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<td>African Development Bank</td>
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<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<td>BBEE</td>
<td>Broad-based Black Economic Empowerment</td>
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<td>BMC</td>
<td>Business Climate Monitor</td>
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<tr>
<td>BOT</td>
<td>Build, Transfer and Operate</td>
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<td>Bush to Energy</td>
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<tr>
<td>CBEM</td>
<td>Community-Based Ecosystem Management</td>
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<td>Competency Based Education &amp; Training</td>
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<td>Community-Based Natural Resource Management</td>
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<td>Community Based Organization</td>
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<td>Cheetah Conservation Foundation</td>
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<td>Community Education Computer Society Namibia</td>
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<td>CMA</td>
<td>Common Monetary Area</td>
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<td>College(s) of Education</td>
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<td>COSDEC</td>
<td>Community Skills Development Center</td>
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<td>COTAMATS</td>
<td>Department of Media Arts &amp; Theatre Studies of the College of the Arts</td>
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<td>CRIAA SA-DC</td>
<td>Centre for Research Information Action in Africa Southern Africa Development and Consulting</td>
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<tr>
<td>CSIR</td>
<td>Council for Scientific and Industrial Research (South Africa)</td>
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<td>Department of Transport and Communications</td>
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<td>Directorate of Veterinary Services</td>
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<td>Environmental Assessment</td>
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<td>Electricity Control Board</td>
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<td>Emerging Commercial Farmer</td>
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<td>ECF-SP</td>
<td>Emerging Commercial Farmers Support Program</td>
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<td>European Development Fund</td>
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<td>Environmental Economics Unit</td>
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<td>Environmental Impact Assessment</td>
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<td>EMP</td>
<td>Environmental Management Plan</td>
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<tr>
<td>ERR</td>
<td>Economic Rate of Return</td>
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<td>ERSC</td>
<td>Eco-Regional Satellite Centre</td>
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<td>ETSIP</td>
<td>Education and Training Sector Improvement Program</td>
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<td>EU</td>
<td>European Union</td>
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<td>FDI</td>
<td>Foreign Direct Investment</td>
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<td>FENATA</td>
<td>Federation of Namibian Tourism Associations</td>
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<td>FMD</td>
<td>Foot-and-Mouth Disease</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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GeSCI Global e-Schools and Communities Initiative
GMP Good Manufacturing Practices
GRN Government of the Republic of Namibia
GTZ German Technical Assistance
HACCP Hazard Assessment and Critical Control Points
HACIS Human Animal Conflict Insurance Scheme
HAN Hospitality Association of Namibia
HIV Human Immunodeficiency Virus
HOGRAIN Hoodia Growers Association of Namibia
ICT Information and Communication Technology
IERR Internal Economic Rate of Return
IPP Independent Power Producer
IPPR The Institute for Public Policy Research
IPTT Indigenous Plants Task Team
ISO International Standards Organization
KAZA Kavango-Zambezi
KCAC Katutura Community Arts Centre
KW Kreditanstalt fur Wiederaufbau
KMS Kalahari Melon Seed
LDC Least Developed Countries
LIFE Living In A Finite Environment
LSU Large Stock Unit
MADI Mashare Agricultural Development Initiative
MAWF Ministry of Agriculture, Water and Forestry
MCA Millennium Challenge Account
MCC Millennium Challenge Corporation
MDG Millennium Development Goal
MET Ministry of Environment and Tourism
MLR Ministry of Lands and Resettlement
MoE Ministry of Education
MoF Ministry of Finance
MRGLHRD Ministry of Regional and Local Government, Housing and Rural Development
MWTC Ministry of Works, Transport and Communication
NAB Namibian Agronomic Board
NACOBTA Namibia Community Based Tourism Association
NAD Namibian Dollar
NAMCOL Namibian College of Open Learning
NANGF Namibia NGO Forum
NAPHA Namibia Professional Hunting Association
NATH Namibia Tourism and Hospitality
NAU Namibian Agricultural Union
NBRI National Botanical Research Institute
NCA Northern Communal Area
(= all communal areas north of the VCF)
NCCA North Central Communal Area
NDP2  Second National Development Plan
NEPRU  Namibian Economic Policy Research Unit
NETSS  National Educational Technology Service and Support – Center
NIED  National Institute for Education Development
NNFU  National Namibian Farmers Union
NOLNet  Namibian Open Learning Network
NPCS  National Planning Commission Secretariat
NPRAP  National Poverty Reduction Action Programme
NPV  Net Present Value
NQF  National Qualifications Framework
NRP  National Resettlement Program
NSFAF  Namibia Students Financial Assistance Fund
NTA  National Training Authority
NTB  Namibia Tourism Board
NWR  Namibia Wildlife Resorts
ODA  Overseas Development Assistance
OIE  International Office of Epizootics
OKACOM  Okavango River Basin Water Commission
ORC  Omaheke Regional Council
OVC  Orphans and Vulnerable Children
OVI  Objectively Verifiable Indicator
PIF  Promoting Indigenous Fruit
PoN  Polytechnic of Namibia
PPA  Participatory Poverty Assessment
PPA  Power Purchasing Agreement
PPP  Public/Private Partnership
PPT  Primary Producers Trust
PRS  Poverty Reduction Strategy
PSDF  Plant Sector Development Forum
PTT  Permanent Technical Committee
QC  Quality Control
RA  Roads Authority
RCC  Roads Contractor Company
RDCC  Regional Development Coordinating Committee
RED  Regional Electricity Distributor
RFA  Road Fund Administration
RPRP  Rural Poverty Reduction Program (EU)
RSA  Republic of South Africa
SACMEQ  Southern African Consortium for the Monitoring of Education Quality
SACU  Southern African Customs Union
SADC  Southern African Development Community
SAIEA  Southern Africa Institute for Environmental Assessments
SAM  Social Accounting Matrix
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<td>SHDC</td>
<td>Sustainably Harvested Devil's Claw</td>
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<tr>
<td>SIDA</td>
<td>Swedish International Development Agency</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium-sized Enterprise</td>
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<tr>
<td>SOP</td>
<td>Standard Operating Procedures</td>
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<tr>
<td>SWAP</td>
<td>Sector-wide Approach</td>
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<td>TASA</td>
<td>Tour and Safari Association</td>
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<td>TCC</td>
<td>Trans Caprivi Corridor</td>
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<td>USAID</td>
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<td>USD</td>
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<td>Zambezi River Basin Water Commission</td>
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1. Background and Development Strategy

1.1 Overview of Namibia

Location

Namibia is located on the western side of the southern African subcontinent. The country became independent on 21 March 1990. The neighboring States of Namibia are Angola and Zambia in the north, Botswana in the east and South Africa in the south. The cold, nutrient rich Benguela Current in the Atlantic Ocean flows from south to north along the western coast. The landscape is characterized by the Namib Desert along the coast, and the Kalahari Desert to the east of the central highlands.

Much of Namibia consists of a wide, rather flat plateau that continues north, south and east into Botswana and other neighboring countries. The height of the plateau ranges between about 900 and 1,300 m above sea level. However, there is a great variation in altitude to the west and south where the escarpment rises from the coast. The incisions made into the landscape by major river systems are often spectacular, especially so in the case of the Fish River Canyon, where some of Namibia’s oldest rocks are now exposed. The highest point in Namibia is the Brandberg at 2,579 m above sea level followed by Moltkeblick (2,479 m) in the Auas Mountains a few kilometers south of Windhoek.

Size

Namibia’s land surface covers an area of approximately 823,680 km², stretching about 1,320 km between the northernmost and southernmost points. The country is approximately 350 km in breadth at its narrowest point in the south while it spans a distance of some 1,440 km where it is widest in the north. The overall perimeter of the country amounts to about 5,760 km of which some 1,570 km is coastline between the mouths of the Kunene and Orange rivers. In addition to the land surface, Namibia’s exclusive economic zone stretches 200 nautical miles off the coast covering an area of about 526,000 km².

Population

The population comprises about 13 different ethnic cultures and 16 language groups. The majority of inhabitants are from Oshiwambo descent. Since independence in 1990, population censuses were done in 1991 and 2001, according to which the population increased from 1.41 million in 1991 to 1.83 million in 2001, growing at a rate of 2.6% per annum over the ten-year period. The rate of population growth decreased from 3.1% in 1991 to 2.6% in 2001. Life expectancy at birth according to the 2001 Population and Housing Census was determined at 50.2 years for females (down from 62.8 in 1991) and 47.6 for males (down from 59.1 in 1991). High rates of HIV/AIDS infections is the main reason for this dramatic decrease in life expectancy and the Government of the Republic of Namibia (GRN) has embarked on a number of plans and actions to curb the infection rate of the pandemic.

The mean household size decreased from 5.2 in 1991 to 5.1 in 2001 while the fertility rate decreased from 6.1 in 1991 to 4.1 in 2001. The mean population density in 2001 was 2.2 persons per km². 67% of the country’s population resides in the rural areas defined as outside the proclaimed Towns and settlements and 28% of all households obtained their main household income from farming activities. However, great regional differences exist in this regard. In the Ohangwena Region in the northern communal areas, 52% of all households derive their main income from farming activities while the figures for Omusati, Oshikoto and Kavango are 46%, 56% and 52% respectively. On the other hand only 1% of households in the Khomas Region, 4% in the Erongo Region and 9% in the Hardap Region
derive their main source of income from farming. The population is more concentrated in the northern areas along the perennial rivers, in the central area around the Capital and at the coastal towns in the west.

**Climate**

Climate has a major influence on all aspects of life in Namibia. For example, climate affects the availability of water, where and when crops can be grown, pastures for grazing, the distribution and abundance of animals and plants, and the potential for using wind and solar energy.

The weather along the coast is quite different from that in the interior of the country. There is little rain along the coast, temperatures are lower, there is less radiation and sunshine, frost is absent, winds are stronger and there is frequent fog. However, Namibia is a country of sunshine and boasts on average between 8 and 10 hours of sunshine per day throughout the year. The main rainy season and therefore the months with the lowest mean hours of sunshine per day is January, February and March. This varies slightly from south to north with the northern parts of the country having higher mean annual rainfall and therefore having less hours of sunshine due to more cloud cover.

The hottest months in most parts of the country are December, January, and February while the hottest months in the northern parts occur earlier. September and October are the hottest months in the Caprivi and the North Central regions respectively. Average annual maximum temperatures in the hottest months are usually above 30 °C over most of the country, excluding the coastal belt where it is much cooler and the arid south where mean temperatures rise to as high as 36 °C. July is the coolest month over much of the country with average minimums of less than 10 °C.

Average annual rainfall varies between more than 600 mm in the Caprivi Region in the northeast to less than 50 mm on the coast with a general decline from northeast to southwest. In addition to the high levels of variation in average, the rainfall is also highly variable between seasons. In large parts of the country, especially towards the west, the coefficient of rainfall variation is more than 40% while it is between 20 and 40% in the remainder of the country.

**Poverty Profile**

Namibia’s status as a "middle income" country is paradoxical as the classification is based on a high annual GDP per capita of about USD2,000, an average far fetched from the realities on the ground. For example, the richest ten % of the households in Namibia has more than 50 % of total income of private households.

Namibia represents a typical dualistic economy where abject poverty exists alongside extremes of wealth. In 1993/94, 37.8 % of households were classified as poor with food accounting for 60 % or more of their household expenditure. At the same time, income disparities were such that the average income of a German speaking Namibian was over 23 times that of a San speaking one and the average income of a female headed household was half that of their male counterparts.

The GINI co-efficient according to the 1193/94 Household Income and Expenditure survey was 0.67, which makes Namibia one of the most unequal societies in the world. According to the preliminary report on the Namibia Household Income and Expenditure Survey, the GINI Co-efficient decreased to 0.6 by 1993/94. Although an improvement, the unequal nature of income distribution remains in tact.

Wide disparities in infrastructural development between the impoverished northern parts of the country where most of the population lives, and the central and southern regions,
unequal access to quality education and health services represent other dimensions of poverty in Namibia. For example, 87% of primary school teachers at national level were qualified to teach in 2001. However, 31% of those in the Kavango region did not have formal teacher training and 23.7% of all teachers in this region had less than Grade 12 Certificates.

With regards to access to quality health services, the 2000 Namibia Demographic and Health Survey revealed that only about one-quarter of households live within 10 km of a GRN health facility. The situation is worse in the rural areas where 34.7 cent of households live 20 km or more away from a GRN health facility. Whilst one doctor serves 2,196 people in Khomas region, the ratio is 16,874, 16,266 and 14,364 people per doctor in Omaheke, Ohangwena and Caprivi regions respectively.

The economic and geographical dualism, partly a legacy of the country’s colonial past, poses one of the biggest challenges to the fight against poverty in Namibia.

The HIV prevalence rate (at 22%) is yet another challenge with considerable socio-economic cost to the poorest groups arising from loss of income, increasing health costs and costs related to funerals (affecting the asset-base of families), low productivity of affected and infected working population, as well as increasing number of orphaned children.

In spite of these challenges, Namibia is not a priority country for Overseas Development Assistance because of the ‘middle income’ label. This underscores the fallacy of per capita income as a major determinant of a country’s level of welfare. But any attempt to advocate for a change in classification should be weighed against the advantages and disadvantages of a “Least Developed Country” label and where Namibia envisions itself by the year 2030.

The following tables (Table 1.1 and 1.2) provide the Human Development Index (HDI) and Human Poverty Index (HPI) for Namibia. These are composite indices developed by the UN to obtain a consistent proxy of the levels of development and poverty within and between countries.

**Table 1.1: Human Development Index for Namibia**

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<td>75.4</td>
<td>95.3</td>
<td>1 598</td>
<td>3 773</td>
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<td>89.7</td>
<td>5 423</td>
<td>4 339</td>
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<td>Hardap</td>
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<td>80.7</td>
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<td>81.0</td>
<td>94.5</td>
<td>3 608</td>
<td>4 190</td>
<td>0.648</td>
<td>0.683</td>
<td>0.770</td>
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Table 1.2: Human Poverty Index for Namibia

<table>
<thead>
<tr>
<th>Region</th>
<th>% Non-Survival up to 40</th>
<th>% Illiteracy</th>
<th>% Underweight</th>
<th>% of Population Without Access to Safe water</th>
<th>% with No Health facilities</th>
<th>Nutrition, Water &amp; health</th>
<th>% of pop that spends over 80% income on food</th>
<th>HPI-N 2000</th>
<th>HPI-G 2000</th>
<th>HPI-N 1999</th>
<th>HPI-N 1998</th>
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<tr>
<td>Caprivi</td>
<td>53.7</td>
<td>24.6</td>
<td>8.4</td>
<td>25.2</td>
<td>42.0</td>
<td>25.2</td>
<td>7.0</td>
<td>36.0</td>
<td>39.6</td>
<td>32.7</td>
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<tr>
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<td>4.6</td>
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<td>7.1</td>
<td>17.1</td>
<td>18.7</td>
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<tr>
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<tr>
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<td>16.7</td>
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<td>43.0</td>
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<td>4.1</td>
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<tr>
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<td>4.2</td>
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<td>27.0</td>
<td>29.6</td>
<td>26.3</td>
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<td>45.1</td>
<td>64.0</td>
<td>41.0</td>
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<td>34.2</td>
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<td>4.2</td>
<td>89.0</td>
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<tr>
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<td>17.5</td>
<td>9.0</td>
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<tr>
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<td>18.1</td>
<td>16.2</td>
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<tr>
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<td>5.6</td>
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<td>19.7</td>
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<td>24.7</td>
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<td>23.4</td>
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Both indicators try to steer away from a definition that reduced poverty to incomes, by attempting to capture the fact that poverty is a multidimensional phenomenon, only one component of which is material.

The HDI has three components:

- Longevity as measured in life expectancy.
- Knowledge, using adult literacy rates and combined primary and secondary school enrolment rates as proxies.
- Access to resources, measured by per capita income. Ideally access to land, credit, capital and other resources should be taken into account, but a lack of comprehensive and reliable data makes this impossible in Namibia.

The HPI is intended to complement the HDI. Its focus is different, in that it seeks to measure deprivation of certain elements of human life that are considered prerequisite for human development. Where the HDI measures progress in developing, the HPI is an indicator of the additional development required to eradicate deprivation. The assumption in constructing a HPI is that, ideally, poverty would have been eradicated where every new born child is assured of an adequate diet during its first five years, every youngster is trained to read and write and every citizen has access to safe drinking water and to health care and has a high probability of surviving the age of 40 years.

The HPI has three main components of deprivation:
- Longevity, which relates to the probability not surviving up to 40 years of age.
- Knowledge, measuring the lack of access to knowledge by means of the written word, measured as adult illiteracy, or the proportion of the population above 15 years of age, which is not able to read or write in any language.
- Standard of living, representing an arithmetic average of three sub-components:
  - % of the population without access to safe water.
  - % without access to health services.
  - % of malnourished children.

Income does not enter into the calculation. However, the proportion of people who spend more than 80% of their income on food, i.e. those commonly classified as extremely poor are also included in the HPI.

As far as the HDI is concerned, a score of 1 indicates the highest degree of human development. In 2000 the HDI for Namibia was 0.648.

The HPI reflects the number of people who are deprived of those elements discussed above. In 2000 the HPI for Namibia was 24.7%, increasing from 23.4% in 1999 and 20.5% in 1998. Poverty has thus worsened between 1998 and 2000.

The figures also indicated that rural residents across the country fared worse than their urban counterparts. HDI for the rural areas in 2000 was 0.574 against 0.749 in the urban areas. Similarly, 29% of rural dwellers opposed to 17.4% of urban dwellers were classified as deprived from those elements required for an “acceptable” living standard.

Namibia recently also commenced with Participatory Poverty Assessments (PPAs) in all regions. To date, three Regional Poverty Profiles have been completed and published while the Regional Poverty Profiles for the remaining ten regions are currently under preparation. The main findings of these can in broad terms be summarized as follows.

Poverty and well-being mean more than just the material things. People in the various regions have indicated that well being certainly relates to having sufficient income and food in a household, and to the ability to afford water, education and health services. Yet, there are other dimensions to poverty, like:

- Being physically or socially excluded from information, services, markets and employment opportunities.
- Being vulnerable to drought, shortage of food, and diseases like malaria and HIV/AIDS.
- Having to take care of many orphans, the burden of care of those who are sick for long periods of time.
- Not having access to municipal services, water and sanitation (in urban settings).
- Lack of productive assets, like draft power and unequal access to resources for men and women.
- Dependency on the wild fruits for survival and on the goodwill of neighbors and relatives for support of any kind.

In order to improve people’s livelihoods it is essential that policies relate to these dimensions of poverty and address people’s priorities. The PPA findings will provide pointers for policy action that is responsive to people’s needs.

The findings underline that people look for less isolation and better access to affordable services in many areas, including health, education, agricultural extension, water supply and
sanitation. Institutions therefore need to improve their standards in delivering quality services. The Regional Council and the Regional Development Coordinating Committees (RDCCs) should in this regard play a central role in the regions in coordinating the flow of information, identifying and addressing people’s needs and setting up the relevant structures at the sub-regional level.

The study also revealed that – apart from improvements required in the area of service delivery- people call for better employment and income generating opportunities. In the case of Ohangwena, infrastructure development is a first priority for poverty reduction, for it will reduce the isolation of communities and increase their access to markets, employment and service centres.

Employment creation is also important from the perspective of curtailing alcohol abuse, thereby possibly reducing domestic violence and other types of crime committed by poor people in desperation. In this regard the PPA revealed the urgent need to recognize alcohol abuse as more than an individual problem and to develop strategies, partnerships with civil society and regulations to prevent people from drinking off their free time.

Finally, in order to address poverty it is important to address food insecurity and environmental degradation, as well as to consider the impact of the HIV/AIDS pandemic on livelihoods.

It is important to enhance the diversification of agriculture, to put up mechanisms for sustainable management of communal resources and to enhance the cooperation between agricultural and forestry extension services.

With regard to the HIV/AIDS pandemic it is important to make ARVs more widely available and to train community based health workers in treatment and care of AIDS patients. It is furthermore necessary to improve access to productive agricultural assets among poor farmers, to ensure effective and equitable famine relief and to establish a proper safety net for orphans and their caretakers.

1.2 Development History, Challenges and Responses

Namibia is a country of contrast, with many challenges and many opportunities.

Challenges relate to its apartheid history, the vast size of the country compared to its relatively small population, small local market, skills “anorexia” with a labor force characterized by a mismatch between skills availability and skills requirements, the high rate of HIV infections and limited track record in internationally competitive production due to a long history of import substitution and polarized industrial development centred on South Africa under apartheid.

Opportunities are equally many, starting with Namibia’s unspoilt and stunning natural beauty and well conserved wildlife, abundant mineral and other natural resources such as indigenous natural products (Hoodia, Marula, Devil’s Claw, Wild Silk and other), a strong culture of animal husbandry and dry-land cash crop production, relatively good roads and financial services infrastructure network, the small size of the population that makes each and every job created count, the strong social support structures that make one income stretch to benefit up to 6 household family or extended family members.

Both a challenge and opportunity is the large proportion of young people in Namibia. Young people can be trained, motivated, employed productively yet without effective education, coaching and mentoring they can end up unemployed and disillusioned, adding to a growing army of unemployed youth.
Since independence, GRN, private sector and civil society have responded to many of the challenges and converted development opportunities into productive business enterprises. However, the dichotomy in the economy inherited at independence has not been overcome. Very poor people and very rich people live together in the same localities, creating obvious tensions in society. The standard of service at GRN hospitals and private medical facilities can hardly be compared, and the same applies for GRN versus private schools. Income disparities continue to widen and Namibia records one of the highest GINI coefficients in the world. Black Economic Empowerment (BEE) during the first 15 years of independence would appear to have made a small group of black Namibians rich, leaving the majority of disadvantaged Namibians behind. Recent developments in BEE are showing signs of change towards a broad-based BEE (BBEE) approach, though whether there is true commitment to this strategic redirection remains to be proven.

Access to financial services is improving with more commercial banks extending into the previously un- or under-serviced communal rural areas. Lending facilities for Small and Medium-sized Businesses (SMEs) have become more responsive to the specific requirements of small businesses and economic service providers are active throughout the country. The policy framework for SMEs has improved considerably.

GRN has held onto the mixed-market economy model, with GRN functions largely focused on the facilitation of private sector development. Private sector continues to dialogue with GRN in a continuous effort to improve the business climate. Key areas of concern remain the very strict immigration procedures for labor, ineffective business registration procedures at national and municipal level, delays in decision-making across a wide spectrum of GRN agencies, and generally low service levels. Yet, the latter is true for both GRN and private sector. Civil society is prominent and active in some sectors of the economy, with the Community Based Natural Resource Management, organizations responding to HIV/AIDS and the women’s movement to be singled out. A major challenge for the outreach of these programs remains the low population density and enormous distances between communities.

Namibia is opening up to the world. The Walvis Bay Corridor is linking Namibia into Southern Africa and transatlantic to the USA, South America and Europe. Trade is aggressively promoted along the Trans-Kalahari Highway into Botswana and Gauteng Province, the Trans-Caprivi Highway into Zambia and DRC and the Trans-Cunene Highway into Angola and the Port of Walvis Bay has been rated the most efficient port in Africa. Barriers to trade are coming down through the tariff reduction commitments of the Southern African Customs Union (SACU)\(^1\) to the Southern African Development Community (SADC) Free Trade Agreement. Customs clearance has been eased by the introduction and continuous upgrading of ASYCUDA. Namibia’s strategic objective of becoming a regional trade-servicing hub is achieving some success. It will be important for Namibia’s long-term

\(^{1}\) Namibia is a member of SACU together with South Africa, Botswana, Lesotho and Swaziland.
investment climate strategy to maintain its emphasis on education and broadening of available skills, and to attain a uniformly high level of efficiency with regard to its capacity to support regional trade. Namibia is ranked 43 on the Global Competitiveness Index of 104 countries (2004).

External investors are principally drawn to Namibia for its natural assets (for example, mining and fisheries resources and its geographic location). With respect to value-added products, Namibia’s immediate southern neighbor, South Africa offers considerable competition as a continental, as well as regional, industrializing engine with a much larger economy, inclusive of production of a much greater number and range of product lines. Therefore, Namibia must work hard to identify “niche” product lines that can compete regionally (principally, at this time, with South Africa) and/or continentally/globally. Until the regional market is more developed, Namibia’s major markets will likely continue to be large foreign markets (for example via regional, EU, AGOA and other trading blocks).

The economy is transforming from a purely natural-resource based economy to a more diversified economy with some processing of natural materials (for example diamonds and marble) and other value added activities (for example textiles), a stronger contribution of the services sector, notably the tourism and financial service sectors, and emerging diversification into on-land marine and freshwater fish farming, exploitation of indigenous natural plants and fruits, and high value irrigation production (for example grapes and dates).

Some charts relating trends in composition of GDP and exports below illustrate this (Figures 1.1 and 1.2).
Figure 1.1: Trends in GDP

Overall GDP growth

Sectoral Contribution to GDP 1990 to 2005

Sectoral Contribution to GDP exl Government 1990 to 2005
Figure 1.1: Trends in GDP / continued

Gross Domestic Product by Activity

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<th>Industry</th>
<th>1990</th>
<th>2000</th>
<th>2005</th>
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<tr>
<td>Agri &amp; forestry</td>
<td>5%</td>
<td>3%</td>
<td>1%</td>
</tr>
<tr>
<td>Fishing</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Mining</td>
<td>5%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>10%</td>
<td>12%</td>
<td>15%</td>
</tr>
<tr>
<td>Elec &amp; Water</td>
<td>0%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Construction</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Wholesale &amp; retail trade, repays</td>
<td>1%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>Transport &amp; communication</td>
<td>2%</td>
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<td>3%</td>
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<tr>
<td>Financial intermediation</td>
<td>2%</td>
<td>3%</td>
<td>4%</td>
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<tr>
<td>Real estate &amp; bus services</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Comm, social &amp; personal serv.</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
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<tr>
<td>Producers of gov services</td>
<td>20%</td>
<td>20%</td>
<td>25%</td>
</tr>
<tr>
<td>Other producers</td>
<td>5%</td>
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</table>
Figure 1.2: Trends in Composition of Exports

**Export 1990**

- Diamonds: 30%
- Other mineral products: 17%
- Food & Live Products: 2%
- Manufactured Products: 34%
- Other Commodities: 17%

**Exports 2005**

- Diamonds: 24%
- Other mineral products: 7%
- Food & Live Products: 15%
- Manufactured Products: 13%
- Other Commodities: 41%
Namibia faces a number of challenges that result from the physical make-up of the country. While the majority of its people depend on agriculture as their main source of livelihood, rainfall is relatively low and highly variable. This results in high levels of insecurity and vulnerability especially amongst the rural subsistence farmers that depend on their livestock and crop fields for their staple and for excess production that can be sold for cash. The cash obtained from selling livestock and excess production is necessary to satisfy other basic needs such as school fees, health services, food and clothes. Droughts, the destruction of crops by floods and pests and livestock disease has a devastating effect on rural livelihoods and often cause great hardship amongst the rural poor who are highly dependent on the natural resources of water and grazing.

Namibia is the driest country in Southern Africa and the provision of water to its population is a major challenge. The only perennial rivers are found on the northern and southern borders of the country while groundwater resources in many areas, especially in the communal areas are generally poor, both in quality and quantity. A continuous effort is needed to assure water supply to all its citizens, often involving major infrastructure works to bring water from areas with enough water to those where water quantity and quality is not sufficient to serve the population.

Closely linked to the physical challenges faced by Namibia is the size and density of its population relative to the vastness of the country. With a population density of only 2.2 persons per km$^2$, infrastructure and services supply, be it roads, water supply, health facilities, education facilities or government services need to spread over a vast area and generally serve small populations within its catchments. To provide services, long distances need to be covered while only a few people can be served in the process. The provision of electricity is extremely difficult because technical limitations dictates that connections are limited to only about 500 m from transformer positions while the low densities and the spread-out nature of rural settlement make this not viable in terms of the costs and benefits to be derived from electrification of sparsely populated areas. As another example, a health facility in the rural areas may only serve a population of a few hundred people within an acceptable distance from such a facility, yet there may be many more people residing within 20 km from the facility. It is impossible to construct, staff and equip clinics throughout the country to enable every citizen to be within say 10 km of such a facility.

There is about 43,000 km of surfaced roads in Namibia, yet most of the traffic is concentrated on only a few road sections. Only 7% of the entire road network carries an average of 200 vehicles or more per day. Tarred roads cover about 5,200 km and carry 75% of all traffic. The ratio of population to distance of surfaced roads is the highest in the region if not in the world, yet accessibility in the rural areas remains a problem.

**Development Responses**

The focus of the Millennium Challenge Account (MCA) Namibia Program is twofold:

- Poverty reduction through economic growth.
- Economic transformation.

As such the discussion around responses of various role players to Namibia’s development challenges is structured around this focus.

**Government Development Policy**

Realizing the daunting poverty situation facing the country despite its rich resources, GRN has committed itself to fighting poverty and inequality by embarking on a growth path that is linked to equitable distribution.
In 1998 cabinet approved a Poverty Reduction Strategy (PRS) that maps out the main direction for poverty reduction in the country. The PRS is built around three main issues:

- Fostering more equitable and efficient delivery of public services in the context of Namibia’s commitment to decentralization.
- Accelerating equitable agricultural expansion, including consideration for food security and other crop development options.
- Exploring options for non-agricultural economic empowerment, including an emphasis on informal and self-employment options.

Economic growth is said to be a pre-requisite for poverty reduction but the key question is: What growth path should Namibia pursue to achieve significant poverty reduction taking cognizance of the skewed nature of its income distribution?

In a 2000 paper, “Growth and Poverty Reduction: What are the Real Questions” Dani Rodrik argues that income distribution has to deteriorate significantly for growth not to benefit the poor. However, in countries where income inequalities are high such as in the case of Namibia, growth may not necessarily benefit poor people unless deliberate policies are pursued for pro-poor growth. In such countries, employment intensive growth backed by deliberate re-distributive policies is imperative for a poverty reduction pay-off.

In this regard, GRN has put in place various redistribution policies aimed at bridging the gap between the rich and the poor in its poverty reduction efforts. Prominent among these are Social Transfers, the Affirmative Action Loan Scheme and Land Reform. These policies are aimed at improving the economic status and well-being of the previously disadvantaged groups.

Policies that are effective in increasing income generating opportunities of the poor and break the vicious cycle of poverty such as investments in primary education, rural infrastructure, and access to productive assets are also in place.

However, it is pertinent to realize that previously disadvantaged people are not a homogenous group of people and some are better off than others. Poverty reduction efforts should therefore place greater emphasis on the welfare of the poorest of the poor by targeting specific interventions such as improved access to quality primary education and health care and ensure that poor people are involved in aggregate production through improved access to production assets including micro-credit.

Whilst the National Poverty Reduction Action Programme (NPRAP) places emphasis on strengthening human capabilities for sustainable poverty reduction, much could be achieved in poverty reduction if specific attention is focused on the bottom 20% of the population.

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**PPAs**

The first PPA was conducted as a pilot in Ohangwena region in 2003. This was then replicated to Caprivi and Omaheke regions respectively in 2004. The Regional PPAs for these regions were launched in June 2006 and are now being distributed to various stakeholders. In 2005/6, PPAs were conducted for all other ten regions with the assistance of two local consortia. These PPAs are currently being finalized.

Poverty Forums are organized at regional level to discuss the draft Regional Poverty Profiles and agree on the issues that affect the regions. The communities that were consulted are also invited to make presentations.

The fora for the ten regions are scheduled to start on 30 October 2006 and run through to 4 December 2006. It is planned that two forums will be conducted in two regions simultaneously for a period of one month.
The recently completed review of the NPRAP also emphasized that the failure of the Action Programme to address key social and development issues such as gender, HIV/AIDS and environmental concerns “threatens to render the targets and long-term vision unattainable”.

The review recommends that Gender and HIV/AIDS concerns need to take centre-stage considering the fact that majority of rural production are generally carried out by women and that the current rate of HIV/AIDS infection poses a threat to the continued existence of a productive critical mass particularly the youth who are currently the most affected.

In 1998, when GRN approved the PRS, it also recognized the importance of monitoring of poverty reduction programs to assess their impact on the well-being of poor and vulnerable members of the society. To achieve this, the NPRAP that concretizes the PRS, stresses the need for well designed structures and procedures for poverty monitoring at all levels of government and in close cooperation with all relevant stakeholders.

The NPRAP acknowledges the importance of participation of poor and vulnerable groups in the analysis of poverty through PPAs, as well as in the design and implementation of support programs. The PPA is a policy research instrument that involves poor people and their institutions in defining and analyzing poverty from their own perspectives. This analysis complements the quantitative household survey information and serves as major input in the formulation of a comprehensive regional poverty profile that depicts the extent and characteristics of poverty in each region and identifies priority areas for action. These will in turn guide the formulation of national and regional development plans and allocation of resources for poverty reduction programs in the regions.

These assessments have been designed in order to come up with regional poverty profiles and to chart out actionable steps that need to be taken up to the village level and interventions required to reduce poverty in Namibia. Because these assessments were very comprehensive in so far as they merged quantitative and qualitative data on poverty, MCA Namibia decided not to hold consultations up to the village level. PPA summary reports highlighted some of the factors contributing to poverty such as the lack of communication, lack of vocational training, poor quality of education and the inability to attract good teachers to rural areas.
Figure 1.3: Performance on Millennium Development Goals (MDGs)

<table>
<thead>
<tr>
<th>GOAL</th>
<th>1992</th>
<th>2003</th>
<th>2006 target</th>
<th>Progress towards target</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eradicate extreme poverty and hunger</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of households living in relative poverty</td>
<td>38%</td>
<td>-</td>
<td>28%</td>
<td>Lack of data*</td>
</tr>
<tr>
<td>Proportion of households living in extreme poverty</td>
<td>9%</td>
<td>-</td>
<td>4%</td>
<td>Lack of data*</td>
</tr>
<tr>
<td>2. Achieve universal primary education</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Net primary school enrolment</td>
<td>89%</td>
<td>92%</td>
<td>95%</td>
<td>Good</td>
</tr>
<tr>
<td>Survival rate for Grade 5</td>
<td>75%</td>
<td>94%</td>
<td>95%</td>
<td>Good</td>
</tr>
<tr>
<td>Literacy rate, 15-24 years</td>
<td>89%</td>
<td>89%</td>
<td>94%</td>
<td>Slow</td>
</tr>
<tr>
<td>3. Promote gender equality and empower women</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary education (girls per 100 boys)</td>
<td>102</td>
<td>100</td>
<td>100</td>
<td>Good</td>
</tr>
<tr>
<td>Secondary education (girls per 100 boys)</td>
<td>124</td>
<td>113</td>
<td>100</td>
<td>Good</td>
</tr>
<tr>
<td>Tertiary education (girls per 100 boys)</td>
<td>162</td>
<td>111</td>
<td>100</td>
<td>Good</td>
</tr>
<tr>
<td>Proportion of seats held by women in National Assembly</td>
<td>9%</td>
<td>19%</td>
<td>30%</td>
<td>Slow</td>
</tr>
<tr>
<td>4. Reduce child mortality</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant mortality (per 1000 live births)</td>
<td>67</td>
<td>52</td>
<td>36</td>
<td>Slow</td>
</tr>
<tr>
<td>Under-five mortality rate (per 1000 live births)</td>
<td>87</td>
<td>71</td>
<td>54</td>
<td>Slow</td>
</tr>
<tr>
<td>Proportion of one-year-old children immunised against measles</td>
<td>63%</td>
<td>72%</td>
<td>80%</td>
<td>Good</td>
</tr>
<tr>
<td>Underweight among children under five</td>
<td>26%</td>
<td>24%</td>
<td>17%</td>
<td>Slow</td>
</tr>
<tr>
<td>5. Improve maternal health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of births attended by trained health personnel</td>
<td>68%</td>
<td>75%</td>
<td>88%</td>
<td>Good</td>
</tr>
<tr>
<td>Contraceptive prevalence rate</td>
<td>21%</td>
<td>37%</td>
<td>50%</td>
<td>Good</td>
</tr>
<tr>
<td>6. Combat HIV/AIDS, malaria and other diseases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV prevalence among 13-19 year old women</td>
<td>6%</td>
<td>11%</td>
<td>9%</td>
<td>Worsening</td>
</tr>
<tr>
<td>HIV prevalence among 20-24 year old women</td>
<td>11%</td>
<td>22%</td>
<td>15%</td>
<td>Worsening</td>
</tr>
<tr>
<td>TB treatment success rate</td>
<td>58%</td>
<td>69%</td>
<td>75%</td>
<td>Good</td>
</tr>
<tr>
<td>7. Ensure environmental sustainability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proportion of rural households with access to safe drinking water</td>
<td>45%</td>
<td>80%</td>
<td>80%</td>
<td>Good</td>
</tr>
<tr>
<td>Proportion of rural households with access to basic sanitation</td>
<td>15%</td>
<td>21%</td>
<td>50%</td>
<td>Slow</td>
</tr>
<tr>
<td>Freehold land</td>
<td>5%</td>
<td>6.1%</td>
<td>8.5%</td>
<td>Slow</td>
</tr>
<tr>
<td>Registered conservancies</td>
<td>0%</td>
<td>4.9%</td>
<td>10.9%</td>
<td>Slow</td>
</tr>
<tr>
<td>8. Develop a global partnership for development</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per capita overseas development assistance to Namibia (in US$)</td>
<td>130</td>
<td>60</td>
<td>90</td>
<td>Worsening</td>
</tr>
</tbody>
</table>

Note: The table provides a quick overview of progress on selected targets for each of the eight MDGs. The data is grouped to represent the closest year to 1992, 2003 and the medium-term targets for 2006. The last column assesses progress against the medium-term target. Good means that the rate of progress seen since the early 1990s continues then the target will be met. Slow means that progress since the early 1990s has been positive but is not strong enough to reach the 2006 target. Worsening means that the situation has deteriorated since the early 1990s.

* A new Household Income and Expenditure Survey will be finalised in 2004 which will update the income poverty figures.
1. INEQUALITY AND SOCIAL WELFARE

Ensure that Namibia is a fair, gender responsive, caring and committed nation, in which all citizens are able to realise their full potential, in a safe and decent living environment.

2. PEACE AND POLITICAL STABILITY

Create and consolidate a legitimate, effective and democratic political system (under the Constitution), and an equitable, tolerable and free society, that is characterised by sustainable and equitable development and effective institutions, which guarantee peace and political stability.

3. HUMAN RESOURCES, INSTITUTIONAL AND CAPACITY BUILDING

Develop diversified, competent and highly productive human resources and institutions, fully utilising human potential and achieving efficient and effective delivery of customer-focused services, which are competitive not only nationally, but also regionally and internationally.

4. MACRO-ECONOMIC ISSUES

Transform Namibia into an industrialised country of equal opportunities, which is globally competitive, realising its maximum growth potential on a sustainable basis, with improved quality of life for all Namibians.

5. POPULATION, HEALTH AND DEVELOPMENT

Ensure a healthy, food-secured and breastfeeding nation, in which all preventable, infectious and parasitic diseases are under secure control, and in which people enjoy a high standard of living, with access to quality education, health and other vital services, in an atmosphere of sustainable population growth and development.

6. NATURAL RESOURCES AND ENVIRONMENT

Ensure the development of Namibia’s natural capital and its sustainable utilisation for the benefit of the country’s social, economic and ecological well-being.

7. KNOWLEDGE, INFORMATION AND TECHNOLOGY

Accomplish the transformation of Namibia into a knowledge-based, highly competitive, industrialised and eco-friendly nation, with sustainable economic growth and high quality of life.

8. EXTERNAL ENVIRONMENT

Achieve stability, full regional integration and democratised international relations, the transformation from an aid-recipient country to that of a provider of development assistance.

VISION 2030

Vision 2030 expresses Namibia’s aspirations in growing the economy, further good governance and most importantly developing its people. It covers a very wide spectrum of challenges and responses. The MCA Namibia relevant – poverty reduction through economic growth – sub-visions are listed in Table 1.3 below.

Table 1.3: Vision 2030 – MCA Namibia Program

<table>
<thead>
<tr>
<th>MCA Namibia</th>
<th>Vision 2030 Sub-Vision</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Objective</strong></td>
<td>Namibia operates an open, dynamic, competitive and diversified economy that provides sustained economic growth, the basis for availing resources for the fulfillment of major national objectives like poverty reduction, human resource development, employment creation, and the provision of adequate social services and infrastructural facilities. (p.63)</td>
</tr>
<tr>
<td>Poverty is reduced to the minimum, the existing pattern of income distribution is equitable and disparity is at the minimum. (p.104)</td>
<td></td>
</tr>
<tr>
<td><strong>Education and Skills Development, producing relevant Skills for the Labor Market</strong></td>
<td>A fully integrated and flexible education and training system, that prepares Namibian learners to take advantage of a rapidly changing environment and contributes to the economic, moral, cultural and social development of the citizens throughout their lives. (p.89)</td>
</tr>
<tr>
<td>The economic environment is suitable for all citizens who are able and willing to work, and there is full employment in the economy, with a well-established and functioning Labor Market Information System for the effective management of the dynamics of the labor force. (p.72)</td>
<td></td>
</tr>
<tr>
<td>In support of the process of capacity building, the nation’s education system consists of public and private initiatives that, together, respond adequately to the challenges of modern technologically developed and industrial society by producing the required managerial, technical and professional personnel.</td>
<td></td>
</tr>
<tr>
<td>Advanced ICTs are used to achieve social and economic transformations in Namibia; the costs of ICTs continue to fall as their capabilities increase, and ICTs are being applied throughout all sectors of the economy and society to serve development goals. (p.79)</td>
<td></td>
</tr>
<tr>
<td><strong>Economic Transformation</strong></td>
<td>Namibia is an industrialized nation, with a viable natural resource export sector, increased size of skills based industrial and service sector, and market oriented production; there is a high level of self-sufficiency, reliable and competitively priced energy, meeting the demand of households and industry. (p.85)</td>
</tr>
<tr>
<td>MCA Namibia</td>
<td>Vision 2030 Sub-Vision</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Land is used appropriately and equitably, significantly contributing towards food security at household and national levels, and supporting the sustainable and equitable growth of Namibia’s economy, whilst maintaining and improving land capability. (p.144)</td>
<td></td>
</tr>
<tr>
<td>Namibia’s diverse natural woodlands, savannahs and the many resources they provide are managed in a participatory and sustainable manner to help support rural livelihoods, enhance socio-economic development, and ensure environmental stability. (p.148)</td>
<td></td>
</tr>
<tr>
<td>The integrity of Namibia’s natural habitats and wildlife populations are maintained, whilst significantly supporting national socio-economic development through sustainable, low-impact, consumptive and non-consumptive tourism. (p.152)</td>
<td></td>
</tr>
<tr>
<td>Namibia develops a significantly more equitable distribution of social well-being, through the sustainable utilization of natural resources in a mixed economy; characteristic of higher income countries, primarily through stronger growth and poverty-reduction. (p.177)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partnerships to deliver the MCA Namibia Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil society; its individuals, groups and organizations are highly resourceful and cooperative with Government and its agencies at local, regional and national level; respect each other and strive to consolidate democratic ideals, and collaborate in social and economic development for the benefit of all. (p.132)</td>
</tr>
<tr>
<td>Local communities and regional bodies are empowered, and are fully involved in the development process; they actually formulate and implement their respective development plans, while the national government – working hand-in-hand with civil society organizations – provides the enabling environment for the effective management of national, regional and local development efforts. (p.207)</td>
</tr>
</tbody>
</table>

**Fiscal Responses**

Since Namibia is restricted in its ability to unilaterally use monetary and trade policies through its membership of the Common Monetary Area (CMA) and the South African Customs Union (SACU), fiscal policy has been the main tool at the disposal of policy makers to accelerate economic growth and development. Namibia has stuck to several key principles in the formulation of its budgets. Although Namibia has run a budget deficit every year since independence, GRN has been reluctant to borrow in foreign currencies to finance the gap between revenue and expenditure. While conscious efforts have been made to develop a local debt market, which allows GRN to borrow to finance the deficit, GRN has borrowed abroad only for specific projects and on concessional terms, even if these loans have not always been included in the annual budget structures. Overall GRN has tried to limit the public finances and introduced several fiscal targets five years ago to formalize this approach. These targets included a budget deficit of 3% of GDP, the stock of public debt not exceeding 25% of GDP and public spending not exceeding 30% of GDP. Despite these targets GRN debt has grown to more than 33% of GDP and public spending to more than 35% of GDP. However, Namibia was awarded an investment grade sovereign credit rating at the end of 2005 by Fitch.

GRN has tried hard to allocate a large proportion of the budget to social services, especially education and health, which have consistently received between 20-25% and 8-10% of total allocations. Namibia has a state pension system that awards a modest monthly pension to every resident over retirement age that reaches many of the poorest households in the country. GRN has tried to ensure the value of the pension keeps pace with inflation and that high coverage is achieved. It has also introduced a number of new grants since
independence to deal with the needs of special groups such as war veterans and orphans and vulnerable children to whom significant sums of money are devoted. The public sector has been used as a way of generating jobs but this has been done within sustainable fiscal limits. It means, however, that by international standards, a large proportion of public spending goes to fund the salaries of civil servants who are well paid by African standards. This may have helped reduce the incidence of corruption but does not seem to have led to the creation of a particularly efficient bureaucracy. Even in education, which has received significant financial resources and policy attention, outcomes are extremely poor, also in relation to other countries in the region. Despite massive expansion in primary, secondary, tertiary and vocational education, Namibia’s skills deficit remains acute.

Several other trends in spending are apparent. Defence spending has risen steadily as a proportion of total spending to a level where it now accounts for a tenth of total spending. Spending on transfers to state-owned companies and agencies has also risen. This is partly because Namibia had to create many institutions of state that did not exist at independence and partly because it has not been possible to run certain companies in a way that prevented them from making losses. The state-owned airline Air Namibia, the state tourism company Namibia Wildlife Resorts, and the state-owned media have accounted for the lion’s share of subsidies in recent years. Hand-in-hand with the increase in transfers has been the increase in the number of parastatals and the number of extra-budgetary hypothecated revenue sources that have been introduced to fund them. GRN has repeatedly stated its intention to maintain and expand the nation’s physical infrastructure and there is a widespread belief that it is this kind of investment that generates growth. The overall allocation in the budget has been steady at between 10-15% of total spending. Finally, land reform has received increasing resources since the passing of key legislation in 1992 and 1995 and pressure within the governing party to accelerate the process of redistribution of commercial farms from white hands to black Namibian hands. GRN now devotes some NAD50 million annually to buy land for redistribution and allocates further sums to Agribank to fund its Affirmative Action Loans Scheme. Monies allocated for the National Land Resettlement Programme is generally vastly underspent but remaining monies are kept in the Land Acquisition and Development Fund for future use.

Development Partners

Namibia is concerned about the decline in overall Overseas Development Assistance (ODA) to Namibia, inclusive of a trend globally by some development partners that involves redirection of resources from individual nations to multilateral and international funds. Practically speaking, this trend is likely to result in yet further decreases in overall ODA amounts to Namibia. For example, Namibia’s low middle-income status, as determined by various international and multilateral institutions, restricts access to some of the funds, while, for those multilateral funds for which Namibia is eligible, Namibia will be competing against developing nations globally or continentally, including Least Developed Countries (LDCs). Further, Namibia’s low middle-income designation bars it from seeking concessional loans that have lower interest rates and longer payback periods.

US Support for HIV/AIDS

- USD24.3 million in FY2004 from the US to support a comprehensive HIV/AIDS prevention, treatment and care program in Namibia. For FY2005 USD42.6 million was pledged.
- Namibia sought the maximum USD 130.9 million from the Fund for which it was eligible over a five-year period and was approved for USD37.8 million, of which 30% was disbursed by the end of 2005. The funds awarded include USD26 million for AIDS, USD3.7 for malaria, and USD905,000 for TB under Round 2, and USD7.2 million for TB under Round 5.
This trend is particularly worrisome in light of a UNDP Namibia estimated gap in assistance it receives as contrasted to estimated funding required to implement MDGs and Vision 2030 of NAD8.5 billion, an amount that is exclusive of those resources already secured from GRN, bilateral development partners, and other sources, such as the Global Fund on HIV/AIDS, Malaria and Tuberculosis. Namibia’s economic growth has been insufficient to enable it to attain its MDGs for reduction of poverty and its related Vision 2030 development goals. Namibia’s development challenges have been exacerbated by the country’s high incidence of HIV/AIDS (one in five people infected), lack of skilled technical labor, high unemployment (particularly among the young) and limited access to finance, including concessional loans. Namibia’s international reserves have been declining, and, since 1990, it has operated at a trade deficit that now amounts to 30% of its GDP.

Private sector investment, which in 2000 contributed 14.1% to the GDP, and which represents 73% of the overall investment in the country, has historically been low and, despite an increase in recent years in Foreign Direct Investment (FDI), has been declining overall.

Development assistance, while it contributed just 3.4% to the GDP in 2003, remains very important to Namibia relative to its ability to achieve its development targets for reducing poverty and hunger, and achieving its sustainable economic and environmental development and social equity objectives. However, ODA has also been declining since 1990, and since 2003 has leveled off. Changing dynamics in how some ODA is channeled have increased unpredictability with regard to the amount and type of assistance available to Namibia. Net ODA disbursements, valued at USD72.5 million in 2003, have been declining. An overview of development assistance and sector focus is given in Table 1.4 below.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Annual Country Frame 1990 to 2000</th>
<th>Main Sector(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>40 m DM</td>
<td>Agriculture, Water, Housing, Vocational Training</td>
</tr>
<tr>
<td>Sweden</td>
<td>100 m SEK</td>
<td>Education, Transport, Public Service, Communications</td>
</tr>
<tr>
<td>United States</td>
<td>20 m USD</td>
<td>Education, Environment</td>
</tr>
<tr>
<td>Norway</td>
<td>60 m NOK</td>
<td>Energy, Fisheries</td>
</tr>
<tr>
<td>Finland</td>
<td>60 m FIM</td>
<td>Health, Forestry, Water</td>
</tr>
<tr>
<td>Netherlands</td>
<td>20 m NAD</td>
<td>Water, Education</td>
</tr>
<tr>
<td>France</td>
<td>40 m FF</td>
<td>Health, Water</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>5 m £</td>
<td>Education, Agriculture, Law and Order</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>2 m USD</td>
<td>Rural Development</td>
</tr>
<tr>
<td>Iceland</td>
<td>2 m USD</td>
<td>Fisheries</td>
</tr>
<tr>
<td>Australia</td>
<td>2 m AD</td>
<td>Training, Rural Development</td>
</tr>
<tr>
<td>Denmark</td>
<td>15 m DKK</td>
<td>Environment, Education</td>
</tr>
<tr>
<td>European Union</td>
<td>51 m EUR (5 years)</td>
<td>Agriculture, Health, Education, Tourism, Trade</td>
</tr>
<tr>
<td>United Nations</td>
<td>10 m USD (5 years)</td>
<td>Various</td>
</tr>
</tbody>
</table>

The United States, committed to providing USD73.1 million in support for the period 2005-2010, is now Namibia’s largest bilateral development partner. MCC funding will reinforce this.
The available private sector capital currently accessible via trusts, and other financial instruments for investment in Namibia is insufficient to finance large-scale development. Hence, public and ODA support will still be required, for example to build energy infrastructure and network, as well as broad foundational capacity building as geared to high priority development goals and objectives (for example health and education).

Financing a value-added, service-oriented economy will require continued support for some time (GRN and ODA), relative to building underlying or “foundational” capacity (managerial, sectoral, etc.) and to enable Namibia in the near term to strengthen and expand upon existing product lines (beef, and fisheries value added products) to meet export quotas, for example, by seeking to attract and support more onshore fisheries processing facilities. Also, while Namibia is still on a “learning curve” in various areas, the need for targeted development cooperation will be critical in pre-commercial or high-risk circumstances.

Namibia recognizes that the global donor community is placing increased emphasis on the commitment and attendant strategies of developing countries for mobilizing their national resources for development, consistent with the vision of developing-developed nation partnership to address poverty. Identification of Namibia’s comparative and competitive advantages for private sector involvement to advance development priorities, and improved approaches for communicating these to the investment community are increasingly important as an aspect of its efforts to stimulate investment in the Namibian economy.

Namibia will need to ensure that its resource mobilization strategy continues to convincingly make the argument that it should be considered for continued pre-commercial or “first generation” ODA. This need is compatible with Namibia’s outreach to development partners, the United Nations and international financial institutions that it be eligible for funding consistent with “as-if Least Developed Country” status.
Namibia, which has a Country Risk rating in the B category, is contemplating seeking a sovereign credit rating to enhance access to concessional funding that would further its objectives to mobilize funding.

**Civil Society**

Civil Society plays an active role in the economic and social development of Namibia, although the degree of activity is inevitably influenced by the scale of resources that are available to it. Thus, for example, in the field of HIV/AIDS, where there is now both a full realization of the scale of the challenge of HIV/AIDS and a strong flow of funds from international sources in response, there are well over 300 civil society organizations now engaged, ranging from a small number of large organizations with up to 100 staff to over 150 CBOs that are typically operating in just one region or even in one community. Altogether over 20,000 volunteers are involved through these organizations and it is widely recognized that the national response in community based care and programs relating to orphans and vulnerable children is predominantly delivered by these civil society agencies.

Some 10 umbrella organizations coordinate the different efforts of civil society, with the Namibia NGO Forum (NANGOF) acting as the apex body for these bodies. NANGOF itself has defined Seven Sector Working Groups: Environment, Formal & Informal Education, Health, Social & Economic Justice, Human Rights & Democracy, Training & Capacity Building, and Urban & Rural Development. The role of these Sector Working Groups is to identify policy advocacy issues and seek ways of networking and collective action in various advocacy campaigns.

Particularly central to the specific objectives of the MCA are the NGOs with a clear agenda to alleviate poverty through economic growth, particularly through the promotion of SMEs. Studies over the last 5 years on behalf of the Joint Consultative Council, one of the umbrella bodies, have consistently shown that economic growth through SME development has consistently outperformed national targets, with significant impact on employment, improving opportunities for women, the size of the national economic base and access to economic opportunity that is otherwise denied through the more formal economy.

**Private Sector**

Private sector’s response to Namibia’s development challenges comes in many forms and shapes.

There are numerous social responsibility initiatives that channel considerable funds to charity and social development, driven by private companies.

Organized private sector – the labor unions, the Namibian Chamber of Commerce and Industry, other sector chambers, the Namibian Employers’ Federation – dialogue with GRN in an ongoing effort on a wide spectrum of issues and are represented on numerous public-private fora. To name a few, these include the Presidential Economic Advisory Council, Team Namibia, the Joint Consultative Commission, the Namibia Trade Forum, the Walvis Bay Corridor Group, the Namibia Tourism Forum, and the African SADC Chamber Institution.

Negotiations do not always run smooth, a case in point being the 2004 Labour Act that poses high costs on doing business in Namibia. After two years of protracted talks between GRN and industry, revisions are under way.

Namibia appears prepared to consider a more rapid pace of privatization, including through public-private sector partnerships, of some of its parastatals that are providing services that private sector enterprises are well suited to help improve upon, and in areas that would be attractive to private sector investors (for example owing to market share). There remains
potential for improved and more transparent rating of performance of enterprises on a formal and regularized basis, including independent audits conform to international standards.

The Institute for Public Policy Research (IPPR), an independent policy think-tank, with the sponsorship of a local stock-broking firm launched the IJG Business Climate Monitor (BMC) in November 2001. The BCM tracks changes in key economic variables and incorporates a short monthly questionnaire of key businesses to provide a monthly assessment of the economic climate in Namibia. As far as is known, it is the only initiative of this type in the country although occasionally more detailed business surveys are conducted by the Namibian Economic Policy Research Unit (NEPRU).

GRN has been struggling to formulate a policy on (B)BEE for some five years without success. This probably reflects divisions in GRN and the wider Namibian society on what such a policy should aim to achieve and how it should be implemented. The Office of the Prime Minister has been charged with leading the (B)BEE policy initiative but efforts now appear to have gone back to the drawing board. It does not appear likely that a policy will emerge soon, giving rise to considerable policy uncertainty to both existing businesses and potential investors. Perhaps the key issue is whether GRN will impose an equity target on firms forcing them to find partner black shareholders by a certain date as is the case in South Africa. Firms now have to decide whether to implement something in a policy vacuum and thereby risk not satisfying GRN requirements when they are finally decided upon.

GRN implemented affirmative action legislation in 1998, which obliges firms to produce an annual report detailing how they intend to improve the representation of previously disadvantaged Namibians at all levels especially at management level. These reports then have to be processed and approved by the Office of the Labour Commissioner. However, a large proportion of the affected firms, even quite large ones, are failing to comply with this requirement and are now facing legal action. This has not stopped GRN from reducing the requirement rate this year from 50 employees to 25 employees.

1.3 Consultative Process in Support of MCA Program Formulation

The premise of the MCC funding mechanism is that the investment program for Namibia is informed by the Namibian people as represented by various governmental, traditional leaders and non-state actors including the private sector. One of the strengths of the MCA regimes is that it relies on country-led proposals.

MCA Namibia developed a consultation strategy and work plan to guide the preparatory work for the formulation of the MCA Namibia Investment Program. Most importantly in this were the stakeholder identification and the communication with the regional authorities to mobilize the stakeholders for the consultative meetings with the MCA team.

Stakeholders included GRN, offices and agencies at central and regional levels, local authority councilors and stakeholders, regional coordination committees, regional AIDS committees, regional emergency unit, Land Boards, farmers associations, and conservancy groups, women associations, church groups, youth groups, vulnerable members of society, NGOs, CBOs and (organized) private sector.

The MCA core team under the guidance of the National Coordinator held consultations in all 13 regions from 12 June to 18 July 2006. At national level, consultations started in May 2006 and have been on-going since, especially in those sectors that the MCA Namibia Investment Program will focus on. More than 62 meetings were held country-wide. Due to the fact that the PPA consultations had just been concluded in most regions, MCA Namibia decided not to hold consultations at village level as this would have sent a confusing signal to the community and may have created unfounded expectations.
MCA Namibia analyzed the information from the consultations and recorded the frequency with which issues of importance to economic growth as seen by the communities consulted were mentioned. This resulted in a matrix (Table 1.5) with 77 issues across 13 regions and one national level grouping. MCA Namibia then clustered the issues and brought down the number of themes as they came from the regional and national consultations to 5 main initial themes and 4 cross cutting issues. These were shared at high GRN level and also with all the regional councilors who had gathered in Windhoek in July 2006 to discuss the implementation strategy for Vision 2030.

Table 1.5: MCA Namibia Consultations Frequency Matrix

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<td>Mushroom project</td>
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<td>54</td>
<td>Improve subsistence farming</td>
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<td>56</td>
<td>Access to finance</td>
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<td>57</td>
<td>Domination of SA markets</td>
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<td>58</td>
<td>Vision 2030 focused</td>
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<td>59</td>
<td>Policy barriers / Reform</td>
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<td>Enhance PPP</td>
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<td>61</td>
<td>Investment / incentives</td>
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<td>Trade barristers / Import/ Export</td>
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<td>Conservancies/ Sustainable NRM</td>
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<td>64</td>
<td>Adding to products</td>
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<td>66</td>
<td>Diversification of agricultural product / Karakul sheep farming</td>
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<td>67</td>
<td>Diversification of game farming</td>
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<td>68</td>
<td>Upgrade/ maintenance NBC infrastructure</td>
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<td>69</td>
<td>Establish community media development fund</td>
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<td>70</td>
<td>Set up film and photo laboratory</td>
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<td>71</td>
<td>Desalinate underground/ Sea water</td>
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<td>72</td>
<td>Establish / Restructuring of trade, industrial investment institutions</td>
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<td>73</td>
<td>Private Sector development</td>
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<td>74</td>
<td>Kudu gas</td>
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<td>75</td>
<td>Solar and Wind Energy</td>
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<td>76</td>
<td>Support to Small Scale minors</td>
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<td>77</td>
<td>Therapeutic medical equipments/ vehicle</td>
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In a next step towards formulating the MCA Namibia Investment Program, the full team (core team plus experts) sought advice from the sectors as represented by stakeholders at national level from government, NGOs and private sector. MCA Namibia took a pragmatic approach towards the formulation process and communicated to the 5 sectors (as per the 5 initial themes) that MCA Namibia would only consider actions that have been conceptualized and detailed with sufficient data available for economic analysis (and monitoring and evaluation) and that MCA will focus on actions that have the highest potential impact on incomes at household and businesses level.

MCA Namibia further provided guidance to the sectors by indicating that investment will be made in public goods and equity participation by MCA Namibia in private sector ventures would not be possible yet equity support to community owned ventures (for example conservancies) could be considered. A main consideration would also be that the actions are sizable to unlock economic opportunities for the country's economic performance to move into higher gear.

MCA Namibia invited the sectors to pre-select those actions/investment on which the economic analysis could be performed. Final selection would then be determined by the economic rate of return analysis.

A large number of proposal for actions/investment to be considered for inclusion in the MCA Namibia Program were received since. Together with the various proposals received from the regions, these easily exceed 150 proposals. It was then up to the MCA full team to screen, analyze and validate these proposals and guide the sector on further narrowing down of possible interventions.

From the pool of concepts and ideas a number of actions were selected that met criteria such as national scope, technical viability including the probability that the investment can be made within the 5 year MCA timeframe, anticipated impacts at community level, and ultimately the Economic Rate of Return.

The MCA economists then together with dedicated staff from the sectors (government and non-government) collected all relevant data and with technical guidance from the MCC transaction team calculated the actual ERRs. These were shared with the sector in a validation meeting. Actions that had low or negative ERRs were rejected in consultation with the relevant sectors and agreement was reached on the drafting format for the MCA Namibia Program, as guided by the MCC transaction team.

MCA Namibia has shared the logical framework that presents the underlying rationale for the proposed investments with Namibia’s development partners and comments were solicited to inform the final program proposal.

As the investment packages for sectors crystallized out, MCA Namibia entered into discussion with the relevant line ministry and other relevant drivers to agree on the program implementation and structures. Recurrent cost implications of the proposed investments were analyzed and commitments secured from relevant ministries and agencies. MCA Namibia together with NPCS, Ministry of Finance (MoF) and the Bank of Namibia (BoN) designed the overall implementation structure for the MCA Namibia Program.

MCA Namibia interacted with Cabinet at three occasions, firstly to approve the MCA Namibia management structure, then to share the outcome of the regional and national-level
consultations and the five initial themes (all of which made it to the final MCA Namibia Program except on-land fish farming with marine and fresh water species) and most recently to seek approval on the MCA Namibia Program, including the budget. The National Council and National Assembly were also given a detailed briefing.

The MCA Namibia Program formulation process has been interactive and well informed by stakeholders at local, regional and national level. While the media did not play an active role in the soliciting of views and proposals, this was offset by the relatively well organized social fabric of Namibia with most individual members belonging to one or another community-based group, be that the local church, a woman’s group, a youth group, traditional, local, regional or central authorities, NGOs, CBOs and other which eased the consultative process. MCA Namibia received numerous phone calls, fax messages, submissions, visits and entertained presentations by private and community interest groups at the MCA office. Responses to individual proposals are ready for dispatch upon submission of the MCA Namibia Program to MCC at the end of September 2006.

An important and noteworthy aspect of the consultative process was the absence of major divergence between the issues identified at national and regional levels. This appears to confirm that, in general, there is consensus within Namibia on priorities for economic growth – a consensus built on previous consultative processes for Vision 2030, NDPs, PPAs and other sector-level consultations.

MCA Namibia – in close consultation and cooperation with the drivers for each of the components – will continue to consult and inform Namibians country-wide on the MCA Namibia Program to ensure broad-based understanding, appreciation, commitment and ownership of the MCA Namibia proposed investments.

1.4 MCA Namibia Program

Considerations that guided Program Design

The MCA Namibia Program is designed to respond to main development challenges and strengthens existing policy initiatives, as described above. MCC funding offers an extraordinary opportunity to accelerate existing development efforts in Namibia. The investments are selected for their power to add good value to the developmental landscape in Namibia, strengthening GRN’s own development initiatives, those supported by its development partners and efforts towards economic growth by non-state actors.

Since the link between economic growth and poverty reduction is at best elusive, MCA Namibia applied a number of pragmatic guidelines in the scoping and formulation process:

- While the intended ultimate beneficiaries of the MCA Namibia Program are the “poor and very poor” in rural Namibia, it may not always be possible to directly engage with this group due to their lack of economic and social power, resources and skills. Conversely, rural development among the wider community is expected to draw in the marginalized and very poor, possibly in first instance through income remittances within households or groups of households that may be spread between rural and urban areas.

When defining poverty reduction plans, care should be taken to avoid a too narrow focus on the poor. The wide range of private service providers, public sector field staff and CBOs are important in bringing affordable services nearer to their end-users. Unless this middle-level is strengthened, the rural poor will never be able to bridge the gap between themselves and the services and resources available.

Trickle down effects are relied upon as an acceptable mechanism to reach the ultimate beneficiaries.
- An access point that should not be understated is the creation of employment for the under-educated rural poor in the textile, fishing, mining and other industries. Salary remittances are set to lift household income levels in the rural areas. Functional skills development is identified as an important vehicle for this.

- Changing lifestyles for under-educated Namibians may be too challenging, especially given the limited implementation timeframe of five years. A preferred access point to reach the under-educated rural poor may thus be rather to improve and expand on “what they know how to do best”, be that farming with small stock or livestock, production of mahangu, maize and other agronomic products, collection of indigenous natural products, etc. However, while noting this development perspective, MCA Namibia intends to power the diversification drive through various well-informed initiatives.

- While unlocking private sector development, the MCA Namibia Program is a public investment and will thus be investing in “public goods”. Funding mechanism that could be considered would include: a) capacity building and training, b) public-private-partnership with MCA providing the public investment portion into joint venture driven by business principles (for example, infrastructure could be public-owned and private sector could provide management of the infrastructure), c) public investment in infrastructure to unlock private sector/business opportunities (for example bringing water to the edge of field for the Green Scheme Model to kick in) and d) Revolving Funds. No grant or equity funding would be made available directly to companies, or private individuals. However, equity support to community owned ventures (for example conservancies) could be considered. Technical assistance and research could be considered but only when of an immediate supportive nature for the main action.

- Informed by the Millennium Challenge Corporation (MCC) overall objective of economic transformation, MCA Namibia aims to – to the extent possible – direct resources to fast-track and upscale existing initiatives that are proven to deliver. In the selection of actions at sector level, MCA Namibia focused on those schemes and program that have been conceptualized and detailed with sufficient data available for economic analysis (and monitoring and evaluation).

- A critical selection criterion was the transformational impact of the proposed investment on household and business incomes. MCA Namibia focused on actions that have the highest potential impact on incomes of households and businesses; the investments should thus be sizable.

These guidelines were shared with the sector teams (public and private) to assist in the scoping of appropriate investments for inclusion in the MCA Namibia Program.
**MCA Namibia Program**

The MCA Namibia Program covers various investments relating to two main themes, namely:

I. To improve human resources capacity and skills, empowering the Namibian workforce to become more competent (knowledge, skills and attitude).

II. To increase productivity of (on-farm and off-farm) enterprises in rural areas

This overall program purpose will contribute to the overall objective to alleviate rural poverty through transformational and accelerated economic growth.

The MCA Namibia investment will seek to unlock economic opportunities in four key sectors:

<table>
<thead>
<tr>
<th>Theme I –</th>
<th>Improve Delivery and Quality of Education at Secondary and Tertiary Level</th>
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</thead>
<tbody>
<tr>
<td>Investment 1</td>
<td>Improve Livestock Productivity and Marketing in Communal areas</td>
</tr>
<tr>
<td>Investment 3</td>
<td>Promote Private and Community based Investment in Tourism</td>
</tr>
<tr>
<td>Investment 4</td>
<td>Promote Private Sector based Investment in the Green Scheme and Indigenous Natural Products</td>
</tr>
</tbody>
</table>

Investment 1 relates to the first theme, the other three to the second theme.

A cross-cutting investment covers the development of rural access roads infrastructure. Where necessary in the main investments, power and communication infrastructure are integrated. All these were identified throughout the consultative process as important contributors to reducing poverty through economic growth.

Each investment comprises of specific goals to reach its ultimate objective as follows:

<table>
<thead>
<tr>
<th>Investment 1</th>
<th>1.1 Increase number of Namibians with mid-level professional skills.</th>
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<tbody>
<tr>
<td></td>
<td>1.2 Increase number of Namibians with technical and business management skills</td>
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<td></td>
<td>1.3 Increase general competency levels of students at secondary level through improvements to existing education infrastructure, increasing the number of educational institutions and improved teacher training.</td>
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<table>
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<tr>
<th>Investment 2</th>
<th>2.1 Improve animal health and quality.</th>
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<tr>
<td></td>
<td>2.2 Increase large and small stock production.</td>
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<td>2.3 Improve marketing infrastructure.</td>
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</table>
### Investment 3

3.1 Develop and improve four protected area complexes with the greatest tourism growth potential.

3.2 Upscale Namibia’s destination marketing efforts, targeting emerging foreign markets, domestic markets, and South African markets – putting Namibia on the international tourism map.

3.3 Remove barriers that currently inhibit investment by tourism operators and to encourage investment in new tourism products/opportunities created in the protected area complexes and promoted by the marketing drive.

3.4 Empower rural and disadvantaged Namibians in the tourism industry and build capacity.

### Investment 4

**Green Scheme**

4A.1 – Expand and renovate Mashare Agricultural Development Initiative (MADI)

4A.2 – Expand Green Scheme Model irrigation schemes

4A.3 – Develop market infrastructure

**Natural Indigenous Products**

4B.1 – Product specific actions (Wild Silk, Hoodia, Kalahari Melon Seed, Devil’s Claw, Marula, etc.)

4B.2 – Multi-purpose Extraction, Quality Control and Product Development Facility

4B.3 – National-level supportive actions

The cross cutting investment into rural access roads (Investment A) is supportive of the four main MCA Namibia proposed investments.

The full Logical Framework is presented in Table 1.6 below.
Table 1.6: MCA Namibia Program Logical Framework

<table>
<thead>
<tr>
<th>LOGICAL FRAMEWORK FOR MCA NAMIBIA PROGRAMME</th>
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<tbody>
<tr>
<td>“POVERTY REDUCTION THROUGH ECONOMIC GROWTH”</td>
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<table>
<thead>
<tr>
<th>Intervention Logic</th>
<th>Objectively Verifiable Indicators (OVIs)</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
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<tbody>
<tr>
<td>OVERALL OBJECTIVE</td>
<td>To alleviate rural poverty through transformational and accelerated economic growth.</td>
<td>Contribute to:</td>
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<td>• Higher level of economic growth, in rural areas country-wide</td>
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<td>• Overall improvement in social conditions, in rural areas country-wide</td>
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<td>• Reductions in rural poverty levels</td>
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<td>• Reductions in regional inequalities</td>
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<td>• Improved Head Count Ratio</td>
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<td>• Improved Poverty Severity Index</td>
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<td>• Improvements in the Poverty Gap Ratio</td>
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<td>National Accounts</td>
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<td>Statistical Abstracts</td>
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<td>Sectoral surveys: labor, SME, agricultural marketing, etc.</td>
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<td>Comparison of regional GDP, economic and social profiles, HDI and HPI</td>
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<td>UNDP Human Development Reports</td>
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<td>Regional and national level political stability.</td>
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<td>Enabling and conducive environment to national economic growth.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The negative impact and cost of HIV and AIDS does not outweigh the benefits from increased rural economic activity generated through the program</td>
<td></td>
</tr>
</tbody>
</table>

| PROGRAMME PURPOSE | 1. To improve human resources capacity and skills, empowering the Namibian workforce to become more competent (knowledge, skills and attitude). |
|                   | 2. To increase productivity of (on-farm and off-farm) enterprises in rural areas. |
|                   | • The economic and social profile of the rural population and enterprises of Namibia has improved, in the following areas: |
|                   | - contribution to National GDP |
|                   | - poverty |
|                   | - employment |
|                   | - diversification in income sources (on-farm versus off-farm) |
|                   | - access to water |
|                   | - access to roads |
|                   | - access to communication |
|                   | • NPCS periodic reports of the poverty monitoring system, showing trends in poverty reduction performance indicators. |
|                   | • Statistical economic and social surveys on trends in GDP, employment, health levels, educational levels, access to water, roads, communication |
|                   | • MCA periodic Activity, Management & Financial Reports |
|                   | Supportive policy measures as identified in the MCA Namibia Program are effected without delay. |
|                   | NPCS develops and implements a National Poverty Monitoring System |
|                   | NPCS establishes mechanisms and structures for implementation of NPRAP. |
|                   | GRN continues to give priority to development actions in the rural areas of Namibia. |
|                   | Regional authorities continue to strengthen capacities to respond to the needs of their regions. |
|                   | The negative impact of HIV and AIDS on program activities and outputs is mitigated. |
|                   | An effective multi-sector national response to HIV and AIDS reverses the trend in the epidemic. |

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2 The indicators will be fine-tuned during Due Diligence and integrated in the design, development and implementation of the MCA Namibia Program in an ongoing effort. Indicators will be specific, simple and measurable. Initial proxies of indicators may need to be used while data collection is undertaken and the baseline established. The assumptions applied in the ERR analysis will be tracked in the final M&E Plan.

MCA Namibia Program: Background and Development Strategy
<table>
<thead>
<tr>
<th>Intervention Logic</th>
<th>Objectively Verifiable Indicators (OVIs)</th>
<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROJECT OBJECTIVE 1: IMPROVE DELIVERY AND QUALITY OF EDUCATION AT SECONDARY AND TERTIARY LEVEL</td>
<td>MCA Namibia Investments</td>
<td>MCA Namibia Investments</td>
<td>▪ Contributions of other Development Partners to ETSIP are forthcoming.</td>
</tr>
<tr>
<td>1.1 Increase number of Namibians with mid-level professional skills.</td>
<td>▪ Create a revolving MCA Bursary Trust to enable 65 Namibians from disadvantaged backgrounds (5 from each of the 13 regions) annually to pursue professional studies in the fields of engineering, architecture, veterinary science, agronomy, horticulture, marine biology, education majoring in mathematics and science.</td>
<td>▪ MCA Namibia periodic Activity, Management and Financial reports.</td>
<td>▪ Resources available to GRN can sustain continued high level spending on education and ETSIP.</td>
</tr>
<tr>
<td></td>
<td>▪ Create 150 student places annually at the Faculty of Engineering and Information Technology at the UNAM Northern Campus.</td>
<td>▪ ETSIP periodic Activity, Management and Financial Reports</td>
<td>▪ Industry engages actively with ETSIP to ensure matching of course content and labor market requirements.</td>
</tr>
<tr>
<td></td>
<td>▪ At the end of MCA Namibia, 325 will have received support from the Bursary Trust and continued support will be sustained.</td>
<td>▪ Education Management Information System (EMIS) reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ More Namibians will find suitable employment, enhancing their individual income generating capacity.</td>
<td>▪ MoE Annual Reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Private sector, GRN and civil society have access to Namibian professionals in technical fields.</td>
<td>▪ NSAF Annual Reports</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Most of the MCA Namibia Investments will not bear fruits immediately, yet output of ETSIP will be monitored on an ongoing basis, with specific inclusion of employment and income level indicators of those who received direct support from MCA.</td>
<td>▪ M&amp;E sample surveys(^3) in Year 2, 3 and 5 among students, teachers and management at the secondary and tertiary education institutions supported/constructed by MCA.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ At the end of the MCA Namibia, a significant number of rural-based Namibians and/or youth have become employable, both in the formal and non-formal sectors of the economy with more skilled persons available to industry. A downward trend in unemployment amongst rural based Namibians and/or youth has been set in motion. Much necessary innovation-drive is supported by PoN Business Innovation Centre.</td>
<td>▪ MCA Cooperation with on-going business climate surveys, integrating specific questions relating to access to appropriately skilled labor.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Business Innovation Center at PoN will house 10 SMEs engaged in R&amp;D for new products and services.</td>
<td>▪ No. of new products and services developed by SMEs at the PoN Business Innovation Centre suitable for commercial replication.</td>
<td></td>
</tr>
</tbody>
</table>

\(^3\) Sample size and questionnaire are to be detailed during due diligence.
1.3 Increase general competency levels of students at secondary level through improvements to existing education infrastructure, increasing the number of educational institutions and improved teacher training.

**Improvements**

- Benefit 140,000 learners and 5,500 teachers through provision of computer labs at 400 schools with secondary grades country-wide.
- Benefit 336,000 secondary level learners countrywide through provision of 336,000 school textbooks in the subjects mathematics, science and physics.
- Make available 60,000 school textbooks in the subjects mathematics, science and physics at school libraries of schools with secondary grades.

**Additional Educational Infrastructure**

- Create 5,880 secondary schooling opportunities annually from the construction, furnishing and equipment of 6 comprehensive secondary schools.
- Create 5,250 secondary schooling opportunities annually from the construction and furnishing of 150 additional classrooms at 50 secondary schools.
- Create 840 and 500 teacher training opportunities annually from the construction, furnishing and equipment of 4 new CoEs and UNAM respectively.
- Benefit 10,500-25,500 annually – following formal or distance secondary (and tertiary or post-graduate education) – through construction of 3 new Regional Study and Resource Centres.

**Anticipated Returns/Benefits**

- At the end of the MCA Namibia, a significant number of Namibians have received secondary education at improved quality and are thus better equipped for tertiary education and/or the labor market.
### Intervention Logic

<table>
<thead>
<tr>
<th>PROJECT OBJECTIVE 2: IN COMMUNAL AREAS AND ON RESETTLEMENT FARMS, INCREASE THE PRODUCTION OF LARGE AND SMALL STOCK AND MAINSTREAM THE COMMERCIAL MARKETING THEREOF.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.1 Improve Animal Health and Quality.</strong></td>
</tr>
<tr>
<td>• Improve veterinary services in the communal areas (North and South of VCF) through the construction of 5 Veterinary Stations in Epukiro, Okakarara, Outapi, Eenhana and Uuvudhiya, reaching 1.32 million LSU and 1.3 million of small stock and tag 1 million LSU and 1.3 million of small stock, enabling Namibia to move to FMD free status.</td>
</tr>
<tr>
<td><strong>2.2 Increase large and small stock production.</strong></td>
</tr>
<tr>
<td>• Unlock new commercial tenure large stock production areas for resettlement by integrating Eiseb block in Omaheke into large stock production mainstream, through commercial tenure and provision of water infrastructure, providing sustainable livelihood to 120 farmer households and creating 500 new job opportunities.</td>
</tr>
<tr>
<td>• Employ three gasifiers for BTE production as a kick-start to convince entrepreneurs how profitable it is to start bush harvesting SMEs and/or IPPs and to demonstrate to farmers how productivity of the land can be improved; only after several hundred units are operating, will large tracts of land be cleared and considerable power generated.</td>
</tr>
<tr>
<td>• Increase livestock production on in total 33,000 ha of bush cleared land over the MCA investment period, doubling the stocking rate from the current 1 LSU per 20ha to 1LSU per 10ha, while at the same time creating employment (each of the three units will reach 135 direct beneficiaries and their families, i.e. 405 people in total) and producing 2MW yearly or 10MW in total.</td>
</tr>
<tr>
<td>• Up-scale the ECF-SP, reaching an estimated 2,200 resettlement families and increasing the off-take of livestock of the resettlement farmers by 7% to 25% and counters the current production loss due to the lack of skills.</td>
</tr>
<tr>
<td><strong>2.3 Improve marketing infrastructure.</strong></td>
</tr>
<tr>
<td>• Upgrade 11 quarantine camps in NCA, reducing entry barriers, increasing the off-take in the NCAs by 5% to 10% and to reduce the threat of fire (the whole formal marketing channel could be lost for one year).</td>
</tr>
<tr>
<td>• Construct 3 feedlots at Etunda in Omusati Region, Rundu (Vungu Vungu) in Kavango region and Katima Mullo (Katima) in Caprivi region with estimated impact of selling 1.5 year old animals rather than 4 year old animals, resulting in increased in net profits to the farmer of NAD735 per head, which result into 37,500 new entrants in the large stock marketing sector.</td>
</tr>
</tbody>
</table>

### Objectively Verifiable Indicators (OVIs)

- Improve veterinary services in the communal areas (North and South of VCF) through the construction of 5 Veterinary Stations in Epukiro, Okakarara, Outapi, Eenhana and Uuvudhiya, reaching 1.32 million LSU and 1.3 million of small stock and tag 1 million LSU and 1.3 million of small stock, enabling Namibia to move to FMD free status.
- Unlock new commercial tenure large stock production areas for resettlement by integrating Eiseb block in Omaheke into large stock production mainstream, through commercial tenure and provision of water infrastructure, providing sustainable livelihood to 120 farmer households and creating 500 new job opportunities.
- Employ three gasifiers for BTE production as a kick-start to convince entrepreneurs how profitable it is to start bush harvesting SMEs and/or IPPs and to demonstrate to farmers how productivity of the land can be improved; only after several hundred units are operating, will large tracts of land be cleared and considerable power generated.
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- Up-scale the ECF-SP, reaching an estimated 2,200 resettlement families and increasing the off-take of livestock of the resettlement farmers by 7% to 25% and counters the current production loss due to the lack of skills.

### Sources of Verification

- MCA Namibia periodic Activity, Management and Financial reports.
- National accounts:
  - GDP Agriculture & Forestry
  - GDP Meat processing.
- MeatCo’s abattoirs slaughter statistics, turnover and statistics for exports to RSA and premium markets (EU and other).
- MeatCo’s increased customer base, ECFs and NCA farmers.
- Feedlot periodic Activity, Management and Financial Reports.
- Quarantine Camps periodic Activity, Management and Financial Reports.
- Repayment and default rates on affirmative action loans for ECFs.
- No. of IPPs and SME harvest teams established.
- MW sold to Nampower.
- Periodic M&E surveys amongst beneficiaries and other stakeholders in the BTE program.
- Periodic M&E surveys amongst beneficiaries and other stakeholders in the ECF-SP.

### Assumptions

- Market access to premium markets (duty free quota) is maintained or will improve.
- No significant adverse shocks in world protein prices and consumption are experienced.
- Farmers respond timely to drought and extended period of drought does not render the MCA interventions ineffective.
- No uncontrollable outbreak and transmission of contagious livestock disease.
<table>
<thead>
<tr>
<th>Intervention Logic</th>
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</tr>
</thead>
</table>
| PROJECT OBJECTIVE 3: PROMOTE PRIVATE AND COMMUNITY-BASED INVESTMENT IN TOURISM | Overall Anticipated Returns/Benefits  
- Increase tourism sector growth rate by on average 2.5% over a 10 year period.  
- Create additional employment in the tourism sector with approximately 6,512 additional jobs of which some 1,500 new jobs related to new lodges, game parks and new community enterprises. | MCA Namibia periodic Activity, Management and Financial reports.  
Annual National Park tourist entry figures  
Local community income records.  
Annual game counts to monitor the value of the game viewing product, as stocked by game camps.  
New border post entry records.  
Trends in the Tourism Satellite Account (TSA).  
Records of website “hits”.  
Income to community conservancies on newly developed and marketed routes.  
Transformation Charter MIS periodic reports.  
Tourism House periodic Activity, Management and Financial Reports.  
Periodic M&E surveys amongst beneficiaries of BEE training and mentoring programs.  
NTB period surveys. | Exchange rate fluctuations remain within reasonable margins.  
International terrorism does not escalate, deterring international tourism travelers on a grand scale.  
Drought preparedness plans are in place and implemented timely and effectively.  
Long distance air travel capacity constraints are addressed by the market.  
Concession Policy is promulgated without delay.  
Quality assurance in Namibia’s tourism services (Parks, lodges, campsites).  
Quality assurance in Namibia’s nature attractions (high wildlife numbers, pristine landscapes).  
Continued improvement and maintenance of supporting infrastructure (roads, telecommunication).  
Continued tourist-friendly immigration into Namibia.  
Upkeep/maintenance of signs and centres along newly marketed routes. |
| 3.1 Develop and improve four protected area complexes with the greatest tourism growth potential:  
I. Etosha-Skeleton Coast National Park-Kunene River complex  
II. Etosha North-South-East complex  
III. North-East Parks complex  
IV. Fish River, Luderitz, Mata-Mata complex | MCA Namibia Investments  
- Unlock new lodge establishments in concessions in all complexes held by conservancies through community/private or PPPs and capitalization of road access and water development and equity capital for conservancies (target of 11 in I, 6 in II, 12 in III and 7 in IV)  
- Create new tourism information and business hubs to facilitate regional tourism promotion, in all complexes (3 in I, 3 in II, 4 in III and 1 in IV)  
- Develop bush access roads and 4x4 game viewing tracks in the 4 park complexes and adjacent conservancies/tourism sites.  
- Establish high-value game camps to produce and market high-value game species for the benefit of restocking conservancies (1 in I, 2 in II and 4 in III)  
- Create Tourism and Natural Resource Management Service Centres to promote the new park/conservancy co-management structures (7 in I, 2 in II, 6 in III and 3 in IV)  
- Address park boundary conflicts through mitigating measures that reduce human/animal conflict incidence (improved barriers through stronger fencing and development of alternative water points that will cost-shared with conservancies), in all complexes.  
- Enhance the recovery of natural resource assets by assisting conservancies to re-establish viable game numbers by game-supporting resources, i.e. water points.  
- Create 3 new border posts to increase access to III and IV and promote a number of highly viable tourism routes into or through Namibia.  
- Establish development and management team consisting of a National Project Implementation team (Windhoek Headquarters) and 4 Regional Field-Based Implementation Teams (1 in each tourism complex). | | |
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Anticipated Returns/Benefits</strong></td>
<td>• Increase tourism sector growth rate by on average 0.7% over a 10 year period and the no. of new tourism trips annually to around 7,000 as from year 6 with each trip adding a blended total economic value of USD1,186. &lt;br&gt;• Unlock economic development opportunities for conservancies that hold concession areas in the National Parks by providing them with leverage to attract private sector investment: land use planning, infrastructure (water and tracks development) and capitalization of Conservancy Equity Fund. &lt;br&gt;• Provide Conservancies that represent approximately 135,000 communal area citizens with additional sources of income: income from PPPs/concessions, employment at the envisaged tourism establishments in the concession areas and tourism services provision.</td>
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<tr>
<td><strong>3.2 Upscale Namibia’s destination marketing efforts, targeting emerging foreign markets, domestic markets, and South African markets – putting Namibia on the international tourism map.</strong></td>
<td><strong>MCA Namibia Investments</strong>&lt;br&gt;• Target emerging markets in North America through the establishment of 15 cooperative marketing agreements with tour operators in the USA and Canada. &lt;br&gt;• Target emerging markets in Europe through the establishment of 30 cooperative marketing agreements with tour operators in Italy, Spain, Portugal, France, Belgium, Netherlands, and Scandinavia. &lt;br&gt;• Upscale destination “Namibia” marketing campaigns in emerging markets (overseas travel trade fairs, consumer fairs, familiarization trips, image and video resources, special interest segments). &lt;br&gt;• Produce public relations and media materials, <em>inter alia</em> promoting new tourism products in the four park complexes. &lt;br&gt;• Market new rural tourism routes in the domestic and South African markets. &lt;br&gt;• Create an interactive website that will serve as a promotional tool in all target markets. <strong>Anticipated Returns/Benefits</strong>&lt;br&gt;• Increase tourism sector growth rate by on average 1.4% over a 10 year period and the no. of new tourism trips annually to around 15,000 as from year 6 with each trip adding a blended total economic value of USD1,186. &lt;br&gt;• Market domestic routes to optimize utilization of new Conservancy and concession-driven tourism developments, potentially benefiting approximately 135,000 communal area citizens.</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>Sources of Verification</td>
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</table>
| 3.3 Remove barriers that currently inhibit investment by tourism operators and to encourage investment in new tourism products / opportunities created in the protected area complexes and promoted by the marketing drive. | **MCA Namibia Investments**  
- Capitalize a Tourism-tailored Loan Scheme (with deferral of interest repayments to the fourth year of the loan repayment period) to encourage local investment and ensure broad-based participation in the newly created tourism business opportunities (created through MCA Namibia investments 3.1, 3.2 and 3.3) and related forward and backward linkages.  
- Capitalize incentive-based Training Packages (with 50/50% cost-sharing with private sector tourism operators). | **Anticipated Returns/Benefits**  
- Increase tourism sector growth rate by on average 0.3% over a 10 year period and the no. of new tourism trips annually to around 3,700 as from year 6 with each trip adding a blended total economic value of USD1,186. | |
| 3.4 Empower rural and disadvantaged Namibians in the tourism industry and build capacity. | **MCA Namibia Investments**  
- Upscale and formalize the activities of the Tourism Council to include structured monitoring of the Transformation Charter and a Tourism Awareness Campaign.  
- Construct “Tourism House” for the Tourism Council and other tourism related industry agencies (self-financing through rental income from offices, training and meeting space),  
- Implement a fully integrated Tourism Training Program based on 2004 National Tourism Training Strategy and the Namibia Qualifications Authority’s tourism training standards, targeting the training of unskilled Namibians in rural communities within the 4 tourism complexes, while mentoring future trainers at existing rural training facilities.  
- Further develop and implement the Tourism Mentorship Program for BEE entrepreneurs. | | |
<table>
<thead>
<tr>
<th>Intervention Logic</th>
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<th>Sources of Verification</th>
<th>Assumptions</th>
</tr>
</thead>
</table>
| **Anticipated Returns/Benefits** | ▪ Broad-based participation in the newly created tourism business opportunities (created through MCA Namibia investments 3.1, 3.2 and 3.3) and related forward and backward linkages have been realized and transformation in the rest of the sector now features prominently in tourism development.  
▪ Synergy has been created between the 10 tourism organizations in Namibia through Tourism House and the Tourism Council (with reduced overheads, more effective planning and collaboration, and greater financing of capacity building, empowerment, barriers removal, and marketing).  
▪ Tourism skills of disadvantaged Namibians within the 4 tourism complexes are enhanced, creating job opportunities and directly addressing poverty alleviation.  
▪ The human resource base to meet the service demands of the growing tourism industry has grown and strengthened.  
The number and success rate of BEE tourism entrepreneurs has increased. | ▪ | ▪ No significant adverse shocks in world grain prices consumption (rendering local grain production uneconomic as opposed to imports) are experienced.  
▪ The use of leasehold as security by resettled SME irrigation farmers when applying for loans from financial institutions is |
| **PROJECT OBJECTIVE 4A** | | | |
| **PROMOTE PRIVATE SECTOR AND COMMUNITY-BASED INVESTMENT IN THE GREEN SCHEME** | 4A.1 Expand & Renovate MADI  
▪ Create 60 additional training opportunities annually at MADI.  
▪ Train in total 100 SME farmers annually. | ▪ MCA Namibia periodic Activity, Management and Financial reports.  
▪ MADI throughput / no. of graduates.  
▪ MADI Activity, Management & Financial Reports.  
▪ No. of ha under irrigation at Green Schemes.  
▪ Periodic M&E production, marketing | |
| 4A.2 Establish Green Scheme Model irrigation schemes.  
▪ Unlock irrigation farming on in total 5,633 ha in Kavango, Caprivi, Omusati, Hardap and Karas regions.  
▪ Create business opportunity for in total 449 SME irrigation farmers and 11-15 SPs.  
▪ Create at least 200 new jobs on the green schemes  
▪ Reduce imports of grain, fresh fruits and vegetables by at least 20%. | ▪ | |
### Intervention Logic

4A.3
Develop market infrastructure: Strategic Grain Storage, Rundu Market Hub and Truck Port.

- Create additional strategic grain storage capacity of 4,500 t in Rundu, for the Kavango and Caprivi GS’, doubling regional grain security stocks and grain sales.
- Increase quality of produce sold in domestic, regional and international markets by implementing sorting and quality assessment system at the Rundu Market Hub.
- Create 3 SME business opportunities at the Rundu Market Hub to provide processing, logistics and transport services.
- Minimum of 17 jobs created at the Rundu Market Hub, generating local wages of approximately NAD1.4 million by end of Year 5.
- Minimum of 17 jobs created at the Rundu Truck Port, generating local wages of approximately NAD1.7 million by end of Year 5.
- Increased local government revenue from facility leases and taxes.

**Objectively Verifiable Indicators (OVIs)**

- Create additional strategic grain storage capacity of 4,500 t in Rundu, for the Kavango and Caprivi GS’, doubling regional grain security stocks and grain sales.
- Increase quality of produce sold in domestic, regional and international markets by implementing sorting and quality assessment system at the Rundu Market Hub.
- Create 3 SME business opportunities at the Rundu Market Hub to provide processing, logistics and transport services.
- Minimum of 17 jobs created at the Rundu Market Hub, generating local wages of approximately NAD1.4 million by end of Year 5.
- Minimum of 17 jobs created at the Rundu Truck Port, generating local wages of approximately NAD1.7 million by end of Year 5.
- Increased local government revenue from facility leases and taxes.

**Sources of Verification**

- BoN/NAB grain import statistics.
- Loan repayment and default rate on loans extended to SME irrigation farmers and SPs.
- MAWF records.
- Rundu municipality records.
- Grain Silo periodic Activity, Management & Financial Reports.
- Rundu Market Hub periodic Activity, Management & Financial Reports.
- Rundu Truck Port periodic Activity, Management & Financial Reports.
- Periodic M&E production, marketing, employment and customer (retailers, wholesalers, exporters, haulers, etc.) satisfaction surveys at the Rundu Market Hub and Truck Port.
- NB. National Accounts do not record horticulture production separately since it is an emerging industry.

**Assumptions**

- from financial institutions is formalized without delay.
- GRN will not issue leaseholds for irrigation in addition to those approved for GS to ensure sustainable abstraction from perennial rivers.
- Continued good cooperation with neighboring states in ORASECOM, OKACOM, Zamcom and Namibia-Angola Joint Committee.
- Extended period of drought will not have significant impact on water levels in the perennial rivers.
- Dumping (sustained sale below normal profit margins or even below cost price) of horticulture products on the Namibian market by existing regional suppliers is countered effectively by GRN and Namibian industry.

### PROJECT OBJECTIVE 4B

**PROJECT OBJECTIVE 4B PROMOTE PRIVATE SECTOR AND COMMUNITY-BASED INVESTMENT IN INDIGENOUS NATURAL PRODUCTS**

4B.1 Product Specific Actions (Wild Silk, Hoodia, Kalahari Melon Seed, Devil’s Claw, Marula, etc.)

- Create income earning opportunity for 180 spinners.
- Increase income earning opportunity for Wild Silk cocoon collectors.
- Create Hoodia cultivation farming opportunity for 120 SME farmers.
- Provide market opportunity for an additional 21,500 SME farmers to sell more and better-quality KMS.
- Create Devil’s Claw propagation and enrichment planting farming opportunity for 2,000 SME farmers.
- Provide access for 100,000 SME farmers to superior Marula genotypes (of which estimated 87.5% in informal sector).

**Objectively Verifiable Indicators (OVIs)**

- Create income earning opportunity for 180 spinners.
- Increase income earning opportunity for Wild Silk cocoon collectors.
- Create Hoodia cultivation farming opportunity for 120 SME farmers.
- Provide market opportunity for an additional 21,500 SME farmers to sell more and better-quality KMS.
- Create Devil’s Claw propagation and enrichment planting farming opportunity for 2,000 SME farmers.
- Provide access for 100,000 SME farmers to superior Marula genotypes (of which estimated 87.5% in informal sector).

**Sources of Verification**

- MCA Namibia periodic Activity, Management & Financial Reports.
- Periodic M&E production, marketing and employment sample surveys at production sites.
- Multi-purpose Extraction, Quality Control and Product Development Facility periodic Activity, Management & Financial Reports.

**Assumptions**

- International markets for fairly traded natural products continue to grow.
- Adequate stockpiling is possible before next disaster drought (or interim drought impacts on value chain can be managed).
- Commercial investors accept the PPT as investment partner.
### Intervention Logic

<table>
<thead>
<tr>
<th>4B.2 Multi-purpose Extraction, Quality Control and Product Development Facility.</th>
</tr>
</thead>
</table>

- Provide access to product development, marketing and other support services to:

<table>
<thead>
<tr>
<th>Products</th>
<th>No. of Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoodia</td>
<td>120</td>
</tr>
<tr>
<td>KMS</td>
<td>25,000</td>
</tr>
<tr>
<td>Devil’s Claw</td>
<td>2,600</td>
</tr>
<tr>
<td>Marula*</td>
<td>12,500</td>
</tr>
<tr>
<td>Ximenia</td>
<td>1,500</td>
</tr>
<tr>
<td>Manketti</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>42,720</strong></td>
</tr>
</tbody>
</table>

- Create at least 15 full-time jobs.
- Create PPT profit sharing in the Multi-purpose Facility.
- Unlock leverage partnerships with private investors.

<table>
<thead>
<tr>
<th>4B.3 National-level Supportive Actions</th>
</tr>
</thead>
</table>

- Consolidate Namibia’s reputation as the most responsive and reliable supplier of indigenous natural products from southern Africa.
- Create PPT to share profits with all participating primary producers.
- Create traceability and certification network with at least 6,000 household members.
- Create part-time incomes for at least 60 internal inspectors.
- Provide regional outreach extension services to some 150,000 households.
- Double First-Level Oil Extraction capacity (and increase intake of raw materials).
- Create full-time incomes for at least 12 young professionals in ERSC, and 4 junior management level jobs and 20 oil processors in First-Level Oil Extraction facility.

### Objectively Verifiable Indicators (OVIs)

<table>
<thead>
<tr>
<th>Sources of Verification</th>
</tr>
</thead>
</table>

- PPT trade records.

### CROSS CUTTING ISSUES A

#### DEVELOP ROADS INFRASTRUCTURE TO SUPPORT MCA INVESTMENTS

<table>
<thead>
<tr>
<th>Rural Access Roads in NCA</th>
</tr>
</thead>
</table>

- A.1 Upgrade/construct 976 km of gravel roads in NCAs.
- A.2 Upgrade 32 km of gravel road to bitumen-faced standard in NCA.

<table>
<thead>
<tr>
<th>Assumptions</th>
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</thead>
</table>

- MCA Namibia periodic Activity, Management & Financial Reports.
- M&E traffic counts on MCA roads.
- No significant adverse shocks in world prices of oil and related products are experienced.
Location

The spatial distribution of the proposed investments under the MCA Namibia Program is shown in a number of GIS maps, inserted at relevant places in the document.

The principal geographic focus of the actions is the communal areas, throughout the country.

Beneficiaries

Intended beneficiaries, summary profile, based on the component/action level analysis in Sections 2-7.

Table 1.7 MCA Namibia Program Intended Beneficiaries

<table>
<thead>
<tr>
<th>MCA Investments/Actions</th>
<th>Beneficiary Profile</th>
<th>Number of Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCA Investment 1: Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1.1 Revolving MCA Bursary Trust for selected Areas of Study</td>
<td>Previously disadvantaged young meritorious Namibians selected equally from each of the 13 regions.</td>
<td>Full financial support to 325 Namibians over the five-year period and support will be sustained over a longer period.</td>
</tr>
<tr>
<td>1.2.1 Construction, Furnishing &amp; Equipment of 3 new VTCs and Expansion of Valombola VTC</td>
<td>Previously disadvantaged Namibians including both genders, all social groups and both rural and urban dwellers to benefit from this intervention, which is enhanced through the provision of some hostel facilities to accommodate those that would normally not be able to access the facilities</td>
<td>2,000 additional training opportunities at an average of 400 additional opportunities per annum.</td>
</tr>
<tr>
<td>1.2.2 Re-equipment of 4 existing VTCs</td>
<td>Previously disadvantaged Namibians including both genders, all social groups and both rural and urban dwellers to benefit from this intervention, which will improve the quality of education received at these facilities</td>
<td>Some 1,631 students annually or a total of 8,155 students over the investment period and more beyond the investment period.</td>
</tr>
<tr>
<td>1.2.3 Re-equipment of 5 existing COSDECs and Construction, Furnishing &amp; Equipment of 5 new COSDECs</td>
<td>Community members from all walks of life inclusive of the disadvantaged not having had access to such facilities simply because they were too inaccessible. Access is guaranteed to all who wish to benefit from these centers, irrespective of gender or social standing.</td>
<td>From the re-equipped COSDECS some 1,100 students will annually benefit and these benefits will be sustained beyond the investment horizon. From the new COSDECS some 960 training opportunities will result annually.</td>
</tr>
<tr>
<td>1.2.4 Expansion &amp; Re-equipment of COTA MATS</td>
<td>Located in Windhoek, COTAMATS will benefit those that already have some skills and are able to access the facility in Windhoek. With its purpose to provide training in advanced media design and production skills, access will be limited in numbers, yet will be equally accessible to all gender groups.</td>
<td>Some 250 full time training opportunities will result from this intervention.</td>
</tr>
<tr>
<td>1.3.1 Construction, Furnishing &amp; Equipment of 6 Comprehensive Secondary Schools</td>
<td>Beneficiaries will include learners from all social classes and both genders. With hostel facilities to be included, these facilities will also benefit learners from the rural areas who struggle with access to secondary education simply because it is too far from home and accommodation is difficult to obtain.</td>
<td>Each school would benefit some 980 students per annum bringing the total beneficiaries over the investment period to 29,400 and at 5,880 for every year beyond the investment period.</td>
</tr>
<tr>
<td>1.3.2 Construction &amp; Furnishing: 50 Blocks of 3 Classrooms at Schools with secondary Grades in 9 Regions</td>
<td>Beneficiaries will include learners from all social classes and both genders. Spreading the intervention over a large area at 150 schools these facilities will also benefit learners from the rural areas who struggle with access to secondary education by bringing more secondary school places closer the communities in the rural areas.</td>
<td>Each block would benefit some 105 students per annum bringing the total beneficiaries over the investment period to 28,250 and at 5,250 for every year beyond the investment period.</td>
</tr>
<tr>
<td>1.3.3 Expansion of 4 existing CoEs &amp; UNAM Teacher Training Facilities</td>
<td>Beneficiaries would include both genders, rural student teachers and provision is also made for disabled students. Hostel facilities will ensure wider accessibility for rural residents.</td>
<td>The number of beneficiaries at UNAM is estimated at 500 student teachers while the number of beneficiaries at the CoEs is estimated at 210 for each CoE per annum or a total of 840 per annum.</td>
</tr>
<tr>
<td>1.3.4 Construction, Furnishing and Equipment of 3 Regional Study and Resource Centers</td>
<td>Community members and students from all classes and genders as well as areas where residents do not have access to such centers currently.</td>
<td>These centers typically serve between 3,500 and 8,500 per annum each. Additional numbers will be served via the mobile collection and distribution system to community libraries</td>
</tr>
<tr>
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</tr>
<tr>
<td>1.3.5 Provision of Computer Labs at 400 Schools with secondary Grades</td>
<td>All children at the beneficiary schools irrespective of gender class or rural accessibility.</td>
<td>More than 140,000 children and 5,500 teachers will benefit from this intervention.</td>
</tr>
<tr>
<td>1.3.6 Provision of School Textbooks in the subjects Mathematics, the Sciences and English for Grades 5-12</td>
<td>All school children studying in these subjects.</td>
<td>A total of 336,000 learners will benefit from this intervention.</td>
</tr>
<tr>
<td>1.3.7 Construction &amp; Equipping of Faculty of Engineering &amp; Info Technology at UNAM Northern Campus</td>
<td>Meritorious students from the northern communal areas irrespective of gender will benefit from this intervention.</td>
<td>Over the first four years some 1,052 students will benefit and the department is expected to deliver some 240 engineers per annum once in full capacity after year 4.</td>
</tr>
<tr>
<td>1.3.8 Construction of a Business Innovation Center at PoN</td>
<td>All SMEs will have access provided that they satisfy certain requirements to ensure the efficiency of the Center.</td>
<td>Assuming that the SMEs are successful in piloting new innovations, some 200-250 people can benefit from this directly in the form of employment or self-employment. Successful innovations could increase the indirect beneficiaries exponentially as the technology becomes available.</td>
</tr>
</tbody>
</table>

**MCA Investment 2: Livestock Production and Marketing**

| 2.1.1 Construction/Expansion of Veterinary Stations & Tagging of Animals | All farmers who own livestock in the communal areas inclusive of all classes and genders. | Some 128,000 households will benefit from this intervention in one form or another. |
| 2.2.1 Unlock Eiseb Block | Equally accessible to both male and female farmers although dependent on the nature of the applicants and the cultural beliefs that may cause a gender bias among the Herero Beneficiaries. | Some 120 households will benefit directly with another 500 workers at the 120 farms so created. |
| 2.2.2 Clearing of Bush-Encroached Farmland through Bush-to-Energy (BTE) | Mainly previously disadvantaged farmers and affirmative action loan beneficiaries and this may flow into the commercial areas as well. Both women and men would be included in the harvesting teams, thereby creating employment for all genders. | The three gasifiers will create employment and potentially some form of equity for about 400 workers and their families per annum. |
| 2.2.3 Upscale Emerging Commercial Farmers Support Program (ECF-SP) | Resettlement farmers or Emerging Commercial Farmers irrespective of gender or other potential bases for discrimination. | Some 2,200 families on resettlement farms per annum will benefit. |
| 2.3.1 Upgrading of existing Quarantine Facilities | Mainly communal farmers but also previously disadvantaged farmers and affirmative action loan beneficiaries. | Not able to estimate but all farmers in the catchments will benefit from the action. |
| 2.3.2 Establishment of Feedlots | All livestock farmers in the Omusati, Kavango and Caprivi within reasonable reach of the feedlots will benefit | All farmers within the catchments of these feedlots could benefit through improved prices. |

**MCA Investment 3: Tourism**

| 3.1 Resource Development & Management | All members of conservancies including women and vulnerable groups. Lodge employees tend to be 75% women. | Some 135,000 people in the 47 registered conservancies would benefit from these interventions. About 6,512 new permanent jobs will be created of which 1,500 will flow directly from the new lodges. |
| 3.2 Marketing | All people involved in the tourism industry inclusive of communal and commercial enterprises. Most spin-off jobs created such as handicrafts production, laundering etc. normally is done by women. | An additional 31,300 tourists per annum is likely to spend their money on local tourist facilities |
3.3 Barriers Removal
- All members of conservancies including women and vulnerable groups

The intervention would fund some 21 lodges and can be rolled over after the investment horizon. Besides 2.5 employment opportunities per room, the equity so created for communities could reach many more households.

3.4 Empowerment & Capacity Building
- All members of conservancies including women and vulnerable groups. Lodge employees tend to be 75% women.

Up to 500 people per annum could benefit from the training and capacity building interventions.

MCA Investment 4A: Green Scheme

4A.1 Expansion & Renovation of MADI
- Students of both genders and from all social groups inclusive of poor and vulnerable households

60 additional students will be accommodated per annum.

4A.2 Green Schemes
- Male and female farmers who demonstrate the ability to successfully farm on the green schemes to be selected on a basis of gender balance.

381 cash crop farmers and 15 service providers or larger commercial farmers that would ensure that the cash crop farmers make a success of their farming ventures.

4A.3 Rundu Market Hub and Grain Storage
- All farmers in the catchment of the grain storage and market hub

All GS farmers and other producers of cash crops in the Kavango Region, distributors, transporters, SMEs, etc.

MCA Investment 4B: Indigenous Natural Products

4B.1 Product Specific Actions (Wild Silk, Hoodia, Kalahari Melon Seed, Devil’s Claw, Marula, etc.)
- The rural poor especially women and vulnerable groups in the rural areas who tend to be the main harvesters and who see these products as a means to improving incomes.

42,720 rural households are expected to benefit from this intervention. The cash accrues predominantly to women (due to the gendered nature of traditional plant-based activities) and is therefore disproportionately spent on the welfare and education of children.

4B.2 Multi-purpose Extraction, Quality Control and Product Development Facility.
- All primary producers who trade indigenous natural products through this particular channel

4B.3 National-level Supportive Actions
- All primary producers in the various areas who trade indigenous natural products will benefit from the various facilities

42,720 rural households are expected to benefit from this intervention.

MCA Investment A: Rural Access Roads

#1 New link from Oshikango to Omundaungilo (74 km)
#2 D3600 from Tsintsabis to Katwitwi (180 km)
#3 New link from Omumatobo Mawe to Okahao (111 km)
#4 Okahao to Omakange (120 km)
#5 D3403 from Divundu to Mohembo (32 km)
#6 D3301 & D3830 from Epukiro to Eiseb Block (222 km)
#7 New link from Omunthya to Omatumbo Mawe (269 km)

These roads are designed to unlock the rural areas and improve the ability of rural residents and subsistence farmers to market their livestock and produce more easily and effectively. During construction local communities will benefit through labor based road construction, which is well developed and has already proved the mechanisms to ensure equal gender participation.

It is not possible to accurately estimate the number of beneficiaries but it is likely to be very high. The selected roads traverse some of the most inaccessible yet densely populated areas in Namibia and most rural dwellers within the catchments of these roads will benefit through the improved accessibility so provided.
Global Costing

All MCA Namibia budget estimates have been converted from NAD to USD using the Bank of Namibia official exchange rate for 28 September 2006 of 7.604. Given the recent fluctuations in the NAD/USD exchange rates, this is not a highly favorable rate and some of the budget estimates may need to be adjusted upwards, as denominated in NAD, during the due diligence period.

All MCA Namibia Program cost tables are in USD million.

Table 1.8: MCA Namibia Global Costing

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Education</td>
<td>20.9</td>
<td>44.9</td>
<td>40.0</td>
<td>21.9</td>
<td>12.9</td>
<td>140.6</td>
</tr>
<tr>
<td>2: Livestock Production &amp; Marketing</td>
<td>17.9</td>
<td>10.4</td>
<td>9.5</td>
<td>2.7</td>
<td>1.3</td>
<td>41.7</td>
</tr>
<tr>
<td>3: Tourism</td>
<td>17.5</td>
<td>28.4</td>
<td>30.5</td>
<td>15.5</td>
<td>5.0</td>
<td>96.9</td>
</tr>
<tr>
<td>4A: Green Scheme</td>
<td>2.4</td>
<td>7.2</td>
<td>15.3</td>
<td>13.8</td>
<td>7.9</td>
<td>46.6</td>
</tr>
<tr>
<td>4B: Indigenous Natural Products</td>
<td>3.4</td>
<td>1.4</td>
<td>1.3</td>
<td>0.7</td>
<td>0.6</td>
<td>7.4</td>
</tr>
<tr>
<td>A: Rural Access Roads</td>
<td>25.8</td>
<td>24.1</td>
<td>24.0</td>
<td>17.6</td>
<td>2.2</td>
<td>93.7</td>
</tr>
<tr>
<td>X: Investment Sub-Total</td>
<td>87.8</td>
<td>116.4</td>
<td>120.4</td>
<td>72.3</td>
<td>29.9</td>
<td>426.8</td>
</tr>
<tr>
<td>Y: Program Management (15% of X)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Z: Contingency (5% of Y)</td>
<td>5.0</td>
<td>6.5</td>
<td>6.7</td>
<td>4.3</td>
<td>2.1</td>
<td>24.5</td>
</tr>
<tr>
<td>MCA NAMIBIA GRAND TOTAL (X+Y+Z)</td>
<td>105.6</td>
<td>135.7</td>
<td>139.9</td>
<td>89.4</td>
<td>44.8</td>
<td>515.4</td>
</tr>
</tbody>
</table>
Websites of Interest

Some websites of interest and relevant to the MCA Namibia proposed investments are listed in Table 1.9 below.

Table 1.9: Relevant Websites

<table>
<thead>
<tr>
<th>General</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><a href="http://www.grnnet.gov.na">http://www.grnnet.gov.na</a></td>
<td>Government of Namibia Network</td>
</tr>
<tr>
<td><a href="http://www.npc.gov.na">http://www.npc.gov.na</a></td>
<td>National Planning Commission, Namibia</td>
</tr>
<tr>
<td><a href="http://www.bon.com.na">http://www.bon.com.na</a></td>
<td>Bank of Namibia</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.nta.com.na">http://www.nta.com.na</a></td>
<td>Namibia Training Authority</td>
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<tr>
<td><a href="http://www.nied.edu.na">http://www.nied.edu.na</a></td>
<td>National Institute for Education Development</td>
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<tr>
<td><a href="http://www.polytechnic.edu.na">http://www.polytechnic.edu.na</a></td>
<td>Polytechnic of Namibia</td>
</tr>
<tr>
<td><a href="http://www.unam.na">http://www.unam.na</a></td>
<td>University of Namibia</td>
</tr>
<tr>
<td><a href="http://www.schoolnet.na">http://www.schoolnet.na</a></td>
<td>SchoolNet Namibia</td>
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<tr>
<td><a href="http://www.tech.na">http://www.tech.na</a></td>
<td>Tech/Na! - ICTs in Education Initiative</td>
</tr>
<tr>
<td><a href="http://www.cecsnamibia.com.na">http://www.cecsnamibia.com.na</a></td>
<td>CECS Namibia</td>
</tr>
<tr>
<td><a href="http://www.gesci.org">http://www.gesci.org</a></td>
<td>Global e-Schools and Community Initiative</td>
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<tr>
<td>Livestock</td>
<td></td>
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<tr>
<td><a href="http://www.nammic.com.na">http://www.nammic.com.na</a></td>
<td>Meatboard of Namibia</td>
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<tr>
<td>Tourism</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.met.gov.na">http://www.met.gov.na</a></td>
<td>Ministry of Environment and Tourism, Namibia</td>
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<tr>
<td><a href="http://www.namibiaturism.com.na">http://www.namibiaturism.com.na</a></td>
<td>Namibia Tourism Board</td>
</tr>
<tr>
<td><a href="http://www.nathnamibia.com">http://www.nathnamibia.com</a></td>
<td>Namibian Academy for Tourism and Hospitality</td>
</tr>
<tr>
<td><a href="http://www.natron.net/napha">http://www.natron.net/napha</a></td>
<td>Namibia Professional Hunting Association</td>
</tr>
<tr>
<td><a href="http://www.hannamibia.com">http://www.hannamibia.com</a></td>
<td>Hospitality Association of Namibia</td>
</tr>
<tr>
<td><a href="http://www.tasa.na">http://www.tasa.na</a></td>
<td>Tour &amp; Safari Association</td>
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<td><a href="http://www.nacobta.com.na">http://www.nacobta.com.na</a></td>
<td>Namibia Community Based Tourism Association</td>
</tr>
<tr>
<td><a href="http://www.panda.org/about_wwf/where_we_work/africa/where/namibia/life/index.cfm">http://www.panda.org/about_wwf/where_we_work/africa/where/namibia/life/index.cfm</a></td>
<td>WWF LIFE program “Living in a Finite Environment”</td>
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<td><a href="http://www.nnf.org.na">http://www.nnf.org.na</a></td>
<td>Namibia Nature Foundation</td>
</tr>
<tr>
<td><a href="http://www.ndt.org.na">http://www.ndt.org.na</a></td>
<td>Namibia Development Trust</td>
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<td><a href="http://www.nacso.org.na">http://www.nacso.org.na</a></td>
<td>Namibian Association of CBNRM Support Organizations</td>
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<td><a href="http://www.drfn.org.na">http://www.drfn.org.na</a></td>
<td>Desert Research Foundation of Namibia</td>
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<td><a href="http://www.unam.na/research/mrcc">http://www.unam.na/research/mrcc</a></td>
<td>Multidisciplinary Research and Consultancy Centre</td>
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<tr>
<td>Website</td>
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<tr>
<td><a href="http://www.rfa.org.na">http://www.rfa.org.na</a></td>
<td>Road Fund Administration, Namibia</td>
</tr>
</tbody>
</table>
Human Resource Development Interventions

Legend
- Namibia Borders
- Trunk Roads
- Region
- Constituency
- Towns

Education Facilities
- combined
- secondary

Population Density
- Less than 0.5 p/km²
- 0.5 to 2 p/km²
- 2.1 - 10 p/km²
- 10 to 50 p/km²
- More than 50 p/km²

MCA Interventions
- UNAM Faculty of Engineering
- Business Innovation Centres
- COTA MATS
- Education Colleges
- Study and Resource Centres
- New Sec Schools

COSDECS Sites
- New COSDECS
- Re-Equipped COSDECS

VTC Sites
- Existing VTC Sites
- New VTC Sites
- Re-Equipped VTC Sites
Introduction

Namibia’s Vision 2030 of industrialization and greater equity can only be achieved through higher rates of economic growth. Such growth implies greater productivity, which requires an improvement in the use of knowledge and technology. However, the education system has been found to be inefficient in producing the people that are needed for a knowledge society. GRN has therefore, with the assistance of the World Bank and others, developed the Education and Training Sector Improvement Program (ETSIP).

The first phase of ETSIP (2006-2011) aims at:
- Strengthening the supply of middle to high level skilled labor.
- Improving the quality, efficiency and effectiveness of general education.
- Systematizing knowledge and innovation.
- Improving the effectiveness and relevance of the tertiary education system.
- Strengthening the policy and legal framework for access to lifelong learning.

Nine sub-programs have been developed to achieve these objectives.

The MCA Namibia proposed investment into education is informed by ETSIP and by additional, valuable proposals from the University of Namibia (UNAM) and the Polytechnic of Namibia (PoN). Certain elements have been extracted that will be suitable for funding from the MCA, focusing on secondary and tertiary education. The MCA Namibia investment is intended to unlock the wider ETSIP and realize set objectives of its first phase of implementation. With the MCA Namibia investment, the Education Sector will 1.1 increase the number of Namibians with mid-level professional skills, 1.2 increase the number of Namibians with technical and business management skills and 1.3 increase general competency levels of students at secondary and tertiary level through improvements to existing education infrastructure and increasing the number of educational institutions. Human resources development in support of economic growth is the motto for the proposed MCA Namibia investment.

Overall, with the combined financing of the MCA Namibia, GRN, the World Bank, the European Union, and a number of other development partners, the first phase of ETSIP, which requires some USD600 million, can be funded. Important to note is that the contributions of development partners will be in the form of budget support and not earmarked for specific activities. Other development partners who cannot work through direct budget support will nevertheless align their activities with ETSIP.

The first phase of ETSIP is for the period from 2006/7 to 2011/12, coinciding with the period of the Third National Development Plan. Implementation of ETSIP began in June 2006, utilizing the first NAD100 million allocated by GRN to the Program. ETSIP is due to be formally appraised by its development partners in October 2006 and this will be followed by the signing of financing agreements.

The following are some achievements by end August 2006. Management and administrative arrangements have been put in place. Building plans have been accelerated for the provision of extra space for grade 11 learners in 2007. More textbooks have been ordered for grade 10 in 2007. The new Standards for Schools are being implemented through an instruction that each school must carry out a self-evaluation during 2006, which
will result in an ‘index’ for each school. Standards for the teaching profession were recently agreed at a national conference and will be used for the reform of teacher education and the introduction of a teacher licensing system. A paper proposing revision of the curriculum has been produced. A program for ICTs in Education will be launched in September 2006. The Vocational Education Bill will be tabled in the next session of Parliament, although much progress has already been made, with full participation of the private sector, in the production of new unit standards and training manuals for various occupations. The national standards framework has been promulgated. A study on the financing of the Namibian College of Open Learning has been completed. And the National Council on Higher Education has begun to meet and grapple with the issue of a funding formula for higher education institutions.  

Table 2.1: Funding Forecast (as at 11 August 2006) for ETSIP, NAD million

<table>
<thead>
<tr>
<th>Cost of ETSIP Programs</th>
<th>2006/07</th>
<th>2007/08</th>
<th>2008/09</th>
<th>2009/10</th>
<th>2010/11</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contributions pledged:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>GRN</td>
<td>100.0</td>
<td>120.0</td>
<td>80.0</td>
<td></td>
<td>300.0</td>
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<td>Private Contributions (sundry)</td>
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<td>4.0</td>
<td>4.0</td>
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<td>EU 9th EDF</td>
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<td>0.3</td>
<td>0.3</td>
<td></td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Germany</td>
<td>6.0</td>
<td>26.0</td>
<td></td>
<td></td>
<td></td>
<td>32.0</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>12.0</td>
<td>12.0</td>
<td>12.0</td>
<td>14.0</td>
<td></td>
<td>50.0</td>
</tr>
<tr>
<td>Spain</td>
<td>8.0</td>
<td>9.0</td>
<td>8.0</td>
<td></td>
<td></td>
<td>25.0</td>
</tr>
<tr>
<td>UN System</td>
<td>21.0</td>
<td>17.0</td>
<td>13.0</td>
<td>12.0</td>
<td>12.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>187.5</td>
<td>297.3</td>
<td>143.3</td>
<td>51.0</td>
<td>30.0</td>
<td>709.0</td>
</tr>
<tr>
<td>Contributions under discussion:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GRN</td>
<td>100.0</td>
<td>100.0</td>
<td>200.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 9th EDF</td>
<td>26.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EU 10th EDF</td>
<td></td>
<td></td>
<td></td>
<td>150.0</td>
<td>300.0</td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td>50.0</td>
<td>50.0</td>
<td></td>
<td></td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>MCA Namibia</td>
<td>200.0</td>
<td>200.0</td>
<td>200.0</td>
<td></td>
<td></td>
<td>600.0</td>
</tr>
<tr>
<td>Subtotal</td>
<td>226.0</td>
<td>500.0</td>
<td>500.0</td>
<td>200.0</td>
<td>600.0</td>
<td>1,200.0</td>
</tr>
<tr>
<td>Loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Bank</td>
<td>22.0</td>
<td>76.0</td>
<td></td>
<td></td>
<td></td>
<td>98.0</td>
</tr>
<tr>
<td>Soft loans (contingency)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>187.5</td>
<td>319.3</td>
<td>445.3</td>
<td>551.0</td>
<td>530.0</td>
<td>2,007.0</td>
</tr>
<tr>
<td>Difference</td>
<td>29.5</td>
<td>0.3</td>
<td>5.3</td>
<td>115.0</td>
<td>29.0</td>
<td>153.0</td>
</tr>
</tbody>
</table>

The elements that have been selected for inclusion in the MCA Namibia Program, and which are described below, are the establishment of a bursary fund that will provide access to tertiary education in strategic areas of need (Action 1.1.1) and construction and equipping of the faculty of engineering and information technology at UNAM’s northern campus (Action 1.1.2); expansion of vocational education and training, including the building of new vocational training centers (VTCs) and re-equipping others, provision of manuals and

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4 This account is not comprehensive but meant to give an indication of progress.  
5 Based on EUR1=NAD8.5 and USD1=NAD6.5
educational equipment (Action 1.2.1-1.2.4); expansion of senior secondary education through the building of additional classrooms at existing schools and the building of six new comprehensive schools (Action 1.3.1 and 1.3.2), expanding the infrastructure of Colleges of Education (CoEs) for teacher education (Action 1.3.3), construction of three regional libraries and study centers (1.3.4), provision of ICTs in 400 secondary schools (Action 1.3.5), provision of school text books (Action 1.3.6), and establishment of a business innovation centre at PoN (Action 1.3.7).

The construction of new schools and expansion and equipping of existing educational institutions will have no significant impact on the environment. New buildings will be constructed in urban environments and well populated places, so that no natural environments will be adversely affected. The proposed actions will, however, have positive socio-economic impacts by increasing the level of knowledge, and skills available in Namibia. Therefore all the proposed activities are considered to be Category C activities: unlikely to have adverse impacts. No Environmental Impact Assessments (EIAs) are considered necessary. Local authorities, however may wish to invite public participation in the site selection of schools, libraries and other educational buildings.

The design of new buildings and extensions of old buildings should consider energy efficiency and alternative energy sources in the design of buildings. For example, solar water heaters that do not require electricity can be installed. Buildings with large roof overhangs can reduce indoor temperatures and reduce the need for air-conditioning. Ground-cooling systems can also reduce the need for air-conditioning. Use of water can also be minimized through appropriate design of facilities, awareness training, and water efficient layout, planting and maintenance of gardens. By designing for energy- and water-efficient systems, and demonstrating to students (regardless of their subject choices) the value of these systems, students can obtain the necessary values and basic knowledge to help Namibian society become more aware of innovative technologies that save the country and the household money, promote clean energy, conserve water resources and reduce the country’s dependence on electricity from beyond its borders to some degree. Requirements for energy and water efficient technologies should form part of the terms of reference given to all architects and contractors involved. In the case of technical and vocational training, the environmental benefits can be promoted even further by providing education on alternative technologies in relation to energy and water.
**Action 1.1**  
**Increase Number of Namibians with mid-level Professional Skills**

**1.1.1 Revolving MCA Bursary Trust for selected Areas of Study**

**Background**

The Ministry of Education (MoE) administers the Namibia Students Financial Assistance Fund (NSFAF), which provides financial assistance to disadvantaged Namibian students to pursue studies at tertiary institutions, in the form of loans that are repayable after completion of studies, thus creating a revolving study fund.

The NSFAF currently disburses NAD54 million per annum. Although the fund annually receives approximately 15,000 applications from prospective students, it can only pay for the studies of some 3,000 students per year. Candidates are selected according to their fields of study and regional quotas. Priority fields of study receive a bigger percentage of the allocations made to students on a regional basis.

**Description of Activities**

A suitably named MCA trust will be created to provide tertiary level scholarships in strategic areas of human resource need. The first trustees will be nominated by the Permanent Secretary of the MoE and the US Ambassador to Namibia. The trustees should include persons with technical knowledge in human resource needs, representatives of tertiary institutions and civil society, and be gender balanced. It is estimated that with an endowment of NAD70 million, the MCA trust would be able to provide 65 new scholarships each year on a perpetual basis, since recipients would be under contract to repay the scholarships once they were in employment. The administration of the MCA trust would be done by the MoE’s NSFAF, but the administration of the study loans will be contracted out to a commercial bank through a tendering process. Scholarships will cover all costs, including tuition, accommodation, books and materials, and transport, since the target group will be persons who do not have the means. Not less than 45% of the beneficiaries should be female. Accommodating students from designated groups will be a priority, including orphans, women and people with disability. Special arrangements will be made for those with disabilities through disability grants. Recipients of loans will be under contract to work in Namibia and perhaps in particular regions and industries for a period of time equivalent to the duration of their studies. Breach of contract will result in a legal claim for the repayment of the scholarship.

Priority areas for these scholarships include:

- Engineering
- Architecture
- Veterinary Science
- Education majoring in Mathematics and Science
- Agronomy
- Horticulture
- Marine biology

For some specialized courses students may be required to do all or part of their studies in South Africa.
Benefits
This investment will enable an additional 65 Namibians, 5 from each of the 13 regions, per annum to enroll in tertiary education in areas as outlined above. By the end of the first 5-year period, 325 students would have benefited from this program and a similar level of support will be maintained indefinitely. More graduates will enter key industries and professions, increasing productivity. Consequently, a ripple effect on the economy will be realized.

Costs
The following model has been developed in terms of the scope and sustainability of the fund.

<table>
<thead>
<tr>
<th>1.1.1 Revolving MCA Bursary Trust for selected Areas of Study</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scholarships for 5 best students from 13 regions</td>
<td>0.300</td>
<td>0.631</td>
<td>0.999</td>
<td>1.392</td>
<td>5.859</td>
<td>9.2</td>
</tr>
<tr>
<td>Total</td>
<td>0.3</td>
<td>0.6</td>
<td>1.0</td>
<td>1.4</td>
<td>5.9</td>
<td>9.2</td>
</tr>
</tbody>
</table>

The funds are planned according to the annual intake of 65 students and from year 2 onwards the cumulative amount is required plus a 5% inflation factor. In year 5 the remaining funds are requested for the completion of all current students in their studies until year 5 to complete these studies.

Technical Analysis
The GRN bursary scheme, being the biggest in the country, is well known to all in need of funds for tertiary education and is therefore in a position to select the most deserving of candidates and to balance all factors such as field of study, region, gender and disadvantaged groups. The innovation in this case will be the involvement of the trustees to scrutinize the proposed allocation of scholarships and the administration of the loans by a commercial bank. In other countries the administration of loans by government has been found less efficient than administration by a commercial bank. Several commercial banks have adequate capacity for loan recovery. There is adequate space for students of this caliber in the Namibian labor market and a SADC protocol allows for mobility of students.

Economic Assessment
The MCA Bursary Trust indicates an ERR of 22%. The Trust has a high initial input cost of sponsoring the students tutoring as well as accommodation and related study cost. The initial costs are high and repayments are expected not before 5 years, when the students return from studies and start to work. The anticipated studies and professions are usually longer than a Bachelor’s degree of three years. While the “delayed” repayments influence financial viability, the ERR of the Trust is positive, which indicates a relative strong economic return compared to the relatively high investment.

The calculated ERR does not include the economic benefits of using own labor and local professionals in the country as opposed to the current system in Namibia, where a large number of professionals are expatriates. When including this benefit in correct detail, which is very difficult to measure with existing data, the ERR would be higher.

Social Assessment
The overwhelming majority of Namibians view education and particularly tertiary education as the key to improving their livelihoods and propel them out of poverty into a situation of relative well-being. Parents, especially in the rural areas regard the education of their
children not only as a means to secure the future well-being of their children but also their own. Should their children be able to get a good education and succeed in finding good employment they would expect support from these children within the context of extended family assistance and kinship support. Yet, few previously disadvantaged households can afford the cost of tertiary education. In fact, the majority of households, especially in the rural areas of the country, find it difficult to afford the cost of secondary education. Feelings of hopelessness are starting to manifest itself amongst the youth because even if they succeed in Grade 12, most find themselves unemployed with little hope to ever find gainful employment.

Expanding access to bursaries for the most deserving will undoubtedly contribute to poverty alleviation. Concentrating on areas of study with a proven resource need will ensure that such beneficiaries will find good employment and contribute to economic development. The fact that the scholarships will cover the entire cost of tuition, accommodation, books, materials and transport will ensure the ability to concentrate on the studies at hand and should enhance the success rate.

The proposal makes provision for gender balance, and places emphasis on orphans and people with disabilities. However, detailed provisions for these will be formulated to ensure that good intentions are practically implemented. The use of external private financial institutions is likely to ensure the sustainability of the fund and arrangements could be made with the employers of the graduates with regard to the regular repayment of the loans.

**Participation of Development Partners**

The NSFAF provides similar services to other agencies or countries offering scholarships for Namibians. The MCA trust may also be able to attract contributions from other sources, although none have been identified at the time of writing.

**Risk Assessment**

Since the MCA trust will be covering all expenses, it will be an attractive option and will therefore be able to select highly capable applicants. Despite rigorous screening, it is nevertheless possible that some students will drop out. Based on past experience it is believed that the drop-outs will not exceed 1% per cohort per year. According to the census data less than 4% of tertiary graduates are unemployed. The main risk is defaulting on repayment of the loan. With its relatively small population it is not difficult for debt recovery agencies to trace those who are in default on their loans. The courts provide for a simple system to recover debt from the salary of an employee.

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Action 1.1.2 Construction and Equipping of the Faculty of Engineering and Information Technology at UNAM Northern Campus

Background

UNAM started a pre-engineering program in 2000 whereby prospective Namibian students, mainly from the disadvantaged groups, spend two years at UNAM (1 year of basic science and 1 year of engineering) and then are transferred to the University of Cape Town or the University of Witwatersrand in South Africa, and few to the University of Botswana, where they join the second year of engineering in a four-year engineering program. This arrangement was arrived at through a memorandum of understanding with these universities. The total number of students transferred each year is very low, typically between 25 and 40, because the South African universities must also deal with the high demand of their own nationals to study engineering at their home universities.

Two years ago, the South African government recommended to its universities to limit future enrolment numbers of their students to the levels that existed in 2004. At the same time increased enrolment by South African black students was encouraged. The cumulative effect will be an ever smaller number of places for Namibian engineers at South African institutions. Another motivation for establishing local engineering training facilities is that the production cost of one graduate engineer is about NAD25,000 per year in Namibia, while in South Africa the costs are NAD50,000 per year.

In 1998 the Engineering Council of Namibia (ECN) had only 381 Registered Engineers (Professional and Incorporated Engineers) on its register. By 30 June 2006, the total number of Registered Engineers in various disciplines had reached 562, representing an increase of 181 Engineers over a period of eight years, or an average of about 22 Registered Engineers per year. It is important to note that among the Registered Professional Engineers, 48% were “white Namibians”, 32% were “previously disadvantaged individuals” and 37% were “expatriates”. All these engineers were trained in South Africa or elsewhere abroad.

An estimated 5,000 Registered Engineers will be required by 2030. At the current supply rate, by 2030 only an additional 528 Registered Engineers will have entered the labor market, resulting in a deficit of close to 4,000 professional engineers.

Table 2.2 Projections of Demand and Supply for Professional Engineers by 2030 at current roll-out

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Namibians</th>
<th>Expatriates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demand</td>
<td>5,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply</td>
<td>1,090</td>
<td>687</td>
<td>403</td>
</tr>
<tr>
<td>Deficit</td>
<td>3,910</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

UNAM has therefore decided to establish a fully fledged Faculty of Engineering and Information Technology at the Ongwediva site of its Northern Campus. The main focus of the training is to produce graduate engineers specializing in Mechanical Engineering; Electrical and Electronics Engineering; Civil Engineering; Computer Engineering; Mining and Metallurgical Engineering and Chemical Engineering. Student enrolment will be designed in such a way that the projected number of engineers required by 2030 would be met. When the faculty becomes full operational, it will have 1,000 students engaged in various engineering disciplines.
Description of Activities

The building will consist of phase 1 of the faculty of engineering and information technology, and other operational facilities for the Main Administration Block, the Library and three engineering departments, namely Mechanical Engineering, Electrical and Electronics Engineering and Civil Engineering.

Benefits

The proposed enrolment in the first year is 50 students per department, thus making a total of 150 students in the first year. The projected roll-out of engineering graduates after a normal duration of 4 years is 40 students per department, or 120 for the three departments per year. Over a four year training period the average number of students per department is estimated to be 175 (50+45+40+40), or a total of 525 for the three departments. In this regard, at full capacity the annual average number of students per year in the faculty over 4 years is 263. Over 4 year the average number of students in the faculty is 1,052. At full capacity, 240 engineers are expected to qualify for the job-market every year. The number of teaching staff per department is planned to be 11 per department, thus giving a staff/students ratio of 1:16, which agrees well with the UNESCO recommended figure of 1:15 for engineering training.

There will be 4 teaching laboratories for each department. Each laboratory would be designed for a maximum capacity of 25 students. Although the normal engineering training program is 4 years, it is expected, however, that during the first 5 years of the faculty’s operation, the majority of the students will need an upgrading year to improve their science and mathematics. This is due to the fact that it would take some time before the effects of improved science teaching at the primary and secondary schools are noticed at the tertiary level. In this regard an allowance has been made for an upgrading year for students with poor science and mathematics background. Such students would join a pre-engineering year before admission to the first year of engineering, and would therefore take five years to complete a degree at the UNAM.

After the construction of Phase I of the action, Phase II will concentrate on the remaining three departments so that the total number of department will be 6 when the faculty is fully operational. The engineering disciplines in the Faculty of Engineering & Information Technology were chosen in line with the development policy of Namibian, its economic competitive advantages and in line with the Namibia’s Vision 2030. The Namibian industry will benefit significantly from locally trained engineers with a thorough knowledge of the local situation in Namibia as opposed to having expatriate engineers, as is currently the case. The Namibian industry and the engineering professions have been part of the feasibility study for the establishment of the faculty of engineering.

Furthermore the location of the faculty in the 5 northern populous regions of the country would benefit SMEs in improving the quality of their products, which are currently not accepted by the local wholesalers. The faculty will be established on the principles of public-private-partnership (PPP). Under the PPP-program, local communities and vocational training centers such as Valombola in Ongwediva, would also benefit from the faculty.
Costs

<table>
<thead>
<tr>
<th>1.1.2 Construction &amp; Equipping: Faculty of Engineering &amp; Info Technology at UNAM Northern Campus</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Administration Block &amp; Staff Dining Room</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.7</td>
</tr>
<tr>
<td>Technical Library</td>
<td>1.315</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>2.0</td>
</tr>
<tr>
<td>Dep. Mechanical Engineering with 4 laboratories</td>
<td>1.315</td>
<td>1.315</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>2.6</td>
</tr>
<tr>
<td>Dep. Electrical &amp; Electronics Eng with 4 laboratories</td>
<td>1.315</td>
<td>1.315</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>2.6</td>
</tr>
<tr>
<td>Dep. Civil Eng with 4 laboratories</td>
<td>1.315</td>
<td>1.315</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>2.6</td>
</tr>
<tr>
<td>Lecture Theatre &amp; Amphi-Theatre</td>
<td>1.052</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.1</td>
</tr>
<tr>
<td>Student Cafeteria</td>
<td>0.000</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.7</td>
</tr>
<tr>
<td>Student Recreational Facilities</td>
<td>0.000</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>1.3</td>
</tr>
<tr>
<td>Staff Houses (20 units)</td>
<td>0.658</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>2.0</td>
</tr>
<tr>
<td>Five Training Workshops</td>
<td>0.000</td>
<td>0.000</td>
<td>1.315</td>
<td>0.658</td>
<td>0.000</td>
<td>2.0</td>
</tr>
<tr>
<td>Equipment and Furniture Purchases</td>
<td>0.658</td>
<td>3.288</td>
<td>2.630</td>
<td>0.000</td>
<td>0.000</td>
<td>6.6</td>
</tr>
<tr>
<td>Research and Learning Materials</td>
<td>0.000</td>
<td>1.315</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>2.6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>8.3</strong></td>
<td><strong>11.2</strong></td>
<td><strong>5.9</strong></td>
<td><strong>1.3</strong></td>
<td><strong>0.0</strong></td>
<td><strong>26.7</strong></td>
</tr>
</tbody>
</table>

The engineering faculty is of great importance to UNAM and considerable planning has been done already. Further commitments from development and investment partners have been received by UNAM to ensure a smooth implementation process for this action. Currently the lack of funding was the only limiting factor. As the construction work will be demanding, two years are planned for this action.

**Risk Assessment**

Initially the staff complement of the new faculty will draw substantially from expatriate expertise to teach, research as well as application of knowledge (innovation). However, UNAM has already secured scholarships for staff development towards the new faculty. Early this year UNAM signed a Memorandum of Understanding with a University in the USA, which is willing to assist to train a limited number of Namibians at postgraduate level (MSc & PhD), in engineering, so that when they graduate, they will return to Namibia and become lecturers in the new faculty. Over 60% of Namibian population is located in the northern regions. The faculty could therefore draw its student population from these regions, which have been economically disadvantaged. The trained engineering students will be able to get jobs in the public or private sectors. Currently there is a deficit of over 200 engineers in the market.

**Technical Analysis**

The Ongwediva site on which the faculty will be situated is owned by UNAM based on a free-hold title deed donated by the Ongwediva Town Council. The site measures 13 hectares and is strategically located adjacent to the Valombola Vocational Training Centre. After construction, the lecture halls and offices must be furnished and the engineering laboratories must be equipped with laboratory equipment, which is mandatory for successful engineering training. On the other hand, the Library will need to be stocked with books, computers, audio-visual equipment and journals to support both undergraduate and postgraduate studies and research.

Phase II of the faculty will consist of additional three departments, namely Computer Engineering, Mining and Metallurgical Engineering and Chemical Engineering. Other facilities related to student activities will also be constructed in phase II. Funding is
expected to come from GRN and other development partners. A number of GRN facilities have been built in the regions to serve as technology transfer and innovation centers, focusing on manufacturing for import substitution.

The technology transfer from engineering researchers and senior students at the faculty would increase potential for local manufacturing base. The faculty will be closely situated to the Valombola vocational training center and this would increase synergy in manufacturing and technology transfer.

The Senate has already approved the engineering curriculum that will be offered in the new faculty. Plans are underway to ensure that, the curriculum will be accredited by the NQA, Namibia Qualification Authority, through the Engineering Council of Namibia (ECN) and also the Engineering Council of South Africa (ECSA). Graduates of this faculty will therefore qualify to be registered as practicing engineers by ECN, in Namibia and by ECSA, in South Africa as Professional Engineers after completing three years of professional training.

Economic Assessment
As the most densely populated regions of the country are in the north, there is good potential for manufacturing-led economic development. The provision of the three mostly needed engineering qualifications for Namibia are appropriately suited to provide the necessary and relevant human resources required to support, maintain, manage and develop a manufacturing-led economic growth in those regions.

Although it is a costly exercise to set up an engineering faculty, the ERR is 23%.

The ERR does not include the full economic benefit of being less dependent on foreign engineers. There will be additional economic benefits of an increase in personal taxes and increased spending of disposable income in the local economy by local engineers.

The administration facilities of this proposed faculty would at a later stage be shared not only by three engineering departments but also by a planned six departments of engineering. Such would reduce the costs per engineering department and thus increase the ERR of this action.

Social Assessment
The technical professions, especially in engineering sciences are extremely important to support economic development in any country. The cited figures show considerable shortages in the number of engineers in the country, to such an extent that there are many expatriates involved in the engineering profession in Namibia. Most of these are either employed in the private sector as consultants, in large parastatals such as the Roads Authority, at government ministries such as the Ministry of Agriculture, Water and Forestry (MAWF), or at larger local authorities. Especially amongst local authorities in Namibia, a considerable shortage exists and this has a major influence on service provision.

On the other hand, meritorious young Namibians within science and mathematics streams find it difficult to pursue careers in the engineering field due to the unavailability of quality local engineering degrees. However, current perceptions have it that the quality of qualifications of students that graduated from UNAM are second rate and employers, especially in the private sector would be reluctant to employ such graduates unless they can be assured of the quality of their education. For engineers to be able to register, they also have to work under the supervision of chartered engineers for a certain period before registration. The quality of the degrees is therefore of the utmost importance. Plans are being put in place to ensure that the teaching staff would be suitably qualified and it is suggested that the curricula be developed with other quality institutions. Access to the
faculty must be based on merit but gender balance should be ensured through a quota system with minimum admission criteria ensuring quality.

The intervention would contribute to not only addressing the lack of engineering skills in the country, but also provide additional opportunities to the youth to suitably qualify themselves and find gainful employment in the higher paid professions. The influence of this on poverty alleviation has proved to be considerable within the context of Namibian culture and kinship support systems. Parents in the rural areas during the PPA exercise reported that the most important intervention that could lift them out of poverty was for their children to have a good education and find gainful employment. This would result in more remittances to the rural areas and the involvement of children in the acquisition of productive resources to farm more effectively.

**Participation of Development Partners**

Discussions with the Government of India indicate that once GRN has started construction of the Faculty of Engineering and Information Technology, the Government of India would assist with the construction of the other 2 departments, namely the Departments of Computer Engineering and Mining. Other departments, such as Chemical Engineering including Biotechnology and Food processing would be added.

Other development partners, like the Norwegian Government through its sponsored capacity building project, SANTED, has offered engineering post graduate scholarships to a few number of Namibian students who will eventually teach in this faculty. During the pledging gala evening, Roads authority pledged to equip the civil engineering lab. Nampower pledged to equip the electrical lab. One prominent local business person has pledged to build student hostels.
**Action 1.2**  
Increase Number of Namibians with technical and business Management Skills

**1.2.1 Construction and Equipment of 3 new Vocational Training Centers (VTCs) and Expansion of Valombola VTC**

**Background**

The Namibia labor force is characterized by a mismatch between skills availability and skills requirements, which has been described as “skills anorexia” by a leading member of the Namibian business community. GRN has embarked upon a reform of the vocational training and education sub-sector entailing the creation of the National Training Authority (NTA) in which the private sector has majority representation. A training levy based on the payroll of employers will be instituted. A system of competency based training (CBET) is also being introduced within the National Qualifications Framework (NQF). Currently GRN administers four vocational training centers at Okakarara (Otjozondjupa region) Rundu (Kavango region), Ongwediva (Oshana region), and Katima Mullilo (Caprivi region) and subsidizes two major VTCs at Arandis (Erongo region) and Windhoek (Khomas region). The total enrolment in these centers is currently 2,068 per year. Only a fraction of those applying for places can be enrolled.

**Description of Activities**

Three new VTCs will be constructed and equipped at Gobabis, Keetmanshoop and Eenhana, in the Omaheke, Karas and Ohangwena regions. There are currently no VTCs in these regions. It should be noted that construction of a small VTC will commence this year at Eenhana and this action will therefore serve to extend and enlarge that center.

The occupational areas to be covered at these centers in terms of curricula either currently developed or to be developed by the NTA will include construction, automotive, business services, hospitality and tourism, engineering, mining, clothing and textiles, cosmetology and telecommunications. At the present time some VTCs have achieved gender equity in their enrolment and in the new VTCs, gender equity in enrolment will be the practice. In addition, a specialized solar energy training facility will be built at Ongwediva as an extension of the Valombola VTC. All trainees will receive training in entrepreneurship and small business management.

**Benefits**

It is anticipated that each of the new VTCs will enroll between 300 and 500 trainees per year. This will include the offering of short courses that are not currently provided for. The solar energy facility would benefit 50 trainees per year. Because the majority of unemployed persons are either rural-based or youth, the action would pull these persons out of poverty. It would provide them with a skill, thereby enabling them to become employable, both in the formal and non-formal sectors of the economy. More skilled persons will be available to industry. It is believed that with a suitable mix of courses, gender equity can be achieved in vocational education.

**Costs**

The construction costs are estimated at NAD25 million per center. It should be noted, however, that this is a planning figure and will be subject to feasibility studies and consideration of the specific skills requirements of the region in which the center is located.
It is estimated that the solar energy training facility could cost NAD8 million subject to further investigation. The cost of equipment and furniture is included in these amounts.

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1 Construction, Furnishing &amp; Equipment of 3 new VTCs and Expansion of Valombola VTC</td>
<td>16.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feasibility studies/ Preparation of architectural and construction tenders</td>
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<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
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</tr>
<tr>
<td>Architectural drawings, architectural supervision/Architect</td>
<td>0.395</td>
<td>0.395</td>
<td>0.395</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Construction three new VTC centers</td>
<td>3.288</td>
<td>3.288</td>
<td>3.288</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Furnishment three new VTC centers</td>
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<td>2.630</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Upgrade and expand Valombola VTC to accommodate renewable energy satellite centre</td>
<td>0.658</td>
<td>1.315</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>All terrain vehicle for communities outreach program (for the renewable energy centre)</td>
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<td>0.000</td>
<td>0.053</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>5.0</strong></td>
<td><strong>7.0</strong></td>
<td><strong>0.0</strong></td>
<td><strong>0.0</strong></td>
</tr>
</tbody>
</table>

The construction of new VTCs will commence in year 1 after confirmation of the proposed funding and the technical planning. The construction will be planned for one new VTC per year. To also ensure a qualified supply of trained personnel for the VTCs it would be impossible to commence all three new VTCs in one year. The procurement and training of qualified personnel will commence in year 1. The upgrade and expansion of Valombola VTC will also commence in year 1.

**Technical Analysis**

In view of the new curricula being introduced for vocational training, it will be possible to build and equip workshops and other facilities according to what is required. Involvement of the private sector in curricula design should ensure high employability of trainees. A minority will also be able to enter the market as self-employed artisans.

The system of quality control and assessment being introduced by the NTA will ensure the credibility and acceptability of trainees.

Namibia having the most days of sunshine of any country in the world has abundant scope for the development of solar energy particularly as the price of fossil fuels continues to increase. Several new businesses are emerging in this area with GRN support.

**Economic Assessment**

The economic benefit of all vocational activities has been separated and the results are the following:

- Construction and furnishment of three new VTCs: 24%.
- Upgrade and expand Valombola VTC to accommodate renewable energy satellite centre and the all terrain vehicle for communities outreach program (for the renewable energy centre): 24.3%.

The new VTCs yield a favorable ERR as the current demand for skilled artisans and related demand for vocational training places are high in Namibia.

The new VTCs are proposed to be constructed in central places in the region, thus offering school leavers an opportunity to pursue tertiary education closer to home. The construction of VTCs in thriving rural centres benefits these towns, and may encourage local small-scale manufacturing.
The Valombola VTC will be upgraded to accommodate a Renewable Energy Satellite Centre that will host a community outreach program (for which an all terrain vehicle is required). This outreach program will reach an additional 300 beneficiaries. The use of solar stones instead of firewood and other conventional energy saving technologies will be demonstrated at village level in support of sustainable environment.

Social Assessment

According to the 2001 Population and Housing Census, Namibia had a labor force participation rate of 54.1% of which 26.8% of males and 35.9% of females were unemployed. When one further considers unemployment relative to age groups, it becomes clear that the unemployment rate amongst 15-19 year olds is 40.4%, while it is 46.9% amongst 20-24 year olds and 36.8% amongst 25-29 year olds. Thereafter, the rate of unemployment drops below the national average. One can therefore see that unemployment is more severe under those aged 30 years and younger. In terms of sheer numbers, 109,923 of the 185,258 unemployed persons in Namibia is aged between 15-30 years of age. This represents 59% of all unemployed persons inside the labor force. Youth unemployment could be said to be a severe problem in Namibia, approximating a time bomb.

VTCs are known amongst the youth, and it is a sought after opportunity. However, during the recent PPAs, accessibility has been cited as one of the constraints and a reason why many young people could not attend these centres. Accommodation especially was mentioned as a constraint and VTCs should make provision for residences for students from rural areas to try and solve this problem.

Certain trades and courses are still regarded as not suitable for women and this will be attended to through allowing equal access to all courses inclusive of the traditionally male dominated and more lucrative trades such as auto mechanics, engineering and welding. The three new VTCs would provide training to an additional 1,200-1,500 people per annum. Although small in absolute numbers, it should make a sizeable contribution to improved employability and will undoubtedly contribute to poverty alleviation amongst a considerable proportion of these students.

Participation of Development Partners

The major agency currently involved in this sector is Lux Development at the Zambezi VTC.

Risk Assessment

One of the main risks would be securing the services of adequately qualified instructors to do the training at the new centers. Provision is, however, made under ETSIP for the training of vocational training instructors at PoN where an in-service course is already established. The trend in vocational education has been for trainees to leave the apprenticeships mid-course because of the high demand for their skills in the market. The new structure of vocational education will allow trainees to leave with qualifications at intermediate levels and also to return to the system when they so wish. The management of VTCs will be decentralized to the VTCs as part of ETSIP and this will require sufficient capacity building. Legislation for the establishment of a national training authority is about to be tabled in Parliament, although the NTA already exists as a project.

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7 Tables 6-4 and 6-5.
Action 1.2.2 Re-equipment of 4 existing VTCs

Background
Quality training requires sufficient, up-to-date equipment in working order. Thus, for the current VTCs to meet the demands of an outcomes-based training system they must be prepared for turnover of equipment and keep equipment up-to-date. New training courses for occupations not previously catered for need to be added.

The existing VTCs are located in Rundu, Katima Mulilo, Okakarara and Ongwediva.

Description of Activities
Equipment standards will be defined in line with CBET curricula. A survey will be conducted to compare the actual provision of equipment at the existing VTCs with the defined standards in order to identify the gaps and equipment needed. This will lead to the preparation of equipment lists and will be followed by purchase and installment of new equipment. Instructors will be trained in the use and maintenance of the new equipment.

Benefits
The VTCs and other training providers would benefit in that standards for various training programs would have been set. An equipment gap analysis will guide the re-equipment, which is set to meet the new standards. The relevance of competencies among trainees will thus be improved.
In total 1,631 trainees will benefit annually from the re-equipment of 4 existing VTCs.

Costs

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.2 Re-equipment of 4 existing VTCs</td>
<td>0.000</td>
<td>0.000</td>
<td>0.789</td>
<td>0.000</td>
<td>0.000</td>
<td>0.8</td>
</tr>
<tr>
<td>Re-equipping existing four VTC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.8</td>
</tr>
<tr>
<td>Total</td>
<td>0.0</td>
<td>0.0</td>
<td>0.8</td>
<td>0.0</td>
<td>0.0</td>
<td>0.8</td>
</tr>
</tbody>
</table>

It is proposed to commence with this action only in year 3 in line with the completion of the third new VTC and this procurement of equipment will be done simultaneously with the re-equipping of the existing VTCs.

Technical Analysis
MoE will call upon technical assistance to identify the equipment needed, as described above. The identified equipment will be procured and installed through the MCA Namibia tendering process.

Economic Assessment
The ERR for re-equipping the existing four VTCs ERR is 44.1%

The re-equipping of the existing VTCs is cost-effective, yielding a higher return in comparison to the construction of new centres due to cost savings on buildings and infrastructure.

This action is crucial for producing a labor force that is well trained in current technologies with current machinery, meeting the demands of modern industry.
Social Assessment

The same arguments as for the construction of the three new VTCs are valid. However, the principles of accessibility and gender equality should also be implemented in the existing VTCs.

Participation of Development Partners

Lux Development is involved in an upgrading program at the Zambezi VTC in the Caprivi region.

Risk Assessment

Should the equipment not be upgraded, VTCs may run the risk of not being able to meet the demands of a competency-based training system. No difficulties are anticipated in acquiring and installing appropriate equipment.

Action 1.2.3 Re-equipment of 5 existing Community Skills Development Centers (COSDECs) and Construction of 5 new COSDECs

Background

Currently, less than 15% of entrepreneurs in Namibia receive any sort of technical training and very few have participated in any form of business management upgrading. They need the business management skills and support to break into the SME market. The overall mission of COSDECs is to increase the income-earning capacity of Namibia’s most marginalized populations – unemployed youth, women and low-skilled adults – by providing access to market-responsive entrepreneurship training and resources, thereby improving the economic performance of the informal sector. Specific objectives to meet this target goal are for COSDECs to assist communities to address and act on needed training (technical, vocational, business, self-employability and workplace essential skills) and SME support to assist the economically and academically disadvantaged Namibians lacking the skills to achieve a sustainable livelihood.

The COSDECs, with support of the Community Skills Development Foundation (COSDEF), currently train some 1,100 young Namibians per year. In addition, the new NTA approved training standards will allow COSDEC graduates to articulate through the NQF levels. This was not possible in the old vocational and training system, since COSDEC trainees were never permitted to enter the system due to formal education enrolment requirements. This change will make COSDECs the first layer of education and in essence a feeding ground for VTCs. The changeover will likely ensure increased access to all VTCs and COSDECs. On a pragmatic level, it will allow COSDEC graduates to increasingly access employment, especially for those who complete the job attachment process. As most of the COSDEC programs were geared towards short demand-driven courses, there is a need to expand the training facilities and install the necessary equipment to meet the demand of these new NTA training standards. The NTA has developed training materials for all training providers, which will need to be purchased to ensure training according to national standards. Current facilities at three of the existing COSDECs in Ondangwa, Tsumeb and Otjiwarongo will need to be expanded with two additional workshops each to accommodate the training standard changes.

Description of Activities

Two additional workshops will be constructed at the existing COSDECs in Ondangwa, Tsumeb and Otjiwarongo while five new COSDECs will be built in Swakopmund, Luderitz, Keetmanshoop, Rundu and a new Arts and Crafts training centre in Swakopmund. New and
existing COSDECs will be equipped to meet the new standards of the NQF/NTA and equipment will include books and educational equipment. New NTA Training materials will be acquired for 10 COSDECs, approximately 40,000 books or 20 books per trade for 5 trades and 40 trainees at all COSDECs, improving the quality of skills training for 960 students per year.

**Benefits**

Existing COSDECs with additional workshops and equipment will meet the requirements of NTA/NQF standards, but will cater for the current number of students. Expansion will enhance the standards and provide entry and exit levels on the NQF.

Trainees will include young and unemployed Namibian men and women, low skilled adults, school drop-outs, and unemployed adults. Special and specific attention will be given to increase the likelihood and success of self-employment in of youth, women, low skilled adults, and the creation of household production units for SME operators in and around Katima, Ondangwa, Rundu, Tsumeb, Otjiwarongo, Opuwo, Khorixas, Gam, Luderitz, Arandis and in the Democratic Resettlement Community (DRC) on the outskirts of Swakopmund.

This investment will create 960 training opportunities annually at the 5 new COSDECs and benefit 1,100 students through the re-equipment of 5 existing COSDECs.

**Costs**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.2.3 Re-equipment of 5 existing COSDECs and Construction of 5 new COSDECs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>Additional workshops to existing COSDECs - 3 units at 2 workshops per unit Ondangwa, Tsumeb, Otjiwarongo</td>
<td>0.000</td>
<td>0.000</td>
<td>0.132</td>
<td>0.132</td>
<td>0.132</td>
<td>0.4</td>
</tr>
<tr>
<td>5 new COSDECs (Swakopmund, Luderitz, Keetmanshoop, Rundu)+ New Arts and Crafts training centre Swakopmund</td>
<td>0.000</td>
<td>0.000</td>
<td>0.401</td>
<td>0.802</td>
<td>0.802</td>
<td>2.0</td>
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<tr>
<td>Re-equipping new COSDECs</td>
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<td>0.000</td>
<td>0.145</td>
<td>0.289</td>
<td>0.289</td>
<td>0.7</td>
</tr>
<tr>
<td>Re-equipping present COSDECs</td>
<td>0.000</td>
<td>0.000</td>
<td>0.158</td>
<td>0.237</td>
<td>0.000</td>
<td>0.4</td>
</tr>
<tr>
<td>Books &amp; Educational Equipment 10 COSDECs- new NTA Training materials approx 40,000 books (20 per trade x 40 trainees x 5 trades x 10)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.395</td>
<td>0.395</td>
<td>0.000</td>
<td>0.8</td>
</tr>
<tr>
<td>Provision of ICTs (PC labs) equipped with 12 stations to COSDECs</td>
<td>0.000</td>
<td>0.000</td>
<td>0.059</td>
<td>0.059</td>
<td>0.118</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>0.0</strong></td>
<td><strong>1.3</strong></td>
<td><strong>1.9</strong></td>
<td><strong>1.3</strong></td>
<td><strong>4.5</strong></td>
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</tbody>
</table>

The funding of the additional workshops will commence in year 3 and one unit consisting of 2 workshops will be constructed per year at the 3 COSDECs. This slow implementation rate will ensure that procurement of qualified personnel will not be jeopardized and done in a hastily manner.

The commencement of constructing 5 new COSDECs will commence in year 3 with one new COSDEC and in year 4 and year 5, two new COSDECs will be constructed per year. The equipping of these new COSDECs will follow simultaneously thereafter. The re-equipping of present COSDECs will be done in year 3 (2 units at NAD600,000 each) and year 4 (3 units) and will be done in conjunction with the new COSDECs as the equipment
will be very similar. To allow for easy assessment, planning, implementation, and procurement of equipment as well as possible confirmation of the equipment being suitable and appropriate for the COSDECs, this procurement action has been spread over three years and starting with 2 units first. The provision of books for all COSDECs is in line with the planning horizon of constructing the new and the re-equipping of present COSDECs. The same principle applies also to the provision of ICTs.

Technical Analysis

COSDEF, with the assistance of Bow Valley College (Canada), has recently implemented the Linkage Model at all its centers and affiliates. The Linkage Model is a competency-based approach that promotes an entrepreneurial mindset and the skills necessary to achieve sustainable livelihood. This model will guide and enable poor Namibians to improve the quality of their lives.

The issue of architectural drawings, project management, and other technical fees are included in the cost per centre. All centres have access to water and electricity. The issue of land is still under negotiation with the local authorities, yet they have all pledged their support. MoE has funds available should any land be purchased from the local authorities.

Economic Assessment

The ERRs for this action are calculated as follows:

- Additional workshops to existing COSDECs (3 units at 2 workshops per unit Ondangwa, Tsumeb, Otjiwarongo) – 72.8%
- 5 new COSDECs and New Arts and Crafts training centre Swakopmund and the equipping of the new COSDECs –78.2%
- Re-equipping existing COSDECs – 60.4%
- Books and educational equipment for 10 COSDECS – 35%
- Provision of ICTs (PC labs) to COSDECS – 66.4%

Finding employment is very difficult for school leavers with less than 50% of all school leavers (grade 10 and grade 12) absorbed in the formal economy. COSDECs will assist school leavers to become semi-skilled and skilled, focusing on those learners who are lacking the funds and the qualifications to enter into formal tertiary education (such as VTCs, PoN and UNAM). This action is important for the informal economy and emerging businesses.

In contrast to the VTCs the re-equipping of the existing COSDECs yields a lower ERR than the new COSDECS, although the cost of a new COSDEC is higher. With the VTCs the explanation was that re-equipping existing VTCs bears a lower cost than building a new VTC. The explanation for this with the COSDECs is that the existing COSDECs have an annual intake of 120 students while the proposed new COSDECs will have an annual intake of 300 students. Thus the economic benefits of a new COSDEC accrue to a larger number of beneficiaries.

The books and educational equipment yield a favorable ERR, despite their relatively short economic lifespan.

The provision of PCs to the COSDEC will contribute greatly to the enhanced quality of education. Entering economic active life without computer literacy is becoming ever more difficult, even in micro and SME business.
**Social Assessment**

Given the high rate of unemployment and youth unemployment in particular, COSDECs certainly will contribute to improving skills and thereby improving the chances of employment or successful self-employment. The emphasis on technical skills and entrepreneurial training is commendable, however, one should have no illusions that every person has the ability to become a successful entrepreneur.

Whether COSDECs can successfully fulfill its mission of reaching the unemployed youth, women and low skilled adults is however, questionable, especially if one thinks about rural dwellers. They are mostly locked up in a day-to-day fight for survival with a tremendous local workload and no time or inclination to be away from home for extended periods of time to learn a trade that means little in the rural areas. At most it would benefit the rural youth who dropped out of school and engage in piecework to survive and earn a little reward in cash or kind. The urban areas present a better beneficiary profile. They are less wrapped up in the daily labor routine than rural residents and livelihoods are much more employment or SME (or should one say Cuca shop\(^8\)) driven.

The identified risks are real and should be addressed. Trainers would be guided to ensure that they approach the training correctly and this trainer guidance would be part of this action. There is little logic in having 10 new COSDECS without good trainers, inept at following the new training directions. The second risk mentioned is even bigger and more difficult to address. If success depends on the ability of those who completed the program to implement sound SME management practices, take calculated risks and venture into the SME sector, then this is perhaps overoptimistic. However, if only a proportion of trainees succeed, the action would be worthwhile and will contribute especially to poverty alleviation in the urban areas.

**Participation of Development Partners**

The operations of COSDECs are financed by GRN through MoE. MoE subsidizes COSDEF on a yearly base for it to meet its mandate of training the unemployed youth.

**Risk Assessment**

Trainers must accept a new approach to training, one that is integrated, competency-based and market driven. They must also be willing to attend training workshops and apply what they have learned. Trainees must see the value in what they are learning and the practical applications of the skills they acquire. Additionally, lower skilled community residents must feel comfortable, confident and supported enough to pursue training. Those who complete the program must be prepared to implement sound SME management practices, take calculated risks, and venture into the SME sector if they are not already part of it. GRN must continue to support community training and provide assistance to those individuals wanting to start their own enterprises. The Namibian culture must accept more women in non-traditional occupations, and training centers must actively encourage their participation. ETSIP will embark on awareness campaigns, ensuring that all centers adhere to the gender quota for intake. ETSIP M&E system is in place and will monitor the quota.

A monitoring and reporting system is in use by the COSDECs and produce specific reports on the MCA financed activities.

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*“Cuca shop” is an informal café.*
**Action 1.2.4 Expansion and Re-equipment of the existing College of the Arts Department of Media Arts and Theatre Studies (COTA MATS)**

**Background**

COTA MATS is the only institution in the country that provides vocational career-based training in media design and production, and in the full spectrum of all forms of electronic media (radio and television), print media and all forms of new media, and that is also integrated with the related technical and performing arts in music and drama.

The expansion and re-equipment of training facilities at COTA MATS will provide opportunities to expand current training and skills development for extended and advanced techniques in media design and production skills. The facilities will also create the means for vital co-production activities and benefits at industrial and professional levels between joint student and local industry partner teams to improve current bridging mechanisms between training and local industry employment or job creation. In addition, COTA MATS will be enabled to develop and produce highly informative and cost-effective educational audio-visual content materials as vital extra-curricular training support at both vocational level, and for the various outreach tuition programs and activities of COTA.

COTA MATS was established nearly 5 years ago in 2001 and is situated at KCAC (Katutura Community Arts Centre) based in Windhoek, which is the second campus of COTA. COTA MATS annually provides training for more than 250 registered fulltime students who fill more than 1000 student placements in over 50 annual subject modules in 5 applied arts diploma courses. COTA MATS staff consist of 4 full-time posts (2 media and 2 drama), an additional 4 inter-departmental posts shared with other departments, and 9 part-time posts filled annually by leading industry practitioners. The 3-year diploma courses are presented at further/tertiary education level in the following main media arts field specializations:

- Radio Production (Drama, Magazine and Documentary)
- Television Production (Drama, Magazine and Documentary)
- New Media Design (Print and Digital)
- Music Production (Sound and Studio Production Techniques)
- Theatre Production & Community Drama (Performance and Production)

**Description of Activities**

The MCA Namibia investment will be directed to the design, extension and building of suitable training facilities equipped with professional equipment of industrial standards needed to create a multi-camera television production studio with vision and audio control room plus audiovisual post-production. In addition, it will cater for the extension of current training facilities for advanced radio production, new media design (graphics, animation, and web design) and develop suitable print and IT library resources.

Six new facilities will be created, namely:

- Multi-camera television production studio (with full lighting control and décor capacities)
- Visual control room (with camera control units and direct / live feed capacities)
- Audio control room (with playback, multi-tracking and monitoring capacities)
- Audio-visual post production room (audio synchronization and time code control)
- Advanced radio production facility (with direct / live feed capacities)
- New media design facilities (with animation, stop-motion, and advanced graphic control)

**Benefits**

COTA MATS currently provides the basic training requirements for students to gain the skills needed for employment in most fields within local industry. This action however would make it possible for COTA MATS to provide training in specialized fields that will significantly increase the employment opportunities of graduates in all fields of local industry and also provide skills to local industry that are currently not locally available.

This investment will bring substantial and direct vocational media arts educational and skills training benefits to 5 vocational, applied arts diploma courses, more than 50 course modules/subjects, nearly 250 registered students with COTA who represent about 1,000 individual placements in the various courses, plus the 20 departmental and inter-departmental lecturers/industry trainers involved. Through this the investment will directly expand the provision of skills specializations currently not available in local industry.

This investment will also bring further significant direct and indirect benefits to more than 1,250 registered community students (representing about 2,500 student placements) from previously disadvantaged backgrounds, plus some 40 part-time lecturers, who are involved in the arts extension program in the 10 satellite centres of COTA in the various regions of the country. In addition, it will create substantial growth in the pilot media outreach program at secondary school level that currently involves more than 200 students and 20 teachers in 10 schools.

Through this investment, 250 full-time training opportunities will be created annually for advanced media design and production skills at the College of the Arts Department of Media Arts and Theatre Studies (COTA MATS).

Students will be in a position to significantly broaden and develop vital local capacities and sustainability in local program productions for broadcast on local radio and television. This will support the national drive of localizing program content and more fully develop current information and communication platforms for arts and media arts that can reach more than 1 million radio listeners and more than 500 000 television viewers.

COTA MATS envisages that the renting out or assignment of some of these state-of-the-art facilities to the (semi-)private sector will serve as a vital link and basis for co-production efforts between student teams and local industry partners, and will importantly also help to develop a (design and production) incubator capacity, which is desperately needed by COTA MATS and at the same time could bring a new income stream as long-term benefit through renting of facilitates and distribution of products achieved.

**Costs**

The cost of construction of the six facilities is estimated at NAD1.8 million, while the cost of equipment, unit wiring, furnishing and technical installation is estimated at NAD2.2 million.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.2.4 Expansion &amp; Re-equipment of COTA MATS</strong></td>
<td>0.000</td>
<td>0.526</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.5</td>
</tr>
<tr>
<td>Expansion &amp; Re-equipment of COTA MATS</td>
<td>0.000</td>
<td>0.526</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.0</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.5</td>
</tr>
</tbody>
</table>

The construction of the new facilities will be implemented in year 2 after the first year will be used for planning purposes, which is a short period due to the differing financial years of MCA implementation and MoE.
Technical Analysis
COTA has in-house capacity through its links to the industry to prepare the tender specifications for purchasing of the specialized equipment needed. COTA will need external architectural and engineering advice to prepare the tender specifications for the construction of the facilities based on the specialized design needs of COTA MATS. The training of lecturers in the use of new equipment and facilities, as provided for by the specific suppliers, is included in the costing.

Planning and building will be executed according to the MCA procurement process.

Economic Analysis
The envisaged COTA MATS improvements will yield an ERR of 29.2%. This ETSIP component of strengthening a non-academic activity is of great importance. COTA MATS is a long term investment with building infrastructure and computer related hardware. In the ERR analysis it has been assumed that new equipment will be purchased every following 10 years. The electronic media is a fast growing sector and this intervention will contribute greatly to the local economy.

Social Assessment
The intervention concentrates on the formation of specific skills that are in short supply in Namibia. As such it provides students and beneficiaries with skills that are in demand and will increase their ability to find gainful employment and improve general skill levels in the industry. Approximately 1,500 individual and community students from previously disadvantaged backgrounds will directly benefit from this program.

Media and arts are fields with high levels of female representation. Despite this trend, the program will provide for gender equality in student placements through careful beneficiary selection.

Participation of Development Partners
COTA receives modest development support annually, which is related almost entirely to arts performances (concerts, exhibitions, etc). Occasionally COTA also receives development support for staff and community arts training. Development partners have contributed in the past to COTA MATS specifically for media arts course training and staff development. This funding has sometimes made provision for small capital cost components related the development of technical facilities and purchase of equipment items. In this way COTA MATS has over time managed to build the technical capacities required to implement its current courses.

COTA MATS is currently not involved with any development partner or project related to the development of facilities and equipment.

Risk Assessment
The risk of this investment is considered minimal. COTA MATS is a fully operational department with sufficient staff and fully developed course curricula and syllabi.
**Action 1.3**  
*Increase general competency Levels of Students at secondary Level through improvements to existing education Infrastructure and increasing the Number of educational Institutions*

**Action 1.3.1 Construction, Furnishing and Equipment of 6 Comprehensive Secondary Schools**

**Background**

Of the total number of learners completing the junior secondary phase, which is about 30,000 youngsters each year, only some 47% find a student place in schools for senior secondary education. The lack of space in senior secondary education has contributed to youth unemployment, a poorly skilled labor force and low throughput to tertiary education. Concerns have also been expressed about the levels of achievement in senior secondary education especially among disadvantaged learners. Opportunities need to be created for learners in the poorer regions to access high quality senior secondary education, which will enable them to qualify for tertiary education.

**Description of Activities**

Six new comprehensive schools, including hostel accommodation, to offer senior secondary education (grades 11 and 12), each catering for 980 students, are to be constructed and equipped in locations listed in Table 2.3.

**Table 2.3: Location of Comprehensive Secondary Schools**

<table>
<thead>
<tr>
<th>Region</th>
<th>Site/community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohangwena</td>
<td>Oshikunde</td>
</tr>
<tr>
<td>Oshana</td>
<td>Ondangwa</td>
</tr>
<tr>
<td>Oshikoto</td>
<td>Omuthiya</td>
</tr>
<tr>
<td>Kavango</td>
<td>Muitjiko</td>
</tr>
<tr>
<td>Omusati</td>
<td>Oongo</td>
</tr>
<tr>
<td>Otjozondjupa</td>
<td>Otjiwarongo</td>
</tr>
</tbody>
</table>

The preliminary sites have been chosen according to need and proximity to disadvantaged groups. Comprehensive schools will have entry selection processes to ensure that learners with potential from disadvantaged communities gain access.

The new comprehensive schools are expected to offer most fields of study with special emphasis on technical studies, natural sciences and mathematics, agriculture, commerce and arts. These areas of study are currently not always available in the identified sites. Particular attention will be paid to the staffing of comprehensive schools to ensure a high standard.

**Benefits**

By the end of the support period (2007-2011) a total of 5,880 learners would have directly benefited from this provision. Learners will have easier access to quality senior secondary education and more learners will qualify for tertiary education. A larger proportion of learners from disadvantaged regions are expected to improve their academic performance by achieving higher grades. The provision of senior secondary education, nearer to where people – including (extended) family – are living, will reduce travel and social costs. A total
of 720 learners will be accommodated in the hostels at each of the schools and other learners will access the schools from home or stay with nearby relatives.

**Costs**

The estimated costs of construction of a comprehensive school is NAD50 million and furnishing and equipment will amount to approximately NAD2.5 million per school. This cost estimate is based on a 2005/2006 tender for nationwide construction of education physical facilities. The total estimated costs of these schools amount to NAD315 million.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.1 Construction, Furnishing &amp; Equipment of 6 Comprehensive Secondary Schools</td>
<td>2.5</td>
<td>13.8</td>
<td>13.8</td>
<td>11.3</td>
<td>0.0</td>
<td>41.4</td>
</tr>
<tr>
<td>Construction, Furnishing &amp; Equipment of 6 Comprehensive Secondary Schools</td>
<td>2.486</td>
<td>13.809</td>
<td>13.809</td>
<td>11.323</td>
<td>0.000</td>
<td>41.4</td>
</tr>
<tr>
<td>Total</td>
<td>2.5</td>
<td>13.8</td>
<td>13.8</td>
<td>11.3</td>
<td>0.0</td>
<td>41.4</td>
</tr>
<tr>
<td></td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
<td>Year 5</td>
<td>Total</td>
</tr>
</tbody>
</table>

The implementation of this action will commence in year 1 and completion is foreseen in year 4 (2 new schools are planned per year). Due to the great planning needs for a new comprehensive school, a planning/documentation period of one year was allowed for the technical planning and drafting of the planning in year 1.

**Technical analysis**

There are different concepts abroad (model schools, schools of excellence, magnet schools) that need to Namibianized.

Land has been made available by the regions or communities that stand to benefit from a comprehensive school located in their area.

The building of schools will go through the normal process of feasibility studies, appointment of consultants, architects, engineers and quantity surveyors. Planning and building will be executed according to the MCA procurement process. Utilities are or will be available at the sites. Two schools per year are to be built during the period 2008 – 2010.

**Economic Assessment**

In a recent study on Namibia, it was mentioned that secondary schools yield the highest returns, as they relate closest to employment after school.

A comprehensive school as proposed in the proposal has the added benefit of offering to the rural population the complete schooling program, reducing social costs and most importantly drop-out rates.

Thus even with a lower ERR for primary education, the ERR for the comprehensive schools – combining primary and secondary levels – is positive at 22%.

**Social Assessment**

According to the 2001 Population and Housing Census, 33.5% of the population aged 15 years and above did not complete primary school. A further 41.5% completed primary school only but did not complete secondary school. This means that 75% of the population did not go on to a secondary education or conversely that only 25% of the population completed secondary school or got a tertiary qualification.

In the above 15 years age group there were more females at school than males and the literacy rate for females were also higher than that for males. School enrolment rates for the

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9 Marope, 2005.
population aged 6-24 years showed the same trend for ages up to the age of 17 years where after the male enrolment rate exceeds the female enrolment rate.

The fact that only 25% of the population older than 15 years completed secondary and/or some form of tertiary education provides an indication of the desperate need for secondary school places. There is an annual scramble for secondary school places across the country and the availability of such places is invariably a constraint to expanding secondary education in Namibia. The provision of six new comprehensive schools with hostels and teachers accommodation will invariably lead to improved availability of secondary school places. Make it more accessible to rural children and lead to better quality of education by ensuring that good teachers can be drawn to and accommodated at these schools. The intention to ensure, through selection processes, that learners with potential from disadvantaged communities will find places at these schools will further contribute to rural poverty reduction.

**Participation of Development Partners**

Involvement of development partners would rather be indirect through ETSIP funding, especially development partners channeling funds through the State Revenue Fund. Inputs other than physical facilities and books are to be provided through ETSIP and the GRN funding.

**Risk Assessment**

Some of the identified sites might be underdeveloped in terms of water and electricity supply, telephone connectivity and access by road. Teacher supply may be an issue, although it is planned to increase recruitment of expatriate teachers and senior secondary teachers from UNAM.

**Action 1.3.2 Construction and Furnishing of 50 Blocks of 3 Classrooms at schools with secondary Grades in 9 Regions**

**Background**

The primary objective of ETSIP in relation to secondary education during its first five years of implementation is to (a) expand access and capacity of secondary education and training, (b) expand the supply of secondary education teachers to enable expansion of secondary enrolments, (c) eradicate inequalities in access to secondary education.

Expansion of access to secondary education is one of the high-level priorities of the MoE, as articulated in ETSIP. Building entirely new schools is an expensive option as GRN must then pay for management and overheads associated with a new school. The expansion of existing schools in areas of high demand for secondary education is therefore seen as a very economical option. The provision of additional classrooms at an existing school can also make it possible to diversify the curriculum choices available to learners locally, reducing the need for learners to be accommodated in other regions.

**Description of Activities**

Fifty blocks of three classrooms each, a total of 150 classrooms, will be constructed at existing schools with secondary grades (Grades 8-12), catering for 105 students per block, in the regions as per Table 2.4. Not all regions experience a shortage of physical facilities or the same population pressures as the regions selected.
Table 2.4: Indicative Location of Additional Blocks at Secondary Schools

<table>
<thead>
<tr>
<th>Region</th>
<th>No. of blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohangwena</td>
<td>10</td>
</tr>
<tr>
<td>Omusati</td>
<td>8</td>
</tr>
<tr>
<td>Oshikoto</td>
<td>7</td>
</tr>
<tr>
<td>Khomas</td>
<td>7</td>
</tr>
<tr>
<td>Oshana</td>
<td>5</td>
</tr>
<tr>
<td>Kavango</td>
<td>5</td>
</tr>
<tr>
<td>Otjozondjupa</td>
<td>3</td>
</tr>
<tr>
<td>Omaheke</td>
<td>3</td>
</tr>
<tr>
<td>Kunene</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>50</strong></td>
</tr>
</tbody>
</table>

A total of 5,250 school chairs and desks for learners, 150 desks and chairs for teachers, 150 filing cabinets and 150 overhead projectors are needed to furnish and equip these classrooms.

**Benefits**

Expansion of existing schools with secondary grades (8 to 12) will directly benefit 5,250 students during the period of support. The expansion of existing schools with secondary grades will alleviate the problem of space the MoE experiences for grade 8 and 11 learners every year and improve conditions that facilitate a good learning and teaching environment. It is expected to alleviate the problem of commuting long distances experienced by previously disadvantaged students and to reduce drop out rate at the secondary level. Students’ academic performance is expected to improve.

**Costs**

The estimated cost of construction of a new block of three classrooms is NAD325 thousand. Total costs for fifty blocks would amount to some NAD16.25 million. In addition, an amount of NAD160 thousand per classroom is required to procure furniture and equipment. These cost estimates are derived from a 2005/2006 tender for nationwide construction of education physical facilities. Such estimates do not however include inflation.

<table>
<thead>
<tr>
<th>1.3.2 Construction &amp; Furnishing: 50 Blocks of 3 Classrooms, Schools with secondary Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional 3 classrooms to existing 50 schools</td>
</tr>
<tr>
<td>0.684</td>
</tr>
<tr>
<td>Furnishing additional classrooms</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The implementation of this action will commence in year one with 16 units and 17 units each in year 2 and year 3. The furnishing of these classrooms is following in a delayed manner so that the furnishment arrives once the construction has been completed.

**Technical Analysis**

MoE has access to standard drawings for construction of school facilities such as classrooms, administration offices, library and laboratories. These will be used for the expansion of the selected existing secondary schools.

Pre-Compact, the regional education inspectors and education planner in collaboration with the Head Office education planners will identify the exact sites and draw up the tender.
specifications and detailed timeframe for construction. Planning and building will be executed according to the MCA procurement process. The building will be carried out with an even spread between the years 2008 – 2010. During construction, teams of architects and work inspectors will supervise all sites to ensure that the quality of buildings and specifications are adhered by the contractors.

The MoE has previously carried out similar activities with KfW (Germany) and Lux Development.

Economic Analysis
The economic benefit of constructing and furnishing 3 classrooms at 50 selected schools countrywide, where there is a lack, yields an ERR of 449.9%. This high ERR indicates that omitting most fixed costs of a school such as the administration block and the accommodation of learners renders an extension to a school feasible. Thus the cost of an extension per pupil is lower than when a new school is constructed. These incremental benefits to such an extension are the result of increased financial efficiency and the economies of scale.

Social Assessment
The importance of improved provision of secondary school places has been illustrated under activity 1.3.1. The added advantage of expanding secondary school places at more and more rural schools offering secondary grades will undoubtedly increase access of rural children to secondary education. With accommodation and affordability as serious constraints for rural dwellers, bringing education services closer to these children will improve access, decrease cost of transportation and accommodation and allow for increased secondary enrolment rates.

The proposed additional classrooms will also be equipped with the necessary desks, chairs, projectors and other teaching aids that are currently under supplied in many rural schools. However, teacher availability is a risk that needs to be addressed as part of the exercise and in an integrated manner.

Participation of Development Partners
Inputs other than physical facilities and books are to be provided through ETSIP and the GRN.

Risk Assessment
It takes 2-3 months to construct a classroom block. Some schools will receive multiple blocks. Standard drawings will be used and are known to local contractors and easily executable by them.

Hostel facilities are not available at all selected schools, but the demand is such that day learners can be accommodated as day scholars. This will make it possible for learners from far to be accommodated in the hostels.

Schools were selected in accordance with the expansion strategy, which places feeder schools close to each other. The focus is on additional classrooms and not hostels. Population density was taken into account in selecting sites.

A plan for teacher availability is to be developed during the early stages of ETSIP implementation. A teacher supply and demand study will be done to inform the selection of specialization areas for expansion.
**Action 1.3.3 Expansion of 4 existing Colleges of Education (CoEs) and UNAM**

**Background**

The number of trained teachers needs to be increased to ensure that the serving under qualified and unqualified teachers (44.5% at primary and 16.5% at secondary by 2004) in the system are replaced and to ensure an adequate supply of teachers to replace those lost through natural attrition including those lost to HIV and AIDS related illnesses. Current facilities at the four Colleges of Education (CoEs) (where primary teachers are trained or produced) and at UNAM (where secondary education teachers are produced or trained) in the areas of ICTs and the sciences are insufficient for the number of trainees and the demands of the changed curricula and new subjects in schools. Given the anticipated increased enrolment for secondary education through ETSIP implementation, the supply of teachers needs to be increased.

**Description of Activities**

The following infrastructure upgrades are foreseen as per Table 2.5.

**Table 2.5: Expansion of CoEs and UNAM Teacher Education Department**

<table>
<thead>
<tr>
<th>College of Education</th>
<th>Infrastructure Upgrades</th>
</tr>
</thead>
</table>
| Caprivi College of Education | - a lecture block with five lecture rooms  
- a laboratory block catering for one science laboratory and one ICT laboratory  
- two hostel blocks with twenty eight double rooms each  
- one office block for lecturers  
- necessary furniture and equipment |
| Ongwediva College of Education | - a lecture block with five lecture rooms  
- a block of science rooms  
- a laboratory block catering for one science laboratory and one ICT laboratory  
- two hostel blocks with twenty eight double rooms each  
- necessary furniture and equipment |
| Rundu College of Education | - a lecture hall block with five lecture rooms  
- a laboratory block catering for one science laboratory and one ICT laboratory  
- two hostel blocks with twenty eight double rooms each  
- one office block for lecturers  
- necessary furniture and equipment |
| Windhoek College of Education | - two hostel blocks with twenty eight double rooms each  
- conversion of previous library into office and lecture rooms  
- upgrading of existing facilities (such as rails, pathways and toilets) to accommodate disabled learners |
| University of Namibia, Windhoek campus | - Laboratories, 2 dedicated Teacher Education Computer Labs that can hold a minimum of 30 computers each, Micro-Teaching Unit, Educational Media Production Unit, Educational Technology Unit and Material Resource Unit. Plus additional offices for lectures responsible for the delivery of these activities  
- Necessary furniture and equipment  
- Upgrading of existing facilities (such as rails, ramps and toilets) to accommodate disabled students  
- Two hostel blocks with twenty eight rooms each |
Benefits
Expansion of facilities will provide 310 additional spaces for students annually at each of the CoEs. Improving the infrastructure of the teacher training colleges will improve access to CoE and create a more conducive environment for learning. Increasing the access to and supply of quality training will increase the number of trainee teachers and their competencies, and subsequently once they are employed, the quality of teacher inputs in schools. Therefore the benefits of the proposed investment are felt beyond the direct beneficiaries.

Improved hostel facilities will attract more trainee teachers and aid retention rates at the CoE. Improved facilities for disabled students will ensure improved access for learners with such special needs, ensuring a more inclusive education system.

The building of science laboratories will improve the quality of teaching in the sciences, and further attract students to areas currently short-staffed in the teacher profession.

In an education sector where there are a very limited number of teachers proficient in ICT, the space to provide ICT provision, will further improve teacher competencies as teachers are exposed to modern teaching and learning processes.

The number of beneficiaries at UNAM is estimated at 500 student-teachers, annually. In addition, 60 additional teacher-training places will be created.

Costs

<table>
<thead>
<tr>
<th>1.3.3 Expansion of 4 existing CoEs &amp; UNAM Teacher Training Facilities</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Caprivi College of Education</strong></td>
<td>0.000</td>
<td>0.541</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.5</td>
</tr>
<tr>
<td>1 lecture block of five lecture rooms each</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>1 block of two spacious science laboratories</td>
<td>0.000</td>
<td>0.053</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>1 block of three ICT laboratories with capacity of 100 computers each rooms</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>2 hostel blocks of 28 rooms each</td>
<td>0.000</td>
<td>0.158</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>0.000</td>
<td>0.093</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Ongwediva College of Education</strong></td>
<td>0.000</td>
<td>0.554</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.6</td>
</tr>
<tr>
<td>1 block of science rooms, instrument improvisation and school laboratory chemical dispensing centre.</td>
<td>0.000</td>
<td>0.066</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>1 block of three ICT laboratories with capacity of 100 computers each rooms</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>1 lecture block of five lecture rooms each</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>2 hostel blocks of 28 rooms each</td>
<td>0.000</td>
<td>0.158</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>0.000</td>
<td>0.093</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Rundu College of Education</strong></td>
<td>0.000</td>
<td>0.836</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.8</td>
</tr>
<tr>
<td>1 lecture block of five lecture rooms each</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>1 block of three ICT laboratories with capacity of 100 computers each rooms</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>2 hostel blocks of 28 rooms each</td>
<td>0.000</td>
<td>0.158</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>1 block of two science and home ecology laboratories</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>0.000</td>
<td>0.324</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.3</td>
</tr>
</tbody>
</table>
### Expansion of 4 existing CoEs & UNAM Teacher Training Facilities

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Windhoek College of Education</strong></td>
<td>0.000</td>
<td>0.639</td>
<td>0.000</td>
<td>0.000</td>
<td>0.6</td>
</tr>
<tr>
<td>1 lecture block of five lecture rooms each</td>
<td>0.000</td>
<td>0.118</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>2 hostel blocks of 28 rooms each</td>
<td>0.000</td>
<td>0.158</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>Convert and renovate existing library into office and lecture rooms</td>
<td>0.000</td>
<td>0.105</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Upgrade existing facilities (rails, pathways, toilets, etc) to accommodate disabled learners.</td>
<td>0.000</td>
<td>0.066</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Furniture and equipment</td>
<td>0.000</td>
<td>0.192</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>** Expansion of Teacher Education facilities at UNAM**</td>
<td>0.684</td>
<td>1.815</td>
<td>0.000</td>
<td>0.000</td>
<td>2.5</td>
</tr>
<tr>
<td>1x Laboratory block with 5 Labs, offices for lectures and furniture and equipment</td>
<td>0.552</td>
<td>1.289</td>
<td>0.000</td>
<td>0.000</td>
<td>1.8</td>
</tr>
<tr>
<td>Upgrade existing facilities (rails, pathways, toilets, etc) to accommodate disabled learners.</td>
<td>0.132</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>2 hostel blocks of 28 rooms each</td>
<td>0.000</td>
<td>0.526</td>
<td>0.000</td>
<td>0.000</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.7</strong></td>
<td><strong>4.4</strong></td>
<td><strong>0.0</strong></td>
<td><strong>0.0</strong></td>
<td><strong>5.1</strong></td>
</tr>
</tbody>
</table>

All four Colleges of Education (Caprivi, Ongwediva, Rundu and Windhoek) construction will commence and be implemented in year 2. A necessary planning horizon of one year is needed to ensure a smooth operation as well as procurement of qualified personnel to teach at these institutions. The UNAM facilities will commence in year 1 and be completed at the end of year 2. As UNAM has its own management that is responsible for this one unit, planning and implementation is easier and does not fall directly under the MoE’s CoEs.

### Technical Analysis

Existing master plans could be used for the addition of the lecture blocks, science laboratories and hostel blocks. Specifications will be needed for the computer laboratories and the conversion of an existing library into offices and lecture rooms. Teams of architects, engineers and quantity surveyors will finalize the plans and supervise construction. Planning and building will be executed according to the MCA procurement process. Utilities will be available at the sites. Construction at each college will take 24 months. Two colleges will be done in 2008/9 and the remaining two in 2009/10. Construction costs at UNAM will be spread over 2008-2010.

### Economic Assessment

The success of ETSIP and most of the MCA Namibia proposed actions is strongly linked to the quality and quantity of teachers produced by the system.

The ERRs for the CoEs are as follows: Caprivi – 114.8%, Ongwediva – 113.1%, Rundu – 77.4%, and Windhoek – 75.3%.

The ERR was calculated separately for each CoE. There are some variations in the construction plans, reflecting specific needs for each location, which explain in part the variations in ERRs. Also, the additional facilities are needed for different subjects and the ERR varies according to subjects intended to be offered in the facilities from science, ICT to home ecology. Another variable is the number of beneficiaries.
An important benefit that is not covered by the ERR calculation is the fact that quality teacher training will now be accessible – through increased in-take and improved quality of training – at regional level. This will provide an incentive to aspirant teachers to study at a nearby college, reducing the social costs of study and hopefully leading to more teachers seeking employment in their region upon completion of their studies.

The ERR calculation for the expanded teacher training facilities at UNAM follows comparable variables, yet the number of beneficiaries is significantly less since the UNAM qualification is a four year course as opposed to a three year course at the CoEs. This increases the cost per student. Nevertheless, the ERR is 46.8% indicating the incremental benefits of assisting teachers at UNAM with quality maths and science education.

Social Assessment
Since expansion of current facilities is involved, there should be no major environmental problems with the sites.

Given the plans to increase secondary school enrolment, the supply of qualified teachers also needs to be increased. The availability and quality of teachers have been cited as the two most serious problems at rural schools during the PPAs. Compounded by an unwillingness to work in the rural areas due to the lack of housing and remoteness, there are simply not enough qualified teachers to handle six new comprehensive schools and an additional 150 classes at 50 schools.

The contribution of the colleges of education is crucial to ensure the success of the entire program and is supportive to the school construction activities. The capacity of the COEs and UNAM to train more teachers must therefore also be improved through increased human resources and more teacher educators are required. This will be done under the broader ETSIP and is regarded as affordable to the MoE.

Results in the rural areas are generally not at the same level as those in the urban areas and children from the rural areas reportedly often find it difficult to keep up with the standards in the senior secondary schools outside the villages. This indicates lower standards in the rural areas and improved numbers and quality of teachers will contribute to alleviating this problem.

The intervention would result in the ability to increase student numbers by 840 at the CoEs and by 500 student teachers at UNAM. This is considerable and would greatly benefit the quality of education in Namibian schools generally.

Participation of Development Partners
No other development partners are involved in the expansion of facilities at the CoE or UNAM.

Risk Assessment
Qualified teachers are a prerequisite for quality improvement in the delivery of education services under ETSIP. To sustain the MCA input, MoE considers utilizing the NSFA budget to finance additional teacher trainees and increase the number currently catered for per year. A sustained supply of qualified teachers to various levels of the education system is a condition for the success of ETSIP.
Action 1.3.4 Construction, Furnishing and Equipment of 3 Regional Study and Resource Centres

Background

Namibia uses the concept of community libraries for the information centre network in the regions and communities. The regional library is the regional research, study and knowledge resource centre in the region. The current network includes 57 community libraries countrywide with regional libraries in three regions: Caprivi, Kavango and Kunene and provision for one being built in the Omusati region. The MCA Namibia investment will cater for the construction of three regional study and resource centres in the disadvantaged regions of Ohangwena, Oshana and Omaheke to support regional economic growth and improvement of educational performance. The existing ill-equipped small community libraries at the foreseen sites of the new resource centres are totally inadequate to the demand, especially in relation to study place and nationally relevant collections to support secondary level and distance students and the demand for up-to-date relevant legal and economic information resources.

This action forms part of concerted efforts to address regional social and economical inequalities in a crucial area of access to survival information and study and learning resources.

Description of Activities

Three Regional Study and Resource Centres will be established in Helao Nafidi in the Ohangwena region, Oshakati in the Oshana region and Gobabis in the Omaheke region. The location and design of these libraries will be planned to benefit the identified low income and disadvantaged groups in the community.

They will provide study space, internet access and adequate facilities and function as deposit centres for all documentation published in and about Namibia (policies, consultancy reports, legislations, statistics, monographs and periodicals) as well relevant technical and economical materials to facilitate research, innovation, studying and administration as a regional resource centres.

Benefits

The direct beneficiaries are estimated to be between 3,500 and 8,500 citizens per Regional Study and Resource Centre. Actual user figures can be estimated from the public library situated in a previously disadvantaged suburb in Kuisebmund, Walvis Bay, where usage is 42,000 users per year. An overview of anticipated beneficiaries per selected site is shown in Table 2.6.

Table 2.6: Estimated Impact of Three Regional Study and Resource Centres

<table>
<thead>
<tr>
<th>Region</th>
<th>Site/community</th>
<th>Estimated No. of Beneficiaries</th>
<th>Regional Impact through Mobile Collections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ohangwena</td>
<td>Helao Nafidi</td>
<td>5,000</td>
<td>70,300</td>
</tr>
<tr>
<td>Oshana</td>
<td>Oshakati</td>
<td>8,500</td>
<td>46,500</td>
</tr>
<tr>
<td>Omaheke</td>
<td>Gobabis (Epako suburb)</td>
<td>5,000</td>
<td>17,000</td>
</tr>
</tbody>
</table>

A lower estimated number of beneficiaries in Gobabis reflects lower population densities. However, Omaheke is also one of the poorest areas of the country where the Regional
Study and Resource Centre will provide crucial support to the regional poverty reduction initiatives based on the regional poverty profile 2006.

Direct beneficiaries will be learners and students of all levels of the education system as well as emerging entrepreneurs, researchers, legal professionals and technicians working on planning and development. In Namibia, the major user group include girls and women for whom social realities at homes do not offer space and time for studies.

Distance learning is socially and economically an important educational channel in Namibia. Over 30,000 secondary level students, especially in the disadvantaged regions targeted by this initiative, study through NAMCOL, the distance study option to complete secondary education. Up to 50% of tertiary education students study through distance education. There are over 5,500 distance students engaged in professionally qualifying tertiary level studies through Namibian institutions. For students studying through South African and other international universities no figure is available, but especially the University of South Africa (UNISA) degree studies are used countrywide as a channel for qualifying degree studies.

Mobile collection services will reflect the impact of the regional resource centre to the sparsely populated rural areas.

**Costs**

The estimate total cost of construction of the three Regional Study and Resource Centres is NAD47 million, taking into account an annual 5% inflation.

The estimated construction costs are based on the 2005 feasibility study for the future Regional Study and Resource Centre in the Omusati region updated with current regional library and community learning and development centre standards.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.3.4 Construction, Furnishing and Equipment of 3 Regional Study and Resource Centers</strong></td>
<td>0.066</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Feasibility studies/ Preparation of architectural and construction tenders</td>
<td>0.197</td>
<td>0.197</td>
<td>0.197</td>
<td>0.000</td>
<td>0.000</td>
<td>0.6</td>
</tr>
<tr>
<td>Architectural drawings, architectural supervision/Architect</td>
<td>0.000</td>
<td>1.973</td>
<td>1.973</td>
<td>0.000</td>
<td>0.000</td>
<td>3.9</td>
</tr>
<tr>
<td>Construction Regional Libraries</td>
<td>0.000</td>
<td>0.000</td>
<td>0.089</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Furbishment Regional Libraries (shelves, desks, tables)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.099</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>ICT hardware and software (10 PC's + photocopiers)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.059</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Library Collections (Regional collection: support for studies, research, planning)</td>
<td>0.000</td>
<td>0.059</td>
<td>0.059</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Feasibility study and specifications for solar energy system/TA</td>
<td>0.000</td>
<td>0.000</td>
<td>0.020</td>
<td>0.000</td>
<td>0.000</td>
<td>0.0</td>
</tr>
<tr>
<td>Solar energy system</td>
<td>0.000</td>
<td>0.000</td>
<td>0.347</td>
<td>0.000</td>
<td>0.000</td>
<td>0.3</td>
</tr>
<tr>
<td>All terrain vehicles to support communities with mobile study material collections throughout the region</td>
<td>0.000</td>
<td>0.000</td>
<td>0.197</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>0.3</strong></td>
<td><strong>2.2</strong></td>
<td><strong>3.0</strong></td>
<td><strong>0.0</strong></td>
<td><strong>0.0</strong></td>
<td><strong>5.5</strong></td>
</tr>
</tbody>
</table>

The planning and implementation of the resource centers will commence in year 1 and construction will commence in year 2 with one and a half units completed per year. The
furbishment, ICTs, solar energy system and vehicles will follow accordingly as the centres are completed, with the planning of the solar energy system also commencing in year 1.

Technical Analysis

The relevant local authorities have already provided the land for the Regional Study and Resource Centers. The construction will go through the normal process of feasibility studies, appointment of consultants, architects, engineers and quantity surveyors. Planning and building will be executed according to the MCA procurement process. Utilities are or will be available at the sites.

Economic Analysis

The regional study and resource centres serve primarily as libraries for pupils but just as important there are a huge number of students (post school level) who study correspondence courses to increase their knowledge and qualifications. It is known that all beneficiaries have difficulties learning from home, due to lack of access to a quiet place for effective concentration and electricity, lack of access to resource books, internet and electronic information. The regional study and resource centres will offer all these advantages and will yield a ERR of 35.9%. The increase in knowledge and pass rates of all intended beneficiaries as well as the increase in aptitude and confidence to access information electronically will be a great advantage after their studies.

The vehicles will be utilized to increase the number of beneficiaries to access resource books. As Namibia’s regional villages are spread out over a vast area and thus the resulting costs of such vehicles are high, the benefits of providing access to rural learners to better information is of a great advantage. As the vehicles are part of the resource centre and will be operated from these, these two activities have been combined to calculate one ERR.

Social Assessment

The previously disadvantaged communities in Namibia and especially those in the rural areas have for many years been neglected in terms of the availability of general information. This resulted in a largely uninformed general population with limited access to the outside world. People are caught up in their daily livelihood activities with no opportunity to learn more about the things that happen in the rest of the country and the rest of the world. This further contributes to an inability by parents to prepare their children for school and children arrive at school without the basic knowledge and childhood development skills needed to be a successful student. People hunger for information and this is illustrated by the high ratings that rural people gave to the NBC as the one source of information of outside events and developments that are accessible to them.

Resource centres and community libraries are important information sources to, over time, alleviate this problem. It brings information to the communities on the one hand and provide opportunities for the youth and adults alike to improve their knowledge base and to successfully augment their studies, be it self improvement or formal distance education. The system is completely open and ensures access to all, irrespective of gender or social positions. Direct beneficiaries at the existing centres are high and the centres are used extensively by the beneficiary communities. It is therefore an effective means of contributing to the general levels of education of a society, of decreasing milieu retardedness and supporting formal study.

In the sense that it contributes to general education, it will have a considerable contribution to poverty alleviation although the full effect may only be evident over the medium to long term. Existing user profiles also show that girls and women is a major use group at these centres and its importance cannot be overstressed since the women are the ones who look after and prepare their children for school.
Participation of Development Partners

Involvement of development partners would rather be indirect through ETSIP funding, especially development partners channeling funds through the State Revenue Fund. Inputs other than physical facilities and books are to be provided through ETSIP and the GRN funding.

Risk Assessment

The envisaged Regional Study and Resource Centre with the regional coordinating, information service and mobile service function will need professionally qualified staff. The new education sector regional structure provides for 2 professionally qualified librarians for each region. There is clear commitment to provide for required staffing and two of the regions already have one professional post in their establishment.

Action 1.3.5 Provision of Computer Labs at 400 Schools with secondary Grades throughout Namibia

Background

In 2006 Namibia adopted a policy on the ICT Policy for Education. In terms of this policy, all schools with secondary grades should achieve the standard described as Development Level 2, which specifies that:

- At least 1 room with ICTs is available;
- A projector and ability to display audiovisual materials is available;
- Internet connectivity is available;
- All teachers have achieved the Foundation Level ICT Literacy Certificate;
- At least 2 staff members have achieved the Intermediate Level ICT Literacy Certificate or higher ICT qualification;
- All learners completing grade 10 will have achieved the Foundation Level ICT Literacy Certificate;
- Learners have at least 1 class period per week where ICTs are utilized, and
- Over 20% of communication with MoE is done via email.

The ETSIP ICT implementation plan provides for a full end-to-end solution. The MCA support will be focused on deployment of hardware while other inputs will be provided through ETSIP. MoE has undertaken all other components.

Description of Activities

ICTs will be deployed at all schools with secondary grades based on rankings established through MoE’s pro-poor school selection criteria and e-readiness surveys, which are conducted prior to deployment (purchase and installation of PCs and networks).

Therefore, implementation of ICTs to 400 schools with secondary grades will be undertaken from 2008-2010. MoE will deploy ICTs to 100 schools with secondary grades in 2007 prior to MCA support.

The standard ICT package for schools includes: a) a lab with minimum 20 PCs, b) a dedicated computer file server, c) a stand-alone projector, d) a printer, e) one portable PC and projector for teacher use and f) a stand-alone PC with a laser printer for administration use.
Benefits
The objectives of the provision of the computer labs are to: 1) improve the academic performance of learners, 2) improve access to information and learning resources, 3) improve the ICT skills of all learners, and 4) enhance the enthusiasm and motivation of all learners. Over 140,000 learners and 5,500 teachers will benefit from this investment annually.

Costs

<table>
<thead>
<tr>
<th>Resource centre with at least 20 workstations (max 30), Server, Printer, Mobile Computer, Internet Access, 2 Projectors, 1 PC with printer for admin.</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.000</td>
<td>6.090</td>
<td>6.090</td>
<td>0.000</td>
<td>0.000</td>
<td>12.2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>0.0</td>
<td>6.1</td>
<td>6.1</td>
<td>0.0</td>
<td>0.0</td>
<td>12.2</td>
</tr>
</tbody>
</table>

The procurement of the ICTs is an ongoing process of ETSIP and will commence with MCC funding in year 2. This action is being done over a two year time span to ensure an even implementation program with sufficient training been done in advance for the personnel to teach ICT subjects.

Technical Analysis
A mapping survey is currently underway to determine the number of schools that are e-ready for deployment and meet the criteria. At schools without computer rooms, electricity and telecommunication, the infrastructure will need to be provided and provision made for site layouts and technical drawings. Architects and contractors (building and electrical) are required for the alterations or new construction. Teams of consultants consisting of architects, engineers, and quantity surveyors are needed to provide the detailed architectural model drawing to be used for all the schools and documentation for each action as well as supervision during the construction.

There is a need to incorporate these detailed architectural model drawings into the Standards and Norms for physical facilities for the construction of future schools.

Equipment should include burglar bars and security doors, security equipment such as alarm systems, air-conditioning, wireless antennas, networking equipment, electrical circuit distribution boards, electrical outlets, tables, chairs, solar panels, customized server cabinets, printers and computer and related equipment.

Economical Analysis
The provision of ICTs is a crucial component to modern day learning. The formal economy requires to a very large extend the use and being conversant in the use of a PC. This qualification has been greatly lacking in Namibian schools and MoE is currently addressing this. With the provision of ICTs to schools in a package including the supporting hard- and software will reach the greatest number of beneficiaries of over 147,000 in all proposed actions. The resulting ERR is 41.2%. The economic benefits of learners finishing their schooling with basic PC knowledge and aptitude is of great importance to the economy.
Social Assessment

Computer literacy and new technologies are foreign to most learners in the previously disadvantaged areas. Unlike in urban advantaged homes, few computers are found in the rural areas and children simply start with a disadvantage when seeking employment even after completion of their secondary education. Having access to a computer and internet opens up a whole new world to those that have little access to information. The lack of knowledge about computer technology has been mentioned many times by local communities during the PPA exercise. People are aware of the benefits and therefore also acutely aware of the effects of not having access to such technologies. With pro-poor selection criteria, the MOE will also ensure that those communities that are in most need will benefit from this intervention. It has a high probability to transform knowledge bases in rural communities.

Although the direct impact would not be immediately evident it is likely that this intervention will contribute to improved quality of education, ability to research assignments and general expansion of knowledge of students. In the medium to long term it would improve education standards and result in greater employability, ability for self employment and poverty alleviation.

Participation of Development Partners

The Global e-Schools and Communities Initiative (GeSCI) under the auspices of the UN ICT Task Force established a presence in Namibia in recognition of the vital role that new information and communications technologies (ICTs) can play in creating long-term, sustainable development. GeSCI has been instrumental in facilitating a major group of stakeholders in Namibia since 2004 to come together and create a national e-schools strategy and implementation plan for MoE.

The following organizations are partners in implementing the ICT in Education policy:

- SchoolNet Namibia is a non-profit ICT service provider with the assignment to introduce affordable computer technology and internet access to all schools in Namibia.
- Namibian Open Learning Network (NOLNet) serves over forty open learning centres, supports the distance learning activities of UNAM, the PoN and NAMCOL.
- The Community Education Computer Society Namibia (CECS), a registered IT Academy, offers good quality computer literacy education within the community at a competitive price.
- Namibian Parliament, MoE and Microsoft created a new approach to provide Namibian schools and communities with access to technology and computer-related training.
- Other partners include, World Teach, USAID, UNESCO, UNDP, SIDA, XNET, Telecom, NETO as well as private sector partners such as IT Department Namibia, Learnthings, Cambridge University Press, the ICDL Foundation of South Africa, Agile Learning, and Microsoft.

This list is not exhaustive.

Risk Assessment

The deployment of more ICTs in schools requires more access to international bandwidth. Part of the ETSIP plan is the setting up of a dedicated V-Sat solution that will double access to national and international bandwidth. Some schools are near enough to the electrical grid to be connected, but the connections have not yet been made. Solar solutions are feasible for those off the grid, but this is a more expensive option.
**Action 1.3.6 Provision of School Textbooks in the subjects of Mathematics, the Sciences and English for Grade 5-12**

**Background**

Research shows that provision of school textbooks is a critical input towards improving the quality of education. Mathematics, Sciences and English are further identified as critical subjects that affect learners' performance in other subjects. Unfortunately it is in these subjects that are also critical for the development of a knowledge-based society, where Namibians are performing poorly. This has been shown in the Southern African Consortium for the Monitoring of Education Quality (SACMEQ) studies where Namibia compares unfavorably with its neighbors. The provision of textbooks in Namibian schools has declined so that one book is sometimes used by 4-7 learners.

**Description of Activities**

Books will be purchased for grades 5-12 In English, Mathematics and the Sciences so as to achieve a ratio of one book per subject per learner. A total of 112,000 Mathematics and Science and English textbooks each or in total 336,000 textbooks will be procured. Furthermore, 60,000 library books will be purchased for distribution to secondary schools with library facilities.

**Benefits**

Textbooks are believed to deliver a high rate of return on the investment. When they reach grade 5, learners should have the necessary skills to benefit from the use of their own textbooks in unsupervised study and can develop a sense of ownership and responsibility towards their own learning.

This investment will benefit 336,000 secondary level learners country-wide through provision of 336,000 school textbooks in the subjects of maths, the sciences and English.

**Costs**

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.3.6 Provision of School Textbooks: subjects Mathematics, the Sciences and English for Grades 5-12</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.4</td>
</tr>
<tr>
<td>Books and Educational equipment</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>5.721</td>
<td>5.721</td>
<td>11.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>5.7</td>
<td>5.7</td>
<td>11.4</td>
</tr>
</tbody>
</table>

Procurement of textbooks is planned for year 2 and year 3 being nearly in line with the completion of the additional classrooms and comprehensive schools as well as a planning period for year 1 for logistics.

**Technical Analysis**

Textbooks are evaluated for suitability by the National Institute for Education Development (NIED) and listed in the textbook catalogue. Library books are selected by regional and national selection committees. The tender for the acquisition of the books will include delivery to the schools. Library books, however, will be processed centrally to provide markings and pockets for the lending system before distribution by MoE to the schools.

**Economic Assessment**

Without a textbook learner cannot effectively participate and learn. It is a challenge to calculate the economic returns of each learner having his/her own text book. The ERR for this action is 14.9%, the lowest of all actions due to the fact that the economic lifespan of a book is limited.
For the calculation of the ERR, it is assumed that the economic lifespan of a textbook is 5 years, which is slightly higher than assumed in the World Bank studies reflecting measures taken by MoE to discipline learners to tend better to text books. There is no doubt that individual access to textbooks will improve the quality of education, especially in the higher grades of schooling.

Social Assessment

The availability of school text books seriously constrains the quality of education in Namibia, especially so at schools in the disadvantaged and poor communities. Where parents have the means to purchase the necessary books and where these books are available it does not constitute a major problem. However, in the rural and disadvantaged urban communities villagers indicated during the PPAs that it is a major problem. Four to seven children sometimes share one book and the implications for effective studying are self evident. Buying your own book is not even an option because these are not readily available in the market.

It is most likely that this intervention will have a major impact on improved quality of education, reduced failure rates and improved examination results in those subjects that are critical to successful further studies in fields where gainful employment is more likely. It would benefit both genders equally and provide added opportunities and motivation for studying. It is also likely to enhance the ability of parents to improve supervision over the study behavior of their children since a lack of test books can be and is often used as excuses for not being able to study. With the curricula as it stands it is unthinkable how learners could get through the curricula with 25% and lower access to their text books.

Both genders and all social groups are likely to benefit from this intervention and it would put the ability of secondary learners to improve their performance at a much higher level than is currently the case.

Participation of Development Partners

At present the main development partner is GTZ, for which the existing agreement comes to an end November 2007, followed by Book Aid International, for which there is a possibility of renewal of a soon to expire agreement (November 2006).

Risk Assessment

It is assumed that the new textbook policy due to be developed in 2007 will be in place, resulting in the improved management of this asset. It is anticipated that for a larger order of this nature, competition in the book trade will be fierce and that the intended delivery will be achievable.
**Action 1.3.7 Establishment of a Business Innovation Center at Polytechnic of Namibia**

**Background**

With science and technology central to the global economy, workers must be equipped to respond to new developments and business innovation. In Namibia, high unemployment remains a significant challenge, at an alarming rate, especially amongst the youth. It has been recognized that the SME sector would largely contribute to employment creation. GRN has put in place multiple programs to provide an enabling environment for young and would-be entrepreneurs. A significant number of institutions exist to provide entrepreneurship training and skills development. Yet, the measure has not succeeded in reversing the unemployment rate. This can be ascribed to the absence of new business innovation and lack of new knowledge and skills.

Without a culture of innovation and creativity, not much sustained economic growth can be achieved. PoN would like to start a Business Innovation Center to provide a unique facility where high tech entrepreneurs can be supported and have access by training faculty, research experts in the industry, network, and grow. To provide a unique environment to individuals and businesses that want to develop new products or improve existing products or services. All too often young graduates and small companies with good potential cannot survive the initial challenges because of lack of support and internships to grow. The Center will nurture the innovative and entrepreneurial spirit of the youth.

PoN supports national development initiatives by offering career-oriented, market-driven qualifications to address critical knowledge and skill gaps. PoN is also playing a leading role in the creation of a knowledge economy, by initiating and supporting research and development (R&D), entrepreneurship, technology and innovation. The institution has created a Center for Entrepreneurial Development that has rendered SME support services training and consultancies.

The Center for Entrepreneurial Development has been very successful. Yet, true innovation has been elusive in the Namibian economy. The main aim of the innovation center is to compliment the work already existing in Namibia by creating unique facility simulation laboratories, with innovative software support entrepreneurship by research technological and marketing support for new product development for the global market.

**Description of Activities**

The action involves firstly the construction and equipment of building in Windhoek, and secondly the appointment of a core staff to provide services and counseling to entrants and manage the building. The building will consist of offices, business laboratories, seminar rooms and meeting spaces. The Center will provide training expertise, research support, internet access, access to business networks, simulation laboratories, with innovative software and mentors to young inventors wishing to grow their companies or start businesses to develop new products and services.

A strict selection process will be implemented to ensure potential for the success of the candidates. Business plans will be scrutinized to ensure this potential success. Creative individuals will focus on technological and business innovation, and new and scientific enhancement of product development and business systems.

Rental will be based on a formula, calculated on the income and stage of development of the product or service. At this stage it is estimated that on average each company will pay NAD2,500 per month for an office of 100m².
PoN will only provide incubation services. It is envisaged that companies will be in incubation for a period of 12-18 months depending on its product developmental status and the extent to which it has achieved the milestones set out in the business plan.

Benefits

At full capacity the facility will house approximately 10 SMEs engaged in research and development of new products and services. It is estimated that each SME will each employ four individuals, bringing the total of direct beneficiaries to 40 to 50 per year and over 200 or 250 in a five year period. As most Namibians live in extended family networks, the total number of beneficiaries is much larger. The country will benefit from the new products and services and increased efficiency and economic growth.

While the action will provide new products and services to the Namibian economy in the interest of individuals and businesses, its benefit lies in the fact that it will serve as the basis for the development of Windhoek and surrounding area into a high-tech location or business cluster within ten years.

The Center will provide an environment to support creative individuals, graduates and students wishing to engage in business aimed at developing new products and services or enhance existing ones. Faculty and staff will play a key role in supporting the development of new products and services and the improvement of existing products and services for productivity and profitability, through research and development and connecting them with relevant resources.

Costs

The construction cost of the building is estimated at NAD30 million dollars. The state-of-the-art building will contain offices, workshops, conference rooms, training facilities and seminar rooms and a small library. This is a preliminary figure subject to feasibility studies.

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.3.7 Construction of a Business Innovation Center at PoN</td>
<td>3.461</td>
<td>0.067</td>
<td>0.067</td>
<td>0.000</td>
<td>0.000</td>
<td>3.6</td>
</tr>
</tbody>
</table>

This minor construction of the centre and furbishment thereof will be done in year 1 and should be also completed accordingly. The PoN staff has already done planning for this center already, in anticipation of funding for implementation.

Technical Analysis

PoN owns an open piece of land and place has already identified the land where the building will be erected. Construction will be in line with the general procedures stipulated
Economic Assessment

The PoN Business Innovation Centre is a relatively small investment that will greatly enhance innovation, creativity, business development and entrepreneurship in Namibia. It is known that entrepreneurial skills and innovation, supplemented by mentorship, resources and support in small businesses do enhance the formal and informal economies. Technological universities such as PoN have been at the forefront of business and technological innovation.

The ERR is calculated at 46.7% and thus renders this investment highly favorable. Many developed countries offer tax incentives, subsidies and business support mechanisms for their graduates to become entrepreneurs and start a business. These benefits are valid for the first few years of an entity’s life, or in the transformation of existing businesses. It is widely acknowledged that SME formal enterprises contribute greatly to employment creation, new business, technological development, and economic growth. In today’s modern world, job security is a major factor in improving the standard of living. However, setting up a small business is risky and it is difficult to attract the interest of employees who prefer job security. PoN’s drive to create the appropriate environment for such targeted businesses and entities, and new ideas and applied technologies, will have an impact that goes beyond the calculated ERR.

Social Assessment

Admittedly, current interventions with regard to the establishment of SMEs have not contributed significantly to reverse or decrease the rate of unemployment and this is ascribed to the absence of new business innovation and lack of new knowledge and skills.

Participation of Development Partners

PoN works closely with Science Parks globally and initial support has been obtained from the Finnish Government to perform a Feasibility Study. Further support will be solicited.

Risk Assessment

If we do not support innovation and create new products, Namibia will not develop and achieve the competitiveness needed for the goals Vision 2030, and will stagnate. The action will afford staff, graduates and students a supportive environment to stimulate innovation and entrepreneurship on campus and in Namibia in general. In spite of screening and selection criteria, we still run the risky of allowing SMEs that may fail. However these should be identified early and alternatives will be put in place to rectify the situation.
3. MCA Namibia Investment 2 – Increased Production of large and small Stock and Mainstream the commercial Marketing thereof in communal Areas and on resettlement Farms

Introduction

Across all the northern regions (Kunene, Omusati, Oshana, Oshikoto, Ohangwena, Kavango and Caprivi) 129,239 households or 44% of all rural households in Namibia rely on subsistence farming as their main source of income. On average some 50% of households in those regions own or have access to cattle, whilst 73% of households either own or have access to grazing land. This means that throughout the entire northern region, 23% of households have the potential and the access to conduct livestock farming practices but currently do not utilize these resources.\(^{10}\)

Only a few livestock owners (estimated at 1.3%)\(^ {11} \) utilize the formal livestock marketing channels while the majority of livestock owners sell their cattle to middlemen (so-called speculators), thereby losing some of the profit margin.

Namibia is physically divided into two distinct animal disease zones by means of a Veterinary Cordon Fence (VCF), which runs from East to West along the southern boundary of the Northern Communal Areas (NCA). The fence serves to control the spread of animal diseases from the northern “endemic” area to the southern “Foot-and-Mouth Disease” (FMD) free area. Due to the FMD surveillance status of the NCA, the marketing of livestock in these areas is restricted to either slaughter for local consumption or slaughter at export abattoirs under strict quarantine requirements. The movement of animals southward across the fence is strictly prohibited, while the movement of meat is subject to the quarantining of the cattle 21 days prior to slaughter and the quarantining of the meat 21 days after slaughter, which is in accordance with the requirements set by the importing country, presently South Africa.

The NCA have for many years been closed to fresh meat exports to the European Union (EU) and other sophisticated markets due to their proximity to FMD infected zones or areas where free-roaming buffalo are present. Meat exporting countries around the world have put many precautions in place to prevent outbreaks of FMD and thus preserve market access for their livestock sectors. This fence negatively impacts on the growth opportunities in the livestock sector in the NCA and farmers are penalized by

Large Stock Units (LSU) – an Asset to Rural Poor Farming Households?

Many communal farmers have small herds, the size of which may be deemed not economically viable. However, should these small farmers be encouraged – through good prices, rural access roads, marketing facilities, sensitization/mobilization/training – to sell their livestock at a younger age as weaners to speculators for fattening at the feedlots and onward selling to the abattoirs the benefits will be two-fold: a more steady cash income for the small, subsistence level farmer and a lower risk of mortality. It is not uncommon that out of say 6 calves only 2 survive up to the age of 4-5 years. In the envisaged set-up, some of the calves will grow up only to weaners within the farming household and are sold at the age of 2-3 years old reducing the risk of mortality. A shift in perception of the function of large livestock in the rural subsistence household is expected, complementing the cash-generating function of small stock. Over time LSUs can grow into a productive capital asset for subsistence farmers in rural Namibia.

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\(^{10}\) Adapted from various sources, including 2001 Population & Household census and DVS animal census 2005.

\(^{11}\) Adapted from MeatCo Oshakati abattoir livestock slaughter numbers.
the cost of compliance with FMD regulations, and by the relative lack of marketing infrastructure.

GRN plans to erect a national border fence between Namibia and Angola in a final effort to move the VCF as close as possible to the border, unlocking a vast area for international cattle and small stock marketing, removing the dichotomy created in the livestock sector by the erection of the VCF during the colonial era. The likely implementation framework for the trans-location of the VCF to the Angolan border would be up to 10 years. Various intermediate measures are foreseen of which a number are included for funding from MCA Namibia. These are the construction of veterinary stations and the tagging of animals to move to FMD free status, training and extension in livestock production and marketing, improved livestock marketing practices and infrastructure. The modalities of the required cross border control measures are being discussed with the Angolan counterparts and technical assistance is provided by the Food and Agriculture Organization (FAO)\textsuperscript{12}. Preparations are made for the establishment of a Namibia/Angola Task Force\textsuperscript{13} to – amongst other development initiatives – work on issues related to veterinary health and FMD control including the movement of the VCF northwards to the Angolan border.

As such, the proposed MCA Namibia actions will contribute to the ultimate goal of trans-locating the VCF to the Angolan border and declaring the communal areas north of the VCF FMD free, creating the opportunity for Namibia to apply for FMD free status and to remove the dichotomy between the communal and commercial farming zones north and south of the VCF\textsuperscript{14}.

For practical reasons a new term has been introduced for the MCA Namibia investment in the livestock sector, namely, the North-Central Communal Areas (NCCA). The NCCA covers the NCA minus the Caprivi region: the Kunene, Oshana, Oshikoto, Ohangwena and the Kavango regions. The Caprivi region will as long as there are free roaming buffalo in the area not qualify for FMD free zoning.

The Ministry of Agriculture, Water and Forestry (MAWF) is present in all regions of the NCA. The Directorate of Veterinary Services (DVS) is very active in the NCA, since it is their role to control quarantining and to monitor animal movements. During the annual vaccination campaign, livestock counts are conducted. A decade ago, MeatCo took over the abattoirs in the NCA. MeatCo is actively involved in mobilization and training of livestock owning households to ensure sufficient supply of cattle to the abattoirs.

Other institutions, such as the Meat Board, Namibian Agricultural Union (NAU) and National Namibian Farmers Union (NFFU) are involved in the NCA, however only to a lesser degree. Especially the farmers unions who represent tenure farmers rather than communal farmers are not directly involved in the NCA.

\textsuperscript{12} FAO (2000), Technical Cooperation Program, Livestock Improvement in the Northern Communal Areas, Namibia, Terminal Statement prepared for the Government of Namibia by the Food and Agriculture Organization of the United Nations, Rome, Italy.

\textsuperscript{13} The Project Coordination for the translocation of the VCF rests with the Meat Board of Namibia. Namibia has nominated the members for the Namibia/Angola Task Force to represent the Ministries of Foreign Affairs, Finance, Defence, Environment and Tourism, Trade and Industry, Safety and Security and Works, Transport and Communication.

\textsuperscript{14} Refer to Cabinet Decision 16th/30.05.00/004.
The MCA Namibia investment into the livestock sector is grouped along three main actions, namely:
- Improve animal health and quality (2.1)
- Increase large and small stock production (2.2)
- Improve marketing infrastructure (2.3)

Historically, the NCA was denied access to the formal livestock marketing channels, for it was classified as FMD area. This affected livestock owning households negatively, being restricted from developing their farming operation and thus resulting into low off-take rates and poverty.

During a period of transformation in the livestock sector in the NCA, the aim is to develop communal livestock farming into a modern industry capable of contributing sustainability to economic development.

Improving the livestock health status in the NCA will contribute to this and will eventually lead to the translocation of the VCF to the international boundary with Angola. Livestock development was neglected for many years in the NCA. Developing this sector depends on improved animal health support, provided by DVS. However, sufficient facilities are lacking in some communal regions, which are conditional for quality and health control, and especially for the envisaged health classification change of the NCA.

To unlock the potential of the livestock sector in the NCA, the production of livestock needs to be mobilized, by means of tenure arrangements, higher carrying capacity, and the adoption of new grazing, breeding, herd and financial management practices, to list a few.

In order for the improved animal health and quality and increased production of livestock to be converted into additional income, as final supportive measure marketing infrastructure needs to be improved, such as feedlots and quarantine camps (necessary for the time being).

This full package of actions will shift neglected communities into main stream livestock production and marketing.

All actions are geared towards the overall objective of the MCA investment to increase production of large and small stock and to mainstream the commercial marketing thereof in communal areas. MCA funds will be utilized to assist communal and resettled farmers to become more productive. The acquisition of land for land reform purposes will not be pursued with MCA funds.

The rural access roads identified for investment by MCA Namibia (Cross Cutting Investment A) are of crucial importance to the MCA investment into livestock. Without the proposed roads infrastructure development, the transport of a much higher number of cattle to the quarantine facilities and on to abattoirs will not be cost-effective. Without the rural access roads the short term returns will be jeopardized. The feedlots and quarantine camps require access to power and are located next to the power grid. For the quarantine camps provision has been made for telecommunications.
Action 2.1  
Improve Animal Health and Quality  

2.1.1 Construction of Veterinary Stations and Tagging of Animals  

Background  
In the context of national animal health structures, the government’s Veterinary Services play the role of “guarantor”, ensuring that all problems related to the activities and fields of competence of veterinary medicine are managed effectively in such a way as to uphold the rights and health care standards of all citizens.  

Animal health services in developing countries operate in a continuously changing policy, institutional and commercial environment. The changing policies and priorities of national policy-makers regarding public and private sector roles, reinforced in Africa by development partners, have reduced funding and support for the large number of tasks that animal health services have traditionally performed. As a result, the entire livestock commodity chain is undergoing major structural changes, which has significant implications for the definition and control of food safety standards. Trade of livestock produce increasingly focus on health and safety aspects, such as traded beef must be classified as health risk free, coming from areas classified with livestock systems, such as traceability, and internationally accepted farming practices. Globalization, and increasing trade and travel have greatly increased the risk of disease transmission between different countries and continents. Veterinary institutions in the developing world need to adapt to these challenges and focus on the essential public sector roles. They must deliver those essential services to the poor, and provide the policy framework to ensure that the inevitable structural changes in the commodity chain take place in an equitable and sustainable fashion, with an acceptable level of health risk for the consumer. According to the weight given to these different objectives, changes in the institutional set-up need to be considered.  

A summary of the animal welfare standards required for international trade is given in Table 3.1.  

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15 Since the outbreak of BSE (Bovine Spongiform Encephalopathy) and other highly infectious diseases, traceability of individual animals became a major issue in international meat trade. Traceability requires a system for tracing individual animals from the farm of birth to death by capturing its movements from farm to farm by a series of permits and registers (paper trail). These record and stored centrally. This system is compulsory South of the VCF, because of trade with the EU and partly so required by RSA. It is as yet to be enforced in the areas north of the VCF. The system also provides for identification and control of animals imported that may not enter the marketing chain with the EU.
Past Experience with Tagging
Since NCA livestock had no access to superior markets, tagging of stock was not applicable. Owners made use of their own way of branding to identify their livestock herd. With the envisaged change in the animal health in NCCA, it is required to apply individual tagging for all livestock. Each animal will be allocated with a unique number from birth until slaughter and will have a registered brand. This can be done by means of different technology, i.e. plastic ear tags with written numbers or bar codes or implanted chips in the ears.

Table 3.1: Animal Welfare Standards required for international Trade

<table>
<thead>
<tr>
<th>Issue</th>
<th>Standard and animal welfare applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production system and general animal welfare</td>
<td>Livestock owners are responsible for the welfare of their animals and must ensure that they are aware of all welfare requirements</td>
</tr>
<tr>
<td>Veterinary issues</td>
<td>Records are kept and annual veterinary inspections carried out</td>
</tr>
<tr>
<td>Animal handling</td>
<td>All animal handling facilities must be designed to ease handling of the animals and prevent injuries. The animals must be handled carefully to prevent stress and injuries.</td>
</tr>
<tr>
<td>Transportation</td>
<td>The vehicle must comply with the condition of the Code of Practice for the transport and handling of animals. Adequate facilities must be provided at times of loading and off-loading.</td>
</tr>
<tr>
<td>Housing and environment</td>
<td>There may be no features of the environment that could cause injuries to the animals</td>
</tr>
</tbody>
</table>

The VCF, which divides Namibia in terms of marketability and movement of animals and animal products, negatively impacts on the growth opportunities in the livestock sector in the NCA. Farmers north of the Fence are penalized by the cost of compliance with FMD regulations, and by the relative lack of marketing infrastructure. The abattoirs operated by MeatCo within the zone were granted export status to South Africa in 1995 subject to the following conditions: (a) animals have to be quarantined for three weeks prior to slaughter, (b) all meat is deboned (this may only be done once the meat has been allowed to mature for twenty-four hours), and (c) the meat is stored for three weeks before sale. All other off-take of livestock has to be marketed within the fenced area; no export is possible.

At the international level a major challenge remains in getting the EU to comply with standards laid down by the International Office of Epizootics (OIE), whose member countries all recognize Namibia as a FMD free zone south of the VCF. To minimize the risk of loosing the FMD free status for the areas south of the VCF, the moving of the VCF northwards needs to be managed very carefully through a step-by-step approach. Firstly, all animals north of the VCF need to be tagged (to be traceable), animals tested and entered into an electronic database. After testing, the area can be declared FMD free provided the VCF along the Angolan border is constructed. FMD free status for Namibia would enable it to export bone-in meat, holding several advantages such as (a) fewer problems with bone disposal, (b) wider range products that can be marketed, (c) distinct price advantage due to higher yield, (d) higher production capacity of a processing plant due to lesser time spent on deboning and (e) lamb cuts are traditionally bone-in and favored by consumers.

Improving animal health in the NCA, north of the VCF, will hold benefits also for the communal farmers south of the VCF. Requirements laid down by the EU for exporting beef to the EU, a key destination for Namibian beef, pose a major challenge for the development of beef production in the communal areas south of the VCF. Communal farmers in the South struggle to meet the detailed record keeping and control measures required by the EU. Should Namibia be declared a FMD-free country, such requirements will fall away.
Through the MCA investment, in a first phase Namibia envisages to tag all bovines in the NCCA, test them for the occurrence of FMD, and to apply for the status of a FMD free zone. Supportive veterinary infrastructure will be constructed to drive this initiative. Existing facilities were established during the time that international livestock marketing was not an option and now need to respond to the new reality of the NCCA entering mainstream exports. The new status would stimulate the livestock sector, by gaining access to superior markets. Farmers in the NCCA are expected to react to the higher prices by improving off-take rates thereby increasing productivity and their incomes and livelihoods.

**Description of Activities**

**Construction of Veterinary Stations**

Once Namibia applies for FMD free status, adequate capacity to monitor the health of animals is required. The planned veterinary stations will offer such capacity. These stations will also be instrumental in the tagging of all animals in the NCCA.

The following veterinary stations will be constructed in communal areas of Namibia:

- Expand the Epukiro Veterinary Station at Epukiro-Pos 3 (Omayevozonyanda) to provide work space for the complete range of state veterinary services and for housing of the state veterinarian and his/her family and staff. This station renders services to the Otjinene, Epukiro, Rietfontein, Eiseb and Gam communal farming areas, as well to parts of the commercial farming sector bordering these areas. One veterinarian plus 16 staff will render veterinary services to 188,304 Large Stock Units (LSU).

- Move the Otjiwarongo Veterinary Station to create a new station at Okakarara to render state veterinary services to the Okakarara communal area. One veterinarian plus 17 staff will render veterinary services to 160,161 LSU. The commercial farmers around Otjiwarongo already make use of private veterinary services and would not be adversely affected by moving the station to Okakara to be of service to the communal farmers.

- Create the Outapi Veterinary Station by upgrading and expanding existing general and veterinary structures at Outapi. Two veterinarians plus 26 staff will render veterinary services to 217,891 LSU.

- Create the Eenhana Veterinary Station, by upgrading and expanding existing general and soon to be completed veterinary structures and facilities. Two veterinarian plus 32 staff will render veterinary services to 7,473 LSU.

- Create the Uuvudiya Veterinary Station to provide services to the western part of the Oshana region. At present this area is serviced from Ondangwa and this will continue until the new Veterinary Station has been constructed.

- Mobilization and sensitization of livestock owners – public media campaign (radio + meetings at auctions)

The veterinary stations in the Kavango and Kunene regions are well placed and functioning. This action is geared towards Namibia’s FMD free zone. Since Caprivi will in the foreseeable future not be aiming for such status – due to the abundant wildlife and free-ranging buffalos – Caprivi is not targeted by this action.

**Off-take Rates**

There is no statistical evidence to determine the exact off-take in the communal areas north of the VCF. Anecdotal evidence would point at off-take rates as low as 2% and as high as 12% in some locations. The irregular slaughtering of LSU at the informal local bush markets makes it very difficult to determine the off-take rates. For the MCA Namibia investment, the off-take is assumed to grow from a very low 5%.
Animal Tagging in NCCA

All cattle and small stock in the NCCA will be tagged to qualify for traceability. This implies that livestock owners have to bring cattle, sheep and goats to crush-pens to be tagged. Each LSU will get a unique number. The type of tags used for cattle can be scanned and are electronically compatible, i.e. movements of herds can be monitored by satellite systems. Tags for small-stock are only area specific, i.e. no unique numbering system is required.

To prove the FMD free status of the cattle herds, 10% of all bovines must be tested once-off. The OEI may then decide to declare the areas north of the VCF with the exception of the Caprivi region FMD free on condition that the border VCF is constructed. Note that most of the Kunene Region and Kavango region are separated from Angola by a perennial river, a natural VCF.

Benefits

The benefits of this MCA Namibia investment are multi-fold and include:

- Across the NCCA 114,539 households and in Otjozondjupa and Omaheke 7,000 households rely on subsistence farming as their main source of income.
- A typical household in the NCCA owns 13 cattle, with an off-take rate of 5%, mostly used for informal trade. Small stock is generally used for own consumption.
- The management of animal health for 1.32 million LSU and 1.3 million sheep and goats in the NCCA will improve and reduce the high mortality rate of livestock in the NCCA from 15% to 3%. Note that only 1 million LSU are targeted for tagging.
- Communal farmers in the NCCA are supported to attain the required veterinary health status for their animals to allow Namibia to apply for the declaration of FMD-free status, which will unlock export opportunities for beef, mutton and goat meat from the NCCA to premium priced overseas markets.
- Reduced mortality rates and higher prices are set to encourage increased off-take and thereby higher cash incomes and improved livelihoods for communal farmers. With an improved off-take rate to 15% in the short term (from very low current 5%) and to 25% in the long term\(^\text{16}\), the communal farmers will improve their livelihoods and boost the local economy.
- It is estimated that the Namibian status of FMD free will have the highest return of all actions addressing livestock marketing in the NCCA. Approximately 280,000 cattle owners and their families, in total some 1.3 million people, would benefit directly.
- The newly proposed resettlement area at Eiseb will benefit from the improvement management of animal health, benefiting 120 resettled farmers.
- Namibia will be declared as FMD free area. This will give the livestock industry as a whole stronger lobbying power regarding export opportunities.

\(^{\text{16}}\) This translates in a nominal increase of 10% and 20% respectively.
### Costs

<table>
<thead>
<tr>
<th>2.1.1 Construction/Expansion of Veterinary Stations &amp; Tagging of Animals</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Construction/expansion of veterinary stations</td>
<td>3.945</td>
<td>3.288</td>
<td>3.288</td>
<td>0.000</td>
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<td>10.5</td>
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<tr>
<td>Eenhana Veterinary Station</td>
<td>0.789</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>2.1</td>
</tr>
<tr>
<td>Uuvudiya Veterinary Station</td>
<td>0.789</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>2.1</td>
</tr>
<tr>
<td>Okakarara Veterinary Station</td>
<td>0.789</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>2.1</td>
</tr>
<tr>
<td>Epukiro Veterinary Station</td>
<td>0.789</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>2.1</td>
</tr>
<tr>
<td>Outapi Veterinary Station</td>
<td>0.789</td>
<td>0.658</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
<td>2.1</td>
</tr>
<tr>
<td>2. Tagging of animals</td>
<td>0.066</td>
<td>0.000</td>
<td>2.262</td>
<td>1.604</td>
<td>0.000</td>
<td>3.9</td>
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<td>Electronic tagging of cattle (1 million * NAD25.00)</td>
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<td>0.000</td>
<td>1.973</td>
<td>1.315</td>
<td>0.000</td>
<td>3.3</td>
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<td>Tagging of small-stock (1.3 million * NAD1.50)</td>
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<td>0.000</td>
<td>0.129</td>
<td>0.128</td>
<td>0.000</td>
<td>0.3</td>
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<tr>
<td>Hardware identification</td>
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<td>0.000</td>
<td>0.033</td>
<td>0.033</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Branding iron (inter-changeable)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.033</td>
<td>0.033</td>
<td>0.000</td>
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<tr>
<td>10% Cattle disease testing</td>
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<td>0.000</td>
<td>0.039</td>
<td>0.039</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Testing equipment</td>
<td>0.000</td>
<td>0.000</td>
<td>0.039</td>
<td>0.039</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Restraining equipment (movable crush pens, etc.)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.016</td>
<td>0.017</td>
<td>0.000</td>
<td>0.0</td>
</tr>
<tr>
<td>Mobilization and sensitization of livestock owners</td>
<td>0.066</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Total</td>
<td>4.0</td>
<td>3.3</td>
<td>5.5</td>
<td>1.6</td>
<td>0.0</td>
<td>14.5</td>
</tr>
</tbody>
</table>

During the first three years, the five veterinary stations will be constructed simultaneously. It is expected that each of the five stations be completed by end of year 3. During the first year, the mobilization and sensitization takes place, so that with the new stations ready by year 3, the tagging of animals can start in year 3 and 4. Year 5 will be used to apply for changing the health status to FMD free.

### Technical Analysis

This MCA Namibia investment requires the DVS to provide sufficient veterinary staff to run the new veterinary stations and to implement the large-scale tagging and testing drive. GRN has made a commitment to allocate sufficient resources to DVS for this. DVS has an excellent track-record of internationally accepted standard in managing the animal health status in Namibia. DVS officials are well known in and exposed to the international environment.

The proposed MCA Namibia investment into a Revolving Study Loan Scheme (under investment 1) will also target veterinary science as a possible field of study for the selected beneficiaries. Students who benefit from this Scheme are required to work for a number of years in Namibia.

DVS has set criteria for the construction and operation of the veterinary stations and no challenges are foreseen in the implementation.

The tagging will require coordinated planning and good communication with the local livestock owners. Their support will be canvassed through an extensive local media campaign and through various GRN channels of communication. The communal farmers
will be motivated to collaborate given the prospect of improved marketing and moving of the VCF. Without tags marketing of animals will no longer be possible. The communal farmers will be on a higher production frontier due to the proposed MCA investment, which will enable them to fund the tags from own resources.

**Economic Assessment**

The ERR calculations reflect the anticipated developments in the marketing of LSU only. Small stock continues to have a household food and small cash income security function yet LSUs will increasingly become a productive capital asset.

The creation of new veterinary stations is relatively expensive, yet without these stations the objective to move forward in declaring Namibia FMD free cannot be attained. However, due to the far-reaching benefits and wide spread of such benefits among the majority of Namibians, this investment attracts a positive ERR.

The improved DVS services to communal farmers at local level delivered through the veterinary stations is expected to increase the off-take rate with 1% point. An additional benefit is the increase in the profit margin up to 5% due to a reduction in the mortality rate. Once the animals are tagged and tested for FMD free status, the benefit to the communal farmers will increase substantially. This is dependent on the declaration and the internationally accepted border fence between Namibia and Angola, which is envisaged shortly after the MCA investment. The full benefits will include savings in quarantine costs and improved productivity and open markets. The latter is reflected in an additional off-take and profit margin increase of 4% points.

Using these assumptions, the ERR over a 20 years life span would be 22.9% and 14.0% over a 10 year period.

The sensitivity analysis shows fairly robust results with a variation of -4.1% and +3.9%, as per Table 3.2.

**Table 3.2: Sensitivity analysis for Animal Health Program**

<table>
<thead>
<tr>
<th>ERR Sensitivity Analysis 20 years project life span</th>
<th>NCCA cattle decrease by 5%</th>
<th>NCCA cattle increase by 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-take nominal increase to 2%</td>
<td>25.2%</td>
<td>26.8%</td>
</tr>
<tr>
<td>Off-take nominal decrease by 2%</td>
<td>18.8%</td>
<td>20.1%</td>
</tr>
</tbody>
</table>

**Environmental Assessment**

The tagging will take place throughout the NCCA and will be done by means of movable crush pens. No stock pens or "camps" are required.

The new veterinary stations will get power from the grid (situated in village/town), while all other activities can be handled with small movable generators, even the quarantine camps are not dependent on the power grid. They will be located on previously disturbed ground, where vegetation has already been cleared, and topsoil has been either eroded or compacted by trampling of people or animals. It is likely that they will be established close to existing concentrations of people and rural villages. In determining the location in relation to dwellings, the most frequent and strongest wind directions should be considered in relation to dust, odors and flies.

The environmental impacts of this action will thus be minimal.
The impacts of veterinary stations can be managed through careful site selection, including prior confirmation of sustainable water resources, regular removal of dung from pens, and fly traps. Therefore no EIA is considered necessary and this action is considered to be in **Category B**. The potential impacts are site specific, of very limited extent such that habitat destruction should be unnecessary, and there are readily available mitigation measures. Instead of an EIA, a simple, short EMP is recommended for the siting of the station and management of construction and operations.

Tagging of animals does not require environmental management, but only the application of normal veterinary practices and standards.

This action does not include any listed activities in terms of the EA Policy of Namibia.

**Social Assessment**

This intervention is largely focused on the Northern Communal Areas excluding Kunene and Caprivi. According to the Report on the Annual Agricultural Surveys 1996-2003\(^7\), livestock numbers in the communal areas fluctuate wildly between seasons. For example, in 1996/7 there were 113,820 head of cattle in the Omusati Region. This increased to a peak of 225,610 in the 1998/99 season and then decreased to 156,766 in the next year! This was followed by a short-term increase to 180,766 in 2000/01 where after it decreased again to 155,850 in 2001/02 and further to 141,892 in 2003/04. The same trend is also evident in the other North-Central Regions. With alleged off-take levels estimated at a very low 2-5% and assuming that the fluctuations are not due to methodological flaws in the surveys, one can only conclude that environmental conditions such as drought and disease in some years take a huge toll on the livestock of poor communal farmers.

During the PPAs villagers indicated that a loss of livestock contributes greatly to poverty in the rural areas. Many cases were cited where individual farmers that had a few livestock, lost all of it due to disease or drought. Such households found it difficult if not impossible to start building a new herd again since they could seldom afford to purchase even a few cattle, let alone a sustainable herd. All villagers in these areas complained about the low prices they received when marketing their livestock, either by taking them to quarantine camps first and then selling it or selling it directly to speculators. From both the PPAs and quantitative statistics it is further clear that cattle owners are mostly not the desperately poor and vulnerable sections of the communities. Improved marketing infrastructure and better prices would mostly affect those that are better off and already own enough cattle, which warrant a reasonable annual takeoff.

On face value the intervention could therefore be seen as one benefiting those that are already better off. However, any intervention that would assist communal farmers to achieve better and fairer prices for their livestock would benefit not only those individuals but also the entire rural economy. The poor often have to engage in distress selling of livestock and better prices would obviously benefit anyone with access to livestock. It could even rescue many farmers from the need to “oversell” to cover their expenses, something that allegedly happens from time to time to some villagers. This could either bring their herd numbers down to below sustainable numbers or wipe out the entire stock.

Ownership of livestock in the NCAs culturally rest with men and they own and control the resource virtually exclusively. It is only in cases where a woman heads a household and is fortunate enough to own cattle where the resource is not owned and controlled by men. Traditional inheritance practices generally result in all or most of the livestock owned by a household being taken by the extended family upon the death of a husband.

\(^7\) NPC, 2004: 30
Against this background the improvement of animal health through the construction of veterinary stations and the tagging of animals with a view to improve marketability will bear great benefits to the rural subsistence farmers and the rural economies in general. Increased and planned off-take could assist communal farmers to better manage their assets and sell livestock when conditions are risky and re-buy when conditions are favorable. It is also likely to increase the number of sustainable herds, which would help in promoting the practice of off-take amongst communal farmers without them feeling that they undermine their own wealth as reflected in the number of cattle they own.

**Participation of Development Partners**

MAWF has constructed various veterinary facilities from its capital budget. No external assistance was received in this regard.

**Risk Assessment**

The principal risk, both inherent to the action and external, is the erection of the international border fence between Namibia and Angola. However, positive steps to prepare the ground for the trans-location of the VCF to the Angolan border have already been taken. It is anticipated that at the end of the MCA Namibia investment the joint Namibia-Angola planning for the border VCF will have been concretized.

The affected communal farmers will be motivated to collaborate with the tagging and testing efforts given the prospect of unlocking the NCCA in the medium term.

**Action 2.2**

**Increase large and small Stock Production**

**2.2.1 Unlock Eiseb Block**

**Background**

MLR is guided by the Land Tenure Proclamation “Communal Land Reform Act, Act no. 5 of 2002”. This Act reflects on the ownership of communal land and land purchased by the GRN for resettlement purposes, which is all state owned land. Eiseb Block is communal land and belongs to the State. The same Act provides for resettlement beneficiaries to enter into a lease agreement for 99 years with the State to secure long-term tenure and also for the tenure hold to serve as collateral for loans from commercial and other banking institutions. Further, a bundle of rights is awarded to the lessee who has the right to sell the infrastructure improvements to the next lessee or pass a right of use to a person his/her preference. The existing legislative and regulatory framework gives priority to women and vulnerable persons.

Since the inception of the land reform process in 1990, MLR acquired 197 farms measuring in total 1.2 million ha on which 1,616 families were resettled. A major constraint in the resettlement process has been the inability of many resettled farmers to put their land to productive use due to lack of access to start-up capital and development or rehabilitation of water infrastructure. The entire process of land reform, training and mentoring and other services will be jeopardized if ECFs are not empowered to utilize the natural resources allocated to them for economic gain.

The organization of the MCA investment into the Eiseb block responds to these challenges by selecting for resettlement in the Eiseb block only farmers who are livestock owners (with a certain number of livestock). The upscaled ECF-SP (to be supported by MCA Namibia) will provide management support geared at improved productivity of these farmers.
Moreover, the 99-year leasehold qualifies as security for the ECFs to obtain commercial financing.

MLR is in the process of formalizing the use of leasehold as security by resettled farmers when applying for loans from financial institutions. The Land Reform Advisory Commission held extensive consultations with various financial institutions that indicated their willingness to support MAWF in an effort to enable resettlement beneficiaries to acquire capital so as to enable them to make productive use of the land allocated to them. Once full consensus is reached, leaseholds would then be acceptable as security by financial institution.

The land reform process will be stepped up over the next few years with a large number of Namibians to be resettled. The target for land reform in Namibia has been increased to 15 million ha by the year 2020, and less than a third of this has been achieved to date.

The Eiseb block is a vast open communal farming area in the Otjombinde Constituency of the Omaheke Region. The area lies about 460 km north-east of Gobabis on the Epukiro-Okatumba road. The larger Eiseb area measures 1.628 million ha and has about 30-35 villages of up to 20 households per village. The Eiseb block is highly suitable for resettlement for it is highly productive virgin land without bush encroachment. The Eiseb Graben aquifer has a sustainable yield of an estimated 700,000m³ of water per annum, sufficient for human and cattle consumption on the farms and at the Eiseb settlement.

As a result of the land reform program an increasing number of farmers who previously farmed in communal areas will be drawn into commercial livestock production. A significant proportion of those will farm on small commercial farms in the currently unutilized Eiseb block. This farm development could be south of the Otjinoko River, on the Omuramba Rooiboklaagte and it could be extended to the omurambas Elandlaagte and Epukiro. This area has to be prepared and developed in such a way, that farmers have access to markets by means of access roads, that the land tenure is arranged and that the farms are set up with the minimum of border fences and one operating water point.

In order to make a success of their farming operations and maintain output levels, these farmers need considerable support in various fields of livestock farming. Apart from training in husbandry practices and sustainable rangeland management, basic skills in financial management will be required to survive in a commercial environment. New forms of marketing may be called for to enable these farmers to remain competitive. The latter will be addressed in another MCA action, the Emerging Commercial Farmers Support Program (ECF-SP).

**Description of Activities**

The MCA Namibia investment will be used to subdivide the un-utilized rangeland area of 3,000km² into 2,500ha units providing in total 120 economically-sized units for resettled farmers. An access road to the farming units will be constructed and a water supply system to service the area will be developed. Land tenure will be arranged with the selected applicants, a border fence will be erected and one running water point will be constructed on each farm.

All on-farm infrastructure and the livestock herd required will be invested in by the farmer him/herself. Each farmer has to be able to settle 200 LSU on the individual farm and to pay for on-farm infrastructure such as housing, more fences and livestock infrastructure by means of a loan or own funding.

GRN will be involved in the land tenure arrangements, surveying and the selection of prospective aspirant farmers. Existing Resettlement Committees at regional level work closely with MLR and will guide the selection of the resettlement beneficiaries following selection criteria as stipulated in the National Resettlement Policy. Each region has also a
The communal regional Land Board that allocates agricultural land for lease purposes. The process of relocation of beneficiaries will be properly guided by the Communal Land Reform Act of 2002 and the National Resettlement Policy.

GRN will also make an estimated investment of NAD34 million into an access road to the individual farm units, i.e. from the MCA access road up to the individual farmer’s water points, which will be their homestead location too.

The Emerging Commercial Farmers (ECFs) will benefit from the ECF-SP.

**Benefits**

The principal benefit from this investment is the settlement of 120 farmers. This will contribute towards the success of land reform and the meeting of targets set by the Permanent Technical Committee (PTT) on Land Reform. The investment will contribute 8% to the PTT target set for the MCA time frame.

The MCA investment will unlock viable farming operations for 120 farmers with their families. The typical size of the farmer’s household would be 7 members, including the farmer. Initially the ECFs will most likely rely on family members for labor though in the medium-term each farmer is expected to employ 3 farm workers. Their families may also settle on the farms. It is expected that the current Eiseb village will increase from the current 180 people to 1,500 inhabitants. A conservative estimate would thus be that 840 people will settle in the area plus a further 1,320 at the Eiseb settlement. This number will grow in the medium to longer-term.

The envisaged land tenure arrangement makes provision for 200 LSUs with an initial off-take rate of 15%, to increase to 25%, which is the commercial area off-take standard. An access road to the market, connecting the Eiseb block to Epukiro to provide access to the weaner auctions at Gobabis, is to facilitate this. This rural access road is proposed for MCA Namibia investment.

The settlement of the 120 farmers with 200 LSU each on crown land could potentially attain a farm-level financial feasibility of above 250% return. This will place the individual farmer on a high production frontier enabling him/her to care for sustained livelihood and where applicable the loan repayments.

The local village will flourish with the (initial) settlement of 2,160 people, creating additional employment opportunities and some SMEs. The developed Eiseb area will serve as a regional growth point, with a school, clinic, police station and some shops.

**Costs**

<table>
<thead>
<tr>
<th>Costs</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2.2.1 Unlock Eiseb Block</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>10.1</strong></td>
</tr>
<tr>
<td>Separating farming units by means of fences</td>
<td>0.000</td>
<td>0.329</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.3</td>
</tr>
<tr>
<td>Water supply system (main borehole to block)</td>
<td>7.891</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>7.9</td>
</tr>
<tr>
<td>Water point infrastructure (one per farming unit)</td>
<td>0.000</td>
<td>0.526</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.5</td>
</tr>
<tr>
<td>Contingencies</td>
<td>0.000</td>
<td>1.315</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>7.9</td>
<td>2.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td><strong>10.1</strong></td>
</tr>
</tbody>
</table>

The Eiseb block development will start with the water supply system in year one. Once the development of water supply is completed, the fencing of farms and water point infrastructure will be done in year 2. Concurrently, GRN will develop small access roads from the large MCA road to the individual 120 water points.
Technical Analysis

The Ministry of Lands and Resettlement (MLR) has targeted the Eiseb block for resettlement units. MLR applies set criteria for the selection of communal farmers for resettlement and will be involved in the selection of applicants. The applicant farmers must have: a) farming experience and ability and b) the financial means to purchase the 200 LSU or own them already. Adhering to these strict selection criteria will be critical to the successful implementation of the action.

The planning of the new rural access road D3301 and D3830 from Epukiro to the Eiseb block must be designed in such a way that it provides direct access to farmers, ideally cut through the envisaged Eiseb block.

The construction envisaged by the MCA investment is standard and no technical challenges in the implementation are foreseen.

MAWF, in collaboration and with financial assistance from its development partners undertook an investigation of the underground water resource potential of the Eiseb Graben. The results indicate that more than 700,000 m³ of water could be sustainably extracted per annum to support development of 120 farm units as well as to supply water to town development in the area over a 15 year timeframe. This means that the projected population of 2,000 people in the settlement, based on the projected percentage growth in population, would only likely be achieved after 15 years.

Economic Assessment

The development of the unutilized land into productive land will create opportunities for many people. It will stimulate growth in a presently isolated area and thereby improve the livelihoods of many people in the north-eastern Omaheke area.

The settlement of 120 farmers with 2,500ha each on crown land cannot only be assessed in terms of economic benefits, but contributes greatly to the national objectives of reconciliation, peace and prosperity, and to address the hunger for land. It also reduces the pressure on national pastures by settling 24,000 LSU on the Eiseb block.

Farmers will be relocated from areas where they subsist with relatively low off-take rates and profit margins into a highly fertile land with off-take of up to 22% and a profit margin of 20%. The relocation also reduces the pressure on agrarian land in other areas.

Over a project time span of 30 years, the ERR is calculated as 6.2%. Adding economic benefits, such as household income creation and a low economic value for land rent/LSU for the reduction of pressure on pastures outside Eiseb of NAD10/LSU/month, the ERR will increase to 13.2% over 30 years. Reducing the life span to 20 years, the ERR is 11.8%. Although the direct ERR (over 20 years) is below the cost of money in Namibia at present, additional non-measurable benefits have to be added, such as the contribution to a peaceful and successful land reform process. This is conditional to national economic growth and improved livelihoods in Namibia. It should however be noted, that development of agricultural land can be assessed over 30 years.

The sensitivity analyses show that the ERRs are relative static, ranging between 14.7% and 11.8%, as per Table 3.3.
Table 3.3: Sensitivity Analysis for Livestock Production related ERR

<table>
<thead>
<tr>
<th>ERR Sensitivity Analysis</th>
<th>LSU profitability decrease by 5%</th>
<th>LSU profitability increase by 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 years project life span</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off-take nominal increase by 2%</td>
<td>12.4%</td>
<td>14.7%</td>
</tr>
<tr>
<td>Off-take nominal decrease by 2%</td>
<td>11.8%</td>
<td>13.7%</td>
</tr>
</tbody>
</table>

**Environmental Assessment**

The action includes:

- Abstraction of water from the Eiseb aquifer.
- Water supply infrastructure to farm units.
- Subdivision of land into economically productive units for livestock farming.
- Housing (build by the new owners) for each farmstead.
- Infrastructure for livestock e.g. fences, pens, dip tanks etc.
- New access roads (D3301 and D3830).

The Eiseb block is comprised of deep sand, classified as Kalahari Sandveld. The soils are derived from wind-blown sand and consist of fine sand, except along the drainage lines where a little more clay would be expected. The vegetation is classified by Mendelsohn et al (2002) as Northern Kalahari, which is comprised of broadleaved woodlands. The soils in these habitats are not intrinsically fertile. The fertility is maintained by continual recycling of nutrients and organic matter in the soil. If the woodland cover is removed, the soil fertility can be expected to decline, and the soil structure can be expected to be detrimentally affected as the finer clay particles get removed by wind. The outcome, if poorly managed, could be a severe decline in fertility and reduction in carrying capacity for livestock.

The area is currently almost virgin land, with a very low population density – both people and livestock. The broadleaved woodland is currently not affected by bush encroachment. The veldt management practices on commercial livestock farms further west has lead to bush encroachment by species such as *Dichrostachys cinerea*, *Acacia melifera*, and *Terminalia sericia* on similar soils to the Eiseb block. It is therefore very likely that commercial livestock farming will lead to bush encroachment, which will have to be managed on an ongoing basis ever after. Failure to effectively manage this impact is likely to lead to reduced grazing capacity in the long term.

The aquifer is a primary aquifer – i.e. rainfall is simply stored in the interstices between the grains of sand to some depth. Therefore the impacts of changing the nature of the vegetation on groundwater recharge, and increased evaporation from a less well covered surface will need to be assessed. If bush encroachment is allowed to proceed unchecked, it will have an adverse impact on the water resources in this primary aquifer. Therefore management of bush encroachment is essential to the long term sustainability of livestock farming.

The impact of colonization of this virgin land by people and livestock will also have impacts on the flora and fauna of the Kalahari Woodland.

This action is categorized as **Category A** as it has potential for significant adverse impacts. Certain impacts – such as alteration of the vegetation communities, some loss of wild fauna from the area will be unavoidable. However other impacts, such as sustainable utilization of
the aquifer and management of soil fertility could be mitigated to some degree through strict enforcement of management measures. For example, low stocking ratios, rotational grazing within fenced camps, management of encroacher bush species. The farmers to be resettled in Eiseb Block will have to demonstrate farming experience and ability; selection criteria that will assist in mitigating the environmental concerns.

Following an EIA, it is recommended that an EMP be devised and put in place to manage the impacts the action on an ongoing basis. It will be necessary to develop the necessary instructional capacity to enforce the necessary management measures. Admission to the scheme should be made conditional upon adherence to environmental management measures. It must also be ensured that farmers remain on the land and do not leave only woman and children to run these farms.

The costs of ongoing management of bush encroachment need to be considered in the economic feasibility of the Eiseb Block action.

This action is listed in several categories in the EA Policy of Namibia:

- “Establishments of settlements”
- “Any government policy, programme or project on the use of natural resources”
- “Major agricultural activities (e.g. livestock and cultivation projects in previously undeveloped/unused areas)”
- “Small scale water supply schemes”
- “Human settlement”
- “Deforestation projects”
- “Major groundwater abstraction schemes”

Social Assessment

A major constraint in the resettlement process has been the inability of ECFs to utilize the full economic potential of their land. This is mainly due to a lack of access to start-up capital to obtain productive resources and develop on-farm infrastructure. This has led to great difficulty and low levels of well-being among many ECFs. The Eiseb Block has, till recently, been a largely unoccupied tract of land without infrastructure and access. However, over the past few years, considerable influx occurred and the area is occupied by about 450 households in 30-35 villages.

This intervention has the objective of developing some 120 economically sized farms in the Eiseb block including a boundary fence and operational water point for each farm. The Omaheke PPA completed in 2005 found living conditions in the Eiseb to be very difficult and poverty levels to be relatively high. This was mainly due to limited service provision, and extreme remoteness. The proposed intervention is likely to improve conditions in the Eiseb Block considerable, especially through improved water supply, access to farm input credit and ease of rangeland management. Leaseholds under the resettlement scheme should facilitate access to funding for productive assets and the necessary technical support will be provided to the ECFs.

The construction of a surfaced access road to the area will also improve accessibility to other areas and allow for the effective marketing of cattle on a commercial basis. These interventions are likely to bring significant improvement to well-being levels in the concerned community. With the Herero having a natural inclination and ability to successfully rear livestock on a commercial basis, the intervention is likely to propel beneficiaries of the action to much higher levels of well-being than is currently the case. The inherent provisions of the
resettlement legislation provides for resettlement practice to give priority to women and vulnerable groups. Yet these provisions must be strictly followed to ensure that land allocation follows these legal prescriptions and alleged favoritism and nepotism should be guarded against. The land allocation procedure must therefore be transparent and open to public scrutiny.

**Participation of Development Partners**

The Spanish Government has assisted land reform by providing housing, schools, clinics, implements as well as inputs for land reform beneficiaries. Examples are farm Queen Sophia and Excelsior, which are run on a project basis and production on the farms has been good.

GTZ has contributed a total of NAD3.2 million to the MLR’s Business Plan for 2006/07. All the activities of MLR are covered under the business plan.

Through the Rural Poverty Reduction Program (RPRP), the EU is providing technical support to MLR.

KfW plans to contribute to the division of land into small-scale farming units, as well as the development of farm infrastructure such as the construction and rehabilitation of fences as well as the drilling of boreholes.

The German Government through the Federal Institute for Geo-Sciences and Natural Resources (BGR) funded the Groundwater Investigation into the Eiseb Graben Aquifer.

GRN will fund NAD34 million for the small farm access roads, from the farm gate to the water point.

**Risk Assessment**

This success of this investment program is strongly dependent on the construction of the rural access road as proposed for funding from MCA (as per cross-cutting MCA Namibia investment A). The D3301 and D3830 from Epukiro to Eiseb Block will provide a marketing route for the farmers to access different markets. GRN is committed to make the necessary investment in on-farm access roads and provide technical support to the resettlement process.

The sustainable yield of the Graben aquifer is expected to only come into full use after some 15 years. Should the settlement continue to grow, alternative water resources will have to be secured.
2.2.2 Clearing of Bush-Encroached Farmland through Bush-to-Energy (BTE)

Background

Bush encroachment is a serious problem in Namibia. It is estimated that approximately 26 million hectares of commercial and communal farmland are bush encroached, of which 15 million in commercial farming areas including resettlement farms and 11 million on communal land.

Bush encroachment significantly reduces groundwater recharge as a result of the extensive root systems and high rates of evapotranspiration of the various invader bush species.

Various Perspectives on Invader Bush

Invader bush is seen as one of the most serious threats to the Namibian rural economy. Already severe declines in the national herd have been witnessed, and the potential for local value addition (retaining weaners) has been severely limited due to the loss of rangelands. Namibia is the driest country south of the Sahara, and the impact of bush encroachment on groundwater recharge and the groundwater table per se are most threatening. The bush-to-energy action plays an important role in changing perceptions about the possible solutions to the invader bush problem amongst farmers, investors and politicians, It could also play an important role in securing Namibia’s electricity supply in a region troubled by huge dependencies on one supplier of energy, South Africa, which itself is currently experiencing a serious domestic energy crisis. A strong correlation exists internationally between economic development and MWe produced per capita. Namibia needs strong economic growth if it is to attain, or even begin to attain, its Vision 2030, and the provision of electricity is the starting point for this.

The combination of reduced grazing areas and diminished water resources has been detrimental to Namibia’s cattle industry. The commercial and communal farm lands located south of the VCF have seen a steady decline in total cattle numbers, from 2.6 million in 1956 to approximately 900,000 at present.

Areas that have a noticeably high intensity of the invader bush are Epukiro, Grootfontein, Okahandja, Okondjatu, Otjo, Tsumeb, Windhoek, Okakarara, Otjiuuo and Otjiwarongo. Although a density of 400 bushes per hectare is enough in some areas to cause adverse impacts on land productivity, there are areas such as Tsumeb and Otavi where the density has been estimated as 20,000 bushes per hectare.

Numerous studies have been performed to better understand the bush encroachment problem, but relatively little has been achieved to address the problem at a practical level. There are a number of proven technologies that allow invader bush to be utilized for the production of electricity. Bush encroachment can be turned into a productive resource and generate electricity thereby significantly improving national energy security and creating thousands of new jobs and thereby reducing poverty.

The generation of electricity using wood gasifiers in conjunction with gen-sets is a refined and proven technology. Wood gasification technologies appear to be best suited for small to medium-scale electricity production (i.e. less than 5 MW). In comparison with small to medium-scale combustion-type technologies, wood gasification technologies are superior in cost, efficiency and emissions. In these times of worldwide concern over global warming and air emissions, wood gasification is an especially attractive technology due to its clean emissions profile. Due to the unlimited market for competitively priced electricity, and the increasing demand for green electricity, wood gasification would appear to be an ideal technology around which an economically viable, market-oriented strategy could be initiated to address Namibia’s bush encroachment problem.
The mission of MCA is to reduce poverty through economic growth. The BTE action would be consistent with this mission by initiating economic growth in a number of ways. First, the productivity of the de-bushed farms would be significantly increased thus creating more income for farmers, new jobs for farm workers, and new, secondary jobs in the meat processing and agricultural sectors. Over the long-term, a 50% increase in meat production from the de-bushed farmland is anticipated. Second, the establishment of bush-to-electricity (BTE) enterprises would create new jobs in bush clearing and aftercare, the operation of the gasifier and gen-set plant, business administration, and secondary jobs in the electricity regulation business. Third, the action would result in environmental benefits that have positive economic implications; improved groundwater recharge is one example.

**Figure 3.1: Levels of Impact of clearing bush-encroached Farmland**

An important objective of the BTE action is to act as a catalyst for future, private sector investments in BTE enterprises, and thus indirectly create many more new jobs and reduce poverty through economic growth.

**Description of Activities**

The activities to be carried out are the following:

**Phase I: Project Initiation**

**Phase II: Project Design**

- Specification of the types and numbers of technologies to be used, such as the gasifiers, gen-sets, shredding machines, briquetting machines, worker accommodation trailers, etc. The contractor will ensure that the technologies specified have been selected based on a public tender process, national or international as appropriate.
- Formulate detailed lease agreements for the NAU/NNFU’s plant and equipment.
- Investigate the best locations to establish the bush harvesting/electricity generation businesses.
- Formulation of acceptable standards for housing and sanitation required for laborers, which will be incorporated into the tender requirements for such infrastructure.
- Formulation of acceptable standards for labor contracts.
- Formulation of the draft Build-Operate-Transfer (BOT) agreement format and details.
- Co-ordination with the Electricity Control Board (ECB), the relevant Regional Electricity Distributor(s) (RED), MET and MAWF to identify the applications, permits and operating procedures to be completed and performed by the BOT Independent Power Producers (IPPs) and SME bush harvesters.
- Formulation of procedures to be followed for project monitoring, reporting and evaluation.
- Preparation of EMP.
**Phase III: Build, Operate and Transfer (BOT)**

The following are some of the activities to be performed by the BOT contractors:

- Apply for an IPP license and co-ordinate with the relevant RED and Nampower as necessary.
- Apply for the required permits with MET and MAWF.
- Manage the procurement and delivery of all plant and equipment.
- Install the wood gasifier/electricity generation plant and supporting infrastructure.
- Develop and optimize operation procedures for all activities required for bush harvesting and the running of the wood gasification/electricity generation plant.
- Conduct training programs for all laborers, foremen and managers that would be involved in bush harvesting and the running of the wood gasification/electricity generation plant.
- Operate and manage the bush harvesting and IPP business.
- Follow all procedures and protocol that are required by the ECB and RED for book-keeping, reporting and general administration of the small IPP business.
- Distribute profit-shares to the parties, and for the percentage amounts, that were agreed upon in the BOT contract.
- Hand over all plant and equipment, and copies of business administration and financial record-keeping books to the JPC/PSC according the procedures agreed upon in the BOT contract.

In addition, with the assistance of service providers the following activities would be performed:

- Advise and assist the BOT contractor throughout the entire licensing and permitting process.
- Develop operation procedure manuals for all activities required for bush harvesting and the running of the wood gasification/electricity generation plant.
- Provide business management training to future bush harvesting SMEs.
- Develop training program content and materials for the training of all laborers, foremen and managers that would be involved in bush harvesting and the running of the wood gasification/electricity generation plant.
- Organize and participate in awareness raising and information dissemination campaigns, in conjunction with the JPC.
- Submit progress reports to the JPC/PSC on a regular basis regarding the performance of all BOT contractors.
- Prepare a comprehensive project report that provides a detailed evaluation of all aspects of the harvesting and electricity generation plant & equipment, operation procedures and requirements, and business administration & management procedures and requirements.

**Phase IV: Long-Term Operations**

The JPC would be owners of the plant and equipment over the long-term, and would lease it out to BOT contractors. The JPC would not become managers of bush harvesting or IPP businesses. However, it is envisaged that the JPC would stay involved and ensure that the plant and equipment is utilized for its intended purpose. This involvement could take the form of detailed lease agreements that specify the locations where, and the conditions under which, the equipment should be used by contractors. In this way, the JPC could ensure that the equipment is used where it is needed most to reduce poverty and improve the agricultural sector. In this respect, it is envisaged that the JPC would perform some or all of the following activities, with the assistance of service providers:

- Formulate detailed lease agreements for the plant and equipment.
- Provide consultations to future bush harvesting SMEs and BTE IPPs regarding lessons learned in the past.
- Provide leadership and consultations regarding the optimal locations for the plant and equipment to be used.
- Perform awareness-raising and information dissemination campaigns, including policy recommendations regarding the wood utilization industry.
- Establish a savings fund from the income generated from the leasing of the plant and equipment in order to replace the plant and equipment in the future, or to establish similar projects.
Area of deployment of the gasifiers

Two IPPs will target current resettlement farms and one IPP will be established in the communal areas. The specific area selection will depend on the bush density and the local electric grid, to which the electricity will be supplied. The initial suggestion can be seen in the overlaps of three maps, resettlement farms, the bush density and electricity grid; a final decision will be made by the PSC.

Status of IPPs in Namibia

At present, the ECB and Nampower are implementing a US Trade and Development Agency funded project that will develop an IPP Framework Model for small, medium and large IPPs. The MCA Namibia BTE action was discussed amongst Nampower, ECB, the project consultants and Namibian stakeholders. All parties expressed excitement about the prospect of decentralized biomass IPPs to be established in the near future. Not only would the BTE IPPs represent a breakthrough in the tackling of the bush encroachment problem, it would also be a great opportunity for the Namibian power generation and regulation sector.

Quantifying land clearance and electricity generation

The land area to be cleared by the 3 units is estimated to be 6,600ha per annum. The three gasifier units would thus clear 33,000 ha during the period of the MCA. While this is a significant amount of bush clearing, the real benefit of this intervention would be to clearly demonstrate that BTE ventures can be lucrative, whilst at the same time providing both social upliftment through improved working and living conditions for harvesting SMEs, and restoring Namibian rangelands.

The demonstration effect makes the real difference, as indicated in Table 3.4.

Table 3.4: Impact Potential of MCA Namibia Investment in BTE Action

<table>
<thead>
<tr>
<th>Number of operators</th>
<th>Number of ha cleared with 1 Unit</th>
<th>Total ha per annum</th>
<th>Lifetime of investment</th>
<th>Total ha cleared</th>
<th>MW generated</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>2,200</td>
<td>44,000</td>
<td>20</td>
<td>880,000</td>
<td>13.3</td>
</tr>
<tr>
<td>40</td>
<td>2,200</td>
<td>88,000</td>
<td>20</td>
<td>1,760,000</td>
<td>26.7</td>
</tr>
<tr>
<td>100</td>
<td>2,200</td>
<td>220,000</td>
<td>20</td>
<td>4,400,000</td>
<td>66.7</td>
</tr>
</tbody>
</table>

Namibia’s peak electricity requirement currently amounts to between 400 and 500 MW. Biomass IPPs could thus, eventually, contribute a significant portion of energy from a renewable source.

Benefits

The initial three gasifiers function as a kick-start to convince entrepreneurs how profitable it is to start bush harvesting SMEs and/or IPPs and to demonstrate to farmers how productivity of the land can be improved. Only after several hundred units are operating, will large tracts of land be cleared and considerable power generated.

There are different groups and types of benefits, as detailed below.

- Namibian Agricultural Union (NAU) and National Namibian Farmers Union (NNFU)
  The NAU and NNFU, through the Joint Presidency Committee (JPC), will be the immediate beneficiaries as they will receive the MCA funding. However, through the BOT model their involvement in the actual bush clearing and power production will be minimal and only focus on sensitization, mobilization and training.
Business opportunities for bush harvesting SMEs and job opportunities for laborers to work for bush harvesting SMEs

It is envisaged that a typical SME bush harvesting team will comprise of one owner/supervisor (with driver's license) and seven to nine staff. They will operate during normal working weekdays, during which they will overnight on the farm. On weekends all staff will go home. It is imperative that the SME harvesting teams’ presence on farmland causes no disruption to regular farm operations and that their presence has a minimal footprint.

Each bush harvesting SME will be equipped with a whole range of equipment that will facilitate efficient harvesting, safe working conditions and reasonable comfort. Mobility is another crucial element not only for transporting staff, but also for delivering shredded bush to the electricity generators. SME equipment will include a light-duty truck, accommodation trailer (solar electrified for lights, refrigeration and other low power appliances; modified to include bunk beds and cooking facilities), chainsaws and other powered harvesting and shredding equipment and protective gear.

Existing SME loan facilities would provide financing, alternatively the BOT operator could avail what is effectively a production loan to the SME. Harvesting SMEs would receive payment for (a) dry tonnage of shredded bush delivered to electricity generator and (b) each hectare of land cleared. In addition, shareholding in the IPP may also be considered to create ownership along the value added chain.

Business opportunities for IPPs and job opportunities with the IPP

IPPs will be established through the BTE MCA investment. The investment is expected to have a demonstration effect and encourage economically viable wood harvesting SMEs and IPPs to become operational. Ultimately, the catching on by IPPs is the real contribution to the bush encroachment problem and power generation. It is difficult to estimate the number of IPPs that will follow, and the speed at which they will be established due to the novelty of this industry in Namibia.

The direct beneficiaries per unit are 25 employees, with an additional 10 women employed for aftercare per unit and 5 farm workers employed additionally per 10,000 ha cleared (or 6 workplaces per unit) over the MCA period. Other direct beneficiaries are the resettled farmers, approximately 5 per unit. All together, each unit will reach 135 direct beneficiaries and their families (405 people in total) for the three units. These figures would significantly increase as private sector technology adoption takes place.

Additional income opportunity for resettled farmers through bush harvesting

Resettled farmers often lack financial resources and find it hard to make a living of the heavily bush-encroached land. They may opt to turn the invader bush resources into start-up capital that will heighten the success of land reform.

Job opportunities from after-care

The aftercare is expected to create employment especially for unemployed and underemployed rural women.
Incentive for policy development in the energy sector

The establishment of IPPs has been identified by both ECB and Nampower as important to the Namibian energy sector and the Namibian economy as a whole. This investment will encourage key stakeholders in the electricity supply and regulatory sector to evaluate and identify the best incentives, regulations and procedures for IPPs, in particular small, renewable energy IPPs.

Other benefits include increased energy security, increased employment in the livestock sector, higher meat production and related profits and employment, access to off-grid energy supply, which will encourage local level economic activity and growth.

Costs

<table>
<thead>
<tr>
<th>2.2.2 Clearing of Bush-Encroached Farmland through Bush-to-Energy (BTE)</th>
<th>5.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobilization, business plans, SME development, IPP licensing</td>
<td>0.145 0.000 0.000 0.000 0.000 0.1</td>
</tr>
<tr>
<td>Procurement of the gasifiers and gen-sets – Phase 1</td>
<td>2.367 0.000 0.000 0.000 0.000 2.4</td>
</tr>
<tr>
<td>Procurement of the gasifiers and gen-sets – Phase 2</td>
<td>0.000 1.973 0.000 0.000 0.000 2.0</td>
</tr>
<tr>
<td>Management, monitoring, administration</td>
<td>0.039 0.039 0.039 0.039 0.039 0.2</td>
</tr>
<tr>
<td>Technical support services, including maintenance, technical assistance, SME and IPP support and other</td>
<td>0.105 0.000 0.000 0.000 0.000 0.1</td>
</tr>
<tr>
<td>Technical support services, including maintenance, technical assistance, SME and IPP support and other</td>
<td>0.000 0.085 0.085 0.085 0.085 0.3</td>
</tr>
<tr>
<td>Visibility activities and awareness raising, policy recommendations, best practices etc</td>
<td>0.026 0.026 0.026 0.026 0.026 0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.7</strong> <strong>2.1</strong> <strong>0.2</strong> <strong>0.2</strong> <strong>0.2</strong> <strong>5.3</strong></td>
</tr>
</tbody>
</table>

This program will start with the mobilization, business plans, SME development, and IPP licensing in year one. The procurement of gasifiers will be done during the first two years. The program has activities, such as management, monitoring, administration, technical support and awareness-raising for the full five years. Thereafter, internal budgeting will cover the latter activities.

Technical Analysis

Technical challenges should be minimal once proper training and installation will have taken place. The technology is rather straight-forward and simple.

As mentioned before, amounts of wood need to be harvested that are comparable with existing enterprises (especially the charcoal industry). This activity is even easier because no further value-addition (such as burning the charcoal) is required from the harvester.

The shredder and briquetting machines are commercially available and regular maintenance has been budgeted for. The gasifier requires very low maintenance only, with the wood gas (used in the gen-set), condensate water and ash are the only product and by-products. The gen-sets run 100% on gas, at optimal revolutions and as such require very low maintenance as well. The piece of equipment in the whole scenario that is most likely to break often is the chainsaw. This is calculated into the assumptions through a write-off period of only 12 months. Technical solutions improving durability will be sought as part of the action. Units cannot be over-used. Breakages need to be carried by the BOT client.
The BTE action derives its benefit from the demonstration effect, and as such needs to succeed on a commercial basis. To this end all calculations include full cost amortization, including cost of bound capital at market rates and full depreciation. Ownership under BOT arrangements is with the user.

Units are delivered on a trailer. The trailer can thus be pulled and relocated easily. The grid in-feeding box and other equipment are also easily moved. In heavily encroached areas the unit would not be moved more than once or twice in 20 years.

The NAU and NNFU have demonstrated institutional readiness to cooperate through the joint implementation of the ECF-SP under the guidance of a Joint Presidency Committee (refer to implementation model below). The implementation of this action will be supported by a Technical Steering Committee comprising of representative of a wide range of stakeholders including MAWF, MLR, Agribank and development partners.

The ECB has guaranteed that the electricity produced may be offloaded onto the national grid. Although no Power Purchasing Agreement (PPA) with the national utility or the regional electricity distributors has been negotiated yet, these entities and the national regulator indicate that a tariff of NAD0.33 to NAD0.40 is very reasonable and in line with current electricity tariffs. The ECB further provided data and guidelines so that a conservative estimate of a reasonable selling rate (NAD/kWh) for electricity could be made for the next 20 years. Detailed cost estimates indicate that BTE IPPs could produce electricity at NAD0.30 per kWh. An agreement to supply additional electricity during peak times could prove to be even more profitable, however this has not evaluated in detail yet.

The BTE IPP would be an “embedded” producer. This means that they would supply directly via the REDs’ distribution system (as opposed to Nampower’s transmission system). As such, the PPA would most likely be between the IPP and the respective RED. The size of the power line connection required will be greater than SWER (single wire earth return); though any size above that will be suitable given the right transformer is used.

Economic Assessment

The BTE activity establishes commercial IPPs that are supplied by wood harvesting SMEs restoring the agricultural potential of Namibian rangelands. The economic assessment has taken account of the harvesting economics, the IPP costs and benefits as well as the additional income being generated on the land trough improved carrying capacity.

Benefits relating to livestock production are the pasture availability of 2,200 ha cleaned per annum for each gasifier set, or 6,600 ha in total. This implies that the stocking rate can

Two Farmers Unions united

The NAU has represented the interests of commercial Agriculture for nearly 60 years. Presently the NAU works in close collaboration with its sister organization, the NNFU, to promote the interests of national Agriculture. The Unions are acknowledged counterparts for the GRN in the pursuit of Land Reform, and also negotiate other issues with policy makers on a continuous basis. The NAU furthermore promotes the sustainable use of Namibia’s natural resources, and strives to avail diversification options for farmers in an even more competitive environment. The unions promotes communication with all other stakeholders in the natural resources sector, and serves the regional structures affiliated with the unions, as well as specialists organizations affiliated such as the Livestock Producers’, Agricultural Employers’, Dairy Producers’, Agronomy Producers’, Charcoal Producers’, Poultry Producers’, Namibia Professional Hunting, Agra Cooperative, Hardap Cooperative and Conservancy Associations. These affiliates create a large pool of knowledge and a very conducive environment for expertise transfer.
double from the current 1 LSU per 20ha to 1 LSU per 10ha with assumed off-take of 20% and 20% profit margin. Additionally, employment creation of direct and indirect beneficiaries (each of the three units will reach 135 direct beneficiaries and their families, i.e. 405 people in total) and the electricity units sold of 2MW per annum are also included in the calculation, at market rates and based on projections made by the Electricity Control Board. Wood harvesting SMEs are paid for their tonnage of wood delivered as well as the hectares of land cleared. Using these assumptions, the ERR over a 20 years life span would be 80.7% and 79.6% over a 10 year period. The sensitivity analysis shows fairly robust results with a variation of -5.3% and +6.3%, as per Table 3.5.

**Table 3.5: Sensitivity Analysis for Livestock Production related ERR**

<table>
<thead>
<tr>
<th>ERR Sensitivity Analysis 20 years project life span</th>
<th>Cattle profitability</th>
<th>LSU profitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-take nominal increase by 2%</td>
<td>77.8%</td>
<td>87.0%</td>
</tr>
<tr>
<td>Off-take nominal decrease by 2%</td>
<td>75.4%</td>
<td>82.8%</td>
</tr>
</tbody>
</table>

Benefits relating to the energy production are the sale of electricity, i.e. 2MWe multiplied by electricity price. The Internal rate of Return (IRR) for the sale of electricity alone is estimated at 28.2%; i.e. excluding the benefits of bush clearing for livestock producers.

The price used starts at current market values (NAD0.33 per MW), and increases with ECB projections to a certain base value at 10% per annum. The ECB would upon reaching that value keep it relatively steady. These projections assume below-inflation price adjustments of only 3% per annum. This was done in consultation with the ECB.

Using these assumptions, the ERR on the investment made by the IPP over a 20 years life span would be 28.2% and 21.7% over a 10 year period. This positive ERR will be an important driver for more IPPs to become involved and establish a profitable business.

**Environmental Assessment**

This action involves:

- The removal of bush encroacher species – particularly *Dichrostachys cinerea*, *Acacia melifera*, and *Terminalia sericia* in order to rehabilitate former grassland areas for grazing of livestock.
- Use of the removed bush in the BTE action including generation of electricity. This involves the establishment of shredders and gasifiers at widely distributed locations.

Bush clearing in relation to the above-mentioned species would have highly positive impacts, both environmentally and socially. The benefits would include:

- Increased carrying capacity and productivity for livestock.
- Employment opportunities.
- Creation of small businesses.
- Very broad distribution of the economic benefits – i.e. to laborers, farmers, small businesses, and the nation through electricity generation.
- Development of management and business skills.
- Improved groundwater levels.
- Generation of electricity that could feed into the national grid.
Electricity generation is from renewable resources that also act as carbon sinks for atmospheric carbon.

Use of small bushes (not only large mature plants). In this way it is better than charcoal production.

This action is considered to be a Category C as it is unlikely to have adverse impacts. There will however be a need to manage certain issues that should be addressed through an EMP. The EMP should address at least the following:

- Retention of ecologically valuable species of trees that are not encroachers - such as Acacia erioloba, Boscia albitrunca, Maerua schinzii. These are important food sources for animals. Other species that provide fruit, shade, materials for building and implements must also be retained. Training must provide personnel with the necessary knowledge of the species to harvest and those to leave.

- There is the potential for “poaching” of non-invader species of trees by bush-clearing operators. For example, useful species such as Boscia albitrunca (animals food), Combretum imberbe (“indestructible” fencing posts) and Acacia erioloba (firewood). This issue will need to be addressed contractually, through the EMP, with provision for effective compliance monitoring.

- A semi-migrant labor system will have implications for families, potential spread of HIV/AIDS, and such issues will need to be managed in some way.

The life-span of bush clearing programs needs to be understood. Since one of the most important long term goals is to enhance grazing capacity, bush clearing at any given location will have a limited lifespan. Following the initial clearing, there will need to be periodic follow-up clearing, but this will produce much lower volumes of biomass than the initial operation. Thus the economics of follow up are less favorable than the economics of the initial clearing. However, the gasifiers are mobile units and considering that 26 million ha is bush encroached there should be enough wood resources for some generations to come. Yet, in the long term fewer people may be required for follow-up, and less electricity may be generated. These sustainability issues need to be understood and planned for in the long term.

In terms of the EA Policy of Namibia, this action may require an EIA under one or both of the following categories:

- “Any government policy, programme or project on the use of natural resources”
- “Power generation facilities with an output of 1 megawatt or more”.

Social Assessment

Bush encroachment in Namibia has caused the national cattle herd to shrink from 2.5 million in the 1960s to the current 900,000. At the same time unemployment in Namibia stands at 31% and youth unemployment has become a serious threat to economic stability.
This intervention has the ability to address both the reduction in grazing capacity due to bush encroachment and high levels of unemployment. Although the proposal is yet untested it is likely to have positive social benefits. It will concentrate on resettlement and communal farms, and should therefore benefit both ECFs and communal farmers who are the ones in most need. The formation of SMEs related to bush harvesting will provide a substantial number of employment and business opportunities and has the potential to even absorb some of these small businesses in more formal and profitable elements of the value chain. The intention is declared to make special arrangements to include women and vulnerable groups in the beneficiary group. Terms for this need, however, to be spelled out and transparent methods must be designed to ensure that this also happens in practice and does not remain an intention.

The intervention could further accelerate economic growth through the use of unwanted natural resources and through the application thereof for power generation, which is widely known to be a very profitable investment sector.

**Participation from Development Partners**

The ECB and Nampower are developing an IPP Framework Model for small, medium and large IPPs, funded by the US Trade and Development Agency. Apart from this, no other development partners are as yet involved in this innovative multi-focused development approach.

**Risk Assessment**

Proper training and capacity building form integral part of this action.

The sale of power to Nampower or the REDs has not been agreed as yet but an initial willingness has been expressed by these entities. Namibia is highly dependent on electricity imports from South Africa with demand in that country already exceeding its generation capacity.

**2.2.3 Upscale Emerging Commercial Farmers Support Program (ECF-SP)**

**Background**

For land reform to be successful supportive measures need to taken in addition to the provision of land, such as financial and technical support as well as marketing and management techniques, so that emerging livestock farmers can produce meaningful returns. Since independence in 1990 about 12% of the freehold land has been redistributed. This was done through a) a GRN initiated National Resettlement Program (NRP) where people were resettled on state acquired freehold farms, and b) through the introduction of an Affirmative Action Loan Scheme (AALS) from the Agribank that assisted financially strong communal farmers to procure commercial land.

Unfortunately, the ECFs received little back-up support to become economically self-sustainable farmers who can contribute to agricultural production and development. Economic gains in the emerging agricultural sector cannot be achieved by putting people on patches of soil. It demands hard work, technical and other assistance that will help new farmers to adapt to commercial farming techniques and practices, access to working capital and improved knowledge of quality control and foreign markets.

Making the transition from farming in Namibia’s communal-tenure areas to managing a freehold farm involves an abrupt change in terms of the farm business environment and farm management practices. New farming practices, including the adoption of new grazing management, breeding and herd management practices for example, must be adopted. Perhaps, above all, farmers must operate their farms as profitable businesses in order to
pay off their often-substantial Agribank loans. This means optimizing outputs and maximizing incomes in a sustainable manner. Further, they must do this in a market environment in which profit margins are tight at the best of times. Considering constraints such as lack of start-up capital and breeding stock, lack of access to operating credit, lack of equipment, poorly maintained farm infrastructure, and lack of access to information and advice, as well as natural risks such as drought and disease, the challenges are indeed enormous.

The ECF Support Program (ECF-SP) aims to improve the livelihoods for ECFs thereby contributing to the attainment of Namibia’s poverty reduction objectives as set out in Vision 2030. The direct objective is to increase and diversify ECFs on-farm income in 8 regions of Namibia through improved agricultural practice. The ECF-SP will empower ECFs, both institutionally and technically, to respond efficiently to their changed and challenging environment. A combination of skills transfer and capacity building methods will be used to bring together and sensitize service providers and other stakeholders about the needs of the ECFs, and to ensure that appropriate information is available to the ECFs for their continuous development. All of these activities are based on partnership between various stakeholders working together for the greater good of the agricultural sector, and the Namibian economy at large.

The ECF-SP is driven by the two agricultural Unions in Namibia (NAU and NNFU) prompted by their members. The ECF-SP aims to tap into a wealth of experience in the agricultural sector, and impart these skills to the new market entrants. The emphasis is both on realizing and improving the production aspects of the land and land husbandry, as well as building bridges between Namibian farmers who were during the Apartheid era allocated farming land in different parts of the country – the communal versus commercial farming areas –in an effort to realize an effective, efficient and equitable land reform process.

**Description of Activities**

The main thrust of the ECF-SP is to engage existing private sector knowledge for the benefit of ECFs in a private-to-private sector mentoring scheme. Capacity building and skills transfer will be pursued through a number of established and novel approaches, both formal and informal, yet primarily by farmers for farmers. All activities are based on partnership between various stakeholders working together for the greater good of the agricultural sector, and the Namibian economy at large.

This is a software action, aimed to create a critical mass of knowledge, competence and confidence amongst ECFs to boost the success rate of the on-going land reform process. There is a strong indication that the European Union Rural Poverty Reduction Program (RPRP) will finance the up-scaling of the ECF-SP for 2006 and 2007. The MCA investment will thus commence in 2008 only.

A modular approach is foreseen with one-year of intensive mentoring for each ECF. After this initial investment, the ECFs will need to consult private sector service providers at commercial rates. The ECFs are encouraged to participate in the more generic farmers’ information days and other related workshops through the duration of the ECF-SP. For the duration of the land reform process in Namibia, ECFs will enter the commercial farming sector and will require initial training, mentoring and other support after which they are expected to buy these services in the market.

The specific modalities of the mentorship program (as one sub-component of the whole initiative) will be informed by a study commissioned and funded by the unions, to be completed still in 2006.
Through the RPRP and the MCA Namibia investment, best practices will have been developed amongst private sector service providers to be used for future support actions to benefit ECFs.

Interventions in rural development aimed at improved livelihoods of farmers rely heavily on group approaches. The establishment and strengthening of ECF associations will be achieved through the facilitation or creation of ECF focus groups that will link up with existing commercial farmers’ groups. These emerging ECF associations will be assisted with the preparation of work plans, linkages with service providers, as well as general capacity building. A guiding principle will be to strengthen the institutional capacity of the ECFs to empower them to drive their own development.

To improve access for the ECFs to appropriate information, awareness will be raised amongst information generators about the specific needs of ECFs and the repackaging of existing information will be facilitated. Participation of ECFs at existing information days for commercial farmers as organized by the NAU, NNFU and other organizations will be encouraged to provide maximum exposure. Making the transition from farming in Namibia’s communal-tenure areas to managing a freehold farm involves an abrupt change in terms of the farm business environment and farm management practices. New farming practices, including the adoption of new grazing management, breeding and herd management practices for example, must be adopted.

Knowledge and skills of ECFs will be determined and enhanced at farmers’ group level. Improving the knowledge and skills base of ECFs will be an iterative process with continuous monitoring of the competency gaps. A variety of tools will be used including pre-settlement orientation courses, farmers’ and information days, excursions, short courses and other formal training as well as a farmer-to-farmer mentoring system. The mentoring system forms the core of the ECF-SP, and previous experiences have shown a great need and appreciation for and technical and social level acceptance of the private-to-private sector delivery of advice.

Support services to ECFs will be identified, complemented and improved. Enhancing the linkages between the ECFs and existing service providers is an important tool in the capacity building effort. At the same time the accountability and efficiency of service providers towards the ECF requirements will be addressed. Coordination and cooperation between the various institutions will be strengthened, especially at local level. Alternative models of service provision, especially in the field of extension, will be explored.

The ECF-SP is combines a number of tried and tested initiatives such as farmers days, information gatherings, informal and formal training (short and medium term) and others that are commonly used in farmer extension work. Fostering close collaboration with other service providers to improve their response to specific (new) needs, as well as building ECF-owned local institutions and linking them to organized agriculture (which itself is in a process of organizational development to accommodate the new clientele) are other important components of the project.

At technical level a number of multiplier effects are anticipated:

- Farmer to farmer extension has proven to be one of the most effective extension methods worldwide, and collaboration of the nature being provided by the ESFSP will provide viable and efficient models of farmer support in Namibia.

- Training materials and other printed sources of information in the most common Namibian vernaculars will be made available at national level for anybody interested to generate a livelihood from agriculture. One can expect that local publications focusing on agriculture will be greatly boosted on account of the higher demand.
Peer review mechanisms are very effective in for instance rural credit provision, and it is expected that similar benefits can be obtained in a situation where some farmers are shown to be doing much better than others. Agricultural shows are one such example where success is rewarded, and are already very popular in Namibia. The projects “ECF of the year” and “female farmer of the year” competitions should further enhance this spirit. Accountability and demand driven development will improve.

Benefits

The ECF-SP targets all land reform beneficiaries in Namibia, which includes ECFs through the National Resettlement Program (NRP) and through the AALS. Current figures are shown in Table 3.6.

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of beneficiaries p.a.</th>
<th>No. of beneficiaries for MCA</th>
<th>Ha per beneficiary</th>
<th>total ha p.a.</th>
<th>total ha for MCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AALS</td>
<td>3,647,169</td>
<td>646 plus</td>
<td>756</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NRP</td>
<td>1,055,129</td>
<td>1,600 plus</td>
<td>166</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>4,702,298</td>
<td>2,246 plus</td>
<td>922</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

During the MCA Namibia investment (year 3-5 or expected 2009/10-2011/12), new ECFs will enter the commercial livestock sector, as per Table 3.7.

Table 3.7: Assumed new ECFs and AALs according to the PTT

<table>
<thead>
<tr>
<th>Group</th>
<th>No. of beneficiaries p.a.</th>
<th>No. of beneficiaries for MCA</th>
<th>Ha per beneficiary</th>
<th>total ha p.a.</th>
<th>total ha for MCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual resettlement</td>
<td>257</td>
<td>1,285</td>
<td>1,000</td>
<td>257,000</td>
<td>1,285,000</td>
</tr>
<tr>
<td>Group resettlement</td>
<td>142</td>
<td>710</td>
<td>250</td>
<td>35,500</td>
<td>177,500</td>
</tr>
<tr>
<td>AALS</td>
<td>80</td>
<td>400</td>
<td>5,500</td>
<td>440,000</td>
<td>2,200,000</td>
</tr>
<tr>
<td>Total</td>
<td>479</td>
<td>2,395</td>
<td>732,500</td>
<td>3,662,500</td>
<td></td>
</tr>
</tbody>
</table>

The aim is to reach all new ECFs that enter the commercial farming sector during the MCA investment period through:

- complete decentralization of activities to the grass-roots level where sufficient social capital exists amongst farmers to mobilize each other
- through institutional development at both local and national level, which facilitates in its own right the targeting, mobilization and support amongst both emerging and established farmers who work hand in hand.

The ECF-SP counters the production losses experienced by ECFs due to a lack of skills. Current production losses of existing ECFs (who are resettled on an area of some 4.5 million ha) are estimated at 15%, resulting in annual losses of some NAD44 million.

The provision of cattle ranching skills is expected to increase the current off-take rate of on average only 7% to eventually 25%, the standard for commercial farming practice.

Primary agricultural production offer substantial employment opportunities and improved productivity will increase the number of job opportunities for farm workers on the
resettlement farms. Increased production will positively impact on down-ward processing industries and create demand for local-level service providers.

### Costs

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.3 Upscale Emerging Commercial Farmers Support Program (ECFSP)</td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human resources</td>
<td>0.000</td>
<td>0.000</td>
<td>0.125</td>
<td>0.125</td>
<td>0.125</td>
</tr>
<tr>
<td>Travel</td>
<td>0.000</td>
<td>0.000</td>
<td>0.063</td>
<td>0.063</td>
<td>0.063</td>
</tr>
<tr>
<td>Equipment &amp; supplies</td>
<td>0.000</td>
<td>0.000</td>
<td>0.123</td>
<td>0.004</td>
<td>0.004</td>
</tr>
<tr>
<td>Local office</td>
<td>0.000</td>
<td>0.000</td>
<td>0.031</td>
<td>0.031</td>
<td>0.031</td>
</tr>
<tr>
<td>Other costs, services and administration costs</td>
<td>0.000</td>
<td>0.000</td>
<td>0.576</td>
<td>0.576</td>
<td>0.576</td>
</tr>
<tr>
<td>Contingency costs</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.115</td>
</tr>
<tr>
<td>Total</td>
<td>0.0</td>
<td>0.0</td>
<td>0.9</td>
<td>0.8</td>
<td>0.9</td>
</tr>
</tbody>
</table>

This action will take place in years three, four and five. Each activity, human resources, travel, equipment and supplies, local office and other costs will be required to run the programme.

### Technical Analysis

The building blocks from which to up-scale the program are in place and no immediate technical challenges are foreseen in the implementation.

The ECF-SP started already in 2003 when initial funds were made available from the Netherlands Government to mobilize farmers, to establish regional coordination committees, and procure a vehicle each for the farmers unions. The NASSP project (National Agricultural Support Services Project) funded by the EU then made bridging funds available. With these funds 50 farmers' information days were held over the past 18 months, catering for the needs of ECFs on mostly technical issues, but also on household and gender issues. Further, two 5-day courses for ECFs were organized in conjunction with the CCF and public lectures were held in collaboration with the University of the Fes state focusing on strategic farm management as well as financial farm management.

Another ECF-SP initiative has been to develop practical production manuals on 9 topics. This received support from GTZ, the Namibia Nature Foundation (NNF), First National Bank (FNB) and Agribank. FNB has pledged support of over NAD1 million to the ECF-SP for 5 years. A proposal has been submitted to the EU RPRP for funding from 2006/7 to 2008/9. The MCA Namibia would take over funding of the ECF-SP from 2009/10 to 2011/12, year 3-5 of the MCA Namibia investment.

The ECF-SP has already established its regional structures to coordinate training needs of ECFs and is governed by a national level Technical Steering Committee comprising of representatives of the NAU, NNFU, MLR, MAWF, Agribank and development partners. The program has a well functioning administration mechanism that was recently successfully audited.

### Economic Assessment

The ECF-SP is a relatively inexpensive investment at a cost per beneficiary of NAD9,091. It addresses the current need to bring ECFs into mainstream livestock production, thereby countering the high production losses, estimated at 15%.

Benefits from the ECF-SP are not only the training, demonstration and mentorship to the ECF, but also the improved relationships within farming communities (interaction between the established commercial farmers and the newcomers), access to market opportunities,
access to lobbying power, etc. This will have all kinds of positive spin-offs in valued added industries and service sectors in the rural areas, possibly stemming the high rate of rural-urban migration.

Over a project time span of 20 years, the ERR is calculated as 167%. Reducing the life span to 10 years, the ERR remains virtually the same.

The sensitivity analysis shows that the ERR are not robust. However, even if the production losses are cut back from 15% to 5% the ERR remains positive and the project viable.

**Table 3.8: Sensitivity Analysis for Livestock Production related ERR**

<table>
<thead>
<tr>
<th>ERR Sensitivity Analysis</th>
<th>Production loss reduced by 10%</th>
<th>Production loss reduced by 17% instead of 15%</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 years project life span</td>
<td>ECF-SP 86.8%</td>
<td>222.3%</td>
</tr>
</tbody>
</table>

**Environmental Assessment**

Redistribution of land has the potential for adverse environmental impacts in the case where land that was previously well managed is taken over by farmers who do not have the necessary knowledge and skills to manage the land well. It is not possible to properly assess such impacts though an EIA as the degree of impact would depend entirely on how poorly or well the land is managed. Redistribution and resettlement is however not considered here, but only training and support programs to improve land management and improve economic benefits to farmers.

Support programs involving training, technical and financial support, marketing support etc. These interventions do not have adverse environmental impacts – provided that they do not involve subsidies for agricultural produce.

Although subsidies may be justified in some cases, they can distort markets and can lead to production of agricultural products that are not environmentally suited and not sustainable. Therefore any consideration of subsidies must be submitted to an EIA.

If it is assumed that no subsidies are offered, then this action is considered as a **Category C**: unlikely to have adverse impacts.

In the case of farming, economic sustainability is closely linked to sound environmental sustainability. An understanding of those links needs to be integral to all support programs. If land is well managed its economic benefits will be sustainable. Conversely, poverty and low levels of skills usually lead to land degradation. Therefore support programs that are well designed can be highly compatible with environmental and economic sustainability.

This action is not listed in the EA Policy of Namibia.

**Social Assessment**

Land reform in Namibia to date has had limited success. While the objectives of the land reform program are widely supported, the actual implementation does show shortcomings. The main problem relates to a lack of knowledge and skills amongst resettled farmers to manage the financial, technical, marketing and management aspects of commercial farming. This has led to a situation where poverty is rife in many resettlement areas and resettlement farms and the situation is deteriorating with time.

The concept of a mentoring scheme for ECFs by private farmers and the proposed partnership between various stakeholders working together for the greater good of the agricultural sector and the economy at large is likely to have a major positive impact on the target beneficiaries. Capacity building for effective farming practice is likely to contribute to
poverty reduction even over the short term and will transform the livelihoods of ECFs and Affirmative Action Loan Scheme beneficiaries. Again provision is made for gender equality and this is proposed to be supported through incentives to reward success, such as “female farmer of the year” and ECF farmer of the year awards. It should also provide wide benefit to a substantial number of farmers.

**Participation of Development Partners**

The Netherlands Government has provided support in this area in the past, as well as the EU NASSP project. It is envisaged that the EU RPSP will fund the ECF-SP during year 1 and 2 of the MCA timeframe. MCA Namibia will take over in year 3 and fund the ECF-SP for three years.

A strong buy-in from private sector funding partners is foreseen post-MCA.

**Risk Assessment**

The ECF-SP is already under implementation and the risks related to the upscaling through the MCA Namibia investment are minimal.
**Action 2.3**  
**Improve Marketing Infrastructure**  

**2.3.1 Upgrading of Quarantine Facilities**

**Background**

The proposed investment in quarantine facilities in the NCA will lead to rural poverty reduction by ensuring higher income generation for both existing and new-upcoming farmers.

The quarantining of cattle north of the Trans VCF is under the supervision of DVS and in general supports GRN to maintain a disease free status in Namibia. In the formal marketing channel available to the NCA farmers the quarantine system significantly increases the cost of marketing. This is due to losses in weight, meat quality and mortality during quarantine and also due to the actual costs of quarantine and the additional transport costs to and from quarantine stations.

Animals are lost during quarantine due to veldt fires, attacks on the livestock by wild animals, measles through contact with human fences in the camp, etc. For instance, should one of the bigger quarantine farms, such as Omutambo Mawe, be destroyed by fire most marketable cattle cannot be quarantined and thus not be sold outside NCA until pastures have recovered after the rainy season. This is likely to result in an oversupply on the local NCA market and lead to a collapse in beef prices with serious implications for farmers’ income.

Once the VCF has been moved to the international border – a medium-term objective for GRN – quarantine facilities will no longer be required for most of the NCA. A buffer zone will be situated on the Angolan side. However, in the intermediate period quarantine farms and camps will play a pivotal role in facilitating a higher off-take in communal areas to bring farming practice in line with commercial farming principles. Enhanced marketing will increase cash incomes for the communal farmers and benefit immediate and extended family as well as farm workers. It is also expected to reduce the pressure on the land, bringing land utilization closer to its carrying capacity.

The overall objective of the MCA investment in quarantine facilities in the NCA is in line with MAWF’s strategic plan for 2006/7 and will contribute to poverty reduction as per Vision 2030 by way of enhancing the sustainability and economic growth of the livestock sector in the NCA.

**Description of Activities**

With the MCA Namibia investment existing quarantine camps will be upgraded to ensure maximum utilization.
Table 3.9: Existing Quarantine Facilities in NCA

<table>
<thead>
<tr>
<th>Name</th>
<th>Camps</th>
<th>Maximum Through-put per Year</th>
<th>Through-put 2005</th>
<th>Region utilizing Q-farms</th>
<th>Cattle population (2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.Oshivelo</td>
<td>19</td>
<td>20,000</td>
<td>856</td>
<td>Oshikoto</td>
<td></td>
</tr>
<tr>
<td>2.Okongo</td>
<td>11</td>
<td>33,000</td>
<td>193</td>
<td>Ohangwena Oshikoto</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>North-Central 633,208</td>
<td></td>
</tr>
<tr>
<td>3.Omutambo Mawe</td>
<td>31</td>
<td>30,000</td>
<td>4,758</td>
<td>Omusati Oshana Kunene</td>
<td></td>
</tr>
<tr>
<td>4.Ehomba</td>
<td>1</td>
<td>840</td>
<td>35</td>
<td>Kunene North</td>
<td></td>
</tr>
<tr>
<td>5.Otjakati</td>
<td>1</td>
<td>900</td>
<td>556</td>
<td>Kunene North</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Kunene North 122,647</td>
<td></td>
</tr>
<tr>
<td>6.Mbungu</td>
<td>1</td>
<td>840</td>
<td>0</td>
<td>Kavango</td>
<td></td>
</tr>
<tr>
<td>7.Matambu Ribebe</td>
<td>1</td>
<td>1440</td>
<td>151</td>
<td>Kavango</td>
<td></td>
</tr>
<tr>
<td>8.Thomas Shayevo</td>
<td>1</td>
<td>930</td>
<td>93</td>
<td>Kavango</td>
<td></td>
</tr>
<tr>
<td>9. Mangetti</td>
<td>30</td>
<td>60,000</td>
<td>580</td>
<td>Kavango Tsumkwe</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Kavango 133,895</td>
<td></td>
</tr>
<tr>
<td>10.Kopano</td>
<td>12</td>
<td>6,000</td>
<td>3,551</td>
<td>Caprivi</td>
<td></td>
</tr>
<tr>
<td>11.Katima</td>
<td>7</td>
<td>6,790</td>
<td>4,513</td>
<td>Caprivi</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caprivi 155,647</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>115</td>
<td>160,740</td>
<td>15,286</td>
<td></td>
<td>1,045,397</td>
</tr>
</tbody>
</table>

The following activities are planned:

- Reduce the treat of fire by (a) clearing the outside corridors between the two fences through de-bushing and the chemical treatment of the bushes, (b) the cleaning of fences, and (c) an awareness campaign on the potential impact of fires to the quarantine farms and camps. MeatCo, MAWF and the Meat Board will form part of this process in order to reach as many communities around the quarantine camps as possible.
- Upgrade the water infrastructure on the quarantine farms and camps to ensure continuous supply of water.
- Reduce the mortality due to wild animals (lions and hyenas) by erecting a new inside fence (mesh) along the existing fence between the Etosha National Game Park and the Omutambo Mawe quarantine farm.18
- Erect a communication tower at each quarantine farm to make cell phone communication possible.
- Construct sanitary facilities for the herders to reduce the human to cattle infection rate of measles. The current rate of measles infections in the NCA of 6% in 2005 and 8% in 2006 is of major concern.

18 The other Quarantine camps are situated in mid-density settlement areas and thus not so much affected by predators.
- Construct sleeping quarters and showers for herders.

**Benefits**

The upgrading of the quarantine farms and camps allows easier access to the formal livestock farming activities at lower financial input cost. The lower cost of marketing is expected to stimulate a higher off-take rate. This will stimulate additional growth within this sector achieved through the entry of new farmers as well as the expansion of farming activities by existing communal livestock farmers. Additional spending power of the key productive economic sector will trigger the development of the retail sector to support the growing consumption and consumer demand.

Across the NCA 129,239 rural households rely on subsistence farming as their main source of income. With the upgrading of quarantine camps, an additional 29,725 households could potentially be involved in livestock farming practices and make use of formal marketing channels. At an average household size of 5.1, a total population of 810,716 will gain directly or indirectly from this program.

A higher off-take will enhance the overall economic contribution of the livestock sector to the local economy and generate a higher throughput at the Oshakati and Katima abattoirs. The latter will enhance the sustainability of these abattoirs and stimulate additional employment creation. At present the Oshakati and Katima Mulilo abattoirs are operating at 21% and 60% respectively (2006).

**Costs**

<table>
<thead>
<tr>
<th>2.3.1 Upgrading of existing Quarantine Facilities</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarantine Farm Omutambo Mawe</td>
<td>0.134</td>
<td>0.063</td>
<td>0.105</td>
<td>0.000</td>
<td>0.000</td>
<td>0.3</td>
</tr>
<tr>
<td>Quarantine Farm Oshivelo</td>
<td>0.132</td>
<td>0.026</td>
<td>0.046</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>Quarantine Farm Okongo</td>
<td>0.062</td>
<td>0.015</td>
<td>0.039</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Ehomba Quarantine camp</td>
<td>0.112</td>
<td>0.017</td>
<td>0.020</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Mbungu Quarantine camp</td>
<td>0.036</td>
<td>0.016</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Matumbu Ribebe Quarantine camp</td>
<td>0.036</td>
<td>0.013</td>
<td>0.003</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Thomas Shayevo Quarantine camp</td>
<td>0.023</td>
<td>0.003</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Mangetti Quarantine camp</td>
<td>0.030</td>
<td>0.029</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Kopano Quarantine camp</td>
<td>0.162</td>
<td>0.014</td>
<td>0.020</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>Katima Quarantine Farm</td>
<td>0.121</td>
<td>0.074</td>
<td>0.018</td>
<td>0.000</td>
<td>0.000</td>
<td>0.2</td>
</tr>
<tr>
<td>Otjakati Quarantine Farm</td>
<td>0.031</td>
<td>0.017</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td>Contingency &amp; Administration</td>
<td>0.063</td>
<td>0.034</td>
<td>0.039</td>
<td>0.000</td>
<td>0.000</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.0</td>
<td>0.3</td>
<td>0.3</td>
<td>0.0</td>
<td>0.0</td>
<td>1.6</td>
</tr>
</tbody>
</table>

All twelve quarantine camps will be upgraded from the beginning of the programme. In year one the biggest portion of camps will be done simultaneously, and the last camp will be completely upgraded by year three.

**Technical Analysis**

Fire breaks will help to reduce the treat of fire. However, the livestock owners who quarantine their cattle for the specific 21 days, need to be equipped to fight the fire, once it comes close to the camps. Also, the management of the quarantine camp plus DVS needs to be geared for prevention of fire.
All role-players in the specific camps have to follow a known operational plan of the camps, i.e. when what pastures are utilized, how to utilize the water, how to address the predator problems, the use of the sanitation facilities and the sleeping quarters, etc.

The communication tower will require access to power and signal strength.

**Economic Assessment**

Over a project life span of 20 years, the ERR is calculated as 199%. Reducing the life span to 10 years, the ERR remains virtually the same.

The upgrading of the quarantine facilities should be done every 5 years. In the current vision of declaring the communal areas north of the VCF FMD free within the next 7 years, in principle no provision needs to be made for upgrading. It is expected that the facilities will then be absorbed by the land reform program. However, as a safety measure the model makes provision to upgrade again from year 11.

Once the NCA is declared as FMD free, the quarantine camps/farms can be reallocated as resettlement areas, and thereby supporting the national objective of land reform.

The sensitivity analysis shows that the ERR are not very robust. However, even in the worst case scenario, ERR remains positive and the action viable, as per Table 3.10.

**Table 3.10: Sensitivity Analysis**

<table>
<thead>
<tr>
<th>ERR Sensitivity Analysis</th>
<th>Cattle delivery increased by 5% per owner</th>
<th>Cattle delivery decreased by 5% per owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased beneficiaries 5%</td>
<td>262.1%</td>
<td>197.2%</td>
</tr>
<tr>
<td>Decreased beneficiaries 5%</td>
<td>198.0%</td>
<td>157.6%</td>
</tr>
</tbody>
</table>

**Environmental Assessment**

Once the VCF is moved to the Angolan border, it will no longer be necessary to have quarantine facilities. However in the meantime, it is proposed to upgrade quarantine facilities to reduce many of the negative impacts on livestock of the present inadequate facilities. The proposed upgrade includes:

- Clearing of fire breaks to prevent stock losses due to veldt fires.
- Possible chemical treatment of bushes (to kill the bushes)
- Upgrading of water facilities.
- Erecting a new inside fence (mesh) along the existing fence between the Etosha National Game Park and the Omutambo Mawe quarantine farm to protect livestock from wild animals (lions and hyenas).
- A communication tower at each quarantine farm.
- Accommodation, toilets and showers for herders to prevent animals being infected by measles.

None of these activities has the potential for significant adverse impacts on the environment. The extent of clearing for fire breaks would not be significant. Only the chemical treatment of bushes is of some concern as the purpose and nature of chemical treatment is not specified. Treatment with herbicides for the purpose of clearing would have no additional impact to the clearing itself provided spray drift onto desirable plants and trees is prevented. Spraying for the purpose of disinfection may require special management and supervision.
The upgrade of quarantine facilities is considered to be **Category C**: unlikely to have adverse impacts, and would have definite economic benefits.

Management of the removal and disposal of dung, and fly traps are recommended to control flies.

The impacts of fences have been dealt with under action 2.1.2 above.

In terms of the EA Policy of Namibia, the only listed activity of relevance is possibly: “Veterinary Fencing”.

**Social Assessment**

Given the shortcomings of the existing quarantine facilities in the country, this intervention would contribute to improved well-being in rural farming communities. With most livestock marketing done through the quarantine camps, farmers in most regions have indicated during the PPA that they find it problematic to market their livestock through the quarantine camps. Being the only way, they have little choice. A number of issues contribute to this difficulty. Firstly, the distance to camps was cited as a problem and farmers alleged that their cattle loose condition being herded for long distances to the camps. They further alleged that they and their herders have no place to stay at the quarantine camps and livestock is sometimes lost due to disease and wild animals.

This action responds almost exactly to the needs of communal farmers who make use of these camps and makes provision to solve most problems cited by rural subsistence farmers. The net effect of these actions will be improved prices for the livestock of the relatively poor subsistence farmers north of the existing VCF. This would mean more cash income to the farmers and therefore improved well-being. Limiting losses also means that less livestock has to be sold to cover costs and this may prevent some households from “overselling” their cattle until they have nothing left. Overselling refers to a situation where a farmer has to sell livestock to survive or cover needed costs to such an extent that his breeding herd is also being sold to a point where it cannot sustain itself. Once this occurs, poverty and vulnerability results. The intervention would therefore also contribute to more sustainable herds being present in the rural areas since less livestock needs to be sold and time could be taken for herds to recover to sustainable reproductive levels.

**Participation of Development Partners**

No development assistance has been received by the sector in the construction/rehabilitation of quarantine stations.

**Risk Assessment**

It is expected that the heightened activity in livestock marketing resulting from the various MCA Namibia investments will induce private sector operators to invest in formal and informal auction pens and/or assembly points and transport arrangements to the quarantine camps. This will contribute to a sustainable flow of animals through the designated facilitated.

The rural access roads to be funded by MCA Namibia – and other road construction in the rural areas financed from other sources – will facilitate transport of animals to and from the quarantine camps.
2.3.2 Establishment of Feedlots at Etunda, Rundu and Katima Mulilo

Background

The lack of access to markets within the NCAs constrains the development of farming, whilst exposing livestock farmers to considerable risk of depletion of grazing and high livestock mortality rates. MeatCo in collaboration with MAWF, the Meat Board of Namibia, NNFU and the northern irrigation farmers, intends to establish three cattle feedlots: Etunda, Vungu Vungu and Katima. The action entails a concerted effort in addressing rural poverty reduction through the promotion of the formal marketing of livestock within the NCA. This will be conducted through enhanced promotional, marketing and capacity building efforts and the physical establishment of the feedlots. The existing quarantine feedlot at Oshifo will be incorporated into the synergistic operational and marketing framework of the Etunda feedlot.

The overall objective of the feedlots is to, in line with the MAWF strategic plan for 2006/7, contribute to the poverty reduction objectives under Vision 2030 by way of improving the sustainability and economic growth of the livestock sector in the NCAs. The purpose of the feedlot investment in terms of rural poverty reduction is to improve returns and household income within the northern regional livestock-farming sector through enhanced accessibility to current and new livestock markets, as well as to improved and sustainable farming practices.

Considering the current drive of the MAWF to fully implement the Green Scheme and promote the development of over 25,000 hectares of irrigation cultivation over the next 20 years (refer to MCA Namibia investment 4A), the potential of establishing additional feedlots across the NCA would appear limitless. The feedlots, in collaboration with the Green Scheme, could kick-start the development of sustainable commercial livestock and agronomic farming in the NCA and as such promote rural poverty reduction through the upliftment of existing subsistence farmers towards enhanced earnings and social development status.

Currently there are only a handful of livestock farmers who utilize the formal livestock marketing channels of which the majority lose out on additional profits generated by speculators within these markets. The feedlots intend to ensure that producer returns are captured by the farmer him/herself, rather than the speculators. They also provide the NCA farmers with an opportunity to market younger animals and this in turn will enhance their access to new markets and higher household earnings potential. Entry barriers to sustainable commercially-driven livestock farming practices will be reduced.

Description of Activities

Three feedlots will be erected according to specifications. The Etunda feedlot will be done first. The second feedlot will be erected at the Vungu Vungu green scheme, close to Rundu, which is the only fodder supplier with access to the power grid. The third feedlot will be erected adjacent to the Katima quarantine camp, close to Katima Mulilo.

A provisional site plan for a total area of 22 ha for each feedlot has been developed. Each feedlot will be able to accommodate an intake of 200 cattle per week, consisting of quarantine and feedlot pens and a consequential restricted “dirty” quarantine zone and a subsequent healthy “clean” feeding zone in line with veterinary requirements. With its planned capacity of 2,600 cattle at any time (10,400 cattle per annum\(^\text{19}\)), each feedlot will...

\(^{19}\) Each feedlot will take 2600 cattle at a time for 21 days quarantine and thereafter 70 days feeding. Once the cattle are out after 91 days, the next group gets into the facility. In practice even more
allow cattle to be under quarantine for at least 21 days and thereafter for a further 70 days in the grower and finisher pens combined.

Each feedlot will be constructed in 2 distinct phases. The MCA Namibia investment only covers the first phase. It is anticipated that the feedlots will be expanded within the first 5 years, on the precondition that they have achieved operational and financial sustainability and the feedlot concept has been accepted as a crucial element within the NCA livestock value chain. During Phase 2 the capacity of the feedlot could be doubled by means of adding additional quarantine and feeding pens. The financial requirements and impact of this second phase are yet to be determined and are not included in the economic analysis of the MCA investment.

Benefits

The direct beneficiaries of the Etunda Feedlot are the NCA subsistence livestock farmers and households, who will have new access towards marketing cattle at potentially better prices and lower production costs and risks. It is estimated that the overall impact of selling 1.5 year old animals rather than 4-year-old animals would result in an increase in net profits to the farmer of around NAD735 per head of cattle once sold to the feedlot.

In addition, the Etunda irrigation farmers will obtain additional income through the sale of maize stover and other agro-industrial by-products to the feedlot, whilst incurring savings on fertilizers and the transportation thereof, through the sourcing of manure from the feedlot (estimated at NAD500,000/annum). The stover production will also create 6 additional job opportunities.

Similar to Etunda, the Vungu Vungu and Katima feedlots will provide new access to marketing of cattle at potentially better prices and lower production costs and risks for livestock owners. Furthermore, irrigation farmers in the vicinity will obtain additional income through the sale of by-products.

New upcoming farmers will experience lower entry barriers to livestock subsistence farming as they can sell their livestock at a younger age and at lower production costs and risk. Over a period of 5 years, it is anticipated that an additional 37,500 farmers \(^{20}\) will market their cattle to the three feedlots and increase their profit margin by 30% to 45%, depending on the distance to the markets.

The entire farming community within the NCAs will benefit from a more sustainable use of the local grazing areas through the reduction of stocking rates in line with the area's carrying capacity, as well as through the capacity building development and HIV/AIDS awareness interventions incorporated into the sensitization/mobilization campaign.

The local community in general will benefit through the availability of higher quality meat products for local consumption, additional employment opportunities generated by the feedlot and at the irrigation site, and higher household consumption, which will trigger local economic growth, SME development, as well as enhanced awareness and spending on personal health and education.

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\(^{20}\) Since livestock owners have a small herd, the farmers on average will supply one weaner per year. Since the three feedlots are only fully operational by end of year three, a total of 124,800 cattle could be feedlotted only (10400/feedlot /annum).
The national livestock sector and economy will benefit through a higher off-take of marketed livestock and the resulting operational enhancement of the NCA abattoirs. It is anticipated that the Oshakati abattoir will generate an additional NAD1.3 million turnover and the Katima abattoir, currently operating at a loss, an additional NAD500,000.

The entire Namibian livestock industry would benefit through the research activities at the feedlots on enhanced application of new technology and more efficient farming practices. The quality of the NCA livestock will be enhanced and genetic material will improve with resulting additional earnings potential.

Furthermore, the feedlots will offer the opportunity for the provision of emergency feeding, and therefore reducing losses in the condition and risk of theft of the animals during the quarantine period.

Mobilization and sensitization will foster long-term sustainable farming practices and growth in agricultural output, research into feedlotting and general farming practices and HIV/AIDS awareness interventions.

It will support the National Livestock Marketing Scheme and fostering the sustainability of the livestock sector in the NCAs.

<table>
<thead>
<tr>
<th>Costs</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3.2 Establishment of Feedlots</td>
<td>2.3</td>
<td>2.5</td>
<td>2.6</td>
<td>0.2</td>
<td>0.2</td>
<td>7.7</td>
</tr>
<tr>
<td>Human resources</td>
<td>0.216</td>
<td>0.183</td>
<td>0.135</td>
<td>0.143</td>
<td>0.153</td>
<td>0.8</td>
</tr>
<tr>
<td>Travel</td>
<td>0.043</td>
<td>0.037</td>
<td>0.026</td>
<td>0.029</td>
<td>0.030</td>
<td>0.2</td>
</tr>
<tr>
<td>Equipment and supplies</td>
<td>1.874</td>
<td>2.024</td>
<td>2.187</td>
<td>0.000</td>
<td>0.000</td>
<td>6.1</td>
</tr>
<tr>
<td>Other costs and services</td>
<td>0.197</td>
<td>0.210</td>
<td>0.224</td>
<td>0.009</td>
<td>0.009</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>2.3</td>
<td>2.5</td>
<td>2.6</td>
<td>0.2</td>
<td>0.2</td>
<td>7.7</td>
</tr>
</tbody>
</table>

It is anticipated that all three feedlots will be constructed over a three-year timeframe, starting with the Etunda feedlot in the first year, the Rundu feedlot in the second and the Katima feedlot in the third year.

Technical Analysis

The intended feedlot sites within the communal areas will need to be approved and allocated for agricultural purposes through the registration of a leasehold right issued by the Traditional Authorities and the local Land Board, with the blessing from the MAWF and MLR. All documentation and arrangements for the Etunda feedlot is in place. The Rundu feedlot will be positioned at Vungu Vungu, where fodder supply and electricity is available close to Rundu and access roads. The arrangements for the Katima feedlot, adjacent to the Katima quarantine camp, were formalized already in 1999. Funding constraints delayed the implementation.

Access to power and water is essential to the feedlots and guided the selection of the location for the feedlots.

Economic Assessment

In the ERR analysis a conservative estimate of only 10,400 LSU throughput as opposed to the anticipated 31,200 additional LSU has been used. Over a project life span of 10 years, the ERR is calculated at 61.5%. This investment will provide improved livelihoods to the majority of the Namibian population and also effect a substantial growth in the livestock industry.
The sensitivity analyses show that the ERR are relatively static, ranging between 53.7% and 69.2%, as per Table 3.11. The additional benefits resulting from job creation in the Green Scheme and the slaughtering facilities are not taken into account.

Table 3.11: Sensitivity Analysis

<table>
<thead>
<tr>
<th>ERR Sensitivity Analysis</th>
<th>Marketing % decrease by 5%</th>
<th>Marketing % increase by 5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 years project life span</td>
<td>Beef price increase by 5%</td>
<td>60.8%</td>
</tr>
<tr>
<td></td>
<td>Beef price decrease by 5%</td>
<td>53.7%</td>
</tr>
</tbody>
</table>

Environmental Assessment

The establishment of feedlots has a number of potential adverse impacts. These include:

- Contamination of surface or groundwater due to the high nutrient loading from animal dung.
- Destruction of natural habitat.
- Flies and other vermin.
- Dust.
- Odors.
- Heavy vehicles may damage roads or pose a hazard to other traffic and people.

These impacts can be managed through appropriate site selection, and good management. A small EIA is recommended to guide the selection of the sites, particularly in relation to water contamination. Under no circumstances should any feedlot be situated where there is the potential for contaminated water to reach a river, pan, or omuramba – whether by surface or sub-surface movement of water.

This action is considered to be in **Category B**: potential impacts that are site specific, not irreversible, readily available mitigation measures. In addition to a small EIA for site selection, an EMP for management should be devised.

Feedlots are not a listed activity in the EA Policy of Namibia, although they are in other countries such as South Africa.

Social Assessment

The value of the proposed feedlots lies for rural communities in the expansion of the market and value addition to the livestock taken through the feedlot. It may even lead to a marketing system in the northern communal areas approximating the commercial auctioning of livestock to various purchasers. It would enable marketing of young animals and allow farmers to take it off the land at reasonable and profitable rates, yet with lower production costs per animal and less risk. This is especially mentioned and very important because the rural subsistence farmers are generally vulnerable to droughts and disease and often lose cattle to these threats without the ability to respond with marketing decisions. This additional market would simply mean more money in the hands of the rural farmers, the ability to manage their livestock better relative to natural conditions, employment creation at the feedlots and general improvement of well-being levels.

Benefits would accrue to all rural subsistence farmers of both genders and of all social groups. The poor and vulnerable are often the ones who are unfairly treated when they have to sell their produce. Stronger traders push prices down and the poor has little choice but to accept such low prices. Expanding markets would provide a relatively larger benefit to the poor and powerless since the increase in prices they would receive from a formal
marketing system would even be higher than for those who could fend for themselves a little better.

**Participation of Development Partners**

No development assistance has been received by the sector in the establishment of feedlots.

**Risk Assessment**

The number of livestock being channeled through the feedlots will depend on the price structures and the effectiveness of the cattle recruitment program implemented by MeatCo. The ERR is positive yet based on conservative estimates.

MeatCo has been active in the feedlot business for the past 19 years. It currently operates the Okapuka feedlot, close to Windhoek. MeatCo is a member of the Feedlot Association of South Africa and contracts international expertise to support its operations to ensure latest technology and trends in the feedlot industry are applied and the Okapuka Feedlot remains internationally competitive. These same principles will be applied to the three MCA Namibia funded feedlots.

Prior to independence, the organizational set up of MeatCo was that of a parastatal. Since, MeatCo has paid back their loan to GRN and the company is now owned by the livestock producers who make use of the company’s abattoirs. Profit sharing is done at the end of each year, calculated on each producers beef supply.
4. **MCA Namibia Investment 3 – Promote private and community-based Investment in Tourism**

**Introduction**

The Namibia tourism sector has performed solidly since independence in 1990. Over the past 15 years, international tourist arrivals have shown a steady increase, growing from 254,978 arrivals in 1993 to 777,890 arrivals in 2005. Increased arrivals have, in turn, generated an escalation of the tourism industry’s outputs, which increased by an average of 14% per year from 1991 to 1996, and by a total of 13% from 1998-2003. The recently developed Tourism Satellite Accounts (2006) found that tourism directly and/or indirectly generated NAD5.242 million to the Namibia national economy during 2004, or the equivalent of 14.2% of its GDP. Tourism was also found to support 69,000 jobs, or approximately 18% of Namibia’s employment force.

Tourism is considered to be the world’s largest and fastest growing sector, and Namibia is strongly positioned to be a major long-term beneficiary of this growing global industry. Rich and expanding wildlife populations, diverse landscapes and cultures, and majestic wilderness settings provide internationally competitive tourism attractions for game/nature viewing and hunting audiences. An extensive and renowned protected area network (covering more than 14% of the country) serves as the engine for much of this tourism. Concomitantly, the recently introduced communal conservancy program also offers massive tourism development opportunities, and in the process is poised to provide substantial employment and livelihood benefits to rural community residents in remote locations where few other development options are available.

In a remarkably brief period of time, Namibia has gained a worldwide reputation for its innovative approaches of linking conservation to poverty alleviation through its communal area conservancy program and pro-poor tourism initiatives. Founded through dynamic policy adjustments that have devolved rights to wildlife and tourism to many of Namibia’s most marginalized and poorest communities, providing such communities with unprecedented incentives to manage and conserve their wildlife stocks. Community responses to this opportunity have been dramatic since passage of the conservancy legislation in 1998. A total of 44 communal conservancies have been formed, covering more than 105,000 m² and encompassing approximately 185,000 rural community residents. Such involvement has been stimulated by significant financial and economic results. During 2005 community participants received NAD20.1 million in direct

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**Tourism as a Growth Sector**

Tourism is considered to be the world’s largest and fastest growing sector, generating more than USD800 billion worldwide in 2005.

**Namibia's Gift To The Earth**

In 1998, His Excellency Dr. Sam Nujoma, Founding President of Namibia, received the prestigious WWF Gift To The Earth award in recognition of Namibia’s remarkable communal area conservancy program.

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21 MET 2004; Stubenrauch Planning Consultants
22 World Travel & Tourism Council, 2006
23 Suich 2001
24 World Travel & Tourism Council 2006
25 A communal conservancy is a self-defined (by resident community members) area of communal land that has been registered with the Government of Namibia as a means of assisting the resident community to develop and sustainably utilize its wildlife, tourism, and affiliated natural resources for the long-term welfare of its members.
financial benefits, while private sector partners accrued a related turnover of almost NAD70 million. Cumulatively, it is estimated that the Net National Income generated by these operations exceeded NAD140 million.

GRN recognizes the increasing value of the Tourism sector, and as well, the importance of the sector’s linkages to the long-term sustainable management of Namibia’s fragile natural resource base. Therefore, GRN support to the Tourism sector is deeply woven into the fabric of a number of GRN development approaches, especially due to its ability to generate employment, reduce poverty, empower local communities, and provide incentives for improved and sustainable natural resource management. Tourism and related protected area and community-based natural resource management (CBNRM) activities are strongly advocated in the following documents:

- **National Development Plan II (2002-2006)** – Tourism development is explicitly promoted in Chapter 17 (pages 272-286) as a means of bolstering the economy and providing employment to Namibians, especially in remote rural areas where few other job creation opportunities are available. Chapter 17 is closely aligned with Chapter 18 on Wildlife (pages 287-299), which gives strong recognition to the economic value of the wildlife sector, the park systems, and the ability of these resources to generate income and employment through tourism-related activities, as well as conserve Namibia’s biodiversity heritage. Tourism is also promoted as a strategy to alleviate poverty in Chapter 14 (Land Reform and Resettlement), while Chapter 11 (Agriculture) strongly recommends broadening and diversification of agricultural production to promote non-farm enterprises.

- **Vision 2030** – Recognizes the tourism sector, in terms of its biodiversity and wilderness appeal, as having the potential to assume a leading role in the world. The Wildlife and Tourism Section (pages 150-157) provides specific recommendations on expansion of the Tourism sector and improved resource management through Parks and conservancies.

- **The National Poverty Alleviation Strategy** – Recognizes tourism (Section 4.1.2) as a sector with high potential for job creation, stating that no other sector of the economy has as much potential to create jobs and generate income for Namibia’s rural communities.

- **The 2005 Key Recommendations of the Cabinet Retreat related to Progress and Challenges for Economic Growth and Sustainable Development** – This high level event identified tourism as one of the most promising drivers of economic growth and produced 24 recommendations (pages 10-11) on how to improve the Environment and Tourism Sector as a means of economic growth and sustainable development for Namibia.

The linkages between tourism and Namibia’s development strategy are partially responsible for driving the current growth in this sector. Other drivers have been the regional opening of tourism following the dismantling of South Africa’s apartheid regime, the off-take from a global drive for nature-based tourism, and an interest from travelers looking for safer desert destinations following the series of political unrest in the Middle East and North Africa. However, while tourists themselves are often responsible for initiating tourism in new destinations, it is the national destination marketing that drives it. In 2000, GRN created a national tourism marketing division called the Namibia Tourism Board (NTB). Previously, national marketing efforts consisted of a few globally placed information offices and the attendance of international travel shows. With the formation of NTB, Namibia has been able to effectively open up markets and form Public/Private Partnerships (PPP) with overseas tour operators that have led to a 50-50 investment share in marketing schemes.
While Namibia’s tourism sector has demonstrated promising growth in recent years, the sector has nevertheless under performed in comparison to competing nature-based tourism destinations in southern Africa. For example, the Namibia tourism production increase from 1998-2003 (approximately 3.9%/year) is considerably less than that achieved by the Botswana, Zambia, and South Africa tourism industries during the same period. Consequently, while tourism was producing competitive growth in terms of the overall Namibia economy, it was actually losing ground and market share to its regional competitors. There are a number of reasons for this, including:

- **Under-investment in the Protected Area Network** – The low investment in the protected area network, its associated park infrastructure, and the human resources who service both the park natural resource management and tourism activities has reduced the sector’s competitiveness. While the parks attract the largest share of Namibia foreign tourists, the park facilities are in urgent need of replacement and/or renovation and the standard of service provision needs to be improved. Without such investments, Namibian park facilities and services cannot be or remain competitive with those found in many other comparable regional tourism destinations.

- **Under-capitalization of the Tourism Sector** – The total tourism capital investment level in Namibia is also low compared to many of Namibia’s competitors. Capital investment in the Namibia tourism sector for 2006 is forecast to total approximately NAD1,312 million (USD212.6 million). In comparison, Tanzania (USD366.6 million), Kenya (USD509.7 million), Mauritius (USD391.7 million), and South Africa (USD6,095 million) are all investing much more heavily in the tourism sector. The low sector capitalization means many prime tourism areas of the country remain vastly under-developed.

- **Slowly Recovering Resource Base** – The wildlife resources in many of the northern parks and communal conservancies have yet to recover from more than two decades of Namibia’s liberation struggle, with wildlife numbers still being too low for a high-quality wildlife viewing experience. Thus, there remains a need to quickly and efficiently promote the recovery of wildlife resources in areas of low density.

- **Barriers and Constraints to Tourism Expansion** – There remain a number of barriers to private sector investment in the Namibia tourism sector. Many of Namibia’s competitors have stimulated tourism investments in their countries by providing tax breaks, investment incentives, access to tourism-friendly capitalization loans, subsidized training programs, establishment of tourism investment centers, etc. In contrast, the Namibia tourism sector is heavily taxed and a number of bureaucratic hurdles make tourism investments time-consuming and burdensome, especially on communal lands where insecurity around land tenure makes access to commercial loans very difficult. Furthermore, technical barriers (in the form of knowledge of tourism business practice) to previously disadvantaged Namibians have largely prevented tourism investments from the BBEE sector.

- **Marketing** – Namibia is a relatively new entrant into the global tourism arena and as such is not a widely-known travel destination to much of the world. Thus, there is an urgent need to strategically strengthen Namibia’s tourism product identity at an international level, improve product packaging, and strengthen the overall branding of Namibia and the various tourism products it has on offer.

- **Constraints to Tourism Skills Development** – The development of hospitality skills in Namibia’s workforce has received little national support, which has led to a vast shortage of qualified staff to fill tourism positions in this rapidly growing industry. Unlike other sectors (agriculture, fishing, manufacturing, mining etc.), there are no incentives
provided to the tourism industry to invest in the development of human capacity through training. Consequently, formal tourism skills development is too costly for the private sector to fund on a significant scale and too expensive for rural Namibians to fund themselves. As a result, the potential for BBEE is constrained in this sector and there have been limitations on the future development of tourism services to meet the demand of incoming tourists.

A key function of the MCA Namibia investment is to reduce poverty in rural poor and vulnerable groups. In this regard, tourism enterprises offer a unique mechanism to assist the rural poor. In particular, lodge development and hunting operations employ significant numbers of community residents, capitalizing on their cultural knowledge and local skills, while simultaneously generating substantial tangible spin-off benefits. Significantly, these enterprises prosper in remote areas, where other employment opportunities are nearly non-existent. Further, such enterprises routinely train and develop low-literacy residents to skilled and highly-valued employees.

The addition of a lodge or hunting concession often provides the major source of employment in a conservancy. A typical 24-bed lodge (Figure 4.1) directly generates approximately 24 full-time jobs and 3-5 part-time jobs. This equates to approximately NAD300,000/year in wages, which roughly supports 120 people (24 families of five). In addition, such a lodge will produce approximately NAD250,000-300,000/year in direct cash income to a conservancy, which then re-invests these funds into management of the conservancy’s resource base (wildlife, water, habitat, etc.), conservancy operating costs, and rural development activities that enhance livelihoods for its members. Normally, the cash income from a lodge or hunting concession allows a conservancy to employ an additional 8-10 conservancy staff, who in turn, may support another 40-50 household members. In addition, the increased presence of tourists visiting the lodge may enhance the financial performance of local shops or contribute to the creation of spin-off enterprises such as handicrafts production, firewood sales, laundry services, guides, etc. Thus, in total, a 24-bed lodge may directly lead to the creation of a minimum of 32-34 fulltime jobs and numerous part-time income-earning opportunities that directly contribute to the welfare of 160 to 180 household members.

In addition, tourist arrivals are extremely invigorating to the total Namibian economy. Studies have shown that one additional direct or indirect job (along backward linkage enterprises) is created by the arrival of 12 new tourists.

Given the above, tourism represents a promising and appropriate investment for MCA Namibia. Key attributes include:

- The ability of tourism enterprises to create employment opportunities in remote, rural areas where poverty is rife;
- The potential for tourism enterprises (lodges, hunting, game production, etc.) to produce strong incentives for communities to sustainably manage their natural resources; and
- The ability of tourism enterprises to stimulate national level economic growth via job creation and through its extensive inter-connectivity with other sectors of the economy (agriculture, transport, energy, etc.).
The sector is a prime example through which “Smart Partnerships” between government, private sector, and civil society can be applied to the benefit and empowerment of the country’s poor towards the aim of poverty alleviation. While the sector remains confronted with a number of barriers and constraints, the MCA Namibia investment will allow for a constructive contribution towards addressing these issues and catalyze the growth of the country’s fast-growing and most promising sector.

**Description of Activities**

This MCA action seeks to build upon the excellent foundation Namibia has laid in the environmental and tourism sector, by further unlocking the undeveloped tourism potential of many of Namibia’s protected areas and creating strong linkages between park development and rural poverty alleviation through increased private sector investment and involvement.

Long-term expansion of the Namibia tourism industry will be achieved through an integrated approach to strengthening the sector. Key aspects of this approach will entail:

- **Enhanced development and management of the natural resource base (in parks and communal areas);**
- **Unlocking new private sector and community driven tourism development opportunities in and/or adjacent to parks;**
- **Improved access to tourism capitalization funds;**
- **Strengthened marketing strategies and campaigns;**
- **Empowerment of previously disadvantaged Namibians to play a more meaningful role in the industry; and**
- **Policy adjustments that address sector bottlenecks and barriers and/or provide incentives for expansion of the tourism sector.**

Implementation of this integrated approach will require the introduction of a number of new concepts, namely:

- **A shift in park management philosophy to strongly incorporate rural development and community outreach into park development and management plans.** Parks will be operated as regional development nodes through which economic gain by park neighbors will be actively promoted;
- **Development of more participatory planning approaches of identifying park-related tourism opportunities for both private sector and community stakeholders;**
- **Creation and funding of dedicated park node planning and development teams to ensure suitably qualified and trained staff are assigned to oversee park development and outreach programs; and**
- **Approval and implementation of the MET Concessions Policy, thereby providing new opportunities and incentives for private sector and conservancies to jointly engage in emerging tourism ventures.**

The MCA Namibia investment in tourism will be implemented and managed through four separate, but closely interwoven components, including:

1. **Resource Development and Management**
2. **Marketing**
3. **Barriers Removal**
4. Empowerment and Capacity Building

Following are brief descriptions of each component.

**Component 1 – Resource Development and Management**

This component will entail development of the resource base and tourism products in and around four priority park development nodes. These nodes were selected on the basis of availability of tourism development opportunities and potential for tourism growth, and will encompass 11 parks and more than 30 communal conservancies (Figure 4.2).

![Map of proposed park development nodes in Namibia](image)

**Figure 4.2: Proposed Park development Nodes in North-East, North-Central, North-West, and southern Namibia in relation to registered Conservancies.**
The largest share of MCA funds will be invested in this component. Though this investment reflects the lowest ERR of the four planned components (13.6% over a 30 year timeframe), the remainder of the MCA investment will have little impact without the development of the parks system and related tourism infrastructure to attract and host the anticipated increased volume of tourists. Further, the planned investments are justifiable based upon their intention to: a) increase the management efficiency of parks and conservancies and b) promote cost-sharing of park and resource management costs with private sector (i.e., operators and conservancies).

Each node has been chosen for the potential ability of the MCA investment to significantly increase tourism visitations to Namibia and to contribute to reduced poverty alleviation through appropriate node development.

Key MCA actions related to the development of the Park/Conservancy Nodes are as follows:

- **Unlocking New Lodge Establishment** – The MCA investment will stimulate the establishment of a minimum of 36 new lodge developments. These lodges will be primarily developed as community/private partnerships in or adjacent to the target parks, or PPPs with conservancies being the target beneficiaries. Many of these lodges will be initiated through implementation of the MET Concession Policy, which will create increased private sector demand and opportunity for lodge development in prime tourism locations. The MCA funds will capitalize road access and water developments at these sites and provide up to NAD2 million in equity funds for conservancies to capitalize portions of the lodge development. The remaining capitalization costs will be provided by the partner private sector investor. The equity fund will allow conservancies to become investors in fixed infrastructure and become vested shareholders in lodge operations. This will place conservancies in a better position to negotiate long-term benefits-sharing arrangements with the private sector partners.

It is anticipated that the average lodge size will be 24 beds, meaning that 36 new lodges will provide the potential for up to an additional 315,360 bed-nights\(^{26}\) of accommodation per year in Namibia. However, it is unrealistic to plan around 100% occupancy, and therefore a more realistic target of 50% is used to measure the potential viability of these lodges against the targeted increased tourism arrivals. At 50% occupation the MCA Namibia investment would unlock the equivalent of 157,680 additional bed-nights, or roughly space for 22,525 new tourists spending an average of 7 nights per visitation. Similarly, if the occupancy rate reaches 60%, then space will be available for 27,030 new tourists. Thus, the anticipated new available bed nights are realistic in that they: a) are capable of absorbing large portions of the anticipated MCA induced new visitors (31,000 by year five), while b) still reaching high enough occupancy rates (40% or greater) to make the new lodges viable even though many of the new tourists will visit other Namibian destinations than the new lodges.

\(^{26}\) 24 beds x 36 lodges x 365 nights/year
Establishment of Tourism Information and Business Hubs – A total of 11 tourism and information hubs will be established. These are centralized information centres that will be strategically located to facilitate regional tourism promotion. The hubs will be focal tourism information points to highlight regional attractions, while simultaneously operated as small business centres. The hubs will provide offices for conservancies, who will further rent out additional spaces for curio shops, kiosks, cafes, guide services, and other tourism related enterprises as deemed locally viable. Rental income from the hubs will be accrued by the host conservancy, with proceeds being ploughed back into operations and maintenance of the hubs, conservancy operating costs, resource management activities, and member benefits.

Bush-access and 4x4 Game-viewing Tracks – An assortment of access and game-viewing tracks will be developed both within parks and adjacent to conservancies/tourism sites. Such tracks will be developed as part of park/conservancy development efforts with the intent to open up a range of new private sector driven tourism development opportunities and to enhance management of the parks/conservancies.

High-value Game Camps – Five new high-value game breeding camps will be established in selected conservancies. These camps will range in size from 10-20,000 hectares and will assist target conservancies (Uukwaluudhi, N#a-Jaqna, Orupupa, Nhoma, and Okamatipati) to set aside viable tracks of land in which high-value game species such as roan antelope, sable, tsessebe, disease-free buffalo, black-faced impala, etc. can be produced and marketed for the benefit of the respective conservancies. Concomitantly, the expanded production of these particular species will be in-line with MET’s national species management plans. The above animals range in value from NAD17,000 per head (black-faced impala) to over NAD100,000 per head (roan, sable, and disease-free buffalo). Consequently, each camp will generate between NAD500,000 and NAD1 million per year in profits when fully operational. Capitalization costs for these camps will entail cut lines, fences, tracks, water, housing, equipment, and game. Game will be acquired through a combination of donations by the MET and purchases from other communal conservancies or private sector. Camps will be operated as PPPs between conservancies, private sector and MET.

The development of these game camps will be built into conservancy management plans, and will require the endorsement and support of all involved stakeholders (i.e., conservancy members, potentially affected settlements, traditional authorities, etc.). This consultative process will ensure that no conflict arises from the encompassment of the identified area by the game proof fence. Additionally, as these areas will be developed on communal land, the fencing and development of them will require approval of the MLR and MRLGHRD. The game camps and affiliated game will be the property of...
the host conservancy. However, management of the camps will involve contracts (i.e., specific services contracted or acquired through a joint venture) with private sector and will also be assisted by the MET.

- **Tourism and Natural Resource Management Service Centres** – There is a need to develop 11 new Tourism and Natural Resource Management Service Centres, which will be strategically located to promote the new park/conservancy co-management structures. Such Centres will necessitate the establishment of fully equipped staff and accommodation offices. The development of Service Centres will be complemented with upgrades to key park infrastructure such as wildlife water points (solar installations), access roads, and other. Such upgrades will improve the efficiency of park management and reduce recurrent costs. They will also contribute to increased effectiveness of co-management approaches proposed in the four nodes, enabling tourism and natural resources development to be directed to further benefit local residents.

  These service centres aim to increase the level and quality of management in each of the complexes, and are intended for core management staff. As such, they are likely to be staffed by MET officials (and exclusively so in the state protected areas). Each complex will be staffed and managed according to its individual opportunities and requirements. Optimizing the opportunities and building on existing structures will play a central role in ensuring these investments facilitate better management and co-management. They will support Namibia’s progress towards using more partnerships and innovative mechanisms in the management of protected areas for tourism.

- **Boundary Conflict Management** – The rapid recovery of Namibia’s wildlife populations is leading to increased human/animal conflict and costs. This is particularly the case with conservancies adjacent to parks, where wildlife compatible land-use zoning exists and wildlife numbers have rebounded. This rebound is accompanied by higher densities of elephants and predators, all of which create increased costs to resident conservancy members. The MCA investment will be directed at mitigating measures that reduce human/animal conflict incidences and costs. Such mitigation actions will include: improved barriers through stronger fencing and development of alternative wildlife water points to reduce elephant use of domestic water sources.
- **Enhanced Recovery of Natural Resource Assets** – Namibia’s 20-year struggle for independence has had significant detrimental consequences to wildlife populations across the NCAs. Consequently, in many emerging or recently registered communal conservancies, wildlife populations are extremely low and not capable of generating meaningful short-term financial returns. This situation will be rectified by assisting conservancies to re-establish viable game numbers through the re-introduction of common game species (i.e., springbok, oryx, kudu, etc.) to core wildlife production zones. Such a process will entail the development of dedicated wildlife water points and movement of target species into the chosen sites. The sites of introduction are in open communal areas, thereby: a) not requiring costs to fence the area, and b) contributing to the recovery of regional game populations that frequently move between conservancies. The translocated game will be provided by the MET from its park system, while payment of capture and translocation costs will be borne by MCA Namibia. At such sites, the translocated game will be introduced as part of the conservancy development process, with the rights to the game and the associated benefits belonging to the conservancy.

- **New Border Posts** – A number of highly viable tourism routes into or through Namibia will be enhanced through the upgrade of three border posts, creating a more impressive and attractive image of the country upon entry. Three sites have been identified for border post improvements: Ngoma (NE), Mata Mata (S) and Sendelingsdrif (S). These are all existing border post sites, requiring no additional negotiation or process. The border posts at Mata Mata and Sendelingsdrif in the south will capitalize on the popular tourism routes between the northern Cape Province of the Republic of South Africa (RSA) and southern Namibia, facilitating the arrival of thousands of new tourists each year. Similarly, the revitalization of Ngoma border post in the NE will greatly enhance tourism route development from Botswana, as part of

![Nyae Nyae Conservancy Reintroduction of Game](image)

**Monitoring movements of introduced game**

The Nyae Nyae Conservancy is a successful site where game introductions, combined with strategic water point developments, have rapidly expedited the recovery of wildlife populations. From 1998 – 2002, a number of wildlife introductions were made, resulting in a rapid increase of game populations (see graph below) as documented by MET aerial surveys in 1995 (baseline), 1998, and 2004. The game introductions have assisted the conservancy to increase income from trophy hunting by 8-fold since 1998 and the amount of meat being consumed by conservancy members. In addition, game densities have reached the point where private sector operators have now expressed an interest in developing tourism lodges in the conservancy.

![Nyae Nyae Conservancy Game Populations Trends](image)
the KAZA (Kavango-Zambezi) Transfrontier Conservation Area development process.

The proposed Mata Mata border would create a new tourism route between South Africa’s Kalahari Gemsbok National Park and southern Namibia tourism destinations. Given the long gravel road drive (more than 200 km) required to access this park on the South African side of the border, it is likely that as many as 25-30% of the visiting tourists would continue onwards into Namibia. Thus, one might assume that as many as 7,000 of last year’s 21,000 visitors to the Kalahari Gemsbok Park would have continued onwards through Namibia if a border post had been operational. Accordingly, the opening of the Mata Mata Gate could immediately contribute to the creation of close to 600 new tourism related jobs in southern Namibia.

Table 4.1 provides a brief description of the proposed park development nodes.

<table>
<thead>
<tr>
<th>PARKS</th>
<th>BENEFITING CONSERVANCIES</th>
<th>MOTIVATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>V. Etosha-Skeleton Coast National Park-Kunene River Complex</td>
<td>Western portion of Etosha, Skeleton Coast, and proposed new Kunene Corridor Park</td>
<td>#Khoadi //Hoas, Ehirovipuka, Omatendeka, Torra, Sesfontein, Anabebe, Purros, Doro !Nawas, Uibesen, //Huab, Ozondundu, Okangundudumba</td>
</tr>
<tr>
<td>II. Etosha North-South-East Complex</td>
<td>Central and northern portions of Etosha</td>
<td>Uukwaluudhi, King Nehale, Ruacana, Sheya Shuushona</td>
</tr>
<tr>
<td>VI. North-East Parks Complex</td>
<td>Mudumu, Mamili, Bwabwata, Mahango, Kaudum, Mangetti</td>
<td>Wuparo, Mayuni, Mashi, Kwandu, Salambala, Impalila, Kasika, Kyaramacan Association, Nyae Nyae, N#Jaqna, George Mukoya, Joseph Mbambangandu</td>
</tr>
</tbody>
</table>
IV. Fish River, Luderitz, Mata-Mata Complex

| /Ais/Ais, Spergebiet | !Khoab | Proposed MCA investments, combined with opening of border gates, will allow for significant route development opportunities between Namibia and South Africa. Will induce significant increase in visitations by both regional tourists and international tourists seeking multi-country experience. Routes have high-demand potential for pending World Cup Soccer Championships in 2010. |
| Naub//Gamaseb, (Kalk Plateau) | |

Component 2 – Marketing

Prior to the establishment of the NTB in 2000, the marketing of Namibia tourism products was executed in an uncoordinated manner with little cooperation between the public and private sector. The NTB was established to, *inter alia*, promote Namibia tourism activities from a coordinated platform with private sector partners. The NTB has been forged out of less than optimal conditions, with a small budget and limited human resources, particularly when compared to other well-established and well-funded national tourism agencies. Nonetheless, the NTB’s tightly focused strategic approach, aimed at achieving a limited set of goals within key markets, is already reaping significant results.

The MCA Namibia will gear the NTB to a higher platform of operation and expand its effectiveness into the USA and emerging markets in Europe. Namibia is fairly new and unknown in these markets, creating greater opportunities for growth than in the traditional, highly seasonal markets exploited by Namibia thus far.

Through the MCA investment the NTB will build upon its previous successes to implement a rigorous marketing campaign aimed at increasing tourist numbers from emerging markets (USA, Canada, Italy, France, Spain, Portugal, Scandinavia, Belgium and Netherlands) by enhancing trade growth through targeted cooperative marketing with key tour operators (15 in North America and 30 in Europe), and increasing consumer awareness through below-the-line public relations and media activities. New domestic regional tourism routes in the four park complexes will be marketed in Namibia, South Africa and other neighboring countries. To further support overall destination marketing activities, an interactive dynamic website will be developed that will facilitate internet bookings and information, which will also serve to position Namibia as a preferred destination for the FIFA 2010 World Cup to be held in South Africa.

Cooperative Marketing

Cooperative marketing is a proven PPP approach to tourism marketing that has been successfully used in long haul tourism destinations such as Canada, Australia and New Zealand. More recently South African Tourism has used this method of marketing to significantly increase sales. Tourism in SA only opened up after 1994, and in 2000, 107 cooperative marketing partners had already been signed up. In that same year, SA Tourism expended ZAR25 million and secured returns in excess of ZAR600 million.

The concept of cooperative marketing is predicated on identifying opportunities in key source markets and selectively engaging with key tour operators who are already well established in those markets. The rationale here being that these operators have detailed knowledge of their target markets based on a track record, and can demonstrate their rates of return on past investments. The national tourism organization, in Namibia the NTB, then establishes joint marketing schemes with these carefully selected tour operators and together they each fund a percentage of the marketing costs. NTB funds only clearly identified incremental marketing activities, and always funds these jointly with the operator (currently on a 50:50 basis), thereby locking the operator into a successful return on investment. What is expressly avoided is any subsidization of existing expenses.
NTB Cooperative Marketing: Case Study
To date, the NTB has invested more than NAD5 million in cooperative marketing with more than 25 tour operators. This has yielded an overall Return-on-Investment of more than 26:1 for funds invested versus in-country expenditures.

Recently, NTB and Sunvil (UK tour operator) jointly marketed a new product, Aloe Safari, which resulted in 1,568 new tourists on 12 day trips, and a 2341:1 return on NTB’s investment.

Given the limited funds at its disposal, the NTB has opted to pursue an ambitious cooperative marketing program with carefully chosen operators in key markets. NTB is able to increase its marketing budget by the equivalent amount matched by the tour operator, thereby leveraging additional funds towards the marketing of the destination. Rather than engage in one-off promotional marketing, these cooperative marketing agreements have a three-year horizon resulting in a sustained marketing program. The bottom line will be a clear return on investment (ROI), based on the in-country injection of funds by the private tour operator compared to the investment made by the NTB.

A critical step in expanding Namibia’s tourism market is to break into emerging markets in Europe and North America, as already identified by NTB’s foreign representatives. This initiative will require intense destination marketing, utilizing trade shows, internet, visits to major sellers of African safaris, and finally the soliciting of tour operators with whom NTB can engage with for future cooperative marketing agreements. These activities will unlock new markets for private sector-driven marketing and encourage investment by both overseas and local tour operators.

Central to the success of cooperative marketing is the PPP between NTB and Namibia’s private tourism operators. NTB currently engages with around 50 to 60% of the private tourism companies in Namibia. There is close collaboration on the hosting of overseas tour operators on familiarization trips, the development of new tour routes, and cost sharing at trade shows.

During the first three years of the MCA Namibia investment, the cooperative marketing agreement will be based on a 50:50 contribution. From year 4, this contribution will be reduced to 25% of marketing funds within the ambit of such agreements. NTB will, as part of the agreements, reserve the right to introduce at least 20% new product into the tour itineraries offered by the operator. In this way it will be possible to engender a greater dispersal of tourists to previously marginalized areas.

Namibia’s private sector will play a key role in maintaining the momentum of overseas marketing efforts in the latter stages of MCA funding and thereafter, once emerging markets are opened by NTB in the first 3 years. In the past, the reputation and marketing investments of existing, well-used tour operators in Namibia have drawn the bulk of the new market visitors, which filter into lesser known and smaller tourism operations such as new community lodges. Most of the larger private sector companies in Namibia utilize the services of smaller operators and even market these services within their own product profiles. Additionally, small private-sector companies often partner with NTB on new route developments and representation at trade shows. NTB generates income through such
partnerships, particularly for providing marketing coverage at overseas trade shows. These PPPs sustain NTB’s overseas marketing activities along with visitor levies and the annual GRN grant.

Marketing efforts will target holiday tourists, most of whom will be undertaking nature-based tourism in Namibia’s park system or in conservancies adjacent to or along routes between parks. Figure 4.3, below, illustrates the anticipated impacts of the NTB’s concentrated marketing effort over the five-year duration of the investment. Without considering the projected increase in product, park infrastructure, route development, and private sector marketing, it is estimated that the MCA investment in NTB marketing (over the 5 year period) will attract an additional 69,734 tourists to visit Namibia, which is a 39% growth rate from 179,416 holiday tourists in the starting year (based on 2007 projection) to 249,150 in year five. By the end of year five, it is anticipated that MCA funds will be responsible for an additional 31,300 holiday tourists per year visiting Namibia.

![Figure 4.3: Anticipated increase in holiday tourist arrivals as a result of MCA investment in marketing, years 1-5. (Based on currently available products and only NTB’s marketing activities)](image)

**Component 3 – Barriers Removal**

MCA investments into Barriers Removal will focus on three particular barriers:

1) Poor access to capitalization funds for lodge developments on communal land and absence of tourism-tailored loan instruments.

2) Absence of tourism-tailored loan instruments.

3) Absence of cost-shared training packages between public and private sector entities.

A number of studies have repeatedly identified these constraints as barriers to tourism developments in communal areas where developmental costs are high due to the remoteness of locations, the absence of existing qualified staff, and demanding logistical support. Private sector investment is the key to the success in these investments, and the tourism loan scheme will increase the amount of that investment unlocked by MCA. The other elements of this component provide the infrastructural foundations, capacity development and marketing support required to help launch and sustain new tourism
initiatives. These actions will increase the effectiveness of the whole MCA Namibia investment in the tourism sector by reducing barriers to tourism opportunity development in a sustainable fashion.

- **Access to Lodge Capitalization Funds through a Tourism-tailored Loan Scheme** – MCA Namibia investment will capitalize an appropriate tourism-tailored loan instrument to be held and managed by a Namibian commercial banking institution. The Tourism-tailored Loan Scheme will provide loans for communal area lodge and other tourism infrastructure developments for which conservancies are joint venture partners or equity-shareholders. The following loan conditions shall apply:
  - Only tourism lodge investments in communal areas shall be eligible to participate in the loan scheme. It is envisioned that loan applicants will be both well-established tourism operators, as well as, new entrants into the sector that demonstrate the capacity and knowledge to successfully develop and operate a lodge;
  - Loan applications shall be limited to a maximum of NAD5 million per lodge development; and
  - Loans will be provided at the prevailing commercial lending rates, but there will be a three-year grace period before interest and principal charges begin to accrue. Consequently, the loan repayment will not commence until the beginning of Year 4. The total loan duration, inclusive of grace period, will be 10 years. This loan instrument gives recognition to the fact that it takes 3-4 years for most tourism operations to break even and begin to make a profit.

The above conditions will allow the rolling capitalization of up to 21 lodges at a given time. Loan repayment funds will be returned to the scheme, making additional funds available for the funding of lodge developments in conservancies for an extended period long after conclusion of the MCA timeframe.

Private sector access to capital is essential to achieve the rapid expansion of the lodge sector around the four proposed park development nodes. The planned MCA investment in the Namibia commercial banking sector will be operated on sound business principles, with interest rates moving in relation to the prime interest rate. Deferral of the interest rates payments until commencement of year four of the lodge operation gives recognition to the time required for new tourism products to gain market share and attain profitability. This type of tourism loan mechanism has been used with great success in South Africa and has contributed greatly to the viability of new lodge operations.

MET, Federation of Namibian Tourism Associations (FENATA), and Namibian Association of CBNRM Support Organizations (NACSO) will coordinate closely with the designated commercial banking institution to: a) develop selection and approval criteria for loan applications, and b) develop a suitable loan scheme management system that ensures transparency on the granting of loans, the relative allocation of loan funds to the various park nodes, and the amount of loan funds that will be made available to the scheme on an annual basis.

- **Incentive-based Training Packages** – Funds will be allocated to private sector tourism operations on a 50/50 cost share basis to create incentives for tourism operators to provide formal training and skills development to their staff. Only private sector partners with an approved training plan will be eligible to participate in this package.
Component 4 – Empowerment and Capacity Building

Historically, the tourism industry in Namibia has mirrored the pre-independence apartheid regime, where the development of business opportunities was unavailable to the majority of Namibians who were unable to participate in the mainstream economy. Since independence, there has been little effort to assist previously disadvantaged Namibians in developing the technical skills required for successful tourism business enterprise. Consequently, though the tourism industry is highly developed, it is largely owned and controlled by a small section of the population.

The slow entry of BBEE into the tourism sector is accentuated by the fact that many individuals who join the industry are from rural areas where formal education is limited and not producing people skilled to access the labor market. Therefore, most entrepreneurs (both urban and rural) have avoided tourism investments or have experienced little success in setting up their own tourism business. Furthermore, those who have accumulated hospitality skills through working in tourism, have difficulty moving into senior management positions or direct ownership because of their lack of business skills.

In order to implement the Transformation Charter, which has been jointly developed and owned by MET, NTB and FENATA, it is important to enact a number of interventions to speed up the involvement of the BBEE enterprises and encourage a more diverse demographic profile in tourism ownership and management. An aim of the proposed activities is to oversee the implementation, monitoring and support of a variety of development programs for emerging entrepreneurs in the tourism industry.

Also central to the future growth of the tourism sector and poverty alleviation in Namibia is the capacity building of impoverished communities in rural areas, particularly those bordering or living amongst Namibia’s tourism resources. In order to support tourism growth and rural job creation, there is a need for targeted hospitality, photographic safari guide, and hunting sector training. An injection of funds into existing training programs will upscale capacity building and will enable existing urban-based training programs to reach rural areas. The enhancement of capacity building will have a significant impact on poverty alleviation by targeting unskilled members of rural communities at all levels of literacy. Simultaneously, the proposed training initiatives will fill the large gap in the tourism sector’s human resource base, thus enabling further growth in the sector and related job creation.

Specific proposed actions that will address empowerment and capacity building in the tourism sector are:

- **Upscale and formalize the activities of the Tourism Council** to include structured monitoring of the Transformation Charter and a Tourism Awareness Campaign. A more fully integrated Council will help to create synergy in the industry, as it represents the various tourism branches. The ten tourism organizations in Namibia are jointly represented by FENATA, but most have operated independently from one another. This lack of synergy has duplicated resources and increased association expenditures on administration. More importantly, because these organizations operate in separate locations, there have been delays in monitoring and charting compliance with the Transformation Charter, capacity building, attention to tourism barriers and tourism marketing.

  Specific activities to be targeted with MCA funding are:

  - **Develop a Tourism Awareness Campaign.** The tourism sector’s role as one of Namibia’s leading industries has been undervalued in the past. An awareness campaign aims to educate potential investors and entrepreneurs, providing guidance
In 2001, Dinah and Joseph Karuumbe (pictured below) of Camelthorn Transfer and Tours were running a basic airport transfer service that barely sustained them in quiet months when monthly revenues were as low as NAD2,500. Following their successful mentorship through FENATA and TASA, they realized an income growth of 15-20% for 2005-2006 and a minimum monthly revenue of NAD15,000. Joseph has since acquired a guide license and started the guiding branch of the business and Dinah has recently hired three drivers to help with their growing transfer business.

- **Implement and Monitor the Transformation Charter.** In 2004, Namibia’s tourism organizations embarked on the tourism transformation charter process, but progress has been slowed by the lack of structure and synergy amongst participants, and by the lack of funds needed to bring in expertise. Upscaling the Tourism Council will help to jumpstart the transformation process and provide funds for consultations on the establishment of a database management system and analytical tools for future monitoring of the Transformation Charter.

- **Create “Tourism House”** as a base for the Tourism Council, tourism representative groups (TASA, NACOBTA, FENATA, HAN) and training groups (NATH, NACOBTA), and a venue for training programs. The running costs of this house would be covered primarily by rental fees collected from tourism organizations such as FENATA and TASA who will be housed here, and from the renting of training facilities. Tourism House will help to unify the many divisions of the sector along with the formation of the Tourism Council.

- **Training and Mentorship Programs** To address the gap in tourism skills in Namibia and in the success of BBEE owned tourism companies, a significant educational component is required for the future development of the tourism industry.

- **Implement the 2004 National Tourism Training Strategy**, targeting the four tourism complexes, by working with GRN, NTB, Namibia Training Authority (NTA), and private sector. NTA and NQA have already authorized standards for level 1, 2, and 3 hospitality & tourism training, also packaged into national qualifications, registered on the National Qualifications Framework administered by the NQA on behalf of GRN (Namibia Qualification Authority, 2006). The strategy aims to improve skills shortage of trained Namibians by producing subsidized training manuals to lower training costs, and will work towards enabling rural training centres to conduct hospitality training in the four tourism complexes that were identified as having the greatest tourism growth potential. The ultimate goal of the strategy is to enhance service delivery to tourists to ensure that Namibia becomes a competitive tourism destination. The strategy committee will choose training institutions through a tender process, and all participating institutions will have to qualify according to the registration and accreditation standards administered jointly by NQA and NTA. Training offered should be based on NQA registered unit standards and qualifications, which carry

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**Tourism Mentorship: Case Study**

In 2001, Dinah and Joseph Karuumbe (pictured below) of Camelthorn Transfer and Tours were running a basic airport transfer service that barely sustained them in quiet months when monthly revenues were as low as NAD2,500. Following their successful mentorship through FENATA and TASA, they realized an income growth of 15-20% for 2005-2006 and a minimum monthly revenue of NAD15,000. Joseph has since acquired a guide license and started the guiding branch of the business and Dinah has recently hired three drivers to help with their growing transfer business.
national endorsement, as part of GRN’s initiative to re-form vocational education and training system. Training funds will enable disadvantaged Namibians to enroll in hospitality and tourism training within four tourism complexes, and will finance the training of field-based trainers to be based in existing facilities.

- Develop and implement the Tourism Mentorship Program for upcoming BEE entrepreneurs. Such individuals will be mentored by existing tourism operators and the collective group of tourism organizations, and given the necessary skills of tourism business. Namibia’s upcoming mentorship program is partially modeled after mentorship programs in South Africa. A 2001 study in Gauteng, South Africa estimated a 70-80% failure rate in newly established SME. A 2004 study of South African entrepreneur mentorships revealed an average failure rate of only 7.6% for mentored SME entrepreneurs.

**Benefits**

The primary target beneficiaries of the MCA Namibia investment in tourism are the 135,000 rural residents living in communal area conservancies adjacent to parks or along tourism routes that will be promoted through tourism developments in the target park node complexes. Tourism offers a unique opportunity for development in Namibia’s remote rural areas, where few other development opportunities exist.

An analysis of the proposed MCA investments indicates that approximately 6,512 new permanent jobs will be created within the five-year investment period. It is estimated that more than 1,500 of these jobs will flow directly from the new lodges, game camps and associated enterprises spawned by the MCA Namibia investment to community members. In addition, job creation in the backwards linkages resulting from the multiplier income of these tourism operations will generate approximately 5,000 more jobs in the broader economy.

The tangential, but additive benefits of tourism operations in conservancies also markedly contribute to other aspects of rural poverty alleviation.

Key considerations here entail:

- Lodge employees tend to be about 75% women, thereby reducing women’s vulnerability and enhancing the likelihood that income will be applied towards family livelihood needs.

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27 Cant and Standford, 2002
28 Watson, 2004
Most of the spin-off jobs created (i.e., handicrafts production, laundering, etc.) are predominantly filled by women. In many cases, the women performing these part-time tasks are heads of households with no other sources of cash income.

Tourism employees tend to be in the younger age strata of society - as such individuals have high levels of enthusiasm for service provision, are eager to learn, and are actively seeking employment opportunities.

Many of the jobs created through tourism do not discriminate between levels of literacy and often do not require any literacy, such as jobs in service, maintenance, and housekeeping. This encourages and facilitates entry into a salaried profession, with further opportunities for skills development.

Income and benefits generated through tourism are not only complementary to existing subsistence agricultural livelihoods, but also diversify livelihood alternatives and add valuable coping strategies during the times of frequent drought in Namibia's arid and erratic climatic setting.

The linkage between the benefits (cash, employment, meat, etc.) generated by nature-based tourism operations with a valuable wildlife resource base provides incentives for community residents to manage and conserve their wildlife. This is precipitating a rapid recovery of wildlife populations and contributing to an upward spiraling flow of sustainable benefits, greatly assisting local community members to remove themselves from poverty traps.

Management of Namibia's arid lands and fragile ecosystems for tourism-related incomes and services is ecologically sustainable for the long-term welfare of land and resources, providing significant opportunities for future generations of Namibians to further capitalize on what will become increasingly more valuable tourism opportunities in future years.

At national level, the invigorated tourism sector will enhance the financial viability of a range of tourism linked businesses, including, Namibia's national carrier Air Namibia, Namibia Wildlife Resorts (the state-owned enterprise that operates tourism resorts throughout the country), grocery stores, agricultural producers, petrol stations, restaurants, hotels, car rental agencies, and more. An assessment of tourist spending contributions to the national economy, based upon increased tourist arrivals, estimates that tourism expenditures will rise from less than NAD800 million at the start of the MCA period to NAD1,483 million by the end of year five (Figure 4.5, below).

GRN will benefit from a strengthened national economy, increased tax revenues, reduced costs related to increased effectiveness of park management, and an enhanced international reputation.
Wilderness Safaris Namibia, a leading tourism operator, runs a NAD75,000 monthly training budget and their full-time training team comprises 4 staff. In 2005, this private company driven training program trained 459 people (both existing and new staff) in rural areas throughout Namibia, including 20 managers, 23 assistant managers, 58 housekeeping staff, 69 service staff, and 51 chefs.

Tourism Training: Case Study

Incentivizing private sector training programs through MCA Namibia will primarily benefit individuals from rural areas. Namibians in rural areas have little means of accessing urban-run tourism training programs, yet they are very often the immediate stakeholders in tourism development due to their close proximity to tourist attractions. Private sector training incentives will encourage formalized tourism-targeted training programs in rural areas. For general hospitality and service staff, this form of ‘in house’ training is already widely used but is extremely ad hoc and limited in terms of developing individuals on a tourism career path.

The potential for private sector in-house training is illustrated by the current training activities of certain large tourism companies in Namibia (refer to text box). To meet their rapidly growing demand for skilled staff, certain companies have had no alternative but to implement formal training without any government incentives.

The MCA Namibia investment in training will fast-track capacity building efforts, enabling unskilled Namibians to fill future tourism positions, commencing with a large bolstering of general hospitality training (housekeeping, food and beverage service) and specialist training (guide and hunting support) in year 1. The direct benefits of this training are illustrated by the average starting wage of hospitality-service employees (NAD750 per month, plus food and accommodation), while the average starting wages of specialist staff, such as nature guides, are approximately NAD1,500 per month, plus food and accommodation. In contrast, hunting staff (trackers, camp staff, skinners, etc) are commissioned for each individual hunt and earn daily wages of NAD35-120 during hunt periods. Qualified hunting guides will receive monthly incomes of NAD1,500 to NAD2,000 per month if employed by a Safari Operator and can earn considerably more if conducting their own hunting operations.

Figure 4.5: Anticipated Increase in Tourist’ Spending as a result of the MCA Marketing Investment (NAD million)
## Costs

### MCA Investment 3: Tourism

<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.1 Resource Development &amp; Management</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>63.1</td>
</tr>
<tr>
<td>New developments</td>
<td>4.911</td>
<td>11.606</td>
<td>15.655</td>
<td>5.677</td>
<td>2.182</td>
<td>40.0</td>
</tr>
<tr>
<td>Tourism and local business hub</td>
<td>0.447</td>
<td>0.894</td>
<td>1.341</td>
<td>1.789</td>
<td>0.447</td>
<td>4.9</td>
</tr>
<tr>
<td>Game production camp</td>
<td>0.921</td>
<td>1.841</td>
<td>2.762</td>
<td>0.921</td>
<td>0.000</td>
<td>6.4</td>
</tr>
<tr>
<td>Bush access and 4X4 game-viewing</td>
<td>1.241</td>
<td>2.411</td>
<td>1.827</td>
<td>1.241</td>
<td>0.584</td>
<td>7.3</td>
</tr>
<tr>
<td>Border Post</td>
<td>0.000</td>
<td>0.130</td>
<td>0.519</td>
<td>0.000</td>
<td>0.000</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Enhanced management of natural resources</strong></td>
<td>1.245</td>
<td>3.610</td>
<td>4.670</td>
<td>1.653</td>
<td>0.655</td>
<td>11.8</td>
</tr>
<tr>
<td>Tourism and natural resource mgt service centre</td>
<td>0.408</td>
<td>2.446</td>
<td>3.669</td>
<td>0.815</td>
<td>0.000</td>
<td>7.3</td>
</tr>
<tr>
<td>Boundary conflict management</td>
<td>0.346</td>
<td>0.672</td>
<td>0.509</td>
<td>0.346</td>
<td>0.163</td>
<td>2.0</td>
</tr>
<tr>
<td>Restoration of NR assets as basis for tourism</td>
<td>0.492</td>
<td>0.492</td>
<td>0.492</td>
<td>0.492</td>
<td>0.492</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>Key support infrastructure</strong></td>
<td>0.268</td>
<td>0.521</td>
<td>0.395</td>
<td>0.268</td>
<td>0.126</td>
<td>1.6</td>
</tr>
<tr>
<td>Bridge</td>
<td>0.067</td>
<td>0.130</td>
<td>0.099</td>
<td>0.067</td>
<td>0.032</td>
<td>0.4</td>
</tr>
<tr>
<td>Energy</td>
<td>0.022</td>
<td>0.043</td>
<td>0.033</td>
<td>0.022</td>
<td>0.011</td>
<td>0.1</td>
</tr>
<tr>
<td>Water</td>
<td>0.067</td>
<td>0.130</td>
<td>0.099</td>
<td>0.067</td>
<td>0.032</td>
<td>0.4</td>
</tr>
<tr>
<td>Site preparation / landscaping</td>
<td>0.112</td>
<td>0.217</td>
<td>0.164</td>
<td>0.112</td>
<td>0.053</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Management team</strong></td>
<td>1.644</td>
<td>3.190</td>
<td>2.417</td>
<td>1.644</td>
<td>0.773</td>
<td>9.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>8.1</td>
<td>18.9</td>
<td>23.1</td>
<td>9.2</td>
<td>3.7</td>
<td>63.1</td>
</tr>
</tbody>
</table>

### 3.2 Marketing

<p>| Destination marketing: emerging USA and Canada | 1.841 | 1.841 | 0.921 | 0.460 | 0.460 | 5.5   |
| Cooperative Marketing Agreements              | 0.921 | 0.921 | 0.263 | 0.263 | 0.263 | 2.6   |
| Public Relations &amp; Media                      | 0.526 | 0.395 | 0.263 | 0.066 | 0.066 | 1.3   |
| Destination Promotion                         | 0.395 | 0.526 | 0.395 | 0.132 | 0.132 | 1.6   |
| Destination marketing: emerging Europe        | 1.381 | 1.381 | 0.460 | 0.276 | 0.184 | 3.7   |
| Cooperative Marketing Agreements              | 0.789 | 0.789 | 0.263 | 0.132 | 0.053 | 2.0   |
| Destination Promotion                         | 0.592 | 0.592 | 0.197 | 0.145 | 0.132 | 1.7   |
| Tourism route marketing                       | 0.921 | 0.460 | 0.460 | 0.276 | 0.184 | 2.3   |
| Domestic Market                               | 0.395 | 0.197 | 0.197 | 0.132 | 0.066 | 1.0   |
| South Africa                                  | 0.526 | 0.263 | 0.263 | 0.145 | 0.118 | 1.3   |
| Interactive website development               | 0.460 | 0.460 | 0.276 | 0.092 | 0.092 | 1.4   |
| <strong>Total</strong>                                     | 4.6   | 4.1   | 2.1   | 1.1   | 0.9   | 12.9  |</p>
<table>
<thead>
<tr>
<th></th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3.3 Barriers Removal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.6</td>
</tr>
<tr>
<td>Capitalize Tourism-tailored Loan Scheme</td>
<td>0.000</td>
<td>4.603</td>
<td>4.603</td>
<td>4.603</td>
<td>0.000</td>
<td>13.8</td>
</tr>
<tr>
<td>Incentive-based training package</td>
<td>0.368</td>
<td>0.368</td>
<td>0.368</td>
<td>0.368</td>
<td>0.368</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.4</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>0.4</td>
<td>15.6</td>
</tr>
<tr>
<td><strong>3.4. Empowerment &amp; Capacity Building</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.2</td>
</tr>
<tr>
<td>Upscale and formalize the activities of the Tourism Council</td>
<td>2.166</td>
<td>0.145</td>
<td>0.082</td>
<td>0.082</td>
<td>0.000</td>
<td>2.5</td>
</tr>
<tr>
<td>Tourism Awareness Campaign</td>
<td>2.065</td>
<td>0.072</td>
<td>0.041</td>
<td>0.041</td>
<td>0.000</td>
<td>2.2</td>
</tr>
<tr>
<td>Implement and Monitor the Transformation Charter</td>
<td>0.101</td>
<td>0.072</td>
<td>0.041</td>
<td>0.041</td>
<td>0.000</td>
<td>0.3</td>
</tr>
<tr>
<td>Create Tourism House</td>
<td>1.963</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>2.0</td>
</tr>
<tr>
<td>Training and Mentorship Programs</td>
<td>0.321</td>
<td>0.228</td>
<td>0.147</td>
<td>0.070</td>
<td>0.000</td>
<td>0.8</td>
</tr>
<tr>
<td>Provide training funds</td>
<td>0.151</td>
<td>0.089</td>
<td>0.030</td>
<td>0.013</td>
<td>0.000</td>
<td>0.3</td>
</tr>
<tr>
<td>BBEE Mentorship programme</td>
<td>0.170</td>
<td>0.138</td>
<td>0.117</td>
<td>0.057</td>
<td>0.000</td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4.5</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
<td>5.2</td>
</tr>
</tbody>
</table>

The proposed activities will be funded in a phased fashion, with primary emphasis on the front-end loading of capitalization costs during years 1-3 and dissipation of recurrent costs during years 4-5 as programmatic support costs are absorbed by in-country organizations and private sector investments begin to take hold. The key capitalization costs related to infrastructure developments (i.e., water points, roads, fencing, management centres, Tourism House, support equipment, etc.), which compose significant portions of the budget, will be done as quickly as possible. This will allow sequential development of other complementary project activities that are to be funded or co-funded by private sector (i.e., lodge developments, route development, etc.) to commence from late in Year 1 onwards.

The development of the lodges will also be done in a strategic fashion, with the establishment of new lodges around each of the four park development nodes being spread over years 2-5 of the project. This process will be guided by the implementation of the MET Concessions Policy, which will provide for the systematic allocation of a limited number of new lodge sites around / within each park node per year. This will ensure that: a) new lodges do not undermine existing lodge operations; b) a glut of new tourism accommodations do not undermine the ability of the new lodge operations to compete with existing and more established lodges; and c) bed availability and lodge developments continue to expand as the marketing campaign results kick-in.

The marketing campaign will place strong emphasis on destination marketing in emerging markets (North American and Europe) during years 1-3. This will assist significant numbers of new tourism operators to break into these lucrative tourist markets and generate a momentum that will be cost-effective for private sector partners to maintain from the latter stages of the MCA investment period onwards. Levies from increased tourist arrivals will filter back into NTB to bolster its marketing budget in subsequent years.

The Tourism-tailored Loan Scheme will be capitalized as from years 2 onwards, with additional funds added in tranches of NAD35 million per year during Years 3 and 4. This sequential investment will be responsive to demands for capitalization funds as the number of new lodges grow.

The empowerment and capacity building initiative will be timed to respond to: a) the need for a centralized self-sustaining facility to create synergy in the sector for the active support, implementation and monitoring of the transformation charter, b) the present pent-up demand...
for qualified tourism staff, and c) the growing demand for skilled tourism staff as the MCA tourism investments take hold.

All of the proposed empowerment and capacity building activities will entail a higher level of funding during years 1-3 of the MCA period. The proposed MCA funds for Years 4-5 will be significantly bolstered by in-country training funds provided through implementation of the Tourism Transformation Charter and funds acquired from use of the Tourism House. As tourism revenues increase in years 3 and 4 onwards, future training programs will also be supported by the demand from private, government, and communal tourism sectors. Furthermore, incentives for tour operators to carry out formal in-house training programs will enable these operators to meet a large percentage of the training needs in rural areas.

Technical Analysis

The proposed integrated approach for the MCA investment in development of the tourism sector is technically robust. The approach is premised upon the need to initiate a coordinated process of: a) developing the resource base to create or unlock new tourism destinations, b) increasing the volume of tourist visitations through a focused marketing strategy, c) enhancing the Namibia service provision skills and capacity, and d) empowering previously disadvantaged Namibians to be key players and benefactors to this increasingly more meaningful sector. Key technical aspects of each of the four components are highlighted below.

Component 1 – Resource Development and Management

Implementation of this component will require the introduction of a new park development philosophy that entails linking park concession opportunities with development benefits to park neighbors. A critical aspect of this approach will be the successful development and implementation of the new MET Concession’s Policy. This innovative policy seeks to extend rights and benefits to park neighbors (i.e., conservancies) through the opening up and development of income-generating opportunities by empowering communities to: a) directly engage as concession operators for select concession opportunities or b) tender out the right to private sector to implement the concessions as part of public/private/community partnerships.

Implementation of this component will be facilitated and managed through the formation of four park/conservancy node development teams. A node team will be established and based in or near each node, thereby ensuring daily support and continuous implementation at the node level. Each node team will be composed of qualified technical specialists (highly qualified contracted staff) whose role will be to: a) implement the identified node development activities and b) provide training and capacity-building to Namibian counterpart staff, ensuring that MET node staff have the knowledge and capacity to continue to support node development and operation following conclusion of the five year MCA investment.

The four node development teams will be supported and backstopped by a core team of specialists that are centrally located in the MET Headquarters in Windhoek. This team will be composed of such types of specialists as: Team Leader/Planner, Resource Economist, Engineer/Quantity surveyor, Concession Tender Specialists, Financial Manager/Procurement Officer, and other. The specialist positions will be filled through an international tender process. The Headquarters team will provide direct specialist services to the four regional node implementation teams in a sequential manner that ensures that development activities in each node are taking place in a timely manner as per the schedule of planned activities.
The node support teams will follow MCA tender and procurement procedures for all development and construction activities, with: a) the planning staff leading the process of identifying appropriate concessions and attendant infrastructural development needs, b) the resource economist providing insights and direction on optimization of the pending developments and policy adjustments that could enhance the returns from such developments, c) the engineer/quantity surveyor generating the design of new infrastructure and overseeing the construction processes, d) the concession tender teams developing tender processes, assisting conservancies to negotiate with private sector partners, and drafting contracts between the relevant government, conservancy, and private sector partners on the conditions related to award and operation of the concessions, and e) the financial/procurement specialist being in charge of financial management activities and ensuring that contractual procurements are implemented in line with MCA guidelines.

The large number of development and construction activities requires that node development teams be highly efficient. Procurement processes will have to be performed in a very timely and effective manner, while a tight timeline on the award of concessions will be critical to the successful completion of the tourism investment activities.

Component 2 – Marketing

Technical implementation of the marketing operations will require intensified efforts from both the NTB and the private sector. The NTB will build and expand upon current efforts by increasing the scope of its cooperative marketing efforts with the private sector (both the number of partners and the geographic focus of marketing partners). As this is an existing mechanism, the approach, technical expertise, and linkages for the planned expansion already exist within the NTB operations. Similarly, the planned expansion and development of the NTB web-marketing effort will build upon an already existing electronic marketing operation. Consequently, both envisaged actions will not present major technical implementation challenges.

The anticipated increase in private sector investment in the marketing effort will come from two sources. First, the private sector will cost-share in the cooperative marketing arrangements, thereby ratcheting up private sector contributions to marketing Namibia as a tourism destination and creating greater awareness of specific tourism destinations within Namibia. Secondly, as tourism becomes more viable in Namibia, it is anticipated that private sector will re-invest significant amounts of its annual income to further market their individual enterprises. This will create a further private sector-driven snowballing effect to expanded marketing efforts. In addition to the above, tourism marketing also reaps substantial benefit from “word-of-mouth” experiences shared by enthusiastic tourists returning to their home destinations following an enjoyable tourism experience. The quality of the Namibia tourism experience can be demonstrated by the high rate of return visitations by nature-based tourists, with some sources indicating that return visitations by foreign tourists to Namibia are as high as 46%.

Component 3 – Barriers Removal

While private sector demand for the lodge capitalization loan scheme is high, the home for the scheme still requires the reaching of an agreement on the most appropriate commercial banking institution for hosting it. Cursory discussions with the both the Development Bank of Namibia and the Namibia Agricultural Development Bank have indicated strong interest levels in hosting and administering the scheme. Once the host of the scheme has been defined, then the proposed scheme will require the establishment of administrative systems to ensure specific management and loan recovery practices are in place. It is envisioned that such systems will be an adaptation of existing bank systems, and will therefore, not present significant challenges or difficulties to develop or implement. The first 6 months of
the MCA investment period will be utilized to finalize these arrangements, thereby allowing the initial applications for loans to take place during the first year of MCA operation and for loans to commence at the onset of Year 2.

**Component 4 – Empowerment and Capacity Building**

The colonial and apartheid history of Namibia combined have produced serious impediments to substantive involvement and ownership of tourism operations by previously disadvantaged Namibians. Similarly, this has resulted in a shortage of qualified tourism staff to drive the proposed rapid expansion of the Namibia tourism sector. This situation must be quickly rectified if the planned MCA investment to rapidly expand the tourism sector is to succeed. The establishment of the Tourism Council and development of Tourism House will greatly enhance sector coordination and facilitate implementation of the Tourism Transformation Charter. Sponsorship for training of disadvantaged Namibians through NATH, NAPHA, and other tourism institutions will fast-track the empowerment and capacity building efforts. Concomitantly, the mentorship program will provide dedicated support to select tourism enterprises, providing an increased likelihood that tourism enterprises owned and operated by previously disadvantaged Namibians succeed.

**Economic Assessment**

The MCA tourism component embraces a selected series of investments in the tourism sector that will maximize the contribution of tourism to economic growth and poverty reduction in Namibia. Several subcomponents are involved. The primary intervention will be to invest in the asset base, which underpins the sector, so that resource development and management will be enhanced. In order to ensure long-term sustainable growth in the tourism sector, several linked interventions are also included, namely the removal of barriers to tourism development, improved marketing of Namibian tourism products, and empowerment and capacity building.

These interventions are complementary in that all are jointly necessary to achieve the desired impact of enhanced economic growth and poverty reduction.

The economic analysis employs a cost-benefit approach, where the costs are the MCA investment (grants), and the benefits embrace the resulting increase in national income. Of secondary consideration is the distribution of this national income as far as it contributes to the reduction of the poverty gap. The analysis follows the MCC’s “Guidelines for economic analysis” as revised on June 12, 2006.

**Methods and Assumptions**

**Available data sources**

The analysis draws on an extensive set of related empirical analyses that have been done, primarily through the Environmental Economics Unit (EEU) in MET, on the micro- and macro-economics of tourism investments in Namibia.

Basic micro-economic enterprise models have been developed by the EEU, using empirical data for a number of activities in tourism and wildlife utilization and these form the basis for the macro economic cost-benefit analysis. The models have been described by Ashley and Barnes (1996), Ashley and Garland (1994), Terry et al. (1994), Barnes (1995), Barnes and de Jager (1996), Barnes and Humavindu (2003), Barnes et al. (2001), and Barnes et al. (2002a). They have been developed for investments in tourism lodges, hunting lodges, camping sites, craft production, tourism-based wildlife estate development, community-based management of tourism and natural resources, and other wildlife related developments.
The models are budget and cost-benefit spreadsheets based on empirical data gleaned from investors. They measure annual net returns, internal rates of return, and net present values (NPVs), among others. They provide measures of private profitability, and economic measures of incremental change in gross and net national income (value added). The economic measures are shadow priced according to a set of criteria developed by Barnes (1994). The analyses consistently show that tourism enterprises generate positive private internal rates of return between 4 and 20%, and economic rates of return between 13 and 63%. The lower returns occur on private land where capital costs of land conversion tend to be high. Community-based activities (conservancy investments) generate project financial rates of return of between 8 and 16%, private rates of return to communities of between 40 to 220%, and economic rates of return 22 to 131%.

The EEU has also conducted a number of demand analyses in the tourism industry, where tourists’ expenditures have been used to compute the national income generated from tourism activities. These studies have also been used to estimate consumer surpluses associated with tourism trips. Here the results of Barnes (1996), Barnes et al. (1999, 2002b), Krug (2003), Söderström (2002), Nyssölä and Ågren (2002) have been used. Another source of data on tourism expenditures has been periodic visitor exit surveys conducted by the Directorate of Tourism 29. Tourist trip expenditures, within Namibia, range from NAD3,500 for domestic tourists, to NAD6,000 for southern African foreign visitors, to NAD21,500 for overseas tourists. Nature-based tourists’ consumer surpluses, measured using contingent valuation, ranged between 19 and 35% of trip costs.

Some studies have been conducted to assess and discuss the impacts of tourism-based community natural resource management initiatives, on the livelihoods of poor rural households. Ashley (1995), Ashley and Jones (2001), Ashley and LaFranchi (1997), Suich (2003), Suich and Murphy (2002), Barnes et al. (2002a) and Bandyopadhyay et al. (2004) provided evidence of the additive and complementary nature of tourism in rural communities’ income, in the Namibian CBRNM Programme. However, detailed, quantitative, empirical evidence on the extent of the impact of tourism on poor household economies is scanty.

The enterprise models described above have been used as building blocks to measure the aggregate benefits in various economic and policy analyses. Thus, Barnes (2001, 2002), Barnes and Ashley (1996), Novelli and Humavindu (2005) Barnes and Humavindu (2003), Barnes et al. (2001) and Novelli et al. (2006) provided results showing the importance of giving priority to tourism in economically efficient land allocation in many parts of semi-arid southern Africa. These analyses point to the finding that in areas of better tourism potential, tourism can provide private and economic return up to 12 times higher then those of competing land uses. The distribution of such areas tends to be patchy, however, reinforcing that tourism is complementary rather than competitive in the spectrum of land use options.

A social accounting matrix (SAM) model of the Namibian economy has been recently developed, based on the 1991 national income and expenditure survey 30. This is an input-output model with which it is possible to calculate economic multipliers and the income effects of policy changes. The model has been used by Turpie et al. (2004, 2005) to calculate the income multiplier for protected area tourism and calculate the total impact of this tourism on gross national income. It has also been used by Samuelsson and Stage (2006) to measure the impact that trophy hunting tourism has on the national income. For nature-based tourism activities, the national income multiplier has been measured at

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29 TIPPMIU, 1997; SIAPAC, 2003
30 The SAM will be updated in due course with the 2004 National Household Income and Expenditure Survey (NHIES) results, which were only recently published.
between 1.86, and 2.56. Turpie et al. 2004, used the SAM to determine that 21 to 24% of national income generated by protected area tourism accrued to low income households.

Another important source of data at the macro-economic level has been the tourism satellite accounts (TSA) developed in MET. A preliminary set of accounts was developed in 2001 by the EEU\textsuperscript{31}. An expanded and upgraded TSA is currently being finalized in the NTB\textsuperscript{32}. The TSA are based on extraction of national accounts data on tourism, providing data on the size of the tourism industry, its components, and its characteristics. It also makes use of the social accounting matrix for measuring tourism’s impacts on the broader economy. This provides empirical evidence of the income multiplier.

**Assumptions**

The measurement of the incremental income benefits that will result from the MCA investment in tourism is based on the expected increase in tourist arrivals and the resulting associated tourism expenditures in Namibia. In the identification of these benefits the tendency has been to ERR on the conservative side. The project can be expected to result in a significant increase in the growth of tourism over the next 30 years. This will be due to the fact that the project will be ensuring sustainability in the tourism natural asset base, which is currently deteriorating due to under investment. But most importantly, it will be removing current barriers to the development of tourism in and surrounding the protected areas, and unlocking undeveloped tourism potential.

International tourist arrivals grew by 16\% per annum between 1991 and 2000, and this is reflected in the gross output of the tourism industry grew at 14\% per annum between 1991 and 1996\textsuperscript{33}. Since 2000 growth has been much reduced due to factors such as international terrorism and currency exchange rate movement\textsuperscript{34}. A growth rate of 2.9\% per annum for the period since 2000 has been measured through the Directorate of Tourism visitor statistics\textsuperscript{35}. For the TSA\textsuperscript{36} this rate is used to predict growth over the next 20 years. It could be expected that the growth rate for international arrivals will resume high growth rates similar to those of the 1990s. For this investment, the interventions will facilitate an estimated growth rate for international arrivals of 5.7\% during the MCA investment period. Thus an investment-attributable growth rate of 2.8\% has been applied in the economic analysis.

Data is available from several surveys (noted above) for average domestic, southern African, and overseas, nature-based tourist numbers and the expenditures of tourists in these segments in Namibia, per tourist trip. Based on visitor surveys, an estimated 36\% of their Namibian expenditures are spent on accommodation services. The remainder is spent on linked services such as independent restaurants and bars, road and air transport, guides and travel agents, recreation and shopping. The value added generated within the tourism service providing establishment, as a result of these expenditures, can be measured using the enterprise models developed by the EEU. Most of the models are of accommodation type enterprises, and the value added to gross output ratios for the linked services has to be imputed. For this the results of a study in Botswana\textsuperscript{37}, where empirical data from a range of tourism establishments was obtained, were used. Generally the estimated value added to output ratios range between 44\% for up-market lodges and 76\% for simple community run campsites. For this investment a blended value added ratio of 48\% of output was used.

\textsuperscript{31} Poonyth et al. 2002; Suich 2002
\textsuperscript{32} WTTC, 2006, pers. comm.
\textsuperscript{33} Suich 2002
\textsuperscript{34} Turpie et al. 2004
\textsuperscript{35} S. Swiegers 2006, pers. comm.
\textsuperscript{36} WTTC 2006, pers. comm.
\textsuperscript{37} FGU-Kronberg 1988
The enterprise models measure *incremental* national income (value added) at shadow prices. Thus they measure how much the introduction of the activity changes the national income. The Namibian economy is relatively free of distortions, so that shadow pricing adjustments are, as a rule, made only with regard to the costs of unskilled and semi-skilled labor (a factor of 30% on wage cost has been applied), the prices of tradable goods (a factor of 1.06, to account for excess demand for foreign exchange has been applied), and the elimination of transfers (subsidies and taxes affecting the enterprise, other than fees for services). The opportunity cost of capital has been accounted for, in a real discount rate of between 6 and 10%. The commonly used rate has been 8%. The discount rate used for this ERR analysis is 10%. The economic analysis is done in constant terms, and the discount rate is a real one. Thus a discount rate of 10% is compatible with the current commercial lending rate of some 13 or 14%, which accounts for inflation.

The benefit-cost model for the project extends over three time periods, namely, 10, 20 and 30 years. Costs in the form of MCA Namibia investments (grant expenditures) are spread over the first five years. MCA costs are not shadow priced. Anticipated recurrent costs arising from selected investments are also included and extended through the analysis period. Thus, where project expenditures result in fixed assets, a recurrent cost of up to 5% of the capital expenditure is inserted thereafter during the project period. Some recurrent costs are inserted to ensure continuity of non-fixed asset expenditures, for example, the expenditures on marketing are given a following recurrent cost of 5% of the initial expenditures. Generally insertion of recurrent costs arising was discretionary and depended on the type of initial project expenditure. The benefits include the stream of incremental national income attributable to new tourism expenditures over the analysis period. These are both direct value added and indirect calculated using a tourism income multiplier of 1.86, derived from Namibia’s SAM model. Two basic analyses are done, one using only direct value added benefits resulting (the ‘lower bound’ model), and the other using the total (direct and indirect) value added benefits resulting (the ‘upper bound’ model). Capital (project) costs are entered in the year when they occur, as are any capital replacement costs (for example for equipment, vehicles, fences), necessary to maintain assets during project period. Depreciation or appreciation of assets is accounted for in a residual value in the final year of analysis.

The economic worth of each subcomponent is analyzed separately, as well as that for the whole project. Benefits attributed to each subcomponent are mutually exclusive, and are thus not double counted in the whole project analysis.

Project expenditures are expected to result in some growth in wildlife stocks and the value of these assets is included in the economic analysis. The value of wildlife stocks is calculated according to natural resource accounting convention, where the asset value is the present value of the expected stream of future economic rents from the stock. Consumer surplus is included in the benefits, but only that for domestic tourists, measured by Barnes et al. (1999) at 28% of trip costs. Some benefits in terms of wildlife species production and sale are included in the resource development and management subcomponent. Benefits are also included for rentals for the Tourism House development that is planned for the Empowerment and Capacity Building component.

The model measures the ERR and the NPV of the project. Components are analyzed separately to assist with planning, but since they are considered to jointly contribute to the project objective, the overall rate of return is considered important. The degree to which the income generated due to the project accrues to low-income households is estimated, using data from the enterprise models and the SAM.
**Economic Assessment Findings**

Table 4.2 shows the results of the economic analysis. The economic rates of return for all subcomponents, and the whole project, are above the 10% cut-off rate after 30 years and for both the lower and upper bound analyses. As all subcomponents are designed to be complementary, it is the whole project result that is critical.

**Table 4.2: The ERR measured in the Economic Analysis**

<table>
<thead>
<tr>
<th>Subcomponent</th>
<th>LOWER BOUND – DIRECT VALUE ADDED ONLY</th>
<th>UPPER BOUND – TOTAL VALUE ADDED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ERR 10 years 20 years 30 years</td>
<td>ERR 10 years 20 years 30 years</td>
</tr>
<tr>
<td>LB WHOLE PROJECT</td>
<td>17.2% 20.3% 22.1%</td>
<td>45.3% 45.9% 46.1%</td>
</tr>
<tr>
<td>Resource Development and Management</td>
<td>5.6% 9.1% 13.6%</td>
<td>15.0% 16.9% 19.3%</td>
</tr>
<tr>
<td>Marketing</td>
<td>90.5% 90.8% 90.8%</td>
<td>213.1% 213.1% 213.1%</td>
</tr>
<tr>
<td>Barriers</td>
<td>12.7% 10.4% 12.9%</td>
<td>28.3% 27.8% 28.2%</td>
</tr>
<tr>
<td>Empowerment and Capacity Building</td>
<td>9.5% 18.9% 20.6%</td>
<td>16.7% 23.9% 24.9%</td>
</tr>
</tbody>
</table>

Specific illustrations of the effect of the project on job creation and poverty alleviation are presented elsewhere in this document. It is also possible to illustrate how the economic income (the contribution to national income) generated by the project affects the incomes of low-income segments of society, and also how jobs for these elements are created. Table 4.3 shows the macroeconomic impact that the value-added generated by the project can be expected to have on low-income households in Namibia. The SAM model was used to extract these values. Thus, the amounts of this accruing to low income members of society were extracted from the expected annual total (direct and indirect) income (value added) generated in the last year of the analysis (year 30). Of the USD71.8 million generated in this year, some 21% accrues to low-income households in the form of wages, mixed income and rentals and royalties resulting from joint ventures. A further 17% of the income accrues to GRN, some of which will likely be redistributed toward poverty alleviation ends. These values are favorable in the context of the broader economy, and show that, contrary to popular belief, tourism investments do have a significant impact on poverty.

**Table 4.3: Expected MCA Investment total Impact on Poverty**

<table>
<thead>
<tr>
<th>Estimated total impact on poverty</th>
<th>USD'000</th>
<th>%</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total income (value added) in year 30</td>
<td>71,834</td>
<td>100.0%</td>
<td>6,512</td>
</tr>
<tr>
<td>Wages - unskilled workers</td>
<td>11,493</td>
<td>16.0%</td>
<td>1,172</td>
</tr>
<tr>
<td>Mixed income - traditional agriculture</td>
<td>2,873</td>
<td>4.0%</td>
<td>208</td>
</tr>
<tr>
<td>Rentals/royalties to communities</td>
<td>718</td>
<td>1.0%</td>
<td>52</td>
</tr>
</tbody>
</table>
Environmental Assessment

The investment involves promoting tourism in Namibia, particularly through community-based projects and joint ventures between communities and the private sector. This helps to address the need for development capital while ensuring that much of the economic benefit is distributed to the communities.

There is no doubt, that tourism in Namibia is already a significant contributor to the economy and the potential exists for a much greater contribution from this sector. Tourism can also be a major motivating factor for conservation. It provides an economic incentive for conserving wildlife and scenic beauty. Community involvement gives previously disadvantaged people a sense of ownership in wildlife and landscape conservation.

The investment proposal well demonstrates the potential benefits of growth in this sector. In relation to scarce water resources, tourism produces the highest possible economic return for each cubic meter of water used.

Tourism, perhaps more than any other sector relies on the conservation and wise management of natural resources. This implies a high level of skill both in wildlife management and in the hospitality fields. Namibia has a reasonably good record of conservation in its formal Parks, and in tourist lodges and establishments that have been established for many years. Much of the wildlife in Namibia exists outside of formal parks. However, the expansion of wildlife programs, and the development of lodges will give rise to enormous demands for upskilling in the wildlife management and hospitality fields.

In the long term, tourism development that is poorly managed, can degrade the resource base on which it is based – in Namibia’s case the wide open spaces, wilderness character and wildlife habitats.

The CBNRM program is well motivated and it makes both economic and environmental sense. However, there are some broad concerns in relation to socio-economic and bio-physical impacts as follows:

- The joint-venture model for lodge development between private investors and communities is a very new development in Namibia, and is still “in the honeymoon stage”. It is not yet tried and proven. Despite this there is political pressure in some quarters for all lodge developments to follow this model – and even for old established lodges to convert to the CBNRM model. However, lessons learned from both ecology and economics indicate that a variety of strategies should be employed, rather than “putting all eggs in one basket”. Those lodges and concessions with good environmental and economic track records should be left to continue to make the contribution to Namibia’s tourism sector and set the standards of excellence that are required to promote tourism internationally.

- If partnerships turn sour for any reason, or communities demand greater and greater stakes, these joint ventures could fail. Such failure would be detrimental to the community involved, the financial partners, and the image of tourism in Namibia (a lose-lose scenario). Therefore “monocultures” should be avoided, and successful lodges not based on the community model, should also be allowed to co-exist as these make a significant contribution to the economy and levels of skills in the industry.

- One aspect of conservancies that needs to be safeguarded is the need for continual review of how much of the conservancies' income from tourism and hunting needs to be “ploughed back” into the environmental management of an area. Lessons have been learned from Tanzania, for example, where inadequate resources are applied to the
management of Mount Kilimanjaro, where environmental degradation is rapidly becoming evident.

- The need for gradual shifts in Park Management philosophy to accommodate the needs of neighboring communities is acknowledged in the investment proposal. A cautionary remark is also needed here. Historically, wildlife conservation in Parks has been run on science-based management strategies. In the interests of long-term sustainability and attractiveness to tourism, the science-based management approach should not be forgotten in the process of broadening the Park Management philosophy to meet the needs of poverty alleviation. There is a real risk that long term conservation priorities can be sacrificed to short term needs for poverty alleviation. All development strategies must take a long term view.

Notwithstanding the above concerns, if tourism development is well conceived and managed, this sector can potentially make a significant contribution to the growth in the country’s economy. Moreover, via community involvement the benefits of growth can also be more equitably distributed than was the case historically.

Specific Environments

The programme proposal focuses on four geographical areas for tourism development:

I. Etosha-Skeleton Coast National Park-Kunene River Complex
II. Etosha North-South-East Complex
III. North-East Parks Complex
IV. Fish River, Lüderitz, Mata-Mata Complex.

These four complexes incorporate very different geographical areas and varied environments, which makes generalization about environmental impacts difficult. However, in general, the drier western parts of the country (Namib Desert) are ecologically the most sensitive.

The Skeleton Coast National Park – Kunene River complex is of considerable environmental concern as an area that is particularly susceptible to environmental destruction through tourist activity. Off-road driving causes severe damage to soil profiles and lichen fields, which are the basis of the food chain for many species of unique creatures in the desert. It is recommended that tourists should only be allowed to enter such sensitive areas if accompanied by a trained guide, and only via pre-approved tourist routes – to prevent uncontrolled off-road driving.

However, the hyper arid regions in the west of Namibia are by no means the only area of concern. Each project, and each region, should be considered on its merits. All tourist developments should be subjected to an EIA process. An EIA process should be used as a decision-making tool in the process of site selection, and route selection. Site selection (e.g. for lodges) should take into account (by means of specialist component studies) the following amongst other things: -

- Availability of reliable and sustainable groundwater supplies.
- Impacts on vegetation and wildlife.
- Archaeological and rock art sites must be avoided (under the Heritage Act).
- Susceptibility of the soil substrate to disturbance.
- Impacts of access routes, water supply pipelines and power lines if applicable.
In general, according to the recommendations of the Northwest Tourism Master Plan, the most sensitive environments and wilderness areas should have no permanent human-built structures and should only be accessed on foot with a guide. Slightly less sensitive environments may permit lodges, which provide a good economic return relative to the degree of environmental impact. The least sensitive environments may permit camping, as this generates relatively higher impacts and lower revenues. The same principles should be applied to other regions.

Need for EIAs

EIAs (albeit on a small scale) and EMPs should be carried out for at least the following activities to assess the potential for negative environmental and socio-economic consequences prior to project implementation:

- lodges (e.g. location, road access, archaeological implications, water usage, energy management, waste management, and tourism management),
- tourism road developments (e.g. location and placement, impacts on rare and/or threatened species and wildlife migration corridors, negative and positive socio-economic consequences from road establishment),
- game camp establishment (e.g. potential impacts to rare and/or endangered species or habitats of high endemism, potential positive or negative social and economic impacts to local residents, vulnerability to wildlife and/or livestock borne diseases),
- establishment of game waters (e.g. acquisition of endorsement by community residents, zoning of associated areas as wildlife core areas to ensure livestock are not settled on new water points, thereby leading to rangeland overgrazing, implementation of sustainable water usage system), and
- game translocations (e.g. maintenance of species genetic integrity, adherence to historical range and habitats).

Failure to conduct prior assessment can result in serious negative impacts e.g. Twyfelfontein, where one of Namibia’s most significant archaeological and rock engraving sites has been desecrated by a lodge, and the Spitzkoppe, where uncontrolled camping is having serious negative impacts. This degrades the very assets that attract tourists, resulting in unsustainable development.

Environmental Management Capacity of Namibia

MET is the lead agency in overseeing environmental legislation and adherence to environmental safeguards during the design and implementation of large-scale development activities. An EIA Unit is housed within MET’s Directorate of Environmental Affairs. This Unit has a screening and monitoring function to ensure that EIAs are conducted when needed and are carried out with integrity. Consequently, most EIAs are outsourced to qualified EIA specialists. In addition, the services of the Southern Africa Institute for Environmental Assessments (SAIEA) are often employed to assist with the design and review of EIAs/EAs.

The EA Policy of Namibia requires that EIA be completed for the following activities of relevance:

- Commercial tourism and recreational facilities (e.g. rest camps)
- “Any government policy, programme or project on the use of natural resources” (this would include hunting concessions)
The following provisions may also be applicable at some stage:

- “Land acquisition for national parks, nature reserves, marine reserves, protected natural environments, or wilderness areas”
- “Cableways and cableway stations”

It is therefore considered that all tourist lodges, and new access routes should be subjected to EIAs. Tourism developments are considered to be **Category A** activities: potential for significant adverse impacts. Following EIAs, outcomes-based, simple EMPs should be developed to manage the impacts of construction and operations, including such issues as water use, power supply and demand, and waste management and disposal. In most cases, the EIAs could be “small” but they must address all the relevant issues. Namibia’s recently launched *Eco Awards System* provides an excellent framework for achieving environmentally sustainable tourism. It is strongly advised that all new lodges strive to achieve a 5-Eco Award rating (this is the top score) as they will have the ability to “start from scratch”. Experience gained in the implementation of this system shows that establishments that plan correctly from day-1 have an excellent chance of getting it right. Establishments that were built many years ago have a greater challenge as they now have to re-design their infrastructure and systems to achieve the desired eco-rating.

Attention should also be given to strategic planning of tourism – along the lines of the North-West Tourism Master Plan. Such regional planning provides a framework, developed through public participation and consultation with conservation authorities and specialists, to identify zones of varying sensitivity to tourism development. This provides a measure of pre-assessment, and serves as a kind of policy framework within which planning of tourism ventures proceeds. It would also help to provide co-ordination, avoid areas being over-developed, which would destroy the wilderness feel of an area, and avoid over-utilization of water resources.

In the setting up of the Tourism Council, Tourism House, and the Transformation Charter, a Transformation monitoring program will be implemented through FENATA. Key inputs into the monitoring database will be the number of individuals trained in tourism, income and demographics of newly trained tourism employees.

**Game Camps**

The establishment of game camps for the reproduction and distribution/restocking of wildlife species in depleted areas requires specialist experience by wildlife managers and veterinarians. It is recommended that an EIA and EMP should be compiled for all such developments. Such EIAs should not only take into account the sites for game camps but also areas where it is proposed to restock if significant numbers of animals are involved.

**Social Assessment**

According to the preliminary report of the 2003/2004 Namibia Household Income and Expenditure Survey, salaries and wages is the main source of income for 25.7% of rural households while 48.0% of rural households reported subsistence farming as their main source of income. The only other main income source for more than 10% of households is pensions, which is the main source for 12.1% of rural households. The report further shows that 50.1% of households in the rural areas has no access or ownership of cattle and 46.9% does not have access to or own any goats. At the same time 74.7% of rural dwellers had access to a field for crops.

These statistics show the precariousness of rural livelihoods with many rural households dependent on their crop fields for survival in an arid environment with high rainfall variability.
This supports the PPA findings, which showed that rural livelihoods are highly dependent on natural conditions, are largely subsistence in nature, do not allow for much access production and in actual fact often leaves households food insecure for a three month period before the crops for the next year is harvested. They face many threats, which further reduce food security in these rural communities.

The development of communal area conservancies introduced a new source of livelihood for the rural communities that are members of these conservancies. Yet they take quite a long time to be established and to grow to a point of maturity where conservancies become financially viable and self sustainable. Some conservancies in Namibia have progressed to this point and today contributes to the direct flow of cash into the communities that are members. As an expansion to the conservancy activities, partnerships were formed with private entrepreneurs and concessions were allocated for lodge developments in some conservancies. This proved even more profitable and bed-night levies are paid to the conservancies in which such lodges are located. Lodge developments contributed significantly towards the sustainability of the conservancies.

This proposed intervention aims to capitalize on past successes in this field and would bring benefits in terms of direct cash inflow to the communities through bed night levies as well as facilitate and increase in the number of tourists that would visit these areas with the resultant economic spin-offs to the local communities in particular and the country as a whole. Rural livelihoods will further be augmented through employment creation at the lodges. If each new lodge contributes 1 new employment opportunity per room and each has 24 rooms, an additional 864 employment opportunities will be created through the intervention. The provision of equity to the conservancies within which these lodges are to be developed would further enable rural communities to share in the profits generated by the lodges and would further contribute to improved levels of well being in such communities. Benefits are likely to accrue to the wider community and both gender groups. Employment at the lodges is mostly taken up by women while both better off and poor groups in the community would benefit from the profits and bed night levies from the lodges. However, the management and equitable and fair distribution or utilization of the profits and income from these activities should be carefully controlled ad managed to ensure transparency, accountability and fairness. This had been a problem before in some conservancies and checks and balances must be put in place to prevent any possibility of fraud and misappropriation of community funds.

Establishment of Tourist Information and Business Hubs

The prime objective of the establishment of tourism information centers and business hubs is to promote regional tourism, highlight attractions and provide rental space for other tourism related operations. The main benefit that is likely to accrue from this intervention is employment creation through the growth in tourism in Namibia. It is a strong growth sector and with such regional hubs will stimulate economic development and employment creation at regional level. The involvement of women in tourism and tourism related art and craft activities is strong and they will benefit substantially from this as a gender group.

Bush Access and 4x4 Game viewing Tracks

Improving access to conservancies and parks develops tourism variety and should contribute to get more tourists into the park and conservancy areas. Higher tourist numbers means higher tourist expenditure on accommodation, guides and other products on offer and would make a further contribution to economic growth and employment creation in those areas. Linked to proper information and guidance from information dissemination at the tourist hubs this could significantly expand access and visits to these areas from self drive tourists and tour companies alike.
High value Game Camps

Conservancies thus far only depended on income from hunting and lodge concessions and community based establishments. Game ranching as an income source has so far not been exploited fully. The intervention could potentially be highly profitable yet may have a significant influence on the livelihoods of the rural poor in these areas. The intervention requires substantial land take and it is assumed that subsistence farmers would not be allowed grazing and cropping rights in these game camps. Prior to implementation of this intervention adequate proof needs to be provided that the livelihoods lost through the land take related to this intervention could be replaced with equal or better benefits to those affected by the intervention. The intervention does, however, have the potential to far surpass current livelihoods derived from the same land tracts. The detailed implementation plan and sequencing for the intervention needs to be worked out in detail inclusive of bridging strategies that should ensure the survival of all community members who may be negatively influenced by it. An independent social impact assessment should be done prior to the implementation of this intervention.

Tourism and Natural Resource Management Service Centers

This is a largely institutional intervention that is aimed at improving park management practices through co-management structures and facilities. The new co-management approach is assumed to be able to also address management and administration problems historically experienced in the parks and conservancy areas. These centers with staff and infrastructure could significantly improve benefits derived from the natural resource base, which accrue to the local communities.

Boundary Conflict Management

One of the negative impacts of conservancy formation and the resultant recovery of wildlife numbers in the communal areas of Namibia has been human/animal conflict and the resultant cost to the subsistence farmers. Livestock were lost to predators and fields have been destroyed by wildlife. This has in some cases contributed to a lowering of levels of well being, which could not be compensated for by the conservancies where such losses occurred. This intervention aims to put in place an insurance scheme for subsistence farmers against such losses. A variety of methods are proposed including improved fencing quality, dedicated wildlife watering points and an insurance scheme that would enable farmer compensation for losses through wildlife related damage. There is an increasing need for this type of intervention. During the PPA in the Caprivi and Omusati Region for example, villagers expressed their understanding for the need to conserve wildlife yet felt that unless they are compensated for wildlife related damage and losses, they, the poor, are paying for the conservation efforts in the country. The intervention would thus greatly benefit the rural poor residing in the conservancies and bearing the brunt of increased human/animal conflict.

Enhanced Recovery of Natural Resource Assets

Without adequate wildlife numbers and visibility, communal conservancies do not have much to offer and consequently not significant sources of income. For example, the Uukwaluudhi Conservancy in the Omusati Region has been trying to attract private investment through a lodge in the conservancy but were not yet able to lure an investor and they feel that the reason for this can be ascribed to there not being adequate wildlife numbers in their conservancy yet. The plan to bolster wildlife numbers from the MET park system would be capable of improving the tourism value of these conservancies and make it more attractive for tourists and investors alike. The groundwork has been done with regard to community commitment to conservation and trans-located wildlife would be safe in their
new homes. This intervention is likely to make marginal conservancies more viable and to contribute to the eventual direct benefit distribution to the local communities.

**New Border Posts**

Similar to other marketing interventions, this intervention is likely to increase tourism flow through Namibia and particularly in the south of the country. It would spread the benefits of tourism development further to the south and allow those communities to also share in its benefits. The route to South Africa via the existing border posts can largely be seen as a “mobility corridor” and simply provides high speed access to the northern parts of the country and the few tourism attractions in the central and southern parts. By including Mata Mata and Sendelingsdrif, “activity corridors” are created and tourists are likely to regard the areas they would traverse as part of their holiday and not just a route towards a destination. It is likely to succeed in spreading tourists over a wider area and thus also the benefits from tourist expenditure and increased employment over a larger part of the country.

**Marketing**

The intervention is likely to increase tourist visits to Namibia and, depending on its effectiveness, this could lead to many new tourist development opportunities with the resultant employment creation and contribution to economic development. No negative social impacts can be foreseen.

**Lodge Capitalization Fund**

The proposed intervention will facilitate more private sector based commercial lodge developments in the communal conservancies with conservancies as joint venture partners or equity shareholders. It is likely to further improve the viability of conservancies in the process and will eventually lead to the direct financial benefit of conservancy members and communities. It would assist in employment creation in the rural areas and will have significant spin offs to rural households, particularly for women who are mostly employed in such lodges and tourist facilities. All benefits and impacts related to the lodge creation are also applicable for and strengthened by this intervention.

**Incentive Based Training Packages**

The effective provision of quality tourist services is a prerequisite for effectively retaining clients and this intervention is likely to improve the ability of sectors in the tourism services provision industry to increase standards and provide a better service to guests, thereby ensuring not only that they will return but also market these service providers by word of mouth. In addition to the marketing and quality benefit, skills development of staff in the tourism sector will broaden the skills base and enable some staff to eventually also venture into the tourism industry as SME in the tourism industry. In this way participation is likely to be broadened to include more operators from and benefits to previously disadvantaged people. Involving the private sector in this intervention is likely to improve that chances of success since they would be fully committed to improve the quality of service they could provide, through this intervention.

**Empowerment and Capacity Building**

The intervention is likely to transform the tourism industry in the sense that it would bring all the varied role players in the industry together in order to work together in empowering the previously disadvantaged and build capacity amongst local entrepreneurs to successfully enter into the industry. The supporting interventions such as the construction of a Tourism House, which would host the training activities, the training program for entrepreneurs and SMEs, the implementation of the National Tourism Strategy and the development and implementation of the tourism mentorship program are all likely to contribute to more local
people being able to successfully enter the formal tourism industry as quality service providers. In this sense it is likely that many such training beneficiaries will be women, and that the intervention would contribute considerable towards poverty alleviation either through likely increases in remuneration because of improved knowledge and skills or through income generated from participation in the tourism industry at a higher level than would have been the case without the training and capacity building intervention.

**Participation of Development Partners**

Below is a description of recent activity by development partners in Namibia’s tourism and environment sector. In summary, the interventions are largely focused on capacity development and institutional reform – as such, they complement the proposed MCA investment extremely well, ensuring that the opportunities for ‘unlocking benefits’ provided by MCA will be capitalized-on in a long-term, sustainable manner, bringing higher levels of returns to Namibia and its people.

- **EU:** The recently completed Namibia Tourism Development Project had a number of highly relevant outputs, which have contributed an excellent environment for such proposed investments: in particular, assistance to the NTB, the Hotel and Tourism School at PoN.
- **USAID:** Has been the longest standing development partner to the community conservation sector in Namibia. Commenced the funding of the Living In A Finite Environment (LIFE) Project in 1993 and will provide continued support through 2009. The primary focus of this project has been to build capacity in Namibian CBNRM service organizations to assist communities in the establishment and operation of conservancies.
- **WWF:** Has been a co-investor with USAID in the LIFE Project since 1993 to support community conservancies. Has also provided major financial support to conservancies in the Kunene and Caprivi regions through WWF funds originating from the United Kingdom.
- **GEF – WB:** Funding a major project focused on communal conservancies, with the aim of increasing capacity to manage resources in communal conservancies, and this fits well with the proposed MCA investments, supporting the development of rural management and governance structures vital both for negotiation with private sector operators, and also for ensuring benefits from such negotiations are effectively dispersed.
- **GEF – UNDP:** Funding a major project focused on protected areas management. Recognized as the foundation for a significant proportion of tourism activity in Namibia, more effective management of the protected areas will be achieved by addressing issues of capacity at institutional and systemic levels, which is again highly complementary to the proposed MCA investment package. The project is also piloting the regional ‘complex’ approach to implementation, and is reporting excellent preliminary results.
- **GTZ/KfW:** This is highly complementary to the GEF-UNDP project, aimed at improving management systems and infrastructure for protected areas. The focus is on institutional issues, staff accommodation and offices, etc. This complements the MCA investments, providing significant complementary support to resource management, while MCA unlocks potential for private sector investment.
Risk Assessment

The tourism sector has been a solid performer since Namibia’s independence in 1990, building an excellent foundation for the proposed MCA investment. The sector is building upon internationally recognized cutting-edge conservation policies and protected area systems, and is therefore poised to rapidly expand with strategic application of the MCA funds. Nonetheless, there are potential risks or threats to success.

The greatest threat to the MCA Tourism investment lies in international and/or national political instability. The tourism industry has repeatedly shown itself to be vulnerable to international events that destabilize economies or make tourists feel unsafe. Thus, international terrorism, wars, or unrest poise a threat to vigorous growth of the sector. Similarly, any events that would destabilize Namibia’s political situation (i.e., the failed secession attempt in Caprivi in 1998) or reputation would also inhibit the growth of the sector. Political or economic stability created by an un-transparent land reform process (such as that applied in Zimbabwe) would have devastating impacts to the sector.

Some additional threats include: a) a strengthening of the Namibian Dollar against the US Dollar or Euro would make tourism visitations more expensive to foreign tourists, making Namibia a less financial attractive destination than some of its Asian competitors, 2) extended drought (such as the drought of the early 1930s) could have significant consequences to wildlife populations, reducing the quality of the Namibian tourism experience in some areas, and 3) the potential inability of the airline industry to absorb the anticipated increase in number of tourism visitations.

An additional potential threat to lodge viability in communal areas also hinges around the uncertainty of lodge lease arrangements. Presently, conservancies are receiving payments in the range of 6-10% of net lodge turnover (gross income less taxes and marketing costs). However, MLR has expressed a possible intent to charge the lodge operator a similar percentage against leasehold payment. Should this intent become real, then the attractiveness of lodge developments on communal lands in conservancies would no longer be viable.

Implementation of the MCA Tourism investment will also be logistically challenging, as the expenditure of more than NAD700 million in five years will require an extensive increase in sectoral planning and implementation capacity. Fortunately, most of the planned investments are building upon existing funding and implementation mechanisms.
5. MCA Namibia Investment 4A – Promote private and community-based Investment in the Green Scheme

Introduction

Agriculture is the second most important economic sector (besides mining) in the Namibian economy. Though its contribution to overall economic activity is relatively small at 6.3% of GDP in 2005, the sector is the main source of livelihood for the majority of the Namibian population, especially in the rural areas. It is estimated that more than 70% of the population in the country depend to a greater extent on the agricultural sector. Prior to Namibia’s independence, most agricultural services and efforts were directed towards supporting commercial agriculture. The commercial livestock sub-sector continues to dominate the total agricultural output relative to other sub-sectors. In 2004, crops contributed 1% to total GDP and 18.2% to the total agricultural output.

In 1995, GRN enacted the National Agricultural Policy, which places an emphasis on the promotion of national food security as well as national food self-sufficiency, where environmentally feasible.

Due to the arid nature of the country, dry land, rain fed crop production, which is practiced by the majority of small-scale and mostly subsistence farmers, is unreliable in ensuring food security, at household and national level. In response, GRN commenced in 1998 with a strategic process to promote the development of irrigation. This resulted in the submission of the Green Scheme Policy to Cabinet. This Green Scheme Policy was approved by Cabinet early 2003 and is under implementation since October 2004. Capacity building, through the training of small-scale (SME) farmers in irrigation technology as well as the production of high-value agricultural products as opposed to low-level cereal crops, was enhanced at various irrigation schemes along the perennial rivers that border the country, which it shares with other riparian states, as well as near major dams.

This strategic process is supported by various initiatives that are geared towards the fast-tracking of cash crop production in Namibia38, including:

- Import levies of 2.5% on horticultural produce.
- Committing horticultural importers to purchase 10% local from their total purchases.
- Construction of and support to market(ing) infrastructure in major towns and smaller centres.
- The Green Scheme.
- Promotion of Indigenous Plant Products.

MAWF, in support of Vision 2030 and the National Development Plan, has introduced the Green Scheme Policy with the aim to enhance agricultural production under irrigation in Namibia. This Policy is complemented by the Horticulture Infrastructure Development Scheme to ensure adequate market outlets for horticultural produce. This scheme is implemented under the auspices of the Namibian Agronomic Board (NAB) in cooperation with fresh produce wholesalers, producers and government.

The mission of the Green Scheme is to create an enabling, commercially viable environment through effective public-private partnerships. The premise is to attract and enable large scale commercial farming enterprises to establish commercially viable entities in remote undeveloped rural areas and act as Service Provider (SP) to SME farmers, ensuring their

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38 Also referred to as the National Horticulture Development Initiative (NHDI).
successful and long-term sustainable settlement. This initiative is implemented by the Green Scheme Agency, a team of private consultants operating in an advisory capacity to the MAWF. The team of consultants was appointed through an open tender process for a five year period, with the option of renewal. The main functions of the Agency are: a) to evaluate all project proposals submitted for inclusion under the policy and if found viable, recommend these to MAWF for support and b) monitor the implementation and operation of all Green Scheme projects and report periodically to MAWF and recommend any corrective measures or policy supportive actions to be taken. All expenses of the Agency are carried by the MAWF.

The objectives of the Green Scheme are multi-fold and include:

- To encourage the development of irrigation based agronomic production in Namibia with the aim of increasing the contribution of agriculture to the country’s Gross Domestic Product.
- To maximize the production of high-value horticulture products for local and export markets.
- To encourage the use of cost-efficient irrigation methods that use low volumes of water to maximum effect, coupled with a water pricing policy based on the scarcity of water and the long-term environmental sustainability.
- To increase food security and to raise the level of self-sufficiency in crop production.
- To achieve the social development and upliftment of communities located within suitable irrigation areas, creating sustainable livelihoods and thereby reducing poverty.

Guiding Principles and Supportive Measures

In addition to the overall objectives as set out in the main text, the Green Scheme seeks to increase the participation of women and the unemployed rural youth in the operations of irrigation schemes and minimize adverse health impacts. Supportive measures include the provision of research, training and extension services to irrigation farmers and all commercial establishments participating in the Green Scheme and facilitation of the training of planners and irrigation engineers to plan and implement irrigation projects.

Given the limited experience of Namibia in irrigated crop production, skills development within the irrigation sub-sector complemented by the facilitation of cross-border investments and the exchange of relevant expertise with neighboring countries are critical to the success of the Green Scheme.

The Green Scheme brings innovation to the cash crop sector by introducing a private-to-private sector delivery mechanism for support services mechanism and encouraging a free market drive.

One of the main thrusts of the scheme is to offer the opportunity to SME farmers to grow into independent commercial farmers. This is reflected in the design of the Green Scheme, which includes intensive pre-farming training at the Mashare Agricultural Development Initiative (MADI) close to Rundu in the Kavango Region and an on-site mentoring scheme whereby an established commercial farmer, the Service Provider (SP), will coach a number of SME irrigation farmers and provide them with access – where appropriate at cost – to:

- Sufficiently developed and maintained supporting infrastructure, including warehousing and possibly cold storage.
- Irrigation and farming methodology best practices.
- Synergies and economies of scale in terms of production input procurement, mechanization and farming implements.
Effectively established marketing and distribution channels.

The SP will be obliged to facilitate these services to the SME farmers on a continuous and cost recovery basis. The SP will not be allowed to charge any risk premium for the provision of these services to the SME farmers but will able to apply for relevant subsidy schemes to cover its risk and opportunity cost. This subsidy scheme is limited to subsidized interest and the provision of bulk water and electricity services up to field edge. The Green Scheme seeks to provide SME farmers the opportunity to participate in planning, financing, implementing, operating and maintaining irrigation systems in support of self-employment and long-term self-sustainability.

The other main thrust is to minimize government intervention and encourage private sector involvement in the physical, infrastructure development, effective, efficient and economic resource utilization and management and establishment of a free market environment.

And finally, the SP and SME farmers will be given leaseholds, currently under formulation by MLR, on the land allocated to them, which could serve as collateral for obtaining commercial financing to unlock production potential and in future grow the enterprise.

The Green Scheme aims to increase the total area under irrigated crop production from the current 8,600 ha (all existing land under irrigation) to 27,000 ha over a period of 15 years and eventually to 40,000 ha by the year 2030, which is the target of Vision 2030. Approximately 5,633 ha are targeted for development over the MCA Namibia investment period 2008/9 up to 2011/12. The total potential for irrigation in Namibia, taking into consideration the availability of water and access to arable land, is some 45,000 hectares.

Most of the proposed Green Scheme areas are situated on government owned, tribal authority managed communal land. In exchange for access to irrigable farmland, the SP will share certain social development functions and participate towards the achievement of socio-economic development within the region.

The main activities implemented by the Green Scheme to realize its objectives are:

- Identification of suitable irrigation areas.
- Selection and training of aspirant SME irrigation farmers.
- Development of bulk water supply up to the edge of field.
- Sourcing of suitable SPs in Namibia, and if necessary the Southern African region, who are keen to share best practices with the emerging SME irrigation farmers and provide

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**Green Scheme – Achievements to Date**

Etunda Phase 1 – 4, Vungu-Vungu, Shadikongoro, Aussenkehr are all irrigation schemes implemented by MAWF. The Agency is heavily involved in preparatory work to include these schemes into the Green Scheme. This involves obtaining leaseholds in line with the Communal Land Reform Act, Act No5 of 2002. The Agency promoted the Green Scheme locally and internationally. Community sensitization and mobilization will drive the changeover process.

The Etunda project was constructed on the green scheme model already in 1995, but was operated by the Namibia Development Corporation until 2003. Currently there is a Service Provider managing the project under contract up to 2012, and there are 87 SME farmers operating on 3ha units each. These farmers will now be the first to obtain loans from a financial institution under the Green Scheme set-up. The process of leaseholds for individual farmers is in an advanced stage. Vungu-Vungu, Shadikongoro and Aussenkehr are all existing government projects being modified to the Green Scheme Model.

The first training for small-scale farmers will commence by end of September 2006. Those that successfully complete the training will be accommodated on one of these schemes.
them with on-site mentoring and (at cost) access to basic infrastructure, agricultural support services and marketing support.

- Development of marketing infrastructure.

In support of the Green Scheme initiative, GRN has taken up a loan from the African Development Bank, OPEC and BADEA to finance the development of an irrigation site at Noordoewer, called Tandjieskoppe. The site comprises 1,000 ha to be developed for irrigated production of dates, grapes and vegetables. Development also includes all other infrastructure such like housing, offices, warehouses, roads and social infrastructure. The total cost of the Tandjieskoppe irrigation scheme is estimated at NAD360 million of which the said loan facility covers NAD320 million and the GRN contribution NAD40 million. This investment is currently in the design phase and physical construction will commence in 2008 and is expected to be completed by 2009. It is envisaged that the first farming operations will commence in 2010.

Figure 5.1

Agricultural output at current prices
(Million N$)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total crops</th>
<th>Maize</th>
<th>Other crops excl. maize, wheat and grapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td></td>
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<td></td>
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<td>2003</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Description of Activities

With the MCA Namibia investment in the GS supportive infrastructure, it would be appropriate for GRN to carry out a second public information campaign to address the various concerns from the public relating to the Green Scheme. Since 2004, some information campaigns have been held yet there is a clearly identified need for further sensitization and mobilization on the Green Scheme Model (GSM). This Model introduces a new way of doing business in the rural communal areas and local communities will need to be assisted in understanding the benefits the new approach will bring as compared to existing projects under which the SME farmers were not really empowered. Issues relating to participation in the Green Scheme need to be discussed at community level and so the role of the SP and the envisaged relationship and interaction between SP, SME farmer, Green Scheme Agency and the communities around each irrigation scheme. Local-level ownership will be key to success of the GSM throughout Namibia.

The actions to be funded through the MCA Namibia investment include:

(1) Renovation of the Mashare agricultural college, called MADI and located in Rundu in the Kavango region, which is used for the pre-settlement training of the SME cash crop farmers.

(2) Phased preparation for irrigation farming of various selected areas in Kavango, Caprivi, Omusati, Hardap and Karas regions, including:

<table>
<thead>
<tr>
<th>Region</th>
<th>Irrigation Scheme</th>
<th>Total size (ha)</th>
<th>MCA size (ha)</th>
<th>No. of Cash Crop Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kavango</td>
<td>Ndonga Linena</td>
<td>800</td>
<td>400</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Muses</td>
<td>440</td>
<td>200</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Simanya</td>
<td>200</td>
<td>200</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Sihete</td>
<td>200</td>
<td>200</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Sikondo</td>
<td>800</td>
<td>800</td>
<td>44</td>
</tr>
<tr>
<td>Caprivi</td>
<td>Bukalo</td>
<td>800</td>
<td>800</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Sangwali</td>
<td>800</td>
<td>800</td>
<td>44</td>
</tr>
<tr>
<td>Omusati</td>
<td>Etunda Phase 7 and 8</td>
<td>900</td>
<td>300</td>
<td>17</td>
</tr>
<tr>
<td>Hardap</td>
<td>Hardap Green Scheme SME</td>
<td>133</td>
<td>133</td>
<td>12</td>
</tr>
<tr>
<td>Karas</td>
<td>Sendelingsdrif</td>
<td>1,600</td>
<td>1,600</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Naute</td>
<td>200</td>
<td>200</td>
<td>22</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>6,873</strong></td>
<td><strong>5,633</strong></td>
<td><strong>449</strong></td>
</tr>
</tbody>
</table>

* SP in place on existing irrigation farm
** Existing commercial irrigation farmers at the Hardap scheme will be used as SP

(3) Development of the Rundu Market Hub and Grain Storage in the Kavango Region.
MADI

As an immediate and urgent action, MADI will be renovated through the MCA Namibia investment. MADI has provided agricultural training in the past in the form of short courses in agronomy and animal husbandry. In 2006, MAWF decided to place MADI including buildings and a land area comprising approximately 5,000 ha under the control of a Foundation that has the mandate to ensure that effective training is offered by MADI to especially all potential SME farmers but also to interested farmers around the green schemes.

The main reason for this change in governance was to get private initiative involved and to minimize government involvement. The proposal was submitted to Cabinet recently. Once approved, a board of directors will be appointed who will seek through public tendering suitable personnel with CEO to run the foundation.

The MADI complex comprises of three components. The first established component is the Agricultural College built during the early 1970’s. All the buildings were renovated recently by LUX Development. This component has a hostel and class room facilities for 40 students, some farm buildings, houses as well as approximately 5000 ha fenced off grazing land with camps and water points ready for cattle farming. The aim is to use this component for short courses in agronomy, horticulture (including high value crops) and animal husbandry for national Namibia. The second component is called the Commercial Farming Unit (CFU), which comprises of 70 ha irrigation development and was also constructed by LUX Development during 2002/3. This component was intended to generate some income for MADI to cover operational costs. The latest addition was the Mashare Irrigation Training Centre (MITC). This complex was an old Leprosy Hospital built in the 1960s that became redundant years ago. The Namibia Defence Force occupied it for some time and it was finally given to the MAWF by the GRN in 2003. The complex was in a very neglected condition. The complex comprises 3 clusters of rooms, kitchen block and office block. LUX Development again renovated some of the offices to a limited extent during 2003/4 as well as 1 cluster of rooms to accommodate 40 students. The MAWF then developed 60 x 1 ha irrigation plots complete with pump station at a cost of 2 million NAD, which is now ready for training purposes. The rest of the centre urgently needs renovation.

It is anticipated that after upgrading and expanding the accommodation facilities, the annual intake of prospective students will be a 100. Currently 40 students can be accommodated and trained. At MADI each participant follows a theoretical course plus practical training. Students each cultivate a one ha plot for one full production cycle of a winter and summer grain crop, mainly maize and wheat, which has to be observed and managed. Some vegetables might be included. The training is an introduction to commercial farming; crop specific mentoring will be done by the SP “on-the-job/on-farm”.

The portion of 70 ha is currently outsourced on a profit share basis to a private commercial farmer for irrigation crop production. This commercial farming unit provides agricultural support services to the students during the practical training. The current area developed for the students is 60 ha and has to be extended to 100 ha to cater for the planned intake of 100 students. Cultivation of this land will therefore be done by the commercial farming unit (ploughing and other mechanical actions).

In addition to the construction of 30 accommodation rooms, offices, kitchen, sewer and water reticulation will be renovated.
Irrigation Schemes in Kavango Region

Ndonga Linea

The Ndonga Linea area, some 80 km east of Rundu, was offered to GRN for development under the Green Scheme by the Gciriku Tribal Authority some years back. The bush clearing, de-stumping, fencing and bulk water and electricity supply infrastructure for the first 400 ha is already completed.

The first 400 ha is currently out on tender, inviting prospective investors/farmers to submit proposals/business plans. The total area made available measures 800 ha. Current infrastructure will only supply water to 400 ha.

The MCA Namibia investment will cover the bulk water supply infrastructure up to the farm gate for the remaining 400 ha. Funds will be used to construct the second pump station, main pipelines to field edge, fencing of the area and main electricity supply for the 400 ha.

Musese

The existing Musese Irrigation scheme is located approximately 100 km upstream from Rundu. The MCA Namibia investment will be used to enlarge the area under irrigation from some 240 ha to 440 ha. Some 22 SME farmers will be settled on the additional 200 ha. Basic infrastructure and services (mentoring, agricultural support and marketing) will be provided by the existing commercial farmer who will act as SP.

The MCA funds will be used to prepare the field and provide water and electricity supply up to the farm gate for the 200 ha area and settle 22 SME farmers.

Simanya and Sihete

The Simanya and Sihete schemes are both near Nkurenkuru – some 140 km upstream from Rundu and near the Katwitwi border post with Angola. The Katwitwi road to Tsinstabis as well as the Katwitwi border post will facilitate the distribution and trade of the cash crops produced at these irrigation schemes.

Private companies acquired the land from the local authority and have applied for inclusion into the Green Scheme. No development has taken place as yet.

The MCA funds will be used to prepare the field and provide water and electricity supply up to the farm gate for the 200 ha area and settle 22 SME farmers and 2 SPs.

In this case the private entrepreneurs acquired the land directly from the Tribal Authority. The allocation of the water at this point in the Okavango River is controlled by MAWF and permits for the abstraction of water for irrigation were given on the condition that the development must be according to the GSM.

Sikondo

Sikondo, an area of 800 ha some 10 km upstream from Rundu, was offered to GRN for development under the Green Scheme by the Mburna Tribal Authority. The Sikondo site holds great potential for irrigation for it is strategically located near a market with good road access and the soil has excellent properties.

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39 The Katwitwi – Tsinstabis is included for funding from the MCA Namibia under cross-cutting investment A.
The MCA Namibia investment will unlock the irrigation crop farming potential at Sikondo by preparing the field, which includes bush clearing, de-stumping and fencing providing water and electricity supply infrastructure up to the farm gate. At Sikondo some 22 SME farmers and 1 or 2 SPs commercial irrigation farmers will be settled.

Irrigation Scheme in Caprivi Region

Bukalo
The Bukalo site is located 11km from the Zambezi River, next to the main road from Katima Mulilo to the Ngoma border post and is 800 ha in size. The land was offered to GRN for development under the Green Scheme by the Bukalo Tribal Authority.

The MCA funds will be used to prepare the field and provide water and electricity supply up to the farm gate for the 200 ha area and settle 44 SME and 1-4 SPs.

Technical feasibility to bring water through an 11 km pipeline from the Zambezi River up to the site needs to be confirmed.

Sangwali
The Sangwali site of 800ha was offered to GRN for development under the Green Scheme by the Sangwali Tribal Authority. It borders a wildlife park and special consideration will need to be given to the management of the interface between people, water and crops and wild animals.

The MCA funds will be used to prepare the field and provide water and electricity supply up to the farm gate for the 800ha area and settle 44 SME and 2 SPs.

Irrigation Scheme in Omusati Region

Etunda Phase 7 and 8
Etunda is located 140 km west from the urban centres of Oshakati, Ongwediva and Ondangwa, along the main tarred road to Ruacana. Etunda Phase 1-6 comprise 900 ha and Phase 7-8 will each add another 150 ha, bringing the total area under irrigation to 1200 ha. Phase 5 and 6 will come into operation during 2007. To date, the development costs of Etunda amounts to some NAD100 million as provided through the GRN budget.

The MCA funds will be used to prepare the field and provide water and electricity supply up to the farm gate for the two areas of 150 ha each and settle 33 SME and 1 SP.

Irrigation Scheme in Hardap Region
The Hardap irrigation scheme started operations in 1963 and the area currently under irrigation measures 2,000 ha. All land under irrigation is privately owned with the exception of a few plots that belong to GRN and include a research farm.

A portion of the research farm is available for the settlement of SME farmers. Bulk water and electricity supply is available nearby.

**Etunda**
To date, Etunda is the largest and most successful scheme and was used as model for the development of the GSM. A total of 87 families are currently settled (phases 1 & 2), with 16 more envisaged for 2008. The farmers produce maize, wheat, vegetables, groundnuts, watermelon, butternuts potatoes and bananas. Currently the project has a permanent staff component of 22 and they employed during the period April 2004 to March 2005 1,374 temporary staff. All equipment/infrastructure belongs to GRN, which is operated by the SP on a profit share basis. The maize and wheat are processed at the site into flour. Produce is marketed on the project, along the road to main centers, retailers in Oshakati and Ondangwa, Angola and South Africa.
The MCA funds will be used for the distribution infrastructure for water and electricity to each plot, ripping of virgin soil, fencing and erection of a store. The area available for settlement is 133 ha and some 12 SME irrigation farmers will be accommodated.

The Hardap Farmers Association, representing established commercial farmers, have already indicated their willingness to arrange for the provision of support services from within their ranks in the spirit of the Green Scheme model of private-to-private sector support.

**Irrigation Scheme in Karas Region**

**Naute**

The Naute dam offers an 80% reliable yield of 12 million m³ per annum and a total of 750 ha may eventually be developed. The land belongs to GRN.

The Naute irrigation scheme was developed with the purpose to establish a national core production unit for dates. Later on vineyards for table grapes were added to utilize labor and packing and cooling facilities more efficiently since grapes and dates are harvested at different times of the year. Currently, 82.5 ha of land are under date and 40 ha under grape production. Both units are performing well with most of the produce exported.

Land and water for another 200 ha is in place for extension of the date component. The availability of date seedlings of the preferred type Medjool is scarce world-wide and it may not be possible to put the whole area under dates.

The anticipated funds are for the water supply from the dam under gravity to a 200 ha area for the settlement of between 22 SME farmers as well as the initial ripping of the soil. Grapes and dates will be the main crops with small areas for vegetables for the local market.

**Sendelingsdrif**

The Sendelingsdrif site belongs to GRN and the planned area of irrigable land of 1600 ha is targeted exclusively for the production of high value crops. The soil is suitable to a large variety of crops and, similar to the Aussenkehr irrigation scheme, at Sendelingsdrif conditions are ideal for the production of table grapes that could reach the European market before large producers of table grapes such as South Africa and Israel are ready to export. Sendelingsdrif is located close to Rosh Pinah, on the Orange River.

The Sendelingsdrif irrigation scheme will provide production areas for 4 SPs at 200 ha each and a further 800 ha to be distributed to up to 200 SME farmers in plots of 4-8 ha.

**Rundu Market Hub and Grain Storage**

At Rundu a private milling company owns grain silos with a capacity of storing 4,500 t of grain while GRN is in the process of erecting grain silos, also with a capacity of 4,500 t and at a cost of NAD4.2 million.

Namibia’s grain (maize, wheat and millet) consumption is around 271,000 t (2004). As Namibia is a net importer of maize and wheat, this grain storage is situated strategically to supply at the onset of droughts to the northern region of Namibia. Existing millers have limited storage space and take grain in as space become available. Farmers, especially the SME farmers, do not have storage facilities to keep the grain in good condition.

The MCA Namibia investment will extend the GRN grain silo capacity by a further 4,500 tons to cater for the increased production from the Green Scheme in the Kavango region. The GRN facility will be used for strategic grain storage. In addition, MCA Namibia will fund the construction of a 12 m weighbridge and a small office and administration block. This investment in grain storage will be complemented by the development of a market hub and truck port.
The Trans Caprivi Corridor highway (TCC) parallels the Okavango valley and provides an excellent highway network linking the farmers of the Okavango to markets in Windhoek, Swakopmund, Walvis Bay and points south as well as to markets in Southern Zambia, Angola and DRC. It also creates a potential link via the international airport to overseas markets.

Producing additional crops does not improve the regional economy without an effective logistics chain to the market. This portion of the project is designed to provide the facilities for a market hub and to tender the operation of the market hub to a skilled logistics operator who understands the specific requirements of the horticulture market both in Namibia and overseas. The domestic logistics infrastructure must be as developed as the international one, if Namibian products are to substitute for imported fruits and vegetables and to penetrate international markets.

The hub concept is that the service providers on each individual irrigated Green Scheme farm on the Okavango would provide transport of commodities on a daily basis to the Rundu Hub for:

- Sorting, grading and sale of fresh fruit and vegetables to regional retailers and wholesalers.
- Sorting, grading, chilling or freezing, and packaging for sale in national or international markets. Marketing, transport and logistics arrangements for the domestic and international market. There are currently many refrigerated trucks on the TCC carrying frozen fish and meat to Zambia, DRC and Congo (Brazzaville), which would be available for carrying horticultural commodities on the return trip.
- Once established, the Hub area might also include processing of fruits and vegetables as jams, confectionary, sauces and other products as a means of increasing the value of the product and providing additional local jobs.

Additional services as a secondary transport, logistics and distribution hub are:

- Serving as an inbound cargo sorting and distribution depot. This enables round trip hauls into the distribution depot and out of the horticultural depot, as well as for the short haul between the depot and individual farm schemes with agricultural inputs and consumer goods to the farm and produce from the farm. Greater vehicle utilization will reduce the cost of transport.
- Truck port facilities adjacent to the market hub will serve the long-distance haulers with basic accommodations, a restaurant and ablation facilities as well as basic mechanical repairs and the local haulers with basic supplies and a mechanical workshop. They also provide a well lit, secure place to park their trucks while the drivers sleep. The truck port co-locates truckers’ facilities with a key distribution centre and turn-around point, thereby adding to the efficiency of the system.
The Rundu Market Hub and Truck Port will be located adjacent to the Trans Caprivi Highway to facilitate easy access to the GS farms and to/from the national and international markets for inputs and horticultural produce. In addition, this location facilitates use of the truck port by haulers serving the Market Hub as well as haulers for cross border TCC traffic. The TCC highway is located away from the river, so this location will not infringe on the use of valuable farm land, nor create environmental hazards through pollution to the river system.

The first set of facilities would be developed on MAWF land identified for the purpose, providing it is readily accessible from the highway. An independent operator would be selected by tender for the operation of the facility and lease the property and assets from MAWF or the Municipality, depending on their agreement. The operator would have a renewable lease for specified period including performance requirements. Initially, the general inbound cargo would be handled from the same facility and later a second dedicated building would be constructed. Sufficient land should be available to allow for later expansion into food processing activities. If the full hectares planned under the Green Scheme are put into production, it is assumed that a similar facility would be designed for Eastern Kavango. The truck port would be built on municipal land. The operation would be concessioned and the concessionaire would pay for finishing the interior, all moveable assets and operations. The concessionaire would have a long term lease requiring monthly payments to the municipality. This approach to transport and logistics services combines the energy and expertise of the private sector with long term municipal ownership of and revenue from the assets.
This action will be jointly implemented by the Green Scheme Agency and the Walvis Bay Corridor Group.

**Benefits**

The MCC investment into the Green Scheme will enable Namibia to fast-track the implementation and realize its objectives in a shorter period of time.

Typically, for each additional hectare under irrigation, apart from the owner, on average another 75 person days of employment per annum is created. As such, the Green Scheme offers good potential for employment creation.

With the exception of the southern irrigation schemes, the Green Scheme sites are near the regional hubs in the communal areas that offer demand for the agricultural produce and provide both permanent and casual semi-skilled labor.

During harvesting there will be a temporary high demand for labor. Creating economic and job opportunities at regional level will stem the current very high levels of urban migration, especially to the capital of Windhoek.

An irrigation scheme of 800ha will have one or more SPs on 400ha with an estimated permanent workforce of 50 workers plus the equivalent of at least 80 permanent staff in casual labor man days. On the remaining 400ha, 45 SME farmers will farm mostly with own labor sourced from within the family and during harvest times attracting 10 person days of casual labor per hectare. The secondary industry supplying the Green Schemes will have a multiplier effect of approximately 2.2.

The Green Scheme intends to advance the gender issue. Currently there are 35 women SME farmers at Etunda. The current MAWF guidelines for the selection of the SME farmers are as follows:

- 34% of beneficiaries to come from the local community (where the project is situated) nominated by the Tribal Authority.
- 33% from the local community and who are members of the National Youth Service.
- 33% from all over Namibia recruited through public advertisement.

The number of women will depend on the applications that are received. The selection process so far for the first 40 to be trained (see MADI) indicates that more than 50% are women.

The Rundu Market Hub and Truck Port will encourage customized logistics that enable SME farmers and SPs to achieve effective economies of scale through a logistics provider associated with a wholesale and processing facility. The sorting and grading before delivery to clients will result in better prices for the producers and the cooling facilities at the hub will improve the quality and shelf life of the fresh produce.

The Hub will offer a complete line of services, such as receipt of goods, quality control, chilling, packing, storage, order management, consolidation, pricing and distribution. For the wholesaler, they can offer online inventory management, order management and invoicing/payment services. Grocery outlets and tourist facilities with demand for the
produce of the project area will have a raised confidence level if they can deal with an established logistics provider that can insure quality, timeliness and consistency of delivery. At the same time, wholesalers serving the northern regions can operate their distribution more effectively through consolidation of loads with other wholesalers to the regional depot for distribution to rural areas. This system will, in all likelihood, reduce the cost of goods to rural areas, especially through the MCA Namibia investment into the rural road network. Consolidating shipment, warehousing and distribution services are anticipated to reduce logistics costs by 10-15%. The shared warehouse and logistics service concept enables local growers to be more competitive in the national and international market. By centralizing services, investment in the secondary hub will become more attractive and thereby decentralize economic activity to the benefit of the Kavango Region. It will also allow the Kavango Region to profit more broadly from the regional transit corridor that flows through it.

The involvement of a private sector operator will provide the flexibility of adjusting to market opportunities. Having the initial GRN/MCA investment in facilities will provide the start-up capital to enable the operator to withstand the first years of smaller, irregular crop output. It also provides revenue to the local government to invest in further infrastructure development to strengthen Rundu’s role as a secondary transport hub.

### Costs

<table>
<thead>
<tr>
<th>MCA Investment 4A: Green Scheme</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
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<tr>
<td>4A.1 MADI</td>
<td>0.395</td>
<td>0.658</td>
<td>0.000</td>
<td>0.000</td>
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<td>4A.2 Green Schemes</td>
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<td>13.151</td>
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<tr>
<td>Ndonga Linea</td>
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<td>0.000</td>
<td>0.000</td>
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<tr>
<td>Museke</td>
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<td>0.526</td>
<td>0.658</td>
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<tr>
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<td>0.000</td>
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<tr>
<td>Sihete</td>
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<td>0.658</td>
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<tr>
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<tr>
<td>Etunda Phase 7 &amp; 8</td>
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<td>Hardap</td>
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<td>0.658</td>
<td>0.000</td>
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<td>7.2</td>
<td>15.3</td>
<td>13.8</td>
<td>7.9</td>
<td>46.6</td>
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</table>

- Its is planned to commence with MCC funding to complete the Ndonga Linena project (Phase 2) as well as commencing with the new project at Bukalo in year 1. The financial flow for these two projects are similar as the technical assessment will be done in year 1, the actual land preparation in year 2 and completion in year 3.
The enlargements of Musese, Simanya, Sihete will commence in year 3 and be completed in year 4. Etunda Phase 7 & 8 will commence in year 2 as currently Phase 5 & 6 will be completed at the end of 2007.

Sikondo as a new project will be planned for year 2 and be completed in year 4.

Sangwali, which will be the last addition to the northern green schemes, will commence in year 3 and be completed in year 4.

Hardap and Naute are relative small projects and have been planned for year 3 and to be completed by year 4.

The last major action will be Sendelingsdrif, which will commence in year 3 and will be completed in year 5. The implementation horizon of Sendelingsdrif is delayed to year 3 to ensure the start-up of another (own funded) Green Scheme in the south being Tandjieskoppe.

All projects have been planned according to the technical abilities/capacities of the Green Scheme Agency, augmented by private sector service providers, and to allow training of SME farmers at MADI.

The Rundu Market Hub and Grain Storage main actions are spread over 3 years. Year 1 funding is intended for the grain silo and weighbridge as the initial primary production is expected to be maize, which requires the silo capacity and the effective purchasing and supplying of this with a weighbridge; year 2 for the land preparation, preliminary technical design for market facility and development of TOR for operator and initial construction of the market hub; and year 3 three for Construction of the market hub with the basic core and necessary facilities and tendering for operator. Year 4 will be used for minor additions and the operations will commence for the Operator.

Technical Analysis

Some of the initial pilot schemes such as the Etunda Phase 1-4, Aussenkehr Farm, Shadikongoro, Vungu-Vungu and the first section of Ndonga Linea have evolved into Green Schemes over the past five years. Tandjieskoppe will be prepared for irrigation farming, as from early 2007.

The Green Scheme Agency was established in October 2004 to provide dedicated management to the implementation process, from planning, procurement, construction, successful operation and monitoring and evaluation. By the time the MCA Namibia Program will commence, the Green Scheme Agency and relevant stakeholders will have gained good experience in operating the model and will overcome the initial growing pains.

Another important technical feature of the Green Scheme is the freedom farmers have to choose their own crops. It is anticipated that during the first years of production, the SME farmers are likely to focus on staple grains such as maize and wheat allowing some time to develop strong basic skills before moving to more sophisticated production of high-value horticultural produce. However, under the guidance of the SP, some SME farmers may be more ambitious and farm with higher-value crops from the start. The SP who has demonstrated experience and expertise in horticulture will venture into high value crops and develop marketing channels that will be available to the SME farmers, from the start or later on. Over time, each farmer will chose his/her own ideal crop mix according to the guidance
from the service provider, his experience, his management capabilities, technical know-how, as well as market expectations.40

The use of joint water resources is regulated by bilateral/multilateral bodies. For the Orange, Okavango and the Zambezi Rivers these bodies are respectively the Orange Senco Commission (ORASECOM), OKACOM (the Okavango River Basin Water Commission) and Zamcom (Zambezi River Basin Water Commission). The envisaged Green Scheme water off-take does not exceed a reasonable allocation, yet the abstraction of water from the jointly owned rivers and related basins for the Green Scheme will need to be agreed upon by these joint bodies and guided by detailed EIAs.

The Green Scheme/WBCG marketing system promotes both (1) the introduction of pre-plant agreements between irrigation farmers and wholesalers/retailers of horticultural products to avoid any mismatch between production and demand, (2) downstream processing facilities for preservation of fruits and vegetables through drying, canning, fruit juice making and other and (3) on-going coordination between producers and the market. Most of the Green Schemes are situated in highly populated rural areas and en route to Namibia’s neighbors (Angola, Zambia, Zimbabwe and South Africa). This offers good marketing opportunities.

**Economic Assessment**

The ERR analysis reflects the incremental returns from the Green Scheme due to the fast-tracked development of the various schemes made possible by the MCA investment. It is assumed that the Green Scheme program will be implemented over the next decades, irrespective of the MCA Namibia contribution, yet using GRN resources and possibly support from other development partners and at a slower pace.

The ERR analysis assumes cash flow from year 1 for all the Green Schemes with the exception of Sendelingsdrif where the high-value dates and grapes or fruit trees are expected to realize a harvest after 4 years.

For the purpose of the ERR analysis it is assumed that each nine hectare plot is planted with 5 ha of maize, 3 ha of horticultural crops, consisting of a mix of butternuts, potatoes, sweet melons and water melons and 1 ha of fruit trees. As such the ERR for the typical Green Schemes (i.e. excluding Sendelingsdrif) will be conservative as SME farmers may opt to pursue higher value crops from the start (as discussed above).

**Table 5.1: ERR and Sensitivity Analysis**

<table>
<thead>
<tr>
<th></th>
<th>ERR 20 years</th>
<th>Increase of 10% in MCA costs</th>
<th>Product price decrease 10%</th>
<th>Product price increase 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without MCC</td>
<td>70.7%</td>
<td>70.7%</td>
<td>65.2%</td>
<td>76.3%</td>
</tr>
<tr>
<td>With MCC</td>
<td>89.2%</td>
<td>90.5%</td>
<td>82.5%</td>
<td>95.9%</td>
</tr>
<tr>
<td>Increment</td>
<td><strong>18.5%</strong></td>
<td><strong>20.2%</strong></td>
<td><strong>17.3%</strong></td>
<td><strong>19.6%</strong></td>
</tr>
</tbody>
</table>

Over a 20 year lifespan, the MCA Namibia induced ERR of 18.5% indicates a favorable return suitable for economic transformation and having an impact on the economy. When reducing the lifespan to 10 years, the ERR is 67% (without MCC) and 88% (with MCC) indicating an increment of 21%; with a 30 year time horizon, the ERR is 70.7% (without MCC) and 89.2% (with MCC), indicating an increment of 18.5%.

40 A distinct exception is the Sendelingsdrif Green Scheme where commercial and SME farmers are expected to farm with dates and other high value perennial crops.
The ERR analysis is fairly robust with an increase of 10% in the MCA costs as well as a 10% decrease or increase in the product price having a limited impact on the increment in the ERR (ranging from 17.3% to 20.2% as opposed to the original ERR of 18.53%).

The Rundu marketing hub ERR yields 22%. The Kavango and Caprivi regions produced 5,300 tons of horticulture produce in 2003. It was stated that the critical mass for a district market (IDC, May 2004) is 6,000 tons. This production figure will be reached by 2007 and the Rundu marketing hub will thus be justified.

MCA Namibia and the various role players are confident that the Green Scheme contribution to the GDP will increase considerably. There is good scope for horticultural crops to be grown for the internal market and for exports. With all planned Green Schemes in full production, a considerable increase in the agriculture sector’s contribution to the GDP is expected. Currently agriculture contributes 6.3% to GDP (2005). Of this 6.3%, horticultural production contributes some 10%; horticultural production contributes less than 1% to GDP. By 2012, it is expected that the proposed MCA Namibia investment into the Green Scheme unlocking horticultural crop production could be contributing up to 3% to GDP, assuming 3% annual GDP growth.

**Environmental Assessment**

In terms of the EA Policy of Namibia, proposals relating to the production of cash crops require EIAs for a number of programme activities. The MCA Namibia proposed actions would definitely fall into all or some of the following categories of the EA Policy:

- “Establishment of settlements”
- Any government policy, programme or project on the use of natural resources”
- “Pest control programmes”
- “Deforestation projects”
- “Major pipelines”
- “Significant use of pesticides, herbicides & defoliants”
- “Major agricultural activities (e.g. livestock and cultivation projects in previously undeveloped/unused areas)”
- Small scale (formal) water supply schemes”

Some of the actions may also fall into the following categories – requiring EIAs:

- “Storage facilities for chemical products” (fertilizers and pesticides)
- “Bulk distribution facilities” (grain storage silos at Rundu)
- “Introduction and/or propagation of invasive alien plant and animal species”
- “Permanent flood control schemes”
- “Major dams, reservoirs, levees and weirs”
- “Human resettlement”

The EA Policy of Namibia clearly indicates that the proposed schemes require EIAs. There is good reason for this requirement.

Irrigation projects frequently have been the cause of major negative impacts on the environment. In addition to damaging the environment, in many cases irrigation projects have proved unsustainable, for example due to salination of soils.
In some cases GRN has gone ahead with clearing of land for irrigation without any prior assessment, and contrary to the EA Policy of Namibia. This has been done despite the fact that some of these irrigation schemes have potential for significant adverse impacts, for example downstream in Namibia and Botswana.

The potential negative impacts of irrigation schemes include:

- **Destruction of habitat that is ecologically important**, for example along the Okavango River there is a narrow band of riverine forest that is rapidly disappearing and only a few remnants remain, notably in the Mukwe-Popa Falls-Mohembo reach of the river. A few rare and endangered species of birds and fish occupy this forest and certain specialized sections (e.g. rocky rapids) in the river. In the case of Sendelingsdrif on the Orange River, the area is renowned for rare and endemic species, and questions about biodiversity need to be answered. The areas to be irrigated from the Kunene River are less sensitive from a biodiversity point of view, and have been heavily disturbed by people and livestock historically. In the case of the Zambezi River, biodiversity issues are probably also less important as the wetter parts in the north-east share most species with neighboring countries.

- **Water demand for irrigation is a critical issue in some rivers.** This issue is dealt with separately for each river, below. However, no figures of water demand have been provided for the proposed irrigation schemes.

  - **Kunene River**: The Kunene River has a mean annual runoff of about 5,100 million m$^3$/year, but it is highly seasonal, and variable from year to year. The Ruacana power station on the Kunene River is the source of half of Namibia’s electricity supply. Further projects are being considered – notably at Baynes downstream, using the same water as Ruacana. Water for irrigation in Namibia is led from the Calueque Dam just upstream from Ruacana. Thus to the extent that water is used for irrigation, there is less available for power generation. Namibia is already facing a crisis with regard to electricity supply. Other demands, such as irrigation in Angola and domestic consumption in Namibia, will aggravate the competition for water resources in time. The economic return from irrigation is very low by comparison with the benefits of using the same amount of water for industry, for example.

  - **Okavango River**: The mean annual runoff of the Okavango River at Mukwe (in the Caprivi strip) is approximately 9,585 million m$^3$/year. The mean figure is, however, highly misleading as the variation from year to year is high. According to Mendelsohn (2004), about 22 million m$^3$/year were abstracted from the river at that stage for irrigation, domestic livestock and Rundu. Once all the planned irrigation schemes are implemented, the total water demand for Namibia alone would be about 134 million m$^3$/year, or 1.4% of the flow of the Okavango River into Botswana at Mohembo (Mendelsohn, 2004). There is also a distinct possibility that water will be required for the Central Areas of Namibia. No reliable data is available for Angola, but they will also need water for irrigation as that country begins to re-develop. The combined impact of all the water abstraction for the Okavango Swamps is currently unknown but it could be detrimental to the Okavango Swamps. In 2003, it was crudely estimated that the Okavango Swamps could afford to lose about 2% of their water without undue harm but this figure requires verification through detailed ecological research. To complicate the ecological impacts, the river flow is at its lowest around October / November, which is the hottest and driest time of the year in Kavango. Therefore, the demand from irrigation is highest when the water in the River is lowest each year (Mendelsohn 2004).
Furthermore, the ecosystems of Okavango Swamps are maintained by an extremely complex system of channel failure, redistribution of water, and flushing out of salts from the surface to prevent a “Dead Sea” situation like the Magadiqadi Pans in Botswana. All of this relates to the transport of fine sand (originally wind blown sand) along the bed of the river. This sand is responsible for periodic channel failure in the Swamps. This channel failure is essential to the survival and continual ecosystem renewal of the Swamps. The rate transport of the sand is related to the flow velocity cubed. Therefore if water is removed from the system, the flow velocity is reduced, which results in an even greater reduction of sediment transport.

- **Zambezi River**: The Zambezi River, with a mean annual runoff of 40,000 million m$^3$/year would probably be little affected by irrigation in the Caprivi.

- **Orange River**: The Orange River is very heavily utilized already and its mean annual runoff is only about 3,400 million m$^3$/year. The main potential adverse impacts would be on the Orange River estuary.

The impacts of water abstraction on riverine ecosystems cannot be assessed on a piecemeal project basis. For each river affected, the maximum sustainable yield of the river (without causing significant adverse ecological impacts) needs to be established. Scientists refer to the “ecological reserve” as being the minimum requirement of the river for healthy ecological functioning. This has not been established for any of Namibia’s perennial rivers. All of these rivers are shared with neighboring countries. Therefore adverse ecological impacts would not only affect Namibians, but people in neighboring states as well – with potential socio-economic and political implications.

- Fertilizers that reach rivers add considerable nutrient loading to those rivers. This leads to increased growth in reeds, and algae floating in the water. In confined waters, these impacts can lead to eutrophication of the water body. Water quality declines, oxygen becomes depleted and serious ecological impacts may result. These issues would be of particular concern on the Okavango River and Okavango swamps in Botswana. Unhealthy river systems tend to promote diseases in human. To the extent that waters carry a higher nutrient loading, and promote the growth of reeds and other aquatic vegetation the incidence of diseases such as bilharzias, river blindness, and malaria can be expected to increase. The Okavango Swamps are particularly vulnerable to water quality issues because they are a closed system – with minimal outflow. The Swamps also support a vast and lucrative tourism industry, providing a livelihood for large numbers of people in Botswana. The Swamps are also a declared World Heritage Site – giving them global status as a conservation area. Any adverse impacts on the swamps would attract international criticism and possibly political conflict.

- Crops attract insect pests everywhere, but in the harsh dry conditions in Namibia, green crops are particularly attractive to insect pests. If pesticides are used to control insects, the potential exists for these substances to get into groundwater and eventually into rivers. Persistent pesticides accumulate up the food chain, and often kill predator species (e.g. frogs, birds etc). This can result in increased pest populations. Moreover, insect pests usually develop resistance to insecticides after a few years.

- To the extent that water quality declines, fish populations may be adversely affected. Since most people along the Okavango River in Namibia and Botswana rely on fish for protein as an important component of their diet, any reduction in the fish resources would have adverse socio-economic impacts.
To the extent that irrigation schemes are successful, they will attract more people to the area. Increased population density leads to increased problems of land clearing, water demand, sanitation and waste disposal issues.41

Given the EA Policy of Namibia, the potential for significant ecological impacts, and the potential adverse secondary socio-economic impacts projects involving water abstraction and irrigation must be considered in Category A: projects having potential for significant adverse impacts.

Comprehensive Environmental Management Programmes must also be devised for monitoring and management of short, medium and long term impacts of fertilizers, salination, pesticides in the environment and receiving waters.

The areas that are considered particularly sensitive to habitat destruction and water abstraction are:

- All schemes using water from the Okavango River should be considered as highly sensitive for reasons of water abstraction, riverine habitat destruction, water quality issues, and potential adverse socio-economic issues are all potentially important issues.
- Schemes on the Orange River may be sensitive in terms of habitat destruction, i.e. potential bio-diversity issues. Water abstraction is probably not very important in the context of a river system that already suffers from so many demands.
- Schemes on the Kunene River are in direct competition with power generation and future power generation facilities. However the impacts on habitats are probably not important as the area to be irrigated is not close to the river and it is widespread habitat.
- All riverine areas should be considered as highly sensitive, and are protected under the Forest Act, which specifies distances from a river that may not be cleared. Safe distances from a river need to be assessed for all projects in terms of destruction of the unique vegetation communities along the rivers, and impacts on water quality due to contamination by fertilizers, pesticides and soil erosion.

In addition to the above, at a local level the following issues also need to be assessed and managed:

- Impacts of power supply (e.g. power lines on large birds in wetland and riverine areas presents some bio-diversity issues).
- Visual impacts on tourism.
- Impacts of heavy vehicles on tourist routes.
- Impacts of large developments (e.g. new settlements, the truck port at Rundu etc); all such developments should be built well away from the river, and on previously cleared or badly disturbed land).

A Strategic Environmental Assessment (SEA) approach for this MCA Namibia investment is proposed. A SEA will enable planners to assess the proposal in the context of current and future activities upstream and downstream of the project area. Given the strong likelihood of trans-boundary impacts, nothing less than “best practice” should be followed.

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41 There are already significant social and ecological impacts evident in the Aussenkehr area (Orange River), where squatter camps have been established by job-seekers. Experience has shown that people remain in the area during the “no work” periods, eking out an existence on ever dwindling natural resources.
Social Assessment

Annual Agricultural surveys are conducted in Namibia and this started in the 1996/97 season. With regard to crop production, the surveys classified information relative to the size of holdings planted with category 1 referring to holdings with less than one hectare land of planted area, category two referring to holdings with between one and four hectares of land planted and category three with over four hectares of land planted. The Report on Agricultural Surveys 1996 – 2003 compares the distributions of households by gender according to these three categories. In 1996 16.4% of female headed households and 13.3% of male headed households were classified under category one. By 2002 these percentages increased to 23.3% of female headed households and 16.1% of male headed households where after it decreased again in 2003 to 19% for female headed households and 15% for male headed households.

Roughly one out of every five communal farmers therefore only plant less than one hectare annually while a greater proportion of female headed households than male headed households are found in this category. However, cereal production per holding in all three categories were generally higher for women than for men with women farmers in 2003 received yields of 412 kg/ha while the male farmers received average yields of only 355 kg/ha. This pattern was fairly stable for all categories through the years while it was only during 2000/01 season where male farmers outperformed their female counterparts and that was only with very high yields on the larger fields.

The importance of crop production as source of livelihood in the normal communal areas cannot be overstressed as is shown by the agricultural statistics. In the six northern communal area regions a total of 803,530 people resided within agricultural holdings. This represents 75.6% of the population in those regions as per the 2001 census. The importance of crop production is clearly illustrated hereby but one must also consider the fact that these farmers have to deal with serious climatic and environmental risks in producing their staple Mahangu, which is mostly planted as the main crop. Drought, pests, livestock destroying their crops and wild animals in some cases all contribute to making cropping a risky business.

The Green Scheme offers the opportunity to some farmers to exchange their dry land small scale communal ventures for bigger and better yielding irrigated units. Therewith, they also receive the necessary skills and guidance from the commercial partner to make a success of the venture. The concept has been proved at Etunda and yields proved to be good and the ventures profitable. Although there are still some development required with regard to the marketing mechanisms, the existing green scheme projects could be regarded as successful and replicable. It would also contribute to employment creation, something that is highly valued by, yet in very short supply to rural communities. Up-scaled horticultural and agricultural activities at the green scheme projects would lead to the creation of one new employment opportunity for every six hectares. With an additional 5,600 ha to be developed under MCA funding, this would mean over 900 additional 750 new employment opportunities.

There are however, a number of concerns that need to be addressed to successfully expand the scheme. Along the perennial rivers in Namibia, people have settled fairly densely, especially along the Kavango and Zambezi rivers. The establishment of existing schemes such as Musese, Shadikongoro and Vungu-Vungu happened during the era of apartheid and included the taking of prime land along the banks of the rivers. This caused unhappiness amongst the local population because not only did it take away their land, it
also complicated their access to the river to water their livestock, collect water and do fishing.

Following recent discussions during the Poverty Audits that formed part of the PPAs, sentiments were expressed that the Green Scheme is the same as the old ENOK (now Namibia Development Corporation, NDC), only in another guise and referring to the caretaker farmer “it is just a way for white men to own land in the communal areas”. There is clearly some important work to be done to market and finalize the design of the Green Scheme Model in such a way that it will be acceptable to recipient communities and great care should be taken to ensure full social acceptance prior to any new development.

The PPAs have also shown that women are the ones responsible for the fields and they are the cultivators more so than men. It is therefore not only important to have a gender balance in beneficiaries because of the gender equality arguments thereof but also because women are generally the better cultivators. A gender equity policy needs to be worked out, agreed upon and applied in the selection of trainees and eventual project beneficiaries for the green scheme.

One of the main problems experienced by cultivators is access to markets where they can get reasonable and fair prices for their produce. This is even more important when output is to be increased beyond what will be taken up by the local communities. There currently is an active trade and bartering system in cereals and other crops between rural residents themselves but this is limited to fairly small quantities. The establishment of a market hub and grain storage facility in Rundu should assist to support and improve the prices received for crops not only produced through the green scheme but also by all other cultivators. This should be of considerable benefit to all cultivators who cultivate more than their household demand and through improved prices should put more cash into their households. This would contribute to poverty alleviation and improve the livelihoods of rural people as well as ensuring the viability of the Green Scheme projects.

**Participation of Development Partners**

Lux Development invested approximately NAD6 million in MADI for the initial renovation and extension of buildings, equipment and the development of 70ha for irrigation farming. For the Tandjieskoppe Green Scheme, the African Development Bank (ADB) and other partners have provided a NAD320 million soft loan. GTZ/KfW and Government of Sweden/SIDA have indicated a possible interest and the ADB has indicated interest in funding project preparatory work for Green Schemes in the Caprivi region.

Regarding market infrastructure such as the proposed Rundu marketing hub and grain storage, no other development partners are currently active in this sector. The EU has provided support for water and sanitation for human consumption in Rundu, not for irrigation.

**Risk Assessment**

The buy-in of local communities needs to be secured before the GSM can be successfully introduced. Sensitization and mobilization efforts are built into the action and will precede the actual investments.

Issues around the water resources available from the Orange, Okavango and Zambezi River and possible environmental impacts are discussed above. The detailed EIAs will need to guide the implementation of the Green Schemes, and EMPs strictly adhered to.
6. MCA Namibia Investment 4B – Promote private and community-based Investment in Indigenous Natural Products

Introduction

Economic context

It has been estimated (MAWF 2005) that indigenous natural products contribute NAD100 million/annum to the Namibian economy at present, with a medium-term potential of about NAD400 million/annum. A recent market study for the Natural Futures programme (Bennett 2006) conservatively estimated that – given appropriate levels of investment – the SADC natural products sector could within a decade or two grow to be worth USD3.5 billion a year. The global natural products sector is worth around USD65 billion/annum and growing steadily42.

Since the start of the first Trial Marula Oil Production project in 1995, Namibian stakeholders have developed and refined an innovative coordinated national “pipeline approach” to pro-actively creating sustainable economic opportunities based on harvesting, processing and trading indigenous plants/natural products. The pipeline approach prioritizes natural products with large and relatively quick market potential and promotes their commercial development through an integrated, holistic strategy that addresses the entire value chain from harvesting to retail sales, in commercial partnerships with the private sector.

In 2000 the early successes of this approach were used to design MAWF’s Promoting Indigenous Fruit (PIF) project, which resulted in the formation of the Indigenous Plant Task Team (IPTT), a multi-stakeholder coordinating body cum steering committee chaired by the Directorate of Agricultural Research. Secretarial services are provided by the National Botanical Research Institute (NBRI), core and project budgets are administered by the Namibia Agronomic Board, CRIAA SA-DC provides ad hoc technology development, market liaison and coordination services, and the “pipeline” is kept moving through a number of targeted short-term consultancies.

This approach has so far brought four new Namibian natural products (Marula oil, Kalahari Melon Seed oil, Ximenia oil, Manketti oil)43 to international cosmetic markets, with several others (e.g. Baobab oil and pulp, !Nara oil, Mopane essential oil, Marula juice and fruit pulp, Commiphora resin, organic fair trade Devil’s Claw, community-produced Hoodia, Terminalia root bark, Manketti fruit pulp and Makalani fruit) at various stages of the pipeline. Many other indigenous resources have been identified as having commercial potential (the earliest stage of the pipeline), or have been lightly assessed for availability (the second stage), but have not been investigated in more detail due to limited human and financial resources.

In addition to its “steering committee” role in the promotion of pipeline products, the IPTT also plays an important “national coordinating” role. It receives reports from several working groups or sub-projects dealing with Devil’s Claw, Hoodia, indigenous vegetables, intellectual property, community development, resource management and eco-regional extension.

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42 Reference is made to FRAMEweb Knowledge Sharing for the National Resources Community, an online portal for the natural resources management community, sponsored by USAID: http://www.frameweb.org.

43 To contextualize this achievement, one of the “gurus” of NTFP commercialization (Jason Clay, 1992) considers – on the basis of his extensive international experience – that “the development of a new product requires at least 5-10 years and a significant investment of resources”.
activities. Taken together, and interpreted iteratively (at 43 meetings over 6 years, and in numerous reports), these inputs have contributed to the emergence of a robust “best practices” model for stimulating successful pro-poor, environmentally beneficial commercialization of indigenous natural products.

The main features of this “Namibian model” – and implications for MCA intervention - are that:

- Commercialization has been based on a clearly articulated demand from the intended beneficiaries (poor rural people, mainly women) for additional cash incomes derived from existing “resource endowments” of indigenous plants (i.e. standing stocks of natural capital are employed to immediately start reducing poverty among the poorest and most marginalized, for whom the relatively low income to be earned at primary producer level is offset by the even lower entry costs). **The MCA intervention proposed will assist these poor and marginalized producers to turn their inheritance of natural capital into productive equity in a fast-growing sector of the global economy.**

- When at all possible, established and reputable community-based organizations are used as first-level collators and bulkers of wild-harvested or semi-domesticated raw materials. This adds value to existing social capital, avoids excessive ex ante expenditure of time and money on starting new supply chains, helps to minimize “development fatigue” in target communities and has clearly been both cost-effective (for the market) and beneficial (for the participating Community Based Organizations (CBOs)). The existing network of grassroots collaborators provides ready entry points for promoting sustainable management, domestication and cultivation of valuable indigenous plants. **MCA support will assist resource-poor farmers enrich local populations of useful indigenous species, incidentally strengthening local institutions for socio-economic development.**

- To counter the dangers inherent in supply-driven natural product commercialization (e.g. fads that go boom and bust, expensive product development processes combined with short product life-cycles), and also to get the best balance of volumes and value (for rapid development impact in the medium term), the initial focus has been on identifying functional properties of the target resources/products and promoting these properties in business-to-business markets (rather than developing finished consumer products). However, as “pioneer” products become more firmly established in the market, additional value-adding opportunities at lower risk are increasingly becoming available at Namibian SME level. Such downstream valorization typically earns much higher margins than basic processing. **MCA support will help to unlock this potential for accelerated economic growth in Namibia.**

- Client confidence and longer-term commercial partnerships have been built through a serious, market-oriented, flexible, responsive and pragmatic approach explicitly aimed at commercial realism and financial sustainability. To a large extent this has been possible and successful because the IPTT has had both the resources and the flexibility to respond rapidly to market signals (unlike potential competitors in neighboring countries). It is essential that MCA support is applied in a way that disrupts existing and emerging commercial partnerships as little as possible. Judging from high historic rates of return (see below), and the high number of pipeline species that have so far had very little direct support, **a substantial additional development dividend will accrue if part of**

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44 Through a significant overlap of stakeholder (MAWF, NAB, CRIAA SA-DC, MET, UNAM etc.) additional lessons have also been drawn from implementation of the Kalahari Wild Silk project, which has its own steering committee, and from emerging initiatives around bio-diesel.
the MCA support is targeted at allowing the IPTT to continue its pipeline approach to product and supply chain development.

- Deliberate efforts have been made to optimize economic returns to primary producers by securing for them a share in the downstream value of their resources, through such mechanisms as equity ownership and/or ethical trade mechanisms. The latest development in this regard is the formation of a Primary Producers Trust (PPT) to own “generic equity” on behalf of primary producers in various public-private partnership (PPP) ventures. The idea is that the PPT will provide a convenient mechanism to effect primary producer equity ownership (ideally 50%, alternatively the best deal on offer with a longer-term mechanism to obtain 50%) at low transaction costs, but that it will be a “sleeping partner”, leaving commercial decision-making to its more experienced private sector collaborators (and/or professional management). The trustees (who will be individuals of good social standing with relevant experience, not necessarily primary producers themselves) will be obliged to disburse at least 80% of the trust’s earnings from its equity holdings directly to primary producers, pro rata to their contribution to profits. The trustees will have discretion to allocate the remaining 20% of the trust’s income between reasonable operating expenses, supporting the work of the IPTT, and re-investing in further development of the industry. A cornerstone of the intervention logic is that (unless a different beneficiary is clearly identified) all MCA investments will accrue to the benefit of the PPT, which will use these “public-good assets” to leverage joint ventures with appropriate commercial partners. This innovative benefit-sharing mechanism represents a synthesis of current cutting-edge best practices and will have a transformational impact on the Namibian natural products sector by assuring that sustainable economic growth is effectively tied to poverty reduction and environmental benefits.

- New and increased incomes from indigenous natural products have deliberately been linked to good resource-management practices, by emphasizing secure land and resource tenure for producers, working with Namibia’s strong rights-and-ownership-based CBNRM45 movement, providing training in sustainable harvesting techniques, and promoting organic and other eco-friendly production methods. In the natural product sector environmental sustainability is more than just a public good – it is a crucial business consideration, for both enterprise sustainability and marketing reasons. By stimulating economic growth that is linked to sound environmental practices (as many other forms of economic growth are inevitably not) MCA support to the indigenous plant sector will incidentally contribute to safeguarding the ecological integrity on which the livelihoods of the poorest will continue to depend for some time to come. While this benefit is hard to quantify it is undoubtedly very substantial and very significant (especially in so far as it buffers the most vulnerable members of society against the shocks and risks of rapid economic growth and transition – the MCA purpose – in marginal arid landscapes).

- Many potential products are investigated and promoted in parallel, which maximizes synergies on “overhead” inputs such as project coordination, shortens lead times on new products, diversifies the range of resources traded along supply chains (which helps to reduce risks for producers and traders, and contributes to scale economies) and

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45 Community-Based Natural Resource Management, an approach that gives organized community groups (Conservancies and Community Forests, respectively) legal ownership and sustainable use rights over natural resources. Namibia is a world leader in this regard, thanks to its progressive laws and policies, which have been implemented with substantial support from donors (notably USAID) and service NGOs over the past 13 years in large parts of the country. CBNRM has lately been evolving toward CBEM – Community-Based Ecosystem Management.
facilitates rapid re-direction of human and financial resources in response to market signals. **MCA should resist the facile error of trying to pin down or limit the specific pipeline species/products that will qualify for support, and instead allow market signals to lead a flexible and agile production response.**

- Public money and ODA is used for essential technical and market R&D, and the unavoidable rural supply chain development activities, required to demonstrate viable economic opportunities, which are then taken forward in collaboration with appropriately resourced private sector partners. Every effort is made to ensure that public resources are used for development and capital investment purposes, and not to subsidize recurring production costs (which would distort emerging markets, cause erroneous pricing signals and make enterprises uncompetitive in the longer term). **In this regard it is important that MCA support is used to kick-start faster economic growth without locking in longer-term subsidies, minimizing market distortion and disruption of existing and emerging commercial partnerships (refer to above).**

Up-to-date market intelligence and business planning conducted over the past three years on behalf of the IPTT and PPT suggest that the timing is right for an even more substantial investment in up- and out-scaling this successful “whole value-chain” approach, specifically with a view to boosting primary production and capturing a larger share of the downstream value. This strategy dovetails neatly with national economic development policy as embodied in Vision 2030, and with national conservation policies centered on sustainable use of renewable natural resources.

**Poverty Reduction Impacts**

Commercialization of indigenous natural products is inherently pro-poor because:

- at harvester level the barriers to market entry are very low.
- returns to labor are moderate, resulting in self-selection of those participants and beneficiaries most in need of additional incomes.
- it creates options for diversification of rural livelihoods, thereby providing some insurance against climatic variability to poorer households (an extremely important consideration under Namibia’s marginal agro-environmental conditions).

Additional cash earnings from natural products also pay higher sustainable development dividends than many other forms of income, because:

- the cash accrues predominantly to women (due to the gendered nature of traditional plant-based activities) and is therefore disproportionately spent on the welfare and education of children.
- cash enables better access to social services (needed for transport, clinic fees, school uniforms, telephone calls, etc.).
- the opportunity to earn additional cash through flexi-time home-based activities is crucial for women heads of households who are precluded from formal employment, and often even from most other informal economic activities, by multiple child-care, household and agricultural commitments; it is also highly suited to the “grandparent and many children” households that are becoming increasingly common due to the effects of the AIDS pandemic.
- demonstrating a sustainable income opportunity alters community perceptions of the actual and potential value of indigenous biodiversity, creating additional incentives for conservation through sustainable use.
Despite these demonstrated and well-documented pro-poor features, it is also true that many natural product harvesters earn a very small share (2-3%) of the retail value of the products they supply, partly due to the (relative power) structure of the downstream value-chain, and to market failures along that chain. This situation implies an opportunity to increase primary producer incomes – and pro-poor impacts – 100% by increasing retail prices a mere 2-3%, provided a mechanism such as the PPT is in place to facilitate the value transfer.

At a time when some Fair Trade markets are growing 70%/annum there is moreover an obvious and compelling business case for robust improvements in benefit-sharing models (“fairer trade”). Resourcing the PPT to capitalize on this window of opportunity on behalf of primary producers will ensure that the poverty reduction impacts of the proposed interventions are sustained long after MCA funding has been spent.

**Description of Activities**

The activities and investments proposed below are informed by the priorities identified for the indigenous natural product sector during the MCA consultative process.

The main considerations used to select and prioritize the potential MCA interventions suggested below have been:

- Does it address a real need in a real market or value chain?
- Does it do so in a way that can be translated (preferably with multiplier effects) into pro-poor economic growth?
- Can it serve a variety of functions, i.e. can it increase Namibia’s commercial agility in the fast-changing international natural product market, and preferably contribute to other national sustainable development priorities as well? If not, does it make a very specific investment into a very specific existing value chain with sufficient market intelligence to justify the investment?
- Does it leverage synergies from sunken or forthcoming investments by GRN, other development partners and/or the private sector?

On the basis of these criteria, taking into account years of stakeholder consultation, previous and imminent initiatives, and current market and regulatory trends, it is suggested that MCA funds the following broad natural products interventions (arranged in logical rather than priority order) over the 5 year investment period (2007-12):

a) Increasing the reliability, quality, traceability and sustainability of raw material supplies through primary supply chain development (including certification of such supply chains) and through support to domestication/cultivation, based around an expanded version of the IPTT’s eco-regional satellite centres, close cooperation with the CBNRM movement, and modular “reverse franchise” incubation of “frontline processing” SMEs.

b) Enhancing national capacity for industry-appropriate quality assurance and quality control, standard-setting/enforcement and product development/innovation through an investment in ISO-certified commercialized scientific services.

c) Establishing a multi-purpose pilot/small commercial scale natural product extraction and trading facility, closely allied to the commercialized scientific capacity above and under competent commercial management.

d) Developing further marketing and brand-building partnerships with the private sector and international fair trade organizations.
e) Expanding Wild Silk production through capital investment and training

It must be emphasized that the “whole value chain” approach embodied in the MCA package of interventions is of prime importance to the overall success of the strategy (Wild Silk being the obvious stand-alone exception, although it could benefit from marketing synergies).

**Product specific actions include:**

1. Expanding Wild Silk production through capital investment and training.
2. Domestication and cultivation of Hoodia.
3. Improving the quantity and quality of Kalahari Melon Seed (KMS) supply.
4. Devil’s Claw propagation and enrichment planting.
5. Selection and increased cultivation of superior Marula genotypes.
6. Multi-purpose extraction, quality control and product development facility.

With other development interventions required at national level to include:

7. Management intervention.
8. Traceability and certification.
9. Eco-Regional Satellite Centre (ERSC) networks for regional outreach.
10. Additional first-level oil extraction capacity.
11. Developing commercial (marketing and brand-building) partnerships.

The product specific actions are detailed in Table 6.1.

<table>
<thead>
<tr>
<th>Development Actions</th>
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<tbody>
<tr>
<td><em>(1) Expanding Wild Silk production through capital investment and training.</em></td>
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<tr>
<td>Wild Silk is included because it was prioritized by stakeholders during MCA regional consultations. It is dealt with first because it does not fit neatly into the plant-based activities that follow, and because it has a completely different set of beneficiaries (to whose benefit this investment will accrue directly, since Wild Silk is not included in the scope of the PPT). The assets of the existing Kalahari Wild Silk project (including the factory in Leonardville) have recently been transferred by MAWF (which co-funded with Oxfam the first five years of development) to the Omaheke Regional Council (ORC)(^\text{46}). The current budget is based on an advanced draft of the ORC RPRP proposal and supplementary discussions with the management of the Kalahari Wild Silk Company. If it is funded by RPRP the proposed MCA support could still be used productively to extend training to even more spinners and weavers, and to invest in electric weaving capacity (or it can be re-allocated to other activities during the MCC verification mission). Benefits have been calculated on the assumption that an additional 180 spinners (mainly women) are trained and equipped with MCA funds. Current market information suggests that such an investment to expand a critical production bottleneck will help the enterprise to fill orders and reach sustainable economies of scale.</td>
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\(^{46}\) Commercialising or privatising the management of Kalahari Wild Silk was very much part of the original project plan, but future progress will depend on decisions made by ORC, which so far appears to favour a cooperative ownership structure that has a contract with a private marketing company.
(2) Domestication and cultivation of Hoodia.

Of all indigenous natural products this stem succulent with its patented appetite control properties is currently most hyped and most in demand (e.g. Canadian company offering a 2-3 year contract to buy 1,500kg a week at USD150/kg; capsules of dried powder for sale on the internet at more than USD1,000/kg). This demand – and the fact that the plant can be grown in the arid south of the country, where there are few viable alternatives) has stimulated intense interest among potential Namibian producers, who recently formed the Hoodia Growers Association of Namibia (HOGRAN) and have prepared proposals for substantial investments into the development of the industry.

Because Hoodia is a relatively rare and slow-growing species the population dynamics of which are not well understood, Namibia does not allow wild-harvesting of Hoodia at present (other than for traditional use) and so far there have been no legal commercial exports from Namibia (although discussions are underway about allowing Hoodia producers with established cultivation programs to conduct strictly controlled wild-harvesting for market development purposes). In 2004 Namibia, Botswana and South Africa succeeded in having Hoodia listed on Appendix Two of CITES, which means it can be traded legally subject to certain controls.

Unfortunately Hoodia is also the species with the largest medium-term market uncertainties attached. There are several reasons for this uncertainty:

- To avoid the CSIR/PhytoPharm/Unilever patents, many marketers have been selling dried Hoodia powder, which is taken in small doses that provide so little of the active ingredient they are probably not effective. This has already resulted in the first signs of a consumer backlash (which is very bad news indeed in the fad-driven weight loss market).
- The plant has not been yet been tested for safety, which has resulted in the first signs of a regulatory backlash (sales halted in the Netherlands). Unilever is currently conducting safety and efficacy tests, but only on its proprietary extracts.
- There have already been several commercial plantings of Hoodia in South Africa and Namibia, but the scale is unknown. Regardless, it is safe to assume that Unilever will want to have tight control over its supply chain (because that is its business model with other raw materials, such control would be doubly important with a functional food from a recently domesticated plant, and that has been the approach it has taken in establishing cultivation in Namibia, where it is negotiating with one fairly large faming concern to be its main contracted grower).

The likely outcome of these factors is that the price of Hoodia will drop until it eventually sells at agricultural commodity prices.

To mitigate these uncertainties without losing the poverty-reduction opportunity completely it is planned to support 120 small Hoodia producers from MCA funds. Of these 20 will be slightly larger-scale seed and seedling producers. The production from these growers will be targeted at “ethical and alternative” markets, where a niche demand for dried Hoodia is likely to persist even after the market shake-out (because certain consumers will not buy from multi-nationals under any circumstances). In the ERR analysis Hoodia is the only product for which an annual price reduction is assumed. To further reduce overall risk these growers will be helped to diversify some of their production capacity into other high-value indigenous succulents.

Most Hoodia intervention sites will be located in the arid south and west of the country. Each small producer will cultivate 200 to 500 m² of land. As a desert-adapted succulent Hoodia has a low water requirement for survival. The yield effects of supplementary irrigation are not known.

(3) Improving the quantity and quality of Kalahari Melon Seed (KMS) supply.

In 2005 Namibia had confirmed orders for 14 tons of KMS oil and strong indications of medium-term demand reaching at least 40 tons, yet it only managed to produce and export around 4 tons of oil (down from more than 8 tons in 2004) due to insufficient seed supplies. At a 7.5:1 seed:oil extraction ratio, 127.5 tons of seed is required to fulfill the 2006 order for 17 tons of oil – it remains to be seen whether this quantity can actually be collected. Producing 40 tons of oil would require 300 tons of seed (worth NAD720,000 to seed producers). It is entirely possible that by 2012 the market has grown to 100 tons of oil, requiring 750 tons of seed. In the longer term a market of 1,000-5,000t/annum is possible.
KMS is an annual plant that is traditionally grown as an “encouraged weed” in Namibian farming systems (in addition to growing wild). The technical barriers to increasing primary production are therefore not insurmountable, given an adequate investment in on-farm research and extension services. The Kalahari is also the centre of genetic diversity for *Citrullus lanatus* and it is possible to breed a “better oil seed melon” from Namibian genetics (preliminary selection work has already been done by NBRI). Such breeding is estimated to have the potential to increase primary seed yields as much as 50%, and additionally to raise the oil quality (by increasing the content of linoleic acid to consistently >68%).

The impacts of the proposed KMS intervention will occur mainly in the north-central regions, and to a lesser extent in the north-east and east. Because the plant is usually cultivated as an intercrop it is hard to predict the exact growing area that will eventually be used for growing KMS. Breeding trials will be done under irrigation in the vicinity of Stampriet (where water is plentiful), supplemented by on-farm out-growing of new crosses in the North Central regions. KMS is a dry land crop with superior drought resistance and is not expected to make any additional demands on scarce water resources (except possibly for bulking up seed supplies of improved crosses, which could be done under irrigation if it appears necessary).

### (4) Devil’s Claw propagation and enrichment planting.

The international market for Devil’s Claw (*Harpagophytum* spp.) – a perennial creeper from the Kalahari, the dried side tubers of which have medicinal uses – has slowly been recovering from a setback two years ago when the product was removed (along with most other herbal remedies) from the list of medicines refunded by state health schemes in two of the main markets, Germany and France. This resulted in sales dropping to less than 400t/annum from a high of more than 1,000t (it was the third largest herbal remedy by retail sales in the German market before this event).

Like Hoodia, Devil’s Claw cultivation only yields a harvest after three to four years. Unlike Hoodia, however, Devil’s Claw has been clinically evaluated since the 1950s and has repeatedly been proven effective and safe. As a low side-effect anti-arthritic remedy in an aging world it has a growing target market. It furthermore has emerging niche markets in pet care and cosmetics and is the subject of dedicated ethical marketing and scientific innovation efforts. In the medium term a market of 500-600t/annum is a safe assumption and in the long-term, given good market development strategies, it is likely to substantially exceed its 1,000t peak.

Devil’s Claw harvesters (estimated at 15,000 regionally) are among the poorest and most-marginalized people in southern Africa. This has kept the price of wild-harvested material low and has made commercial cultivation a less attractive option (than Hoodia) for farmers who have viable alternatives. In recent years a low-tech approach to Devil’s Claw cultivation has been developed and found suitable for implementation by resource-poor farmers. This approach allows harvesting communities to grow seedlings in a simple nursery and transplant them in more convenient harvesting places, thus addressing the problem of populations being most depleted exactly where they are most needed, reducing the labor requirements (walking to harvesting sites) and increasing overall production. An MCA investment into the expansion of this system will allow harvesters to defend their market against commercial plantations. This will help to address some of the grossest expressions of poverty in Namibia and increase the quantity of material available for ethical marketing, thereby building on the successful model pioneered under the Sustainably Harvested Devil’s Claw (SHDC) project.

The proposed Devil’s Claw intervention will mainly be implemented in the east (Omaheke and Otjozondjupa). Each nursery will be about 40 m² and use less than 100 lt of water a day during the nursery phase. If producers choose to plant out into fenced fields (which is one option) each intervention site will use an additional 6-7 ha of land. Alternatively plants can be placed out into the nearby environment using “enrichment planting” strategies. No further irrigation is required once the plants are transplanted.

### (5) Selection and increased cultivation of superior Marula genotypes.

In northern Namibia Marula is a revered and protected resource, used for the production of alcoholic and non-alcoholic drinks during the fruiting season, and for kernel and oil production at any time of the year (although the main season for kernel extraction is from August until about November). Efforts over the past few years to establish larger-scale commercial production of Marula juice and
pulp for formal (export) markets have consistently run into problems with securing an adequate supply of fruit. It has been calculated that planting six Marula trees per hectare can effectively double the production of that land area, compared with traditional cropping (6 trees x 500kg fruit/annum x NAD0.20/kg = NAD600, plus additional seeds for kernel production). Grafted Marula trees start fruiting after four years (compared with 10 or more years for seed-grown trees).

An additional problem for fruit processing has been the short and intensive (mid-February to mid-April) peak of the main Marula season, at a busy time of the agricultural calendar when household labor is limited. Yet there are some Marula trees in the north-central regions that start fruiting as early as January, and some that continue well into May (and in Kavango until August, but this might be environment-related). Planting and caring for Marula is already a well-established practice among some farmers in the North-Central regions and increased cultivation is more likely to be “pulled” by market demand than pushed by promotion and/or subsidies.

The Directorate of Forestry (DoF) has embarked on a long-term project to grow superior Marula strains at various sites for comparison. It is suggested that MCA provides some additional funds to allow DoF to focus on bringing more early and late varieties into cultivation, to establish clonal “mother stock” plantations through truncheon-planting of selected genetic material, and to train more farmers in rootstock production and grafting. Provided such basic technical assistance is available, farmers in the area are expected to respond spontaneously to the additional economic opportunity.

The main impacts of the Marula intervention are expected to occur in the north-central regions, where the existing Marula industry is located. In the longer run the availability of superior early and late varieties will also benefit producers in the north-east. Since Marula trees are usually grown in or on the margins of crop fields it is impossible to predict how many hectares will eventually be planted. Limited irrigation water is needed during the nursery phase and to help transplanted trees survive until the first rains, but in general Marula trees survive, grow and fruit well in northern Namibia without supplementary irrigation.

<table>
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<tr>
<th>(6) Multi-purpose extraction, quality control and product development facility.</th>
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<tr>
<td>Homestead-level post-harvest processing at thousands of remote rural locations brings obvious and significant quality control issues. Problems are being addressed through education at harvester-processor level, but this is a longer-term process (and might never eliminate environmental microbes). For the foreseeable future the only practical solution appears to be technological interventions (filtering, refining, pasteurizing, radurizing etc.) with rigorous quality control (QC) at the point in the value chain where products are dispatched to clients. This value-adding step typically carries a 50-100% mark-up in the natural products industry (in the ERR calculation 50% has been assumed for every product line). Sharing this profit with harvesters through the PPT brings a more equitable (and therefore more marketable and sustainable) solution to this technological bottleneck.</td>
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<tr>
<td>Quality standards (in addition to Organic, Fair Trade and Sustainable) that would interest clients include HACCP, GMP, Eurepgap, various ISO standards and others. It is essential to invest in attaining at least a minimum set of certifications and accreditations in this regard. This also implies that physical facilities have to be planned with such standards in mind.</td>
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<tr>
<td>A related but separate issue is regulatory compliance in various markets. Relevant regulations include EU Novel Foods, EU Cosmetics Ingredients, REACH, US FDA, INCI and many others. Thus far compliance with regulations has been handled by commercial partners, or collaboratively through PhytoTrade Africa. It is envisaged that Namibia will increasingly have to take over responsibility for this essential function, especially when it comes to its own new products.</td>
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<tr>
<td>Certified quality standards and the ability to comply with regulations are essential for building client confidence. By combining (visible, physical) QC capacity with the large low-cost primary supply chain resulting from collaboration with the CBNRM movement, Namibia will be in a position to inspire true client confidence in its ability to deliver, unleashing additional product R&amp;D efforts by final users.</td>
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<tr>
<td>Exactly because the QC measures required are primarily aimed at satisfying due diligence requirements of commercial clients it is not sufficient to rely on installed capacity at UNAM or PoN, where heavy teaching loads and a shortage of technical support had in the past delayed important work for unacceptable (even under research scenarios) periods. Moreover, industry is used to receiving out-sourced QC results from private laboratories (usually with ISO certification). The</td>
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international natural products industry will not accept or trust results from national academic institutions with limited resources (who are suspected of bias and – fairly or unfairly – incompetence) and using such scientific services will make a company suspect as a commercial partner. To overcome this problem and make appropriate quality control and scientific capacity available to the PPT – in a way that also incidentally supports wider economic growth opportunities in Namibia (e.g. processing of exotic plant products, QC of food processing and other industrial processes, mineral prospecting) it is suggested that MCA funds implementation of the following holistic strategy for building sufficient extraction, QC and innovation capacity:

- Build a multi-purpose facility with loading and unloading facilities, safe warehousing, on-site laboratory with bench-scale capabilities, dirty and clean processing spaces, sufficient ablution facilities for workers, and office space. The premises should be in an industrial area in Windhoek (to retain high-level scientific and technical staff) with adequate electricity supply and waste disposal, and must be constructed to EU standards. The estimated cost of such a building is around USD500,000.

- Enter into a public-private partnership with a commercial analytical laboratory from the Namibian private sector, which will use the laboratory space and equipment (also for its other business) and provide on-site QC and other analytical services to the natural products sector as required.

- Assist this laboratory over the 5-year MCA intervention period to acquire the necessary ISO certifications for key analyses and to train technicians (which is an on-going expense due to high attrition rates).

- Equip the processing facility in a manner, and establish Standard Operating Procedures (SOPs) and documentation systems to a standard, that would allow the facility to pass the most stringent of due diligence inspections from international clients or certifiers. This would include HACCP, GMP and ISO certifications as appropriate. External assistance with some of these certification processes is anticipated from other development partners (e.g. trade promotion component of the Natural Futures programme, PhytoTrade Africa, UNCTAD Biotrade Facilitation Programme). Some smaller capital items can be donated by the IPTT and others.

In addition to trading, quality-controlling and processing those natural products with existing markets, the main functions of the multi-purpose facility will be to:

- Conduct in-house research and technology refinement trials with a selection of priority products, partly to make samples available for market development, and partly to develop in-house knowledge.

- Batch produce small commercial runs of products that do not yet justify a dedicated processing facility of their own.

- Turn preliminary work by e.g. the IPTT and PhytoTrade into proprietary commercial-scale value-adding techniques.

- Build a portfolio of technologies and products that will create substantial longer-term value for Namibia and the PPT.

It must be emphasized that the purpose of this facility is not to replace current and future SME processors of natural products, but in fact to stimulate and incubate the emergence of more such enterprises by adding value to their production at a higher level of technology, which no individual enterprise could (under current market conditions) justify investing in by itself.

The facility must be in Windhoek and is envisaged to have about 800 m² under roof for storage, processing, QC and offices. A fairly detailed feasibility study and business plan for this intervention has been done over the past two years, but pre-compact funding to verify and detail the existing plan would be very useful. It would be important to structure the open MCA tender(s) so as not to compromise or crowd out existing arrangements with commercial partners, since this would have a huge negative impact on what has already been achieved and will severely set back achievement of the incomes projected for the MCA investment.
The other development interventions required at national level are detailed in Table 6.2.

**Table 6.2: National level Actions for MCA Investment in Indigenous Natural Products**

<table>
<thead>
<tr>
<th>Development Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(7) Management intervention.</strong></td>
</tr>
<tr>
<td>This part of the proposed MCA intervention is intended to allow the IPTT to continue its national “pipeline” strategy at a significantly larger scale. Since the pipeline itself is largely market-driven it is important that the IPTT be given a clear mandate to change the proposed priorities and activities in response to unforeseen market developments and to re-allocate budget lines made redundant by other sources of funding or support over the five-year intervention period. A full-time supply chain development officer and a half-time administrative support person, contracted by NAB and reporting to the IPTT, are needed during the development phase to coordinate the various activities (cultivation, certification, traceability, frontline processing) positioned upstream of the QC/processing facility.</td>
</tr>
<tr>
<td><strong>(8) Traceability and certification.</strong></td>
</tr>
<tr>
<td>A well-documented trail of custody is already an essential requirement for effective QC, organic certification and fair trade, and is increasingly becoming a pre-condition for market access. This activity will extend registration, certification and traceability systems to an additional 6,000 rural households (working through CBNRM partners, other CBOs and eco-regional satellite centres). This action will involve the following activities:</td>
</tr>
<tr>
<td>- Organizing local groups for internal control systems.</td>
</tr>
<tr>
<td>- Registering participants.</td>
</tr>
<tr>
<td>- Mapping participating farms.</td>
</tr>
<tr>
<td>- Establishing record-keeping system.</td>
</tr>
<tr>
<td>- Training local inspectors/record-keepers.</td>
</tr>
<tr>
<td>- Basic training in organic production.</td>
</tr>
<tr>
<td>- Subsidizing initial external inspections/certification.</td>
</tr>
<tr>
<td>2,000 households per annum will be targeted or 6,000 households in total during the first three years of implementation, starting with members of Eudafano Women’s Cooperative (~5,000), organized Ximenia producers at Eenhana (~800), King Nehale Conservancy KMS producers (~1,000), Manketti producers in Kavango (~500).</td>
</tr>
<tr>
<td><strong>(9) Eco-Regional Satellite Centre (ERSC) networks for regional outreach.</strong></td>
</tr>
<tr>
<td>Continuation and expansion of IPTT eco-regional satellite centre (ERSC) network (from 6 to 9, plus 3 new sub-centres in priority areas). Running cost budget is scaled up significantly from past two years (historical running costs of NAD7 500/month for 6 centres) to allow hiring local assistants who can increase regional IPTT presence and impact (including interfacing with regional CBNRM groups) – also an important investment in capacity-building. Technical support and project coordination (around 88 days over past two years) is now included in supply chain development officer’s job description. Capital investments are budgeted on a per-unit basis for 12 units, though in reality each centre will have slightly different needs and the IPTT should use its discretion (and up-to-date market information) when spending the capital budget. This action will involve the following activities:</td>
</tr>
<tr>
<td>- ERSCs with focal points who attend national IPTT meetings provide cost-effective interface between national programme and regional stakeholders, so should be continued and extended for next 5 years to help grow Namibian natural products sector more rapidly.</td>
</tr>
</tbody>
</table>

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47 The exact location of additional ERSCs requires further consultation. Current candidates include Otjozondjupa (Okakarara? Groofontein?), the South (Keetmanshoop?), the Northwest (Opwuo? Palmwag? Sesfontein?), Omaheke South (Leonardville? Aminuis?), East Kavango and Ohangwena/Kavango border. Sub-centres candidates are somewhere south-east of Eenhana, Omuthiya, Onesi/Eunda, Ohangwena town, and maybe in West Caprivi.
Each ERSC provides local physical focal point for commercial, conservation and cultivation initiatives, and should therefore have minimum set of assets required for trading natural products and propagating useful plants.

Appointing one young Namibian graduate per ESRC will speed up implementation (over current system of volunteers also employed fulltime in other jobs) and contribute to capacity-building.

(10) Additional first-level oil extraction capacity.

There is a significant chance that some very large clients will soon (by 2007/08) start placing much larger orders for indigenous African oils. It is strategically important that Namibia has institutional capacity and ready plans to expand crude oil production fairly rapidly, without over-capitalizing supply in what is still a new and easily disturbed market. To minimize the technical complexity of quality controlling oil supplies from various SME producers for downstream value-adding it is useful if equipment and procedures are uniform. “Reverse franchise incubation of frontline processing SMEs” simply means the transfer of a standardized processing technology package (including standardized quality control, management systems and technical back-up) to a local-level producer entity (which can be community, cooperatively or individually owned, as long as it is commercially managed), accompanied by a long-term contract to buy the production of the enterprise. Through modular processing capacity development at nodes in the network with proven raw material collation and enterprise management ability this model enables a rational, market-led approach to expanding the processing of indigenous natural products (without precluding individual entrepreneurial efforts).

The scale, level, timing, location and source of additional investments in oil production are all complicated issues. At a minimum – and assuming sufficient raw material availability, which is addressed elsewhere in the submission – the aim of MCA investment in processing should be to send a clear signal to the market that Namibia will at least have sufficient capacity to produce enough oil for the “2008 high” scenarios currently predicted. Doing so would require that Namibia roughly doubles its current oil pressing capacity by mid-2008. Additional capital investments will likely be required before 2012, but are impossible to quantify accurately at the moment due to (currently confidential) technical innovations and the unpredictability of emerging competitors. Subsequent capitalization will however have the benefit of better-quantified business plans and more established markets, making commercial credit or private equity financing much easier.

To avoid a situation where a temporary gap in processing capacity sends erroneous signals about security of supply, thereby disrupting on-going market and product development by commercial partners and clients, it is suggested that MCA funds a doubling (to tripling, depending on exact configuration) of primary oil processing capacity by mid-2008.

This action will involve the following activities:

- New facility at Omuthiya (KMS and Ximenia) or Eenhana (Ximenia, KMS, Marula and Manketti) or somewhere in Omusati region (organic Marula, KMS, Baobab).
- Expansion of existing facility at either EWC (Ondangwa), or KAP (Windhoek) or Mashare (Kavango).
- Additional equipment at the two existing facilities that are not selected for expansion.

If market developments so dictate IPTT should be mandated to change plan (e.g. establish more, smaller, simpler facilities).

(11) Developing commercial (marketing and brand-building) partnerships.

Although the multi-purpose extraction facility will have some capacity to formulate and manufacture market-testing batches of finished consumer products at pilot scale, it is not intended nor will it be equipped to be a mass producer. Its primary business is developing and selling a top class range of quality assured products in business-to-business markets, locally, regionally, and internationally, thereby leveraging the assets of many clients when it comes to finding new routes to consumer markets (and creating opportunities for other downstream operators in Namibia and SADC).

In addition to this core business, however, its supply chain configuration and PPT equity ownership structure, as well as its capacity to identity-preserve value added products along a chain of custody,

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48 It is a “reverse” franchise because it seeks to standardize upstream production rather than downstream distribution, as franchises usually do.
will create multiple opportunities for downstream partnership development, as “fair trade” grows into “fairer trade”. Realizing the full value of these opportunities is key to the success of the overall strategy. This entails much more than mere marketing: it needs a “driver” with vision who has both an intimate knowledge of local, national and regional supply chains, and a good overview of international markets, backed up by at least two junior professionals who can follow up on the details of developing partnerships and deals. The ability to hire expert short-term (scientific, marketing, product design, business planning) consultants is equally important. An operating budget that allows frequent local, regional and international travel, some out-sourced media services, and adequate attendance at key trade shows is also imperative.

Benefits

Experiences to date suggest a large majority (60-100%, depending on the specific activity) of the direct beneficiaries will be women or people from other marginalized groups. The indirect beneficiaries will mainly be children.

The anticipated benefits for each action are detailed below.

Expanding Wild Silk production through capital investment and training

Directly, 180 additional spinners (mainly women) in southern and eastern Namibia will be earning an average USD9/day at current prices, and their households will benefit. Indirectly, cocoons harvesters will receive an additional income from higher volumes processed and traded, and the enterprise as a whole, from scale economies.

Domestication and cultivation of Hoodia

Directly, 120 smallholder farmers in southern Namibia and their households will benefit. Indirectly, other smallholders who may gain access to seed and seedlings and decide to enter the industry once the market settles down will benefit. The overall increase in horticultural capacity may stimulate increased food gardening and improve nutrition. Homestead growing of rare high-value succulents will aid biodiversity conservation and creates long-term incomes.

Improving the quantity and quality of Kalahari Melon Seed (KMS) supply

Directly, an estimated 21,500 additional smallholder producers will benefit. Indirectly, up to 150,000 producers in communal areas will benefit. Rural marketing infrastructure and institutions will be strengthened.

Devil’s Claw propagation and enrichment planting

Directly, about 2,000 of the poorest people in Namibia, in Omaheke, Otjozondjupa, Kavango and Caprivi regions, and their households will benefit. Indirectly, 7,000-10,000 other harvesters (from impacts of larger ethical trade) will benefit. Rural marketing and social institutions will be strengthened.

Selection and increased cultivation of superior Marula genotypes

It is estimated that 100,000 farm families in northern communal areas could easily earn an additional USD5/annum (10% of their current minimum income from Marula) by year 5 from extending the fruiting season and/or increased production. This figure is used as a rough average to calculate the overall benefits of the intervention, but in reality some families will earn substantially more, while others will probably not avail themselves of the opportunity at all (at least not within the first ten years).
Multi-purpose extraction, quality control and product development facility

All primary producers who trade indigenous natural products through this particular channel will – via the PPT equity ownership mechanism – share in the profits pro-rata to the contribution made by their raw material. Having the necessary capacity available increases the rate at which new products are developed, bringing new primary producers into commercialized value chains. Successful innovations and new products could add significant extra value.

The total numbers of beneficiaries by Year 10 are estimated as follows:

<table>
<thead>
<tr>
<th>Products</th>
<th>No. of Beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoodia</td>
<td>120</td>
</tr>
<tr>
<td>KMS</td>
<td>25,000</td>
</tr>
<tr>
<td>Devil’s Claw</td>
<td>2,600</td>
</tr>
<tr>
<td>Marula*</td>
<td>12,500</td>
</tr>
<tr>
<td>Ximenia</td>
<td>1,500</td>
</tr>
<tr>
<td>Manketti</td>
<td>1,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>42,720</strong></td>
</tr>
</tbody>
</table>

Note: * 12.5% of 100 000, rest are in informal markets

Management intervention

All actual and potential primary producers benefit. Institutional capacity will be enhanced to organize extension of primary supply in response to market signals.

Various GRN, NGO and international ODA-funded initiatives prioritize development of natural product markets (e.g. IPTT, ICEMA, LIFE Plus, CFNEN etc.) but most have mandates limited to particular geographic areas or particular groups. Having one national focal point will add value to all of these initiatives.

Namibia will be in a position to consolidate its reputation as the most responsive and reliable supplier of indigenous natural products from southern Africa.

Traceability and certification

The 6,000 households target is based on a conservative estimate of the number of primary producers who can relatively easily be reached through existing partnerships. With some modification this intervention has the potential to reach most of the 43,000 beneficiaries totaled above, and eventually many more (as neighbors see higher prices and improved market access and join existing schemes at no extra development cost).

Traceability and certification open new and alternative market channels for conventional agricultural produce (e.g. organic/fair trade pearl millet/bambara groundnuts/dried tomatoes for health food niche markets).

Assuming 100 producers per group, 60 new part-time incomes are created for internal inspectors, paid by participating producers.

Group certification mechanism (“internal control system”) keeps per-unit costs low; additional market access, premium prices and sufficient scale allows producers to maintain

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49 This added value has not been quantified nor reflected in the ERR because it is not certain, yet as an indication of potential scale, CSIR received more than USD3 million for rights to the Hoodia patent.
certification without external assistance; organic production systems are inherently more sustainable in long run.

Organic and fair trade price premiums are not included in the ERR calculations (although increased market access has been factored in).

**Eco-Regional Satellite Centre (ERSC) networks for regional outreach**

All primary producers involved (potentially around 150,000 rural households) will benefit as this is the major tool for driving expansion of the supply network. Face-to-face information about sustainable production and marketing of indigenous natural products will be more readily available at regional and community level. This relatively low cost network for collation and raw materials enhances Namibia’s competitive position in the regional natural products sector.

At least 12 young professionals acquire skills and knowledge needed to further develop pro-poor income from natural products.

The ERCS will lay a strong foundation for economic growth over and beyond MCA-supported actions

**Additional first-level oil extraction capacity**

All Namibian producers benefit from increased market confidence in their ability to deliver required quantities in good time. Direct beneficiaries will primarily be women from NCA. Doubling processing means doubling raw material supply, so current producers (~7,000) could sell double, or 7,000 new producers could sell the same.

At least four additional junior management-level (~NAD30,000/annum) jobs will be created, and at least 20 oil processor/laborer jobs (NAD12,000/annum).

Encouraging the particular clients involved by making an appropriate investment in processing capacity could increase overall demand five to ten-fold by 2012.

Production capacity can be sustained from own income as soon as projected increase in demand translates into orders (~2008-09).

MCA support would facilitate rapid growth of cosmetics markets and exploration of other markets, for example exotic food oils, nutraceuticals and/or food supplements.

**Developing commercial (marketing and brand-building) partnerships**

Adequately resourcing market development, especially during start-up, is a crucial link in the strength of the whole value chain.

Major additional pro-poor impacts are likely from at least some of the pipeline products not included in the product specific actions.
Costs

<table>
<thead>
<tr>
<th>MCA Investment 4B: Indigenous Natural Products</th>
<th>7.4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4B.1 Product Specific Actions</strong></td>
<td></td>
</tr>
<tr>
<td>(1) Expanding wild silk production through capital investment and training.</td>
<td>0.159 0.106 0.111 0.115 0.120 0.6</td>
</tr>
<tr>
<td>(2) Domestication and cultivation of Hoodia.</td>
<td>0.562 0.059 0.061 0.064 0.066 0.8</td>
</tr>
<tr>
<td>(3) Kalahari melon seed (KMS).</td>
<td>0.166 0.182 0.199 0.027 0.028 0.6</td>
</tr>
<tr>
<td>(4) Devil’s claw propagation and enrichment planting.</td>
<td>0.039 0.021 0.021 0.022 0.023 0.1</td>
</tr>
<tr>
<td>(5) Selection and increased cultivation of superior Manula genotypes.</td>
<td>0.020 0.021 0.021 0.022 0.023 0.1</td>
</tr>
<tr>
<td>(6) Multi-purpose extraction, quality control and product development facility.</td>
<td>1.436 0.371 0.266 0.191 0.018 2.3</td>
</tr>
<tr>
<td><strong>4B.2 National-level Supportive Actions</strong></td>
<td></td>
</tr>
<tr>
<td>(7) Management intervention.</td>
<td>0.049 0.051 0.053 0.055 0.057 0.3</td>
</tr>
<tr>
<td>(8) Traceability and certification.</td>
<td>0.300 0.316 0.331 0.000 0.000 0.9</td>
</tr>
<tr>
<td>(9) Eco-Regional Satellite Centre (ERSC) networks for regional outreach.</td>
<td>0.270 0.108 0.113 0.117 0.122 0.7</td>
</tr>
<tr>
<td>(10) Additional first-level oil extraction capacity.</td>
<td>0.237 0.000 0.000 0.000 0.000 0.2</td>
</tr>
<tr>
<td>(11) Developing commercial (marketing and brand-building) partnerships.</td>
<td>0.197 0.205 0.103 0.107 0.111 0.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3.4 1.4 1.3 0.7 0.6 7.4</td>
</tr>
</tbody>
</table>

Activities are timed using best available market development information and assuming MCA funding becomes available by September 2007.

Expenditure is front-loaded to ensure transformational impact within 5 years, although ERR is calculated over 10 years to factor in impacts of activities that deliver in the longer term.

Recurrent costs proposed for MCA support during the 5-year intervention period are intended to have a rapid and transformational impact on the growth of the sector. Virtually all these costs are covered by commercialization after five years. The on-going expense of expanding production to more rural households after 2012 – i.e. the developmental work – could be covered from GRN budgets or through development cooperation. Even without any further support market forces will have made the bulk of the intervention sustainable by 2012.

Income streams for domestication and cultivation have been discounted for unproductive establishment period (e.g. Hoodia plantings only start yielding income halfway through Year 3).

**Technical Analysis**

The project design builds on Namibia’s excellent track record in natural product commercialization by incorporating best practices from cutting-edge examples in international markets, thereby setting a new international standard.
Inputs and costs are based on real production and market prices, adjusted conservatively for both inflation and increased efficiency.

There are always timeline issues in a rapidly growing industry, but the situation has been “lead” (i.e. adjusted forward) a bit, using expert guesstimates, to correspond as well as is possible to the situation anticipated to prevail in September 2007.

The project links to many other previous and on-going initiatives, but has been designed to complement these (except where possible double funding has been flagged explicitly). A major unknown is the rate and exact direction of “hostile” private sector investment over the next year (i.e. investment outside the PPT strategy).

Technologically and scientifically the project is feasible and practicable. To a large extent it involves up- and out-scaling proven models by working with established institutional structures and partners.

Strategies are in place to address technical capacity gaps by drawing on the expertise of specialist private sector partners and/or expert consultant and/or contract manufacturers as necessary.

**Economic Assessment**

The anticipated benefits as described in detail above have been translated into action specific ERRs. Regarding the development interventions required at national level it should be noted that since these activities are essential for the development of the whole Namibian natural products industry but are not directly linked (or attributable) to any particular revenue stream, their benefits are assumed to accrue entirely via the incomes detailed above. To calculate an “overall ERR” their costs have been offset against all incomes. It should be observed that this approach completely discounts the undoubtedly substantial multiplier effects, human and institutional capacity building, synergies, livelihood diversification and demonstration impacts.

The product specific ERRs and the overall ERR for national-level actions are presented in Table 6.3 below.

**Table 6.3: ERR Analysis**

<table>
<thead>
<tr>
<th>Product Specific Actions:</th>
<th>ERR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Expanding Wild Silk production through capital investment and training.</td>
<td>109%</td>
</tr>
<tr>
<td>(2) Domestication and cultivation of Hoodia.</td>
<td>12%</td>
</tr>
<tr>
<td>(3) Kalahari melon seed (KMS).</td>
<td>38%</td>
</tr>
<tr>
<td>(4) Devil’s Claw propagation and enrichment planting.</td>
<td>66%</td>
</tr>
<tr>
<td>(5) Selection and increased cultivation of superior Marula genotypes.</td>
<td>123%</td>
</tr>
<tr>
<td>(6) Multi-purpose extraction, quality control and product development facility.</td>
<td>14%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>National-level Supportive Actions:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall ERR</td>
<td>16%</td>
</tr>
</tbody>
</table>
The assumptions behind the ERR analysis are detailed in the “description of activities” and “benefits” sections above. They are informed by more than six years of intensive experience in developing the sector, three years of business planning for the development of the sector, current market information and very conservative growth assumptions.

The ERR analysis is extremely conservative. Because it is spread over many resources and activities it is also significantly buffered against one or a few adverse developments. In reality it should of course be expected that some activities will undershoot their targets, but the same number or more are likely to beat predictions.

Table 6.4: Sensitivity Analysis (on Overall ERR)

<table>
<thead>
<tr>
<th>Overall ERR</th>
<th>Decrease of 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Should growth in income change</td>
<td>15.46%</td>
</tr>
<tr>
<td>Should production volume change</td>
<td>14.38%</td>
</tr>
<tr>
<td>Should number of participants change</td>
<td>13.66%</td>
</tr>
<tr>
<td>Should price, volume &amp; participants change</td>
<td>11.37%</td>
</tr>
</tbody>
</table>

The project design responds to the notion that products that relate to health care and nutrition are notoriously susceptible to fads (or fashion). A sudden drop in the market value of a product could have serious consequences for producers, particularly given the long periods required between planting and first harvest. To a degree this risk can be managed by diversifying crops, and through keeping a vigilant watch on international market trends in order to anticipate declines in demand or prices. It goes without saying that marketing is essential and, if done properly, the products will perform well locally and internationally.

**Environmental Assessment**

This MCA Namibia investment is driven by a strong integration and understanding of conservation and biodiversity issues with socio-economic issues.

The actions relate to the production of a wide variety of Namibian indigenous plants, many of which have been used by traditional societies for generations, but cultivation for commercial markets is a relatively new practice.

The proposed products include Marula oil, Kalahari melon seed oil, Ximenia oil, Manketti oil, Baobab oil and pulp, !Nara oil, Mopane oil, Marula juice and fruit pulp, Commiphora resin, Devil’s Claw, Hoodia, Terminalia root bark, Manketti fruit pulp, and Makalani fruit, and also wild silk production.

Communities will be involved in growing, harvesting, extraction and beneficiation of products, transporting raw materials and intermediate products.

All of the target species were selected on the basis that they are either naturally resilient to harvesting. For example, Marula is a semi-domesticated resource that fruits prolifically. For some species methods for sustainable harvesting and management are known e.g. Devil’s Claw can be harvested repeatedly provided the taproots are not disturbed and some side tubers are left as water reservoirs. Hoodia can only be harvested if it is cultivated in greater numbers than are removed from the wild.

**Environmental benefits**

There are many environmental advantages in the use of indigenous plants (and caterpillars in the case of silk production). These include:

- Planting can be done within natural habitats without destroying those habitats.
- With indigenous species, the risk of plant disease and crop failure is probably low, providing that monocultures are discouraged.
- In the event of project failure due to external factors such as market collapse, the plants will not prove to be invasive or ecologically damaging.
- Community involvement and the optimization of economic benefits to primary producers help to promote conservation of the species utilized. However, caution must be exercised here. As product values increase, some individuals may be tempted to take a short term view and remove products from the wild rather than cultivating them. This type of issue will need to be managed by having growers and processors certified, and subscribing to a code of ethics that forbids buying of products “off the street” where the sources are not certified. Policing will also need to be increased. Offenders could perhaps be made to learn how to cultivate their own products, and maybe some innovative legal provision is needed.

**Potential adverse Bio-physical Impacts**

- Over-harvesting leading to local resource depletion or species extinction.
- Removal of fruits and seeds, especially from the wilds, would reduce natural regeneration of the affected species. However, natural regeneration in the wild is constrained by grazing and /or frequent wildfires. Research in communal areas suggests that it is those species that are most utilized that are assisted by people to become established in favored sites. Increasing the perceived value of indigenous plants is therefore a key conservation strategy.
- There is a risk of people taking the “easy route” and raping the veldt of wild fruits, rather than cultivating these plants.
- Mono-cropping of newly domesticated plants could lead to additional land clearing and biodiversity loss. Furthermore, monocultures are more susceptible to disease or crop failure and increases community exposure to the risks of crop failure. It would be wise to encourage the production of diverse crops and products.
- Long term cultivation may lead to genetic impacts as superior specimens are selectively harvested for seed.
- Soil erosion and loss of soil fertility is a potential threat if natural plant cover is removed. However, over vast areas that are covered by Kalahari sand, the ground is fairly flat and infiltration of rain is rapid. But trees and as much natural vegetation as possible should be left in place to prevent wind erosion of the fertile surface layer in cultivated areas. Moreover, the recycling of nutrients via natural leaf litter is essential to the maintenance of soil fertility, since quartzitic Kalahari sand is not inherently fertile.
- Terminalia root bark harvesting has not been promoted despite large commercial orders. However, it is a very common species that causes problems in some areas by invading large areas of grazing land. Consideration should be given to harvesting this root bark only in areas where it is naturally invasive – thereby opening up pastures at the same time as harvesting saleable product.
- There is a need for training in sustainable harvesting techniques that don’t damage the plants.
- Any extension to exotic plants poses a risk of introducing alien invasive species – this requires EIA.
- Climatic variability can reduce production and make supply unreliable. The variation in rainfall from year to year is enormous.
Environmental considerations must be applied in the selection of sites for processing plants. These should not be made near rivers, omurambas, and pans. Any waste products need to be managed and disposed of safely and without posing a risk of soil or groundwater contamination.

It is considered that all of these impacts are manageable. Even the vagaries of climate can be addressed to a degree by storing products for lean years, and through financial mechanisms to save money for lean years. It is of concern, however, that environmental management capacity in Namibia is poor in the public sector. As in many developing countries, there is a lack of financial and human resources within government, and arguably a lack of political will to take environmental considerations seriously. Environmental management is often erroneously perceived as a threat to development, rather than as a means to enhance the sustainability of development, and avoid projects that are not sustainable for environmental reasons. However, the GRN’s CBNRM policy, which gives local communities legal rights to manage certain natural resources, and the resultant involvement of communities, is helping to address this issue and promote understanding of environmental sustainability. Close collaboration and cooperation between producer organizations and conservation authorities need to be encouraged.

The EA Policy of Namibia requires EIAs for a number of actions. Of direct relevance to indigenous product cultivation are the following:

- Any government policy, programme or project on the use of natural resources”
- “Major agricultural activities (e.g. livestock and cultivation projects in previously undeveloped/unused areas)”
- “Deforestation projects”
- “Afforestation projects”

Also of potential relevance for some related activities are requirements for EIAs for:

- “Pest control programmes”
- “Significant use of pesticides, herbicides & defoliants”
- Small scale (formal) water supply schemes”
- “Storage facilities for chemical products” (fertilizers, pesticides, products?)
- “Bulk distribution facilities” (product storage facilities?)
- “Genetic modification of organisms & releases of such organisms” (Not proposed at this stage)
- “Waste disposal sites”

The use of groundwater for cultivation of any crops is discouraged by MAWF. However, if groundwater of suitable quality was used only for a year or two to get trees established, this would probably be acceptable, provided that a permit was acquired from MAWF, and that water was abstracted within the sustainable yield/capacity of the borehole.

The investment involving the cultivation of indigenous plants and beneficiation of the products is considered to be a **Category B** activity: potential impacts that are site specific, not irreversible, readily available mitigation measures. An environmental management programme is probably the best instrument for managing these activities. The EMP should be integrated in all training, and institutional development.

However, if it involves the large-scale clearing of virgin land (say, >5ha), it should be considered in **Category A** with a full EIA being conducted as well.
Social Assessment

Natural Resource Harvesting forms an important part of the livelihood systems of rural households. During the PPAs residents reported that many households engage in various forms of natural resource harvesting for its nutritional value, as an economic commodity that can be sold and to extract oils from these products. However, the utilization of these natural resources leans towards the poor and very poor households with those that are better off not bothering with these. Should they want any of these products they are the market to which those that engage in actual gathering activities sell their produce. It also became clear that it was mostly women that engaged in these activities. They were the ones that would cut and sell grass and harvest roots and berries in the forest areas. The assumption that this intervention will largely benefit the very poor and women is therefore supported by PPA findings. The proposed provision of equity in the PPT to the primary producers would also add benefit for the primary producers and enlarge their stake in the market. Barriers to entry are low and it would be easy for even the poorest of the poor to also benefit from the intervention. In addition, the unemployed youth in rural villages may find a niche that they could explore to become primary producers and earn cash income for them.

Although rural livelihoods are already diversified to include the harvesting of wild products, it is mainly used for own consumption and the potential of many of the products they already used is not fully known to them. The intervention would therefore add an additional dimension to the harvesting and use of wild products and thereby assist in the diversification of rural livelihoods. There would, however, be a danger that the more affluent villagers would, once they see that there is income to be gained from these activities, also enter the market and compete for resources with the very poor. During the process of recruiting primary producers and during the process of building the certification system, care must be taken to ensure the participation of women and the especially vulnerable groups and to protect them against competition from more affluent villagers. Power relations between rich and poor at village level is uneven and there is a real danger that, if a profitable venture, the rich will make use of connections and influence within the traditional and formal system to benefit themselves. Beyond the village level, there is a need to establish mechanisms that optimize the return to primary producers. For growers, offers from middlemen to buy out their plantations would be tempting for someone who previously had a very low income and faces the prospect of suddenly having a large sum of money. If they succumb to the temptation and sell their plantations or surrender rights to the land, then they will end up poorer and landless. Partnerships between growers/producers and financial partners need to be carefully considered so that neither party can be “held to ransom” by unscrupulous partners. The strategy to work with existing CBO and groups such as women’s groups, or CBNRM organizations should assist in dealing with this potential threat.

The gender mainstreaming of many of these activities is demonstrated through the wild silk project, which is almost exclusively done by female weavers. The harvesting of devil’s claw is accessed by all genders and many San people (probably the most vulnerable group in Namibia) in the Omaheke, and Otjozondjupa Regions also engage in this activity as an important source of livelihood.

Participation of Development Partners

The first Trial Marula Oil Production project was funded by the Office of the President, the Ministry of Trade and Industry (MTI) and the Namdeb Social Fund. DFID Enterprise Development Fund later supported further phases. The initial IPTT budget of NAD2.5 million was provided by GRN (from the MAWF’s capital development budget). It was later supplemented by the Useful Plants Development Project, funded to the tune of NAD2 million
from income generated by the sale of food aid donated by the USA. The EU and Oxfam have made significant contributions, especially to Devil’s Claw. Oxfam also co-funded Wild Silk development with MAWF. The national Devil’s Claw situation analysis was funded by IDRC Canada. The Swedish Local Environment Fund kick-started Ximenia oil production with a grant channeled through the Namibia Nature Foundation’s Small Grants Programme. CARE Austria funded the first Manketti oil production project and Luxembourg Development co-funded the second. Significant support was received from the National Agricultural Support Services Programme (NASSP), funded by the 8th European Development Fund, for setting up the ERSCs, developing Devil’s Claw cultivation techniques, bringing community level growers into Hoodia and succulent production, working with indigenous vegetables, and training interns. The EU also funded the Kalahari Livelihoods Programme. FAO funded a project on domestication of indigenous fruit trees. USAID funded research into co-cultivation of melons and Kalahari truffles through Ben Gurion University; much more importantly, its funding over more than 10 years for CBNRM (through the WWF LIFE project) has resulted in Namibia having the best programme of this kind in the world, which present a brilliant foundation for the implementation of large parts of the strategy proposed for MCA support. Gaia Foundation/GRAIN, the Embassies of Finland and France, the British High Commission, the US Environmental Protection Agency, UNCTAD, People and Plants International, the International Programme for Arid Land Crops, the International Centre for Underutilized Crops, the German Ministry of the Environment, the Eden Project, Biowatch and Enterprise Works Worldwide have supported smaller, synergistic or learning initiatives over the years (apologies if this is not a comprehensive list).

Current ODA funded initiatives in Namibia that are relevant to natural products commercialization include the GEF-funded Integrated Community Ecosystem Management (ICEMA) project in MET, and especially its High-Value Plant Species sub-component, funded by the French Fund for the Global Environment (FFEM). The LIFE Plus project co-funded by USAID, WWF, IRG, CLUSA and NNF is contributing to the pilot organic certification project, which is also supported by the Natural Futures partnership between IUCN South Africa and PhytoTrade Africa (with money from the Kellogg and Ford Foundations, and DFID). PhytoTrade Africa also continues to provide valuable market and product R&D services with funds from the International Fund for Agricultural Development (IFAD) and HIVOS. Germany is funding GTZ to implement a biotrade project with MET. KfW is funding DED to implement the Community Forestry in North-Eastern Namibia project. The 9th EDF’s RPRP might yet fund some natural product interventions. FAO is supporting synergistic activities through its National Forestry Programme facility. The SADC FIRCOP programme is expected to support further domestication research in the Kalahari ecosystem. Regionally there are too many related projects to mention here.

The specific MCA interventions proposed above were explicitly designed to complement and/or add value to sunken, on-going and forthcoming donor interventions. Channeling MCA funding through the IPTT will help to reduce overlaps and redundancies, and to maximize synergies. Creating primary producer equity through the PPT mechanism will turn historic and on-going donor and State interventions into long-term value for poor rural people, who will become co-owners of the global economy, rather than merely its hewers of nuts and drawers of juice.

Risk Assessment

The main risk inherent in natural products commercialization projects is that they run out of money and steam before the products are mature enough to develop and grow without support. This is especially true for “development project” commercialization of natural products where the promoters – typically NGOs or research organizations – do not have the long-term institutional continuity (even when they have the funding) required to bring
business partnerships between primary producers and commercial operators to fruition (and thereby establish a self-sustaining value chain). This is not surprising, considering that it takes five to ten years to bring a new natural product to market, while most development programs have a time horizon of four to five years at most.

Namibia’s indigenous plants sector has come of age and is now ready for a large up- and out-scaling of production to chase a clearly established market demand. This allows an opportunity to use the income and momentum from successful “pioneer” products to fuel the development of products further back along the pipeline. Such a “spread-betting” strategy helps to minimize the risk on any one or two product(s). The institutional constellation proposed for the MCA intervention has moreover demonstrated its stick-to-itiveness over more than a decade. Resourcing the PPT to form long-term alliances with private-sector partners will further obviate this risk.

In Namibia’s semi-arid environment an obvious and real inherent risk (it has already happened twice) is climatic variability, especially drought, which can depress production, disrupt supply and upset markets. The only way to remove this risk is through adequate stockpiling, which until now has not been an option (either because there was no stock to pile, or there was no money to invest in stock to pile). Part of the operational costs budgeted for the multi-purpose facility is intended for investment in such strategic reserves. In the meantime is has been possible to manage the worst effects of drought-related crises through open and transparent information exchange with commercial partners, and back-up supplies from other areas.

The PPT equity ownership mechanism proposed for MCA support is explicitly designed to mitigate the inherent risk of an economic elite appropriating – through rent-seeking or direct privatization of common resources – the benefits of natural product commercialization initiatives. This entrenches the poverty-reduction effects of the project to a significant extent while still allowing local investors to take part in the economic opportunity through equitable deals with the real harvesters (who are also the real custodians of the resources).

A somewhat more abstract, but nevertheless very dangerous, inherent risk is that the MCA investment in national production capacity and the resulting business configuration is perceived by the international private sector to be a parastatal institution. This will deter serious investors and attract fly-by-night operators. To manage this risk it is crucial that the PPT positions itself as a “sleeping partner” for serious commercial interests, which have good track records of achievement in the industry and explicit commitments to ethical partnerships and trade. If the PPT were to assume an “activist shareholder” position it will not be an attractive partner, and it will not achieve much to alleviate poverty, either.

The main external risk to the strategy proposed for MCA support is that other producers enter the same markets with large volumes of the same products, at much lower prices. In reality, and in the medium (5-10 year) term, this is assured for Hoodia (from South Africa), likely for Manketti oil (from Zambia) and maybe Marula oil (from Zimbabwe, Zambia or Mozambique); it is also possible for KMS oil and Ximenia oil (no clear competitor yet, but both are widespread species). However, given its existing lead, the MCA investment in QC detailed above, and the wider range of more mature products and producers Namibia has to offer, this risk should be relatively simple to manage over the next ten years, because Namibia will be in a position to out-compete, and/or productively collaborate with, its neighbors.

A different but related external risk is that wannabe competitors put inferior products on the market and destroy the reputation of a particular valuable resource. There is a real danger of this happening with Hoodia. The answer to this problem is to have traceability, certification and QC capacity that can pass the strictest international due diligence
assessments. Having such capacity will position Namibia to pick up trade forfeited by less scrupulous competitors.

Any business that exports a significant portion of its production runs global trade risks such as dramatic exchange rate fluctuations, unforeseen economic upheavals, or protectionist measures in key markets. The current international interest in helping Africa to break free of poverty suggests that these risks are likely to be kept in control for the foreseeable future, at least when it comes to pro-poor natural products.
7. MCA Namibia Investment B – Rural Access Roads

Introduction

GRN recognizes the strategic importance of the transport sector and as such accords it high priority in its development agenda and strategies. The sector’s Mission Statement in the Second National Development Plan (NDP2) reads:

“to contribute to national sustainable development through coordinated provision of transport services that are equitably distributed across regions and people, are environmentally friendly, and contribute to economic growth, employment creation, poverty alleviation and reduction of income inequalities”.

Both the PRS and NPRAP name improvements in the transport sector as important contributors to a major means of reducing poverty and boosting economic growth.

Namibia has in place a Rural Areas Road Development Policy and Programme, which provides a framework that guides MWTC in fulfilling its mandate of providing accessibility to rural areas in Namibia. The policy embodies the GRN’s aspirations and commitment on developing rural access roads as a catalyst and instrument for stimulating economic growth.

The framework outlines the responsibility of various parties, funding arrangements and minimum standards among other aspects are highlighted. Within this context, rural access roads are broadly defined as “roads that promote reasonable accessibility for motorized and non-motorized vehicular traffic to rural communities and rural service centers”

Rural access roads are in the majority of cases “district roads” in communal areas, defined functionally in terms of the Roads Ordinance 17 of 1972, and part of the proclaimed road national network. Whereas the RFA shares in the responsibility of providing for financing, the Roads Ordinance 17 OF 1972 in particular compels the MWTC to provide for up to 50% thereto.

The Medium to Long-term Road Master Plan is the supporting functional instrument for the identified roads. The programmes for rural access roads developed via the Regional Road Master Plans are incorporated into the RA’s medium to long-term planning, for purposes of determining budgeting requirements and meeting other policy provisions. It is the statutory responsibility of both the RA and RFA to maintain minimum standards on Namibian roads. Thus an annual budget for the construction as well as maintenance of rural access roads is part of the responsibility of the RA. Regional Roads Master Plans are also in place for a selection of Namibia’s 13 regions.

The Namibian road sub-sector comprises four core organizations. These include two parent ministries, the Ministry of Works, Transport and Communication (MWTC), which includes the Department of Transport and Communications (DTC), and the Ministry of Finance (MoF) and two semi-autonomous entities, the Roads Authority (RA) and the Road Fund Administration (RFA).

The current organizational and institutional set-up is largely a result of structural reforms undertaken since the early 1990s. The reform programme was developed in two phases. The first phase (1990-95) emphasized mainly road taxation and road funding issues, including a system of road user charges. The second phased, starting in 1994, formulated a broad and comprehensive approach to the restructuring of the Ministry, the MWTC2000 Project. In 2000 the RFA was created in 2000 to manage the Road Fund and the road user charges and the RA to manage the national road network. The plant pool and the force account units were commercialized in the establishment of the Roads Contractor Company

(RCC), which competes in the open market for road construction and maintenance contracts. MWTC remains in charge of policy development in the sector.

The NCA – Kunene, Oshikoto, Oshana, Omusati, Ohangwena, Kavango and Caprivi regions – are the most densely populated parts of the country both in terms of human and livestock populations. About 60 per cent of Namibia’s population live in the NCAs, which comprise 32% of the country’s surface area. In the decades prior to independence in 1990, public investment and development resources were concentrated on the commercial farming areas of Namibia, south of the VCF, comprising 45% of the surface area and hosting 40% of the population. Only about 10% of roads were located in the NCA at independence. While GRN has invested heavily in the transport sector since 1990, a glance at today’s roads map clearly shows the remnants of apartheid in the historical pattern of roads network concentration in the commercial farming areas.

The transport sector functions as a catalyst for development in all other sectors of the economy providing physical integration at national and regional level. The availability, quality and cost of transport infrastructure and services play an important role in economic growth and employment generation. The vastness of Namibia, the long transport distances and relatively low population densities demand an extensive road network and related transport services.

Namibia has more kilometers of roads per capita or per vehicle than any other country in Africa, and probably also in comparison with most other countries of the world. In 1990, there was 0.029 kilometer of road per capita in Namibia or 0.32 km of road per vehicle in the country compared with 0.007 kilometers per capita and 0.07 kilometers per vehicle in South Africa.51

The provision of rural access roads will improve access to markets, employment opportunities, training, education, health and other social services.

Since it is mainly women who transport goods to local markets, an improved rural transport system will also contribute to reducing gender inequalities and raising household incomes. In the wider context, rural access roads eventually impact onto the main trunk roads and are thus indispensable in facilitating economic activity and completing national and cross-border connectivity.

GRN accords particular preference to labor-based techniques of road construction and maintenance for its significant direct impact on employment creation, skills development and poverty reduction. This technique has been put to use on a number of roads including the Ongwediva-Ongha and Onyaanya-Okankolo roads.

Equally important is the fact that construction and maintenance works on rural access roads are to take into consideration the employment of women. Tender specifications by the RA point contractors to the country’s principal labor laws including the Labor Act (1992), Affirmative Action Act (1998) and Health and Safety of Employees at Work Act (1997). These specifications are however devoid of exact provisions on the employment of women as a special group. At best, they refer broadly to addressing specific needs (for example training) of disadvantaged groups. Despite this policy “shortcoming” (lack of specificity) practical experience has shown that women often form part of the workforce of particularly labor-based projects. In the interest of equity and empowerment on MCA funded road projects, the MCA could specify and reserve an employment quota for women.

The MCA Namibia investment in rural access roads will support the actions directed at increased production of large and small stock and mainstreaming of the commercial

51 White Paper on Transport Policy: 1995, 2-1
marketing thereof. Without rural access roads, farmers will not be in a position to transport the envisaged higher off-take of livestock to the quarantine camps, feedlots and abattoirs in a cost-effective manner. This would erode the benefits to accrue to the communal farmers from marketing their cattle more regularly and at a younger age. The selection of the rural access roads to be funded by MCA Namibia is mostly driven by the MCA investments into livestock sector development, yet they also support access to the tourism nodes that are located north of the VCF in the NCA. These are complex I (Etosha-Skeleton Coast National Park-Kunene River), complex II (Etosha North-South-East) and complex III (North-East Parks).

The proposed investment in rural access roads will complement and fast-track development in the NCA and increase the standard of living of individuals and households in the communal areas north of the VCF.

**Description of Activities**

A total of 6 gravel roads will be constructed and one rural access road will be upgraded from gravel to bitumen faced. These 7 roads cover a total distance of 1,008 km and are located in the Omaheke, Omusati, Ohangwena, Oshikoto and Kunene regions. These 7 roads are selected from a much larger number of rural access roads that had initially been identified for possible funding by MCA Namibia. This was done through a process of extensive community level consultations, stakeholder consultation at national level and economic analysis. MWTC, the Roads Authority, the MCA Namibia team and MAWF and MET all contributed to the final selection.

They are listed in Table 7.1 below. They all have a significant impact on the MCA investment in the livestock sector and their anticipated impact on tourism is described in the last column of the table.

**Table 7.1: Rural Access Roads selected for MCA Namibia**

<table>
<thead>
<tr>
<th>no.</th>
<th>Description</th>
<th>Region</th>
<th>km</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>gravel roads * bitumen faced **</td>
<td>Omaheke Omusati Ohangwena Oshikoto</td>
<td>1,008</td>
</tr>
<tr>
<td>#1</td>
<td>New link from Oshikango to Omundaungilo *</td>
<td>Ohangwena</td>
<td>74</td>
</tr>
<tr>
<td>#2</td>
<td>D3600 from Tsintsabis to Katwitwi *</td>
<td>Kavango &amp; Oshikoto</td>
<td>180</td>
</tr>
<tr>
<td>#3</td>
<td>New link from Omutambo Mawe to Okahao *</td>
<td>Omusati</td>
<td>111</td>
</tr>
<tr>
<td>#4</td>
<td>Okahao to Okakange *</td>
<td>Kunene</td>
<td>120</td>
</tr>
<tr>
<td>#5</td>
<td>D3403 from Divundu to Mohembo **</td>
<td>Kavango</td>
<td>32</td>
</tr>
<tr>
<td>#6</td>
<td>D3301 and D3830 from Epukiro to Eiseb Block *</td>
<td>Omaheke</td>
<td>222</td>
</tr>
<tr>
<td>#7</td>
<td>New link from Omuthiya to Omutambo Mawe *</td>
<td>Oshikoto &amp; Omusati</td>
<td>269</td>
</tr>
</tbody>
</table>
Benefits

The proposed roads run through rural areas, whose economies are based on mixed farming consisting of mainly subsistence crop production, and subsistence/cash livestock husbandry. Cattle and livestock products dominate the cash and trade component of most rural economies in the NCA. All selected rural access roads with the exception of Road #5 pass through extensively-grazed cattle post areas where the larger cattle herds, ranging from 20 to 1,000 head in herd size, are grazed and managed.

Cattle off-take rates for the 1.2 million cattle in the NCA (which comprises around half of the national cattle herd) are reported to be about 1-2% for the formal sector i.e. marketing through MeatCo into Oshakati abattoir, from where meat is exported chilled from the region to the rest of Namibia and into South Africa. For Kunene and Caprivi regions, current off-take is estimated at about 4%, and in the communal areas of Omaheke region about 5%. There is reported to be an additional 1-2% off-take for slaughter into the local informal sector. Communal area off-take rates are very low compared with the 25% off-take rate from the herds of the commercial areas.\(^{52}\)

Sixty per cent of the cattle slaughtered at Oshakati abattoir are from the Kunene region, an area where animal husbandry and livestock grazing is traditional, where average herd sizes are relatively large, and off-take rates are higher than elsewhere. Average herd sizes in northern Kunene are around 40 cattle per household, compared with 13 in the Caprivi and 7 overall for the NCA.\(^{53}\) An increase from 1-2% off-take to 5% off-take is anticipated in the NCA, except for Kunene and Caprivi, as a direct consequence of the construction or upgrading of the roads. For Kunene and Caprivi, “with road” projected off-take is 8%, and for Omaheke 10%.

MeatCo anticipates that the proposed road building and improvement would stimulate around a doubling of current off-take rates in the areas of influence of the proposed roads. The incentives for this response would be from a combination of savings on transport costs to and from quarantine camps and to the abattoirs (quarantining is a disease control prerequisite for cattle off-take north of the VCF), and savings in animal weight loss and condition caused by long periods of trekking or trucking to and from quarantine camps. The same is true for access to feedlots.

Improved access of veterinary services to the areas associated with nearly all the roads would also have productivity benefits for farmers and the livestock industry as a whole. Vaccination campaigns must be executed effectively against Foot and Mouth Disease (FMD) (with vaccinations once a year in all NCA regions except the Caprivi where cattle is vaccinated twice a year), and lung sickness (Contagious Bovine Pleuro-Pneumonia, CBPP). FMD has not officially been recorded in the NCA since 1992 in Kavango and in 2000 in Caprivi, while lung disease is endemic. In the north-central and Kunene areas, FMD has not been recorded since 1964. FMD, however, remains topical and nearby. It is currently present in eastern Botswana probably as a result of cross-border movement from Zimbabwe, and in the Chobe District adjacent to Caprivi region. The reasons for current low livestock off-take rates in the communal areas are a complex of economic and socio-cultural factors. Low realization prices in the NCA as a result of quarantine, transport and loss of weight/quality are certainly one of the reasons. Transport

\(^{52}\) Estimates from MeatCo and see Table 3 of Reconsidering Policies to Encourage Formal Livestock Marketing in the Northern Communal Areas, Division of Policy and Planning, Ministry of Agriculture, Water and Forestry, May 2005.

\(^{53}\) See Table 4, Reconsidering Policies to Encourage Formal Livestock Marketing in the Northern Communal Areas, Division of Policy and Planning, Ministry of Agriculture, Water and Forestry, May 2005.
costs related to loss of weight and condition en route to the abattoir, and the costs of trucking, relating to the current situation are illustrated in Table 7.2. Transport related deductions/losses would be halved in some of the areas influenced by the roads under review as shown in the Table.

**Table 7.2: Illustration of Transport Related Disincentives to Livestock Marketing**

<table>
<thead>
<tr>
<th>Item</th>
<th>Kunene/North Central (NAD)</th>
<th>Kavango (NAD)</th>
<th>Caprivi (NAD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight/quality loss during transportation and trekking</td>
<td>107</td>
<td>107</td>
<td>84</td>
</tr>
<tr>
<td>Transport to abattoir</td>
<td>150</td>
<td>165</td>
<td>25</td>
</tr>
<tr>
<td>Transport to quarantine</td>
<td>50</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>Total Transport Related Deductions</td>
<td>307</td>
<td>322</td>
<td>124</td>
</tr>
<tr>
<td>Gross Value of Animal: 200kg @ 10 NAD/kg</td>
<td>2,000</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td><strong>Transport deductions as a % of Gross Value</strong></td>
<td><strong>15%</strong></td>
<td><strong>16%</strong></td>
<td><strong>6%</strong></td>
</tr>
</tbody>
</table>

Source: MeatCo

Apart from livestock marketing, provision of rural access roads will markedly contribute to other aspects of poverty alleviation. The economic livelihood of communities within the sphere of influence of the proposed roads is expected to improve with easy access to socio-economic services and amenities (schools, health facilities, markets, etc.). Longer distances plus bad road conditions negatively impact on the input cost of production and ultimately the cost of services and/or products. Typically, the cost is passed on to the end user. Provision of access road infrastructure in itself is a prerequisite for unlocking private sector investment in remote, isolated, rural places.
### Costs

#### MCA Investment A: Rural Access Roads

<table>
<thead>
<tr>
<th>Road No</th>
<th>Description</th>
<th>Length (km)</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>New link from Oshikango to Omundaungilo</td>
<td>74</td>
<td>4.4</td>
<td>0.5</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>4.9</td>
</tr>
<tr>
<td>#2</td>
<td>D3600 from Tsintsabis to Katwitwi</td>
<td>180</td>
<td>2.9</td>
<td>4.7</td>
<td>3.9</td>
<td>0.0</td>
<td>0.0</td>
<td>11.5</td>
</tr>
<tr>
<td>#3</td>
<td>New link from Omutambo Mawe to Okahao</td>
<td>111</td>
<td>3.3</td>
<td>4.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>7.3</td>
</tr>
<tr>
<td>#4</td>
<td>Okahao to Omakange</td>
<td>120</td>
<td>0.0</td>
<td>5.7</td>
<td>10.9</td>
<td>10.9</td>
<td>1.0</td>
<td>28.4</td>
</tr>
<tr>
<td>#5</td>
<td>D3403 from Divundu to Mohembo</td>
<td>32</td>
<td>9.4</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>9.4</td>
</tr>
<tr>
<td>#6</td>
<td>D3301 &amp; D3830 from Epukiro to Eiseb Block</td>
<td>222</td>
<td>2.9</td>
<td>4.7</td>
<td>4.7</td>
<td>2.3</td>
<td>0.0</td>
<td>14.6</td>
</tr>
<tr>
<td>#7</td>
<td>New link from Omuthiya to Omutambo Mawe</td>
<td>269</td>
<td>2.9</td>
<td>4.5</td>
<td>4.5</td>
<td>4.5</td>
<td>1.2</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>1,008</strong></td>
<td><strong>25.8</strong></td>
<td><strong>24.1</strong></td>
<td><strong>24.0</strong></td>
<td><strong>17.6</strong></td>
<td><strong>2.2</strong></td>
<td><strong>93.7</strong></td>
</tr>
</tbody>
</table>

Regarding the timing of the investment, the following observations are made:

- Good supervision on a labor based construction project can produce a total of 3.0 km/month.
- Equipment based construction can achieve 300m/day @ 21 days/month = 6.6 km/month.
- An average production for constructing a gravel road has been taken as 5.16 km/month. A combination of labor-based and more capital intensive road construction is foreseen.
- For the upgrading of the gravel road to a bitumen faced road (road #5), it is assumed that 3.2 km can be finished per month.
- Road #3 and #6 need to be constructed as a priority in immediate support of the MCA Namibia investment into livestock production and marketing.

#### Technical Analysis

The Roads Authority of Namibia was established through an act of Parliament, Act No 17 of 1999 and the entity was formally launched on 1 April 2000. The Authority is 100% owned by GRN. The Mission of the RA is to manage the National Road Network and support our stakeholders in road – sector related matters in accordance with our distinct legislation and agreed – upon standards and principles. This is done with a view to achieving a safe and efficient road sector, thereby promoting economic growth. The RA is obligated to plan, design, construct and maintain the national road network and to ensure that work contracted
out is performed according to set specifications and standards. The RA is also responsible for the operation of a pavement (road) management system and the prevention of excessive damage to roads by enforcing legislation in place for this purpose.

The divisions and sections within the RA contribute towards the achievement of the overall objective of the Authority. The various sequences in a road development project typically involve the Division Network Planning and Consultation; Division Construction and Rehabilitation; and Division Maintenance.

Since its establishment in 2000 up to date, the RA has commissioned and constructed projects to the value of NAD1.4 billion including construction of new gravel roads, rehabilitation of gravel and paved roads, construction and rehabilitation of bridges, construction of weighbridges. The total length of the roads network rehabilitated and/or constructed during this period totals 1,056.5 km with 245 km new gravel roads and a further 811 km of rehabilitation/upgrading of gravel and paved roads.

Of importance are the scope (nature of the work), time, cost and risk of the project. An early and successful completion of a project is desired. Standards used in RA projects should equal or exceed the minimum given in design guidelines and manuals taking into account cost and related benefits, socio-economic and environmental impacts. Different activities within the project can overlap.

**Table 7.3: RA Typical Project Cycle**

<table>
<thead>
<tr>
<th>Item</th>
<th>Activity (Report)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Initiation</td>
<td>Identification</td>
</tr>
<tr>
<td></td>
<td>Pre-feasibility</td>
</tr>
<tr>
<td></td>
<td>Feasibility</td>
</tr>
<tr>
<td>2. Planning</td>
<td>Detail design</td>
</tr>
<tr>
<td></td>
<td>Tender Documentation</td>
</tr>
<tr>
<td></td>
<td>Tender Evaluation and award</td>
</tr>
<tr>
<td>3. Design</td>
<td>Contract management</td>
</tr>
<tr>
<td></td>
<td>Project supervision</td>
</tr>
<tr>
<td></td>
<td>Construction</td>
</tr>
<tr>
<td></td>
<td>Completion</td>
</tr>
<tr>
<td></td>
<td>Handing - over</td>
</tr>
<tr>
<td>4. Construction</td>
<td>Routine repair work</td>
</tr>
<tr>
<td></td>
<td>Periodic repair work</td>
</tr>
<tr>
<td></td>
<td>Minor improvements</td>
</tr>
<tr>
<td></td>
<td>Assess road condition with RMS</td>
</tr>
</tbody>
</table>

The RA employs the best possible technical standards in the construction and maintenance of road infrastructure. Partially due to this practice, Namibia is placed amongst the best in road network development and management on the African continent. SADC and other global protocols on road infrastructure standards are taken into consideration thereto.

In order to minimize damage to the country’s road network, the RA in cooperation with other law enforcement agencies administers policies against ill-practices such as vehicle overloading. Thus weighbridges are positioned at strategic points across the country. In this regard, enhanced harmonization of policies and standards is critical in creating synergy and curbing spill-overs of cross-border lawlessness.
Economic Assessment

The World Bank Roads Highway Design and Maintenance Standards (HDM version 4) programme software, was employed in running the economic evaluation to calculate the internal economic rates of return (IERR) to provide an indicative estimate of the economic viability of the proposed roads. This is based on transport costs savings and does not include any other quantified exogenous benefits. The model was calibrated in August 2006. The IERR measures the benefit based on incremental value added to the national economy. The non-quantified assessment also takes account of development benefits from tourism, livestock marketing and related environmental benefits from increased cattle off-take in environmentally sensitive areas.

In the individual Road Profiles, qualitative account has also been taken of other economic activity, mainly the impact on tourism. Although a utility analysis could not be carried out during the preliminary road appraisal stage, such will be required for the programme appraisal. This will involve the development of an appropriate Utility Index combining strategic, economic and social impacts of the projects.

Five of the seven selected rural access roads record an IERR exceeding 10%, which is the conventional cut-off social discount rate for public investment into roads in Namibia. The cut-off rate reflects the opportunity cost of capital in the economy. For Road #5 a full Feasibility Study is available.

Road #7 has been included for its potential high impact on opening up livestock marketing opportunities and creating access to the newly created tourism establishments under MCA investment 2 and 3. Its IERR does not meet the threshold yet there are compelling arguments – listed below under the Road Assessment Profiles for each selected road – to include the new link between Omuthiya to Omutambo Mawe in the MCA investment package for rural access roads.

Road Assessment Profiles were prepared for each road to record their main features, and to assess their strategic, economic and social significance. They are presented in Table 7.4 below.

<table>
<thead>
<tr>
<th>Assessment</th>
<th>IERR indicative</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 New link from Oshikango to Omundaungilo</td>
<td>24.8%</td>
</tr>
<tr>
<td>Part of the rationale for the construction of this gravel road is to link up with the Trans Caprivi Highway and to strengthen cross-border security. It would provide a link from a rural, medium density populated area to the urban areas around Oshakati, and to the railhead at Ondangwa. There is a lot of economic activity taking place at Oshikango. A major road network connecting Oshikango to Oshakati and Ondangwa is already in place. The eastern Ohangwena is not properly connected to Oshikango. With this road, agricultural products and other goods destined for Oshikango can be transported without passing through Oshakati or Ondangwa. The road’s area of influence appears to be well provided with schools. The impact of the road on access to schooling would be low.</td>
<td></td>
</tr>
<tr>
<td>#2 D3600 from Tsintsabis to Katwitwi</td>
<td>23.1%</td>
</tr>
<tr>
<td>This road would play a strategic role in developing the international cross-border commerce and trade link at Katwitwi between south-central Angola (e.g. Menongue) to north, central and southern Namibia and on through to South Africa. Currently, southern traffic using the Katwitwi border post (current average daily traffic is in the range 60-70 vehicles per day) travel from Otavi via Rundu. The new road would</td>
<td></td>
</tr>
</tbody>
</table>
connect with the National Trunk Road network, and would save 173 km on the journey from Tsumeb to Katwitwi and also improve intra- and inter-regional traffic movements along the borders of both Kavango and Oshikoto regions.

The alignment of this road is also a possible site for a major new water pipeline from the Kavango River to central and possibly northern Namibia. Current cattle numbers on the Tsintsabis-Katwitwi road are low because of its bad state.

A good road and further opening/developing of the land (water) cattle numbers would increase with more people settling there. The road would be used to take cattle out of the extensive cattle post areas in Oshikoto and Kavango regions, to the Oshivelio/Mangetti Quarantine Camp.

The road would be connected to the new east-west tourist route running from Kaudum National Park to northern Etosha.

Katwitwi is earmarked for upgrading to a settlement status in the medium term, providing an expanded range of commercial services with increased flows of traffic from central and southern Namibia and from southern Angola.

Since the road for most its length runs mainly through cattle post areas, human population is scattered and low density.

There are 17 primary schools with an average of 100 pupils each in the area of influence of the road. The area is characterized by a relative lack of school facilities and long distances to school. The nearest combined Grade 8-10 school is at Mpungu, with a Grade 1-10 school in Tsintsabis. A road would allow consideration for the establishment of a secondary school at a more central location.

#3 New link from Omutambo Mawe to Okahao

This road is significant inter-regionally since it would improve livestock movement between north and central Kunene region via the Omutambo Mawe Quarantine Camp and into Oshakati abattoir. It is expected to exert an impact on sustainable development since it would facilitate cattle off-take out of the environmentally fragile northern Kunene region.

Farmers from central Kunene Region and from central and southern Omusati, market large volumes of cattle through the Quarantine Camp at Omutambo Mawe. It is estimated that around 60% of the animals going into the Oshakati abattoir (12 year average, 13,000 cattle slaughtered per annum) go through Omutambo Mawe Quarantine Camp. Farmers experience difficulties in transporting their animals to the abattoir since there is no proper road connection from Omutambo Mawe to Okahao. With this new road, the distance saving for traffic moving from Omutambo Mawe to Okahao to proceed to Oshakati instead of the existing routing Omutambo Mawe via Omakange to Okahao is 94 kilometers i.e. a 46% saving. There would also be savings to farmers on productivity loss as a result of transport into and out of the Quarantine Camp. The existing tracks are practically impassable to vehicles, and animals are trucked long distances to the markets. This contributes to the poor quality of animals for the meat market that negatively affects farm incomes.

The road would be connected to the extreme western end of the east-west tourist route from Kaudum National Park to Etosha, and would enable tourist access via Okahao to Kunene. Okahao is scheduled to be upgraded to a town in the medium term.

Relative to other roads, human population density is quite high. There are 15 primary schools and two secondary schools though mainly concentrated in the southern section of the road. The northern area is therefore characterized by a relative lack of school facilities and long distances to school in the road’s northern section.
#4 Okahao to Omakange
This is the western extension of the Trans Caprivi cross-border transport corridor. Cattle populations in northern Kunene are high. The road would ease environmental pressures on the vulnerable and erratic rainfall areas of northern Kunene by facilitating cattle off-take to the abattoir at Oshakati. It would also open up access to social services for communities along the route.

As elsewhere, the marketing of cattle from north-eastern side of the Kunene region is constrained inter alia by high transportation costs. Northern Kunene cattle provide around 60% of the through-put at the Oshakati abattoir. The eastern section of the road would facilitate livestock marketing through Quarantine Camp 14 at Etanga, out of environmentally sensitive northern Kunene, to the abattoir and market in Oshakati.

Tourism already plays a role in the road’s (west section) area of influence and the route would ease access for tourists into central Kunene. Significant tourism initiatives are foreseen by GRN, which include the development of a Namibia/Angolan trans-frontier protected area54. There are currently numerous community conservation initiatives in Kaokoland comprising registered and emerging conservancies. They generate valuable income through tourism and hunting55. However, care will be needed to regulate and protect a sensitive environmental and cultural area.

The Ministry of Mines and Energy (MME) is interested in this road as a result of mineral deposits in the area, and difficulties with the transport of minerals out of the area to Walvis Bay. Potential mining operations have been identified in the Opuwo area, and several new mining licenses have already been issued or are pending for precious, semi-precious stones, copper, iron, gold, silver, lead56. MME anticipates that the mining potential and exploitation in the region (especially in the north western area, west of Omakange), would increase significantly with improved access57.

There are five schools at the eastern end of the western section, while the east section of the road appears to have only one primary school along its length. If this is the case, then the road area of influence is severely under-provided with schools, and travel distance to school is a major issue.

#5 D3403 from Divundu to Mohembo
This road provides a link between Namibia and Botswana. It will also complete a tourist route incorporating these two countries together with Zimbabwe and Zambia. The road in its present state is rendered impassable during the rain season making the cross-border link between Namibia and Botswana a challenge.

There are six primary schools and a combined school in the road’s area of influence. Travel distances and access are not a major issue in relation to this road.

#6 D3301 & D3830 from Epukiro to Eiseb Block
The Epukiro-Eiseb Block road would connect the Eiseb and Gam Settlements in the western part of Omaheke to central Namibia. It would connect these remote settlements to main centres such Gobabis in the south, and to Windhoek through Gobabis. The road would also enable the residents of the area to connect to Otjiwarongo via the Otjinene-Okakarara road. The relatively small size of the settlement mitigates its significance in terms of strategic transport links.

This road is essential for the MCA investment into the unlocking of the Eiseb block, creating 120 new farms for resettlement. During the consultative process, communities

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55 Rundu - Cape Fria Road, Environmental Pre-Feasibility, Africon, June 2006, p20.
56 Pre-Feasibility Study of the Trans Caprivi Highway from Rundu to Cape Fria, op cit, p 23.
57 Rundu - Cape Fria Road, Environmental Pre-Feasibility, op cit, p34.
indicated their preference for this road over an alternative road initially proposed, namely the D3806 and D3831 Otjinene to junction Gam/Eiseb road. The road would enable the transportation of animals and other agricultural produce to the markets of Gobabis. Farmers and residents of Eiseb will also have easy access to rest of the Omaheke Region.

Road #6 should ideally pass through the new farming block or pass close enough to ensure a direct link. GRN will then develop the small access road from this MCA road to the water points or the future homesteads. Human population is concentrated in the settlement of Eiseb, with some habitation at scattered cattle posts but often associated with a main family home in Eiseb. Pupils schooling beyond Grade 8 must go to the combined school at Gam. The number of schools in relation to school age population may be low. The nearest schooling beyond Grade 10 would be at Otjinene. The road would connect Eiseb to higher level health and education social services in central Namibia.

#7 New link from Omuthiya to Omutambo Mawe

Although this road has a low EIRR of 6.7%, it still retains significant importance in a number of ways. This road will open up a totally isolated area for livestock farming plus human activities. All road users currently traveling from an area (called area 1) Ondangua/Oshivelo to an area (called area 2) Opwo/Otiwasando will save 50% of the traveling distance (reduce 450 km to 220km), i.e. at present they have to travel from Area 1 via Ruacana to area 2, or alternatively via the Oshakati Tsandi Opuwo road. Both current alternatives take the same time. However, once the road is built, time and distance saving will result in a change of the current road usage pattern.

Taking the above into consideration, trade with livestock will open up between the two areas. At present no livestock owner will herd cattle through the isolated area. Once a road is developed, the relative under-utilized areas will be settled with livestock, since access to markets are opened. Movements by means of small trucks, large trucks and also on the hoof will result. If these benefits to the communities are quantified, additional returns will increase the low EIRR of 5.6%. From a spatial point of view, this road has one of the highest priorities in the northern communal areas.

Road #7, running north of, and parallel to, the northern boundary of Etosha National Park, will enhance tourism benefits for several reasons. First it will provide logistical access to several new potential tourism concession sites in the park near its northern boundary. Second it will enable east west travel between the north western Kunene region and the north eastern Caprivi-Kavango-Otjozondjupa regions of Namibia; thus linking two key complementary areas for tourism development. Third, it will provide a link between the park and the emerging cultural tourism activities in the north central regions of Namibia.

It is expected that this will also open up the area north of Etosha National Park to new livestock development. Road development will be planned to ensure minimum conflict between to wildlife and tourism sectors linked to the Park, and livestock developments. Thus the road development will be expected to form the northern edge of a buffer between the park and the livestock/agricultural land uses to the north. In this way the road will facilitate land use zoning for amelioration of current conflicts between remote human livestock settlements and wildlife along the park boundary.

The road for most its length runs mainly through cattle post areas. Human population, except in the road’s eastern section, is scattered and low density. Schools are concentrated at the eastern end of the road, with 12 in the area of influence. There are only three schools in the lower populated western section, thereby implying long travel distances to school for many pupils. There are three combined schools and one senior secondary and at the eastern end of the road.
Environmental Assessment

In terms of the EA Policy of Namibia, EIAs are required for “Major roads”. Most of the proposed roads will however be minor roads. However, the need for environmental studies is considered on its merits for each road, as per Table 7.5.
<table>
<thead>
<tr>
<th>Description &amp; Details</th>
<th>Findings</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>#1</strong> New link from Oshikango to Omundaungilo</td>
<td>The route is underlain mostly by Kalahari sand, with the vegetation type being North-eastern Kalahari Woodland. Only a small section near the western end of the route has calcareous soils and pans of the Cuvellai drainage system. The area is densely populated, very disturbed, and neither of these vegetation types is particularly sensitive.</td>
<td>This route is considered to be a Category B project: potential impacts that are route specific, and mitigation measures are available. This would be a minor road. It is recommended that, instead of an EIA, an EMP is devised to have input to the design stage. The EMP should provide guidance on any minor changes to the alignment to avoid sensitive receptors (e.g. schools, if any), patches of sensitive vegetation, optimum crossing points at omuramba etc. The EMP should also aim to manage the impacts of construction through a set of Environmental Specifications to be included in Contracts for Construction and to be enforced on site. Particular attention must be given to the rehabilitation of borrow pits.</td>
</tr>
<tr>
<td>- Ohangwena Region.</td>
<td></td>
<td></td>
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<tr>
<td>- 74 km length.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A gravel road is proposed following an existing sand track along the Angolan border.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- No effect on tourism is likely.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The route will be used mainly to transport livestock.</td>
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<td></td>
</tr>
<tr>
<td><strong>#2</strong> D3600 from Tsintsabis to Katwitwi</td>
<td>It is understood that the proposed route would utilize existing tracks to minimize the clearing of land. The entire area is underlain by fine Kalahari sand that is of wind blown origins, except where it crosses the ephemeral drainage lines where heavier soils occur that may be saturated during the wet season. Such areas may also provide a source of calcrete for road making. The vegetation is classified by Mendelsohn et al (2002) as North-eastern Kalahari Woodland - dominated by broadleaved woodlands. Most of this area is expected to be disturbed, particularly new the drainage lines (omuramba) where population concentrations are higher. In relation to tourism, route is unlikely to offer any benefits or any adverse impacts. Assuming that the alignment will be along existing tracks, there will be little impact on vegetation.</td>
<td>This route is considered to be a Category B project: potential impacts that are route specific, and mitigation measures are available. The D3600 would be a minor road. It is recommended that, instead of an EIA, an EMP is devised to have input to the design stage. The EMP should provide guidance on any minor changes to the alignment to avoid sensitive receptors (e.g. schools, if any), patches of sensitive vegetation, optimum crossing points at omuramba etc. The EMP should also aim to manage the impacts of construction through a set of Environmental Specifications to be included in Contracts for Construction and to be enforced on site. Particular attention must be given to the rehabilitation of borrow pits. The Owambo Roads Masterplan (1989) provides ideas for route alignment and avoidance/mitigation of impacts. The key issue regarding this routing is to ensure that drainage lines are not restricted by the</td>
</tr>
<tr>
<td>- Kavango &amp; Oshikoto Regions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 180 km in length.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- A gravel road is proposed following an existing sand track.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- There will be no immediate benefit to tourism or impact on tourism.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- The route is also a possible route for a pipeline from the Okavango River to Central Namibia.</td>
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</tr>
<tr>
<td>- It will be used to transport cattle to the Oshivelo/Mangetti Quarantine camp.</td>
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</tbody>
</table>
The main environmental impacts are likely to relate to borrow pits as the calcrete used is found in association with wetter areas where the vegetation type is different and more restricted that the woodland on sandveldt. The use of bridges is preferred over the insertion of culverts, as the latter are usually insufficient for significant flood events.

### #3
**New link from Omutambo Mawe to Okahao**
- Omusati Region.
- 111 km in length.
- A gravel road is proposed following an existing sand track.
- There is a potential benefit to tourism from Etosha if another gate is opened from Etosha to the north.
- Also to be used to take cattle to the Omutambo Mawe Quarantine camp.

The route is underlain by fine Kalahari sand and the vegetation type is Central Kalahari, and possibly some Mopane shrubland. The area is sparsely populated. The area as a whole is not particularly sensitive.

This route is considered to be a **Category B** project: potential impacts that are route specific, and mitigation measures are available. An EMP is recommended at the design stage, which should make recommendations about possible minor adjustments to the alignment to avoid any sensitive areas. The EMP should also aim to manage the impacts of construction through a set of Environmental Specifications to be included in Contracts for Construction and to be enforced on site. Particular attention must be given to the rehabilitation of borrow pits.

### #4
**Okahao to Omakange**
- Omusati and Kunene.
- 120 km length.
- A gravel road is proposed along the route of an existing sand track.
- Indirect benefits to regional tourism.
- It will also be used to transport livestock.

The route crosses mainly Kalahari sands, where the vegetation is mainly Western Kalahari (broadleaved woodland). The area is not known to be particularly sensitive, but there may be patches of sensitive vegetation and pans. Population density is fairly low.

The route is considered to be in **Category B**: potential impacts that are route specific, and there are mitigation measures available. An EMP should also be devised at the design stage if the route is approved. The EMP should provide guidance on any minor changes to the alignment to avoid sensitive receptors if applicable. The EMP should also aim to manage the impacts of construction through a set of Environmental Specifications to be included in Contracts for Construction and to be enforced on site. Particular attention must be given to the rehabilitation of borrow pits.
<table>
<thead>
<tr>
<th>#5</th>
<th>D3403 from Divundu to Mohemo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kavango.</td>
</tr>
<tr>
<td></td>
<td>32 km length.</td>
</tr>
<tr>
<td></td>
<td>Upgrade of existing gravel road to a tar road. (This is currently the only untarred section of this link between Botswana and Kavango.</td>
</tr>
<tr>
<td></td>
<td>The upgrade may benefit tourism.</td>
</tr>
</tbody>
</table>

The affected habitat along the road (and probable borrow pit sites) is North-eastern Kalahari woodland, through the Mahango game Park. Since a substantial gravel road already exists there would be little impact in the road corridor itself. However, it is not known where construction materials would be obtained for base layers. This area is mainly Kalahari sand. There is stone in the Divundu – Popa Falls area, but quarrying here may be in sensitive environments within important Riverine woodland habitat.

In relation to the road itself an EMP would probably be sufficient. However an EIA for the borrow pits and quarry for stone (wherever they may be) may require an EIA.

For the above reasons, and because the road runs through an important but small Game Reserve, it is recommended that the project should be considered as **Category A**: potential for significant adverse impacts. In this case, a full EIA was conducted in 1992 (as part of the planning for the Trans Caprivi Highway).

In relation to the road itself, the potential adverse impacts would be mainly during construction in relation to wildlife issues. However at borrow pits and quarries, the impacts would be long term and possible irreversible – depending on the habitat type affected. In Namibia Red Data listed species of plants or reptiles are often confined to rocky “koppies” (small hills).

Most of the road runs through the Mahango Game Park and it would thus be essential that the roads will have speed reducing features. To this extent, options should be explored, e.g. rumble strips or road painting techniques that will give the visual appearance of a narrow road (while normal road width standards apply). MET must continue to exercise access control and monitoring through park. Measures will be required to reduce environmental impact (due to proclaimed Park status). Road design may need to be adapted to avoid that it obstructs game movements.

It is recommended that the original EIA and EMP be revisited to ensure that the impact avoidance and mitigation proposals are still valid. Moreover, the Mahango Game Park Management Plan (completed in 1992) should also be used as a point of reference as it contains specific recommendations relating to road construction.
<table>
<thead>
<tr>
<th>#6</th>
<th><strong>D3301 &amp; D3830 from Epukiro to Eiseb Block</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Omaheke Region.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>222 km in length.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Gravel roads are proposed following existing sand tracks.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>No effect on tourism is likely.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>The route will be used mainly to transport livestock.</strong></td>
</tr>
</tbody>
</table>

The area is underlain by Kalahari sand, except along drainage lines where heavier soils can be expected with higher clay and possibly calcrete horizons. The latter may provide a source of construction materials. The vegetation is Central Kalahari (open Acacia woodlands) and Northern Kalahari (broadleaved woodlands).

Because this area is in a semi-pristine condition, it should be considered as a **Category A** proposal: potential for significant adverse impacts, and an EIA is recommended. The potential impacts are, however likely to relate not so much to the road itself, but to the excavation of borrow pits (which are likely to be associated with vegetation types of more limited distribution). Furthermore, the impacts of these roads will be related to the opening up of the area as a whole to settlement and grazing. Therefore it is recommended that they be assessed in the context of an EIA for the whole Eiseb Block programme proposal. Particular attention should also be given to the borrow pits sites, their management and rehabilitation (for example issues like conserving the topsoil for later replacement are vitally important).

<table>
<thead>
<tr>
<th>#7</th>
<th><strong>New link from Omuthiya to Omutambo Mawe</strong></th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Oshikoto, Oshana and Omusati.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>269 km length.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>A gravel road is proposed following an existing track.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>The road may benefit tourism from the northern Etosha gate to the east and west.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>The road will mainly be used for transporting livestock.</strong></td>
</tr>
</tbody>
</table>

The route traverses mainly Kalahari sands, saline soils and pans. The vegetation is likely to include saline grasslands without bush or trees, mopane shrubland, and Western Kalahari comprising broadleaved woodlands.

The saline grasslands are extremely important for large walking birds such as cranes, some of which are Red Data listed species, for example the blue crane that would be disturbed by traffic. Moreover, the area is over flown by flamingoes and numerous other aquatic bird species that utilize the salt pans such as Oponono north of Etosha Pan. The mopane shrublands on the other hand are not particularly sensitive, while the broadleaved woodland to the west may contain sensitive areas.

Most of the route is very sparsely populated, very close to the Etosha Game Reserve. Various conservancies and community based tourism ventures are planned north of the Etosha National Park, and these may be affected, positively or negatively.

This route should be considered in **Category A**: potential for significant adverse impacts, and an EIA is recommended.

An EMP should also be devised at the design stage if the route is approved. The EMP should provide guidance on any minor changes to the alignment to avoid sensitive receptors if applicable. The EMP should also aim to manage the impacts of construction through a set of Environmental Specifications to be included in Contracts for Construction and to be enforced on site. Particular attention must be given to the rehabilitation of borrow pits.

The road should be constructed preferably 20 km north of the Etosha boundary. It is essential that major drainage lines into the Etosha National Park are not affected. The road should not be fenced, as this would have major impacts on wildlife.
**Social Assessment**

The results from the PPAs indicate that accessibility has a strong link to the general levels of well-being of communities. Remote and inaccessible communities in the Omusati region were generally poorer and service provision to those communities was also regarded as of a poorer standard than for the more accessible communities. Poor levels of accessibility impacted negatively on people’s ability to access higher order health facilities, clinics when there were none inside the community, other services that had to be procured at higher order settlements and markets to sell their goods. Transportation opportunities decreased as accessibility decreased while the cost of transport increased with lower levels of accessibility. It is furthermore more difficult to provide services in remote communities and more resources in terms of fuel, vehicles and time is required to serve those communities.

The road interventions are mostly concentrated in the communal areas and aimed at improving access to markets and facilitating tourist movement in these areas through the upgrading of strategic roads and tracks. While roads is a catalyst for all sorts of development actions and opportunities, it potentially also brings with it other influences that may be to the detriment of local communities. The alignment normally requires land take and it is therefore important that prior to any road design and construction activities, a social impact assessment be done to determine the potential impact of the proposed works in terms of the need for land relative to existing settlement and land use patterns, the impact on the spread of HIV/AIDS, the influence on social pathologies such as substance abuse and prostitution and the potential influence on cultural norms and values. The assessments also need to identify the potential positive impacts such as improved access to markets and services and employment creation and must provide an Environmental and Social Management Plan (ESMP), which should specify the actions required to mitigate the potential negative impacts and maximize the potential positive impacts of the intervention.

If labor based construction methodologies are used care must be taken to ensure gender equity in the employment opportunities provided and this should, together with the ESMP be included in the construction contract and made compulsory to the contractor to comply with the requirements of the ESMP.

The proposed roads should contribute significantly to improve accessibility in some of the northern communal areas and improve the ability of livestock farmers to market their cattle more effectively and to get better prices for their animals. It would also make the quarantine camps more accessible to more farmers, thereby improving their incomes from better prices and improved marketing. At the same time, veterinary extension services could be provided more effectively and at lower costs, thereby improving livestock health and farmer education, which will eventually translate to increased household incomes. Other services should also improve simply because of improved accessibility and this should contribute considerably to improved well-being levels of those communities living within the influence sphere of these roads.
Participation of Development Partners

Namibia’s cooperating bilateral development partners in the roads sub-sector include Germany, Sweden, France and Japan. Multilateral partners include the European Union (EU), African Development Bank (ADB) and the Arab Development Bank (BADEDA).

Germany’s Support to the Roads Sector

KfW has been involved in the Namibian transport sector since 1991 through the financing of rehabilitation and upgrading of corridor roads and labor-based construction of district roads. Since 2001, the transport sector, with particular emphasis on the road sector, has been the priority area for German development assistance to Namibia. Germany is Namibia’s largest bilateral development partner.

A regular exchange of information takes place between the MWTC and cooperating partners through on-going projects, strategies and the co-ordination of activities. MWTC with support from KfW (Germany) is preparing for a Sector-wide Approach (SWAP) in the Namibian road sub-sector to realign the development cooperation with major development partners. Various development agencies have expressed interest in joining a programme-based approach to avail development funding to the Namibian road sub-sector. To date these include the European Commission, the AfDB, and the French Development Cooperation (AFD). Other agencies may follow. In particular the EC has already included support to rural roads within the Rural Poverty Reduction Programme Rural Roads SWAP arrangement, which commenced in the fiscal year 2005/6.

Risk Assessment

Namibia is amongst the top five highest HIV/AIDS infected countries globally. The impact on financial resources, productivity, skills and manpower in the transport sector cannot be overemphasized. The trucking and cross-border transport segment for instance, is highly vulnerable to the spread of the virus.

The mainstreaming of the national policy framework on HIV/AIDS is complemented by workplace policies within the transport sector. Other PPP initiatives include the Namibia Business Coalition Against HIV/AIDS (NABCOA). Since the end of 2003, an HIV/AIDS awareness component form part of contract specifications by the RA to road contractors. Concurrently, the National Social Marketing (NASOMA) carries out information campaigns at labor-based projects. This initiative will also be extended to the MCA Namibia funded construction of rural access roads.

No lack of co-operation from in foreseen. In the unlikely event of resistance by communities that live within the sphere of influence of the proposed roads, negotiations within the frameworks of relevant laws and procedures will be pursued. The RA is governed by Section 65 of Ordinance 17 of 1972 and Cabinet Resolution (Section B of the State Finance Act), a policy package outlining the manner and extent of compensation for possible disruption of their economic livelihood or cultural heritage.

The high technical standards upheld by the RA will minimize any technical risks related to the implementation.

MWTC is in the process of addressing the perceived general under-funding for road maintenance.
8. MCA Namibia Program Implementation

8.1 Supportive Policy Developments

For each MCA Namibia investment, relevant policy issues and envisaged developments are highlighted below. These are not seen to be core MCA Namibia responsibilities, but are tasks that should be undertaken by the respective, involved ministries and stakeholders to ensure optimization of the potential MCA Namibia investment impacts.

Education

For ETSIP, a policy matrix is being developed that prioritizes equity in the implementation of this education sector transformation program.

For the expansion of secondary education the following policies need to be in place:

- Policy for the effective implementation of the staffing norms.
- Policy on the distribution and provision of textbooks.
- Policy on the share of goods and services.
- Policy on system and learner achievement.
- Policy on managing assets.
- Policy on teacher salaries.
- Policy on differentiated admission criteria for grade 11 by regional quota; and policy on per capita funding and its effective implementation.

The ICT policy is in place and being implemented. Elaborate plans detail the rollout of ICTS to the different levels of the education and training system and cover secondary schools, VTCs and CoEs in prioritized order.

Livestock Production and Marketing

The MAWF policy position with regard to animal health is supportive of the MCA Namibia investment. The international border between Namibia and Angola requires attention to ensure that once the environment is created and the criteria are met for Namibia to apply for FMD free status, the border VCF will be erected. There are good prospects that all necessary arrangements will be in place at the end of the MCA Namibia investment. Once Namibia is FMD free, the quarantine camps in the NCCA comprising of some 102,600 ha can be used to resettle some 41 farmers at 2,500ha each. This on its own will support the land resettlement program substantially and associated returns to the local economy.

Regarding resettlement, supportive policies, regulation and most importantly appropriate selection criteria are in place.

Nampower is responsible for generation and transmission in Namibia, while REDs purchase electricity from Nampower or other sources and distribute directly to end users. Nampower has relied heavily on imported electricity from South Africa. This supply has become insecure and local generation capacity is being pursued. In terms of progress, the Kudu Gas-to-Power project is the furthest advanced. Nampower has confirmed that Kudu will be online earliest in 2011, but a number of complications still need to be addressed. Within this background, Nampower has established a Renewable Energy Section. This section has three focal areas: 1) wind energy power generation, 2) hybrid mini-grids and 3) BTE using invader bush. The latter has been identified by Nampower as a possible generation option that can be implemented in the short-term. Although no comprehensive planning has been
conducted by Nampower to date, Nampower is fully aware and supportive of this action, since it addresses both grid and off-grid electricity supply options. Other large-scale generation options considered by Nampower are the hydro-electric schemes at Baines (Kunene River, Namibia) and Inga (Congo River, Democratic Republic of Congo). Even if planning progresses smoothly, both schemes will not be online by 2018.

The ECF-SP will implement a wide variety of approaches. Tried and tested activities such as farmers’ days and short farmer training courses have much to contribute. New approaches such as mentoring by established farmers, attachment of Agricultural Extension Technicians (AETs) to certain Farmers Associations, study groups and study tours offer potential to overcome some of the limitations of farmers’ days and training courses, and so to increase impact in terms of farmer adoption of innovations. The ECF-SP will pave the way for the privatization of extension services, and enable Namibia to learn a number of valuable lessons in the process.

No policy changes are required in support of the quarantine camps. However, once the whole area is declared FMD-free, Namibia would apply for FMD free status.

Finally, for the new feedlots also no policy changes are foreseen. MAWF and MeatCo will enter into a Performance Management Contract to ensure the feedlots are managed in a cost-effective manner and facilities are well maintained.

**Tourism**

A number of proposed policy changes will enhance or greatly contribute to the viability of the MCA investment. Many of these policy initiatives are underway, while others are under discussion. Key policy changes that may influence the proposed MCA investment are listed as follows:

- **MET Concessions Policy** – Effective implementation of this policy is central to the success of the MCA investment, as it will unlock massive tourism development opportunities in and around the targeted park/conservancy nodes. The establishment of the proposed concessions will allow the creation of the targeted 36 new lodges and a range of other spin-off concessions (such as tour guides and craft sales) that will be driven by the tourists visiting the new and existing lodges. The income and employment contributed by these concessions and affiliated tourism activities are central to the MCA Namibia Tourism investment’s ability to contribute to poverty alleviation in the targeted conservancy communities.

- **Communal Land Leasehold Arrangements** – A barrier to private sector investment for lodge operations in communal areas has been around the implementation of lease arrangements. Presently, conservancies are not allowed to sub-lease lodge sites onwards to lodge developers. As a result, many lodge investors feel insecure about investing on communal lands where they have little direct control of the ownership or tenure of the land they might potentially develop a lodge upon. Similarly, banks have expressed hesitancy to consider loan applications for infrastructural investments on communal lands for the same reason.

The policy framework for accessing land in communal areas is in place and the application procedures for leasehold for communal land are discussed in the Communal Land Reform Act, 2002. There are Communal Land Boards in all 13 political regions. Therefore, the applicant applies to the Communal Land Board, which in turn seeks the consent from the Chief or traditional authority. Consultations with specific sector Ministries depends on the activity that the applicant intent to do. The Minister of Land and Resettlement approves any leasehold period of more than ten years.
Return of Portions of Airport Taxes to the NTB – Though a large percentage of airport departure taxes are generated by tourists, all of these taxes accrue to the Ministry of Finance as general tax revenues and do little to benefit the Tourism sector. Strategically, it can be argued that a portion of the airport taxes should be allocated to the NTB to better market Namibia as a tourism destination and further increase the number of tourists visiting Namibia. There is, in fact, little doubt that such an arrangement would actually increase the tax base to Namibia as all tourists pay 15% VAT on their accommodation and the linkage payments by supporting sector payments generated by tourist visitations is also stimulatory to the tax base. Further, a return of a portion of the Airport tax to the NTB would greatly enhance its viability and sustainability long after conclusion of the MCA investment.

Bank Policy Adjustments – It will be necessary for the host banking institution of the proposed loan capitalization fund to adjust its loan policies to recognize the specific needs and profitability characteristics of the Tourism industry. This will entail making a commitment to the proposed three-year grace period for loan repayments, and also accepting the increased degree of risk that might be encountered by making loans for infrastructural development on communal lands.

Green Scheme
The Green Scheme Policy and Communal Land Reform Act, Act no 5 of 2002 are in place to support the MCA Namibia investment into the Green Scheme. The Agricultural policy, which covers water, is in place though under revision to ensure that all issues, including related to the Green scheme are reflected. The existing Internal Policy on Allocation of Water from the Okavango River is guiding the development of irrigation projects in the Kavango region.

Regarding the Land Reform Act, the process of getting leasehold is in place but such leases are not yet accepted by financial institutions. Under the leadership of the Green Scheme Agency, a team is working on a solution, which will be presented to GRN for approval by mid 2007. The team consists of representatives from the four commercial banks operating in Windhoek, the Agricultural Bank, the Ministry of Lands and Resettlement, and the Attorney General’s office.

The National Horticultural Development Initiative is working towards a more secure market place for all Green Scheme producers. The system that will be developed will provide producers and marketers up-to-date information of areas planted, volumes expected and prices. These policies will enhance the viability of Green Scheme projects.

Indigenous Natural Products
Short of the adoption of national legislation in line with the UN Convention on Biological Diversity’s provisions on genetic resources Access and Benefit-Sharing (ABS, which process is well advanced within MET) no policy changes are required for the success of the proposed MCA Namibia investment. The intervention will in fact succeed even without such ABS laws, but its overall impact will be somewhat reduced (because it will not have a legal framework for some of the bio-prospecting innovations and partnerships that are otherwise readily available).

In the medium-term lessons learned from the intervention will feed into national efforts to harmonise community resource management across landscapes and ecosystems.

Rural Access Roads
The White Paper on Transport (1994) was the first to bring to the fore the urgent need for institutional and sector reform. The restructuring of the MWTC under the “MWTC 2000” Project led to the establishment of the Road Fund Administration (RFA), Roads Authority
(RA) and Road Contractor Company (RCC). This has relatively improved formulation and control of policy, road management and financing framework. Namibia has further succeeded in tailoring her road sector policy to the criteria of economic efficiency and introducing the participation of users in the direct and indirect transport costs.

In view of the bottlenecks inherent within the current road sector financing approach, the Ministry of Works, Transport and Communication and its road sector State Owned Enterprises in collaboration with some of its long-standing development partners, particularly KfW funded the commissioning in 2006 of a study on a SWAP in the road sub-sector. To date, Germany, the African Development Bank (ADB) and the European Union (EU) have been the most active in this consultative process. The approach aims at developing an expedient and integrated financing framework. At present the financial accounts of any of the organizations involved in the road sub-sector do not provide a comprehensive overview of the different funding channels and do not relate these to the sub-sector’s different annual, medium term and long term plans and to performance outcomes. Furthermore, the study seeks to address the challenge of inadequate financial resources for timely road maintenance.

The implication of the SWAP is that Namibia’s cooperating partners and financiers are being enticed to buy into this policy re-alignment and paradigm shift.

The MCA investment will be managed outside the SWAP. The MCA funds will be ring-fenced and will not feed into the budget support system. The necessary mechanisms and procedures will be put in place to ensure the dedicated handling, utilization and reporting of the MCA funds.

**8.2 Institutional Sustainability**

**Education**

The Capacity Development component of ETSIP makes provision for:

- Rationalizing the division of labor in the sector and restructuring the MoE.
- Strengthening leadership.
- Strengthening general management at all levels in the MoE.
- Improving the management of human resources.
- Improving the management of physical resources.

Strengthened capacity across the board will enable the MoE to implement policy and programs to ensure maintenance of facilities and systems.

Introducing teacher licensing and performance contracts for managers will enhance institutional sustainability.

**Livestock Production and Marketing**

GRN will continue to administer animal health and control of disease free areas as a core public sector function.

DVS and the MeatBoard have in the past implemented similar initiatives such as the statutory stock branding, which required every livestock owner to register and be issued with a unique brand for his/her herd. While not as intensive as the proposed tagging of all animals in the NCCA, this demonstrates that these institutions have basic capacities to implement the action.
At regional level, the veterinary stations are headed by a veterinary doctor and a chief animal health technician. In addition, there are satellite stations called Veterinary Rural Extension Centres, which are headed by animal health technicians.

At the grassroots level and outside of the GRN staffing structure there are Community Animal Health Agents (CAHAs), who are independent livestock health consultants, trained by the DVS and issued with veterinary kits to provide a service within their communities. CAHAs attend to emergency veterinary incidents and report major problems to the animal health technician. Community veterinary drug retailers provide drugs to the CAHAs but also to farmers directly.

This outreach network of de-concentrated service providers will facilitate the implementation of the tagging, reaching also the most remote farmers. The involvement and commitment of and ownership by civil society at large, including traditional and community leaders, are critical to the successful implementation of this action.

The following institutions are well briefed about the proposed MCA Namibia investment into the Eiseb block and are in full support. These are MLR, PPT, MAWF, NAU and NNFU, DEES, DRWS, DVS, AGRIBANK, Regional Settlement Committee, Regional Councilors and Regional Land Board. There is a Steering Committee where all these institutions meet.

The Steering Committee takes decisions on issues related to resettlement in Eiseb Block and monitors the performance of the individual settlers based on guidelines to be set up by the Committee.

The NAU and NNFU, as representatives of the majority of rural dwellers, are committed to the long-term sustainability of economic growth in Namibia’s rural areas, as well as the diversification of on and off-farm incomes, and as such are committed to the BTE action. Various stakeholders, including MAWF, MME, MLR, ECB, Nampower, REDS, have already been engaged and have indicated their interest and future cooperation. Private sector is to become the driver of the BTE action during the course of the MCA investment period.

The benefits that accrue from the BTE action will finance a) the BTE Technical Steering Committee and b) be made available to the development leg58 of the NAU/NNFU Joint Presidency Committee for investment in developmental activities as identified by the JPC in national interest, primarily in the field of BTE activities or in support of land reform beneficiaries.

The ECF-SP consolidates rural development interventions such as SARDEP (Sustainable Animal Rangeland Development Project), NOLIDEP (Northern Regions Livestock Development Project), REMP (Research and Extension Management Project), STEAR (Supporting the Transition of Extension and Research project), NASSP (National Agricultural Support Services Project) and the RPRP (Rural Poverty Reduction Program), which have all been at least partially funded by the EU or one of their member states. It complements the MLR National Land Reform Program. The PTT stresses the importance of post-settlement interventions and recommends that tailor-made support packages be designed according to specific defined needs for different categories of farmers. The ECF-SP responds to this.

The ECF-SP is owned by the farmers unions of Namibia, brought together under the stewardship of the Joint Presidency Committee, and aims to promote collaboration between all farmers. Farmer associations will be strengthened as one concrete result of the ECF-SP and the sense of ownership, which already prevails amongst the more active institutions will be fostered and instilled in those that still require additional support or even formation per se. The NAU has well-established structures in the commercial areas of Namibia. Yet, the

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58 Please note that these funds will not finance union activities as in the “Commodity and Advocacy Leg”, but exclusively developmental initiatives.
socio-political environment in Namibia poses particular challenges to the institutional affiliation of all ECFs to the NAU. The two unions recognize this and have made this one of the key focus areas of their Joint Presidency Committee. International models are being considered to foster collaboration between the various organizations, and to move towards an integrated secretariat of all farmers’ organizations at national level. A number of ECF Farmer associations have been established in the past years, most notably in the Okahandja – Osire area. The ECF-SP offers a wealth of experience amongst its implementing partners to strengthen these associations at both technically and institutionally. Linkages to existing associations will be fostered to expedite the integration and skills transfer process. At the grassroots level, however, not all ECFs are well organized and accommodated into existing structures and the ECF-SP will support them in the establishment of institutions of their own. A primary aspect of the ECF-SP is that it is demand driven through local organizations with a high level of social capital and thus peer pressure. This is being supported by a knowledgeable Technical Steering Committee comprising of a wide variety of stakeholders in the sector. Local leadership, local ownership, and local control both of the farmer community building processes and the information, advisory and training activities. The ECF-SP creates capacity amongst a large number of ECFs who will pass on skills and knowledge to new market entrants. Already some ECFs have grown into highly innovative and successful farmers and the ECF-SP will call upon these “graduates” to further the course. Finally, by the end of the MCA Namibia investment the private sector service providers will be well adapted to the beneficiary’s needs and requirements.

GRN will continue to administer animal health and control of disease free areas as a core public sector function. A Project Steering Committee for the MCA Namibia investment into quarantine facilities will be established with representation from MAWF, MeatCo, the Meat Board of Namibia and the NNFU. MeatCo manages the main abattoirs in Namibia. The members of the Project Steering Committee are established cooperation partners, working together on a number of livestock sector related matters.

The main stakeholders in the MCA Namibia investment into three feedlots, GRN and MeatCo, have a keen interest in the long-term sustainable operation of the feedlots. MeatCo’s core activity is the production and export of meat products. Ensuring a higher quality and more consistent throughput at its abattoirs in the NCA will increase productivity and long-term profitability. To encourage the marketing of livestock in the NCA at a younger age is a main driver in the cattle recruitment program of MeatCo.

Tourism

The tourism sector is well organized and strong synergies are found between GRN, NTB, the various private sector associations, the support programs, and NGOs and CBOs. The National Program Implementation Team and Tourism House will only strengthen these already functional cooperation links and working relationships.

The MCA Namibia investment in tourism will complement on-going initiatives, including USAID funded initiatives in CBNRM. It is not replacing the USAID funding that is providing resources to NGO and GRN service providers who are building the capacity of conservancies. Should USAID support funds be prematurely withdrawn, a major gap in the conservancy institutional support process would arise.

Green Scheme

The Cabinet has approved the Green Scheme. As a start up, GRN established the Green Scheme Agency to implement the green scheme initiative. The Agency consists of a group of experts with a five-year contract with an option for renewal. The ultimate aim is to have a
more permanent body and provision is made for that in the green scheme policy. Towards the end of the initial five years, a proposal will be submitted for a more permanent institution. The policy made provision for a National Steering Committee to provide the opportunity for other relevant institutions to contribute to the successful implementation of the green scheme. This committee needs to be established as soon as possible. There is a need for the Regional Government to be more involved to support the Agency in the regions.

**Indigenous Natural Products**

Enabling primary producers – through the PPT – to earn a fair share of the downstream value derived from their raw materials is expected to deliver multiple and major institutional sustainability benefits, both by securing the loyalty of suppliers and by boosting the financial viability (and therefore continuity) of producer/collation organisations at primary producer level. Further downstream, the intervention will be sustainable because it will be configured as a profitable business partnership with experienced free-market operators.

**Rural Access Roads**

One of the key challenges to sustainability in the transport sector is the improvement of the institutional framework. The MWTC and its agencies are however making strides towards addressing capacity and policy related deficits that cause inefficient administration. Thus human resources development particularly at management level and in specialized and technical areas is critical.

As recent as May 2006, a training needs assessment study commissioned by the MWTC in cooperation with German Technical Assistance (GTZ), revealed training needs in management and leadership development, policy management, strategic management and project and contract management among others. The failure to address this capacity gap poses a threat to institutional sustainability and development of the road sector in general.

Largely due to the colonial heritage and quality of the current Namibian education system, the country suffers from a shortage of engineers, transport economists and other specialized experts. It is no surprise that a relatively high number of foreign experts are retained in the sector.

Measures (scholarships, understudies/on-job training) are in place to train Namibians in these critical areas. In order to augment these initiatives, a sector-specific capacity-building component should however be considered under the MCA funding framework.

### 8.3 Financial Sustainability

**Education**

ETSIP costs are of two kinds. Firstly, there is the cost of the nine sub-programs of ETSIP. These are to be covered by the combined contributions of the GRN and development partners. Secondly, the expanded provision of senior secondary and vocational and teacher education would increase the MoE expenditure beyond the provisions of the medium-term framework. These increases are therefore to be offset by a number of efficiency measures, including restraint in the growth of support staff and salary increases, reduction in repetition by learners (currently about 15%), per capita funding and formula funding, increased learner teacher ratios (currently 29:1) and other stringency measures.

ETSIP driven efficiency improvement measures will create sufficient space in the MoE budget to finance recurrent costs requirements created by the MCA investment.
Livestock Production and Marketing

DVS have staff and allocated budget for the maintenance of the veterinary stations and the role of administering and the control of animal health in communal areas north of the VCF.

The tagging and the testing of bovines are a once-off activity to get the FMD status. Once all animals are tagged, it will remain the duty of the livestock owners to keep the herd tagged, i.e. old and newborn. Only tagged animals can be marketed.

The ultimate objective of the BTE action is to see the commercial business opportunities offered by the bush harvesting and power generation widely exploited by newly established SMEs and IPPs. These will be established as commercially viable business entities. The intrinsic economic viability of the bush harvesting SMEs and IPPs ensures entrepreneurial sustainability. The MCA Namibia investment will result in the creation of many SMEs and IPPs to address the bush encroachment problem and make profits with the sale of energy. Depreciation forms part of the amortization, it is thus assumed that the units will be replaced after 20 years (smaller equipment or those with higher wear-and-tear such as the shredder at an earlier stage). As such the initial MCA investment will be recovered to replicate the action, over and above the economic growth it has spurred.

The highly economically viable farming units that will have been unlocked in the Eiseb Block through the MCA investment will be self-sustainable, perhaps with the exception of some technical support and guidance. The main selection criteria to select the farmers to be resettled in Eiseb block will be that they should be livestock farmers and have access to a minimum number of livestock. The 99-year leasehold qualifies as security for the ECFs to obtain commercial financing.

As from 2012 the modalities of the ECF-SP will be well established, ensuring improved efficiency in post-settlement support. It is envisaged that once the MCA Namibia investment into the ECF-SP is concluded, the trained and empowered ECFs will be on a higher production frontier and thus able to pay for further services required. In addition, the private sector service providers will be well experienced and capacitated to support ECFs on a continuous basis. Moreover, by 2012 after 8-10 years of support a large number of ECFs will have “graduated” to the status of established farmer, and contribute themselves to their skills development and that of their colleagues. Private sector support to land reform in Namibia is expected to gain momentum over the coming years, considering the importance of the agricultural sector to the entire business community. Established commercial farmers and private sector at large are taking up their social responsibility towards the land reform process. Already some support has been forthcoming from the FNB and Agribank and such and other support will in part sustain the ECF-SP post-MCA. The “agricultural consortium”, which comprises of 7 prominent Namibian companies and currently supports agricultural shows in communal areas, has indicated its willingness to become involved in the ECF-SP.

DVS has staff and an allocated budget for the controlling of the quarantine camps/farms. The lease and performance management contract will clearly stipulate the maintenance obligations of the lessee. The lease amount and period will take such obligations into consideration.

Livestock owners in the NCA will gain by being introduced to higher turnover of capital, which is their livestock. Once the feedlots have the support of livestock owners, it will become part of the livestock marketing landscape and offer an attractive alternative to marketing at auctions, bush markets, through quarantine camps to the abattoirs, to speculators and formal and informal middlemen. MeatCo will pay a user fee to the feedlot owner, which is GRN, and through the performance management contract re-invest part of the income into the maintenance of the feedlot.
Tourism

Park development Nodes – Parks will become more financially sustainable, as the MCA investment will lead to: a) the new infrastructure will reduce maintenance costs of managing the parks; b) lead to cost-sharing with private sector of certain types of infrastructure (i.e., water points, tracks, etc.); c) placement of new management service centres will decentralize park mgt, making it more efficient and effective; d) if gate entry fees can be returned to park management, this will greatly increase financial viability of park management, particularly as the number of tourist visitors increase from the MCA investment;

Conservancies – MCA investment will substantially bolster income to conservancies from the lodge developments, game camps, information centres, increased trophy hunting opportunities, etc.; the increased income could lead to approximately 40 conservancies being financially self-sufficient versus approximately 20 without the MCA investment; increased benefits to conservancies will also lead to increased benefits to members, meaning greater support for conservancy concept.

Lodges – Will be fully self-financed and sustained.

NTB – Will become more financially sustainable due to: a) increased income being generated from the tourism levy – as tourist bed nights go up, so too does NTB revenue; b) successful lobbying of GRN to return part of airport tax to NTB for tourism marketing would increase the viability of the NTB as well as lead to increased tax revenues to the GRN; c) once Namibia established as an international tourism destination of choice, the NTB marketing investments will no longer need be so high as marketing will then be largely driven by private sector.

Since NTB receives much of its revenue from MET, the costs of maintaining the elevated level of investment should also be included in the recurrent costs. By Year 5, NTB is receiving NAD7m from MCA. It is estimated that NAD6m per year recurrent cost should enable NTB to continue at same level. This brings annual recurrent cost up from NAD3.9m to NAD9.9m.

Tourism House – Fees from the rental of offices and conference facilities would lead to full-cost recovery of running/maintaining tourism house and generate significant annual contributions to training activities;

Tourism Information Centres and Business Hubs – costs from space rentals would cover operating and maintenance costs

High Value Game Camps – Operational costs would be fully covered by income and extra income would be returned to conservancies for benefits distribution

GRN – Increased tax revenues generated by tourist expenditures to linked businesses (i.e., petrol stations, grocery stores, airline industry, restaurants, lodges, shops, etc.) will greatly enhance tax revenues – thereby, generating more revenues that can be re-directed into service provision for Namibian tax-payers.

Direct Value of MCA investment to MET

The majority of the MCA investment is targeted towards unlocking private sector investment in tourism, and channeling the benefits into reducing poverty. However, in recognizing the importance of state institutions to the long-term sustainability of both wildlife and natural resources, the proposal also ensures significant long-term value will accrue to the relevant government institutions, in this case, primarily the Ministry of Environment and Tourism. Following the ‘unlocking’ principle, the investment in MET is directed to make best use of currently existing resources, particularly staff.
It is pitched at the optimum level, such that it vastly enhances the efficiency and effectiveness with which MET staff can manage natural resources, without incurring high recurrent costs. This includes: tourism and natural resource management service centres, boundary conflict management, bush access and 4X4 game viewing, and other key support infrastructure.

The investment will not require the creation of any new staff posts, and thus recurrent costs after the initial 5-year MCA investment period, will largely be in the form of maintenance of infrastructure. The annual recurrent cost is thus estimated at 5% of the above investment:

**Green Scheme**

The agency is funded by GRN and MAWF includes the agency's operational expenses in its recurrent budget. The Division of Engineering within the Ministry annually request funds on the development budget for Green Scheme projects. As this is a project supported by the Cabinet and is based on a public-private partnership, and receives strong support

The biggest risk lies in the commitment by the SME irrigation farmers. To reduce this risk, the selection of candidates for the Green Scheme is given more attention and so the screening of potential SME irrigation farmers during the 12 months training period. The Green Scheme Agency will shortly launch a monitoring and evaluation system to assist the SME farmers in their farming business.

**Natural Indigenous Products**

Financial sustainability will be assured through profitable and sustainable commercial business operations and partnerships.

The first iteration of the budget included (in response to stakeholder suggestions during the MCA consultation process) a revolving credit facility of USD120,000/annum over 5 years. Since this considerably reduced the ERR without having a clearly stated purpose and benefit, it was later dropped, on the assumption that sufficient alternative sources of SME finance are available in Namibia for proven business models with real markets.

If a lower (theoretical) ERR is acceptable, considering the potentially huge pro-poor impact of the natural products intervention, the MCC due diligence team may wish to re-examine this assumption and bring back this feature (maybe by building in an overall contingency budget, a fixed percentage of which can be used as micro-credit) so as to create a fertile environment for the emergence of local entrepreneurs.

**Rural Access Roads**

The roads sub-sector competes for national resources and access to adequate funding for maintenance of the roads network and construction of new roads is a critical constraint. To maintain a roads network of in total nearly 30,000 km with only 2.1 million people is a definite challenge. Namibia is vast and sparsely populated contributing to high per capita costs for roads. It is for these reasons that Namibia continues to rely on support from its development partners.

Road user charges are the main source of income for the Road Fund managed by the RFA for purposes of road construction and maintenance. GRN's contribution is project specific and forms about 8-10% of the RFA's annual development budget. Fuel levies form the bulk of the road user charges at about 75%.

MWTC and its development partners are engaged in identifying measures to mitigate the current overall under-funding for the road sector (maintenance, rehabilitation and development). The MCA funding for road network development will have a positive effect by freeing up resources for maintenance.
The future maintenance of the rural access roads constructed with MCA funds will automatically be integrated into the national roads network and thus covered by the maintenance obligations of the RA. The total length of 739 km of the MCA rural access roads represents about 1.5% of the total national roads network.

During the first years, minimum maintenance is to be expected on these additional roads for their “newly–built” status. Annual maintenance costs of these gravel roads during the first 5 years will consist of routine maintenance at an average cost of NAD3,000/km/year. As such, the maintenance of the MCA funded roads will amount to approximately NAD55.45 million per year, representing 0.8% of the RA’s annual budget for maintenance in 2006/7.

The rising cost of fuel particularly for oil importing countries as a result of global market tendencies cannot be ignored as it continues to impact on the domestic input cost of service provision and production. This has a direct implication on the cost of road construction and maintenance.

8.4 Environmental Sustainability

Education

Education is not regarded as a high-risk activity in terms of environmental concerns. Provided that the provision of education is perceived to be equitable it should be one of the most important contributors to social stability and peace.

The EA Policy of Namibia requires EIAs to be completed before all commercial tourism and recreational facilities are undertaken, and for any government policy, programme or project on the use of natural resources, which would include hunting concessions.

Livestock Production and Marketing

The Program Proposals relating to livestock are wide-ranging and varied in terms of their environmental impacts.

EIAs are required under the EA Policy of Namibia for one of the actions, which are specifically listed in the Policy, namely, the unlocking of Eiseb Block. These are considered to be Category A projects.

Opening up the Eiseb Block to cattle farming and human settlement is expected to have significant negative impact on natural environments. These impacts need to be well understood. However, the socio-economic benefits may outweigh the negative impacts if the proposed activities are shown, through the EIA process, to be sustainable.

Of far lesser concern are the establishment or upgrading of veterinary stations and feedlots. The impacts of these activities are expected to be localized and manageable. EMPs are recommended for site selection and ongoing management of these activities. Where large numbers of livestock are to be confined for extended periods, consideration will need to be given to the potential for groundwater contamination, nuisance impacts for neighbors, and human and animal health issuers.

Three of the actions are considered to have low environmental impacts – Category C: Clearing of Bush encroached farmland through BTE, Upscale ECF-SP, and Upgrading of Quarantine Facilities. While aspects of the BTE action will require environmental management, it is expected that any adverse impacts will be minor and diffuse, and the benefits of improved pastures, and possibly improved groundwater supplies, will outweigh any adverse impacts.
Tourism

The EA Policy of Namibia requires EIAs to be completed before all commercial tourism and recreational facilities are undertaken, and for any government policy, program or project on the use of natural resources, which would include hunting concessions.

Therefore tourist lodges, their access roads and infrastructure, hunting concessions, and game camps/restocking areas with game are all considered to be Category A activities.

Tourism planning needs a strategic approach to zone areas in terms of their environmental sensitivity. The most sensitive and pristine areas, such as Skeleton Coast, tourists should only be allowed in with well trained guides, to prevent the occurrence of off-road driving that can have serious long term impacts on sensitive lichens and leave unsightly tracks for many decades. Thus a zoning approach is recommended to guide proposals for tourism. In particular, Namibia should adhere to the “high quality, low volume, low impact” type of tourism, especially in the northwest.

EIAs for each individual projects are also needed to identify site specific issues, guide the site selection process and manage potential adverse impacts that cannot be avoided in the choice of site or routes (in the case of roads, pipelines and power lines). In cases where lodges are to be established in places already identified as appropriate in the North West Tourism Masterplan, the EIAs could be “small scale”, with the emphasis being on a simple, but outcomes-based EMP to guide the construction and operation of the establishment. Namibia’s Eco-Award system provides a good framework for achieving environmentally sustainable lodges.

Community based tourism projects in line with Namibia’s CBNRM program have the potential to generate many benefits in terms of employment creation, empowerment of local communities, and giving previously disadvantaged communities ownership and responsibility in the conservation of natural resources. This approach should be encouraged. However, as local experience with the CBNRM model of lodge development is still in its infancy, it is recommended that the CBNRM model should not be applied at the expense of old established lodges, which have proven track records and set high standards in Namibia.

The limited capacity of the GRN institutions that are involved in environmental management places a considerable onus on individual developments for wise management of environmental issues.

The need to prevent or manage environmental impacts is no where more important than the development of tourism – in order to ensure the sustainability of high quality environments that continue to attract tourists for the benefit of present and future generations. No less important is the need for social sustainability.

Green Scheme

The key environmental impacts are summarized below, but there would be many potential secondary impacts as well – both biophysical and socio-economic. Key impacts relate to:

- Destruction of habitat, particularly any riverine and floodplain and paleo-floodplain habitat that may be affected, where there are likely to be bio-diversity issues.

- Abstraction of large volumes of water relative to the flow of the river.
  - Potential adverse impacts on the Okavango Swamps in Botswana, in the case of the Okavango River.
  - Potential conflicts with power generation in the case of the Kunene River.
The impacts of water abstraction cannot be assessed on a project-by-project basis. There is a need for a basin-study to be conducted to determine how much water can be safely abstracted from the Okavango River, in particular, without incurring significant ecological impacts. The exploitable water resources then need to be apportioned between Angola, Namibia and Botswana in some equitable manner. Then each country needs to determine what is the optimum economic use of their allocated portion of the exploitable water resources.

Fertilizers are very likely to reach the Okavango River in the long term, where they are may result in eutrophication issues in the Okavango Swamps.

Pesticides are accumulated up the food chain, where they can become a threat to fish, frogs, birds etc.

Potential secondary impacts include loss of fish resources on which many people rely for their daily protein. Diseases, for example bilharzia and malaria, may also be encouraged.

Major clearing of vegetation, abstraction of water for irrigation, use of pesticides, and a variety of related activities all require EIAs under the EA Policy of Namibia.

All irrigation projects, whether on virgin land or not, should be regarded as Category A activities and full EIAs and EMPs are necessary.

**Indigenous Natural Products**

The development of small industries based on the cultivation of indigenous plants and natural silk would have many benefits, while avoiding some of the environmental impacts and risks associated with certain alternative activities, such as irrigation of domestic crops.

If and when cultivation of indigenous plants requires clearing of virgin lands, then full EIAs are required under the EA Policy of Namibia. However, where indigenous plants can be grown on previously disturbed / cleared land, or without clearing land, then full EIAs may not be required but EMPs would still be recommended.

Concerns about the use of indigenous plants mainly revolve around the potential for plundering of wild areas, once a good market for the relevant products is established. This potential will need to be managed through institutional arrangements and certification of reliable producers.

A number of sustainability issues will require good management, and good record keeping by producers and processing plants. Sustainability issues could be both biophysical and socio-economic. In cases where the demand for products is “fad-driven” e.g. in the health care sector, vigilance over market fluctuations and diversity of crops and products should be considered.

However, it is considered that all the issues should be manageable, and the use of indigenous plants and products can be promoted with confidence.

**Rural Access Roads**

The impacts of roads construction may vary considerably from one project to another. The impacts depend not only on the nature of the environment traversed (direct impacts), but also on the secondary impacts of opening up a remote area for development. The roads proposed under the programme proposal can be grouped as follows: -

- Construction of roads along existing tracks that will not significantly alter the patterns of vehicle movement (although numbers of vehicles will likely increase), where the environments traversed are not particularly sensitive or are already much degraded. In
such cases no significant impact is expected provided the project is well designed and managed. An EMP is recommended for road alignment and construction (Category B). These proposed roads include:

- D3600 Tsintsabis – Katwitwi
- Omutambo Mawe – Okahao
- Oshikango – Omundaungilo
- Okahao – Omakange

Construction of roads in remote areas of high environmental quality and high sensitivity (whether along existing tracks or completely new) needs to be considered far more carefully. In areas that were sparsely populated, new roads can lead to considerable negative impacts mainly due to the secondary impacts of developments and settlement made possible by new and easy access. In such cases, an EIA is essential, not only to consider the least impact alignment, but also to take into account the likely developments arising from the creation of improved access and the impacts of those developments. These Category A proposals include:

- D3301 and D3830 Epukiro – Eiseb Block (opens up near-pristine Kalahari woodland).
- D3403 Divundu – Mohembo (the road construction itself would have little impact but for the fact that it passes through the Mahango Game Reserve. It would be an upgrade of an existing gravel road, and would not likely change the patterns of vehicle movement as it is the only road to Botswana in that area. Measures are required in the design of the road to cause motorists to reduce speed to protect wildlife. The impacts of borrow pits could be significant if they are in the Park).
- Omuthiya – Omutambo Mawe (runs east west near the northern boundary of Etosha) where it will create a disturbance to wildlife and large walking birds such as the endangered blue cranes).

During construction, a long-term impact usually arises due to the excavation of materials from borrow pits for base layers. This needs to be well managed in all cases, through the implementation of an EMP.

Stone for surfacing of tar roads would most likely be imported from existing quarries, which may be far away. However if any new quarries for stone are proposed these would require an EIA and EMP.

The EA Policy requires an EIA for all “major roads”. However the impact of a road is not always related to the size or volume of traffic that it carries. New roads that open up sensitive areas to settlement and development are of greatest concern.
8.5 Social Sustainability

Education

Education is intimately linked with the skills levels in the country and with the ability of a person to find gainful employment. It has been argued that low skills levels amongst the youth and the resultant high levels of unemployment pose a threat to the stability and peace in Namibia. The interventions proposed for the education sector has as its main objectives to increase skills levels and to bring the supply of skills in line with the demand for such skills. While the interventions will supply considerable physical facilities it would be of little use (and a threat to success and sustainability) if the “software” in the form of enough and appropriately qualified teachers are not available to ensure the maximum benefit from these “hardware” interventions. For social sustainability and poverty reduction it is therefore of extreme importance that the other aspects of ETSIP, which would ensure staffing and accommodation of staff and maintenance of all the facilities be integrated into the MCA interventions through proper planning and programming of the interfacing of all these components.

Livestock

The threats to sustainability rest with the ability of the GRN system of veterinary extension services to successfully achieve the objectives of this intervention. Veterinary extension services currently suffer from staff shortages and vehicle shortages and the intervention does not specifically address these issues. There would be little use to create new veterinary stations and embark on a tagging program without the necessary human resources and vehicles to tackle this mammoth task. Once the intervention commences, expectations will be created and failure to satisfy such expectations could jeopardize the entire intervention at an early stage or cause it to come to a halt as soon as the investment ends. Parallel to the implementation of the MCA interventions, these shortcomings and constraints need to be addressed satisfactorily.

The intervention would create some 120 new farms with access and infrastructure. It is remote and costly to access markets and suppliers of farm needs. In settling farmers in this area, care should be taken to select them carefully and ensure that beneficiaries at least have enough assets to handle the baseline costs. Settling really poor and vulnerable people on such farms without the necessary support is tantamount to throwing them for the wolves. Whoever is selected must be provided with the necessary support and guidance to ensure sustainability and prevent the creation of a pocket of poverty.

Social sustainability of the BTE action would be enhanced through well-designed training programs for the proposed SME bush cutters and proper agreements between the generation equipment owner and the bush harvester SME. Entering such a venture without the right support decrease success rates and the harvester SMEs are probably the most important link in the chain. Suitable training should be provided to ensure sustainability and thereby ensuring that the benefits derived from this intervention provide the maximum benefit to all the parties involved in the venture.

As an example of social un-sustainability one only need to consider the conditions at many resettlement farms where many people benefited from the land reform program. However, no or little support was provided and now, a few years later, these beneficiaries are probably worse-off than before resettlement, simply because they were given a benefit with a responsibility but without the tools to be able to manage it successfully. The ECF-SP is key to ensuring sustainability of most agricultural interventions forming part of the MCA intervention in Agriculture.
To ensure the value and sustainability of the upgrading of quarantine facilities, other key elements must also be put in place. Firstly the benefits to the farmers must be clear. They must receive better prices, be able to more easily transport their cattle to these facilities and be convinced that they will have a market. The intervention must therefore be properly interfaced with the buyers, and improved accessibility, which will lead to real better prices to ensure that it would work over the long term. The health of their cattle must also be shown to be guaranteed. Effective extension services that provide guidance on how and when to market cattle should further support the intervention. Only if all these are in place would true social sustainability be achieved and would the intervention lead to true transformation in off take and commercialization practices.

Feedlots in the commercial areas are based on private sector interest in buying suitable young animals, adding as much meat as possible in a short throughput period and selling or slaughtering at optimal points. It creates a market with competitive prices and assists with off-take of young animals. This could transform the off-take patterns in the communal areas. However, one could expect a lag period from communal farmers to catch on to this new opportunity and effective extension services is once again imperative if this intervention is to be socially sustainable. Behavioral changes will be required and farmers will have to be convinced to make use of the new marketing mechanisms. The same considerations of manpower and other resources for effective extension services are also valid to ensure the success and sustainability of this intervention.

Tourism

Namibia’s CBNRM program has yielded spectacular results and conservancies and tourism development potentially have many benefits to the communities who live in these areas. It has led to massive recoveries of the natural resource capital. However, the benefits to the communities are not always clear and are sometimes questioned. Human animal conflict often leads to the destruction of crop fields and the killing of livestock by wild animals. Although a new intervention insuring against such eventualities forms part of this proposal, care should be taken to ensure that real financial benefits accrue to the communities in the conservancies where the interventions will occur, and that not only in the sense of the employment opportunities created by the tourism facilities. If this does not happen, the perception can easily take hold that despite all the benefits gained from the CBNRM program, the poor are actually the ones that pay for the conservation efforts in the country. This would seriously undermine the program and would raise questions about the social sustainability of the proposed interventions.

Green Scheme

The Green Scheme, by definition, takes up portions of strategic land next to the rivers and watercourses, especially in the Kavango and Caprivi Regions. This has an effect on the local population in terms of loss of land as well as loss of access to the rivers because the public are normally not allowed access through the irrigation schemes. The social acceptance of the green scheme in some areas has also not been proven and considerable consultation is required to ensure the social acceptance of both the land take elements as well as the management models for the Green Scheme projects. For any such project, beside environmental considerations, full community and political support is required and must be sought as probably the most important element that would influence the social sustainability of the intervention. In addition, political will to not interfere with the running and commercial agreements is also important and the recent problems with failure from the cash crop farmers to pay their debts to the Service Provider comes to mind. Although new mechanisms have been designed to solve these problems, the services to be received and the responsibility to pay for these also need to be applied in the exact same manner in all
schemes across the country so as to not allow any discrepancies or perceptions of favoritism to jeopardize the success and sustainability of these schemes. It is further imperative that the SP’s are carefully selected to satisfy certain requirements with regard to skill levels, financial ability and development orientation.

**Rural Access Roads**

Road construction sometimes has very negative social impacts and could be very detrimental to communities. The proposed MCA roads generally follow existing roads and tracks and would therefore have a lesser impact than a complete new road alignment. However, in order to ensure that the communities that may be affected by the works are not negatively affected, sustainability can be ensured through social impact assessments to ensure that negative social impacts are mitigated and the positive impacts are maximized to the benefit of the communities. Particular attention should be given to land take, the influence on existing settlement and archaeological impacts. It is further important that the roads construction activities be planned in such a way that local people also benefit from the investment through the use of labor based methodologies designed to provide employment fairly and equitably to all residents living along the route. Cognizance must also be taken of the increased traffic speeds that normally result from road upgrades and the potential for livestock collisions, which rural dwellers all fear.
8.6 Overall Program Management

The Mid-Term Review of NDP2 (2005) revealed that projects funded by development partners are often not sustainable due to the immediate dismantling of temporary structures upon completion of the program or project. It was further observed that projects funded by development partners bring with them implementation and administrative challenges as they often require specific administrative and reporting formats.

For MCA Namibia, GRN has mandated the National Planning Commission Secretariat (NPC) to supervise the implementation of MCA Namibia Program. NPC has a constitutional mandate to account for development resources.

In this section, an overview is given of the supervisory functions, the management of MCC funds, the procurement of goods and services and the fiscal accountability elements. For sustainability, the GRN envisages the implementation of the MCA Namibia Program in the following manner:

**Supervisory Management**

The NPCS will be the Accountable Entity and supervise the implementation of the MCA Namibia program. This presents additional work yet no additional responsibility and it fits in very well with NPC’s role of overseeing overall development planning in Namibia.

Within the Government structure, the NPCS falls under the Office of the President (OPM) as it was established in accordance with Article 129 (1) of the Constitution of the Republic of Namibia. Its main responsibility is planning of national priorities and directing the course of national development. Its powers and functions are also stated in the same article. NPC is a legal entity established by the Act of Parliament, the National Planning Commission Act, 1994 (Act No.15 of 1994).

The Commission is composed of Commissioners drawn from sector ministries (as stipulated by the NPC Act) plus eight persons with knowledge in economic, social ecological or other developmental issues. The President appoints the eight Commissioners.

In terms of Article 3 (1) (f) of the Act, the Commission is responsible for “management and coordination of international aid resources, including for non-governmental activities.” In addition, provision for the establishment of an Advisory Committee is made under Article 8 of the Act.

Applying this provision, the Commissioners’ meeting of 23 August 2006 resolved to appoint a Special Committee to advice the Commissioners on the management of the MCA Namibia Program. This Special Committee will be appointed to serve as a Board to guide the implementation of the MCA Namibia Program, as eventually defined in the MCA Namibia Compact.

The NPC will perform overall supervision, yet a dedicated MCA Program Unit will be established to perform the day-to-day activities. The Unit will be at the level of Under Secretary in the Government structure. All staff members for the Unit will be recruited through the MCA Namibia Procurement Agent (outsourced), in consultation with specific sectors.

These envisaged staffing of the MCA Program Unit will include (among others):

- Programme Manager (Head of the Unit).
- Deputy General Manager\(^\text{59}\) or Administration and Finance Manager.
- Monitoring and Evaluation Manager.
- Procurement Manager.
- Public Relation Manager.
- Environmental and Social Impact Manager.
- Manager Legal Affairs.
- Project Managers, who will be sector experts and will be working together with the sectors that are included in the final MCA Namibia Program as well as with Procurement Agent.

The Head of Unit will report to the NPC, who in turn will report to the Board of Directors. The staff of Unit will be recruited on two years renewable contract except those who are seconded from the Government system. This kind of arrangement will create less problems of re-deployment, especially after the programme comes to an end.

For continuity, the Division of Development Resource Coordination\(^\text{60}\) under the Directorate of Development Cooperation at NPC will second some of its staff to the Unit for the duration of the program.

The Accountable Entity will manage two flows of information, to and from the MCA Program Unit at NPC and other institutions/agencies (public and private) involved in the program implementation.

In general, horizontal communication will be encouraged with all ministries/departments/institutions/agencies involved in the management and implementation of the MCA Namibia Program communicating with each other on a regular basis, bearing in mind formal communication protocols as per existing agreements.

**Implementing Agencies**

The principal implementation agencies for the scoped MCA Namibia investments are the following:

<table>
<thead>
<tr>
<th>Implementing Agencies</th>
<th>Ministry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve Delivery and Quality of Education at Secondary and Tertiary Level</td>
<td>Ministry of Education, University of Namibia (UNAM), Polytechnic of Namibia (PoN) and other related institutions involved in education and training.</td>
</tr>
<tr>
<td>Improve Livestock Productivity and Marketing in Communal areas</td>
<td>Ministry of Agriculture, Water and Forestry, Ministry of Lands and Resettlement, Meat Board, Agronomic Board, and both Agricultural Unions</td>
</tr>
<tr>
<td>Promote Private Sector based Investment in the Green Scheme and Indigenous Natural Products</td>
<td></td>
</tr>
</tbody>
</table>

\(^{59}\) If the Deputy Manager is required to have a financial background then there will be no need to have both or the Finance Manager can also be the Deputy Programme Manager.

\(^{60}\) The Division is already approved by the Cabinet as well as by the Public Service Commission. It will be funded by EU and UNDP for the initial period of two years, after which the Government is to take over. Recruitment process has been initiated but yet to be finalized. (Complication: four different rules and regulations – GRN, UNDP, EU and MCC. MCA Namibia staff will be paid by MCC for 5 years)
All these institutions will be the implementing agencies spearheaded by sector Ministries. Their functions will be supervisory and technical in nature, with direct involvement in the technical specifications of tenders in close cooperation with Action Managers in the MCA Namibia Unit. In addition such institutions are also responsible for operational, management and maintenance of MCC funded infrastructure, upon completion of the MCA investment and beyond the MCA Namibia Program.

Some of the institutions may not have capacity to keep up with the speed of MCA implementation over the short period of five years. In order to close this gap, the Procurement Agent, in consultation with the responsible sectors, is expected to recruit specific Action Managers for each component to work under the MCA Namibia Unit at NPC.

**Procurement Agent**

For transparency and speedy implementation of the MCA Namibia Program, GRN has decided not to use its own Tender Board for purchasing goods and services for this program. The Agent will be recruited through international open tender and will use the GRN procurement guidelines.

The relationship with supervisory management and implementing agencies will be a two-way flow of information. The Agent will work closely with the Action Managers in the MCA Namibia Unit at NPC who at the same time are the link between the sectors, contractors and the Unit.

**Financial Management**

The Ministry of Finance will be responsible for budget control and authorizing of expenditure under the MCA Namibia Program. Funds will not be channeled through the State Revenue Fund but will be deposited in a separate Bank Account held at a local Commercial Bank (to be appointed through tender). The operations of such account will require Treasury Authorization, as stipulated in the Treasury instructions.

The Ministry of Finance will dedicate a specific staff member to perform the daily management, as required and agreed upon in the agreement between parties. It is suggested that the Financial Manager of the MCA Namibia Unit at NPC will work closely with the dedicated staff member in MoF. This will help to avoid delays in the instructions to the Commercial Bank for effecting payment to the contractors.

Financial reports will be submitted to NPC for forwarding to MCC. The frequencies of reports will be determined in the agreement, and also the detail of reporting.

The relationship with the Supervisory Management is on daily basis and reflects a two-way flow of information. The Implementing Agencies and Procurement Agent are invited to meetings at NPC and will be allowed to share their view.

The Bank of Namibia (BoN) will act as the receiver of foreign exchange (from MCC) and will convert such funds into the local currency. The Bank will act as a wholesale disburser of funds.
Channeling foreign currencies through BoN would add to the country’s foreign exchange reserves. The Bank will therefore be recipient of foreign currency (US Dollar) and it will make available the Namibian dollars equivalent to the selected local banking institution.

The commercial banking function will be sourced out and selection can be done through open tenders. However, in order to avoid delays, the Terms of Reference should dictate that whatever decision might be required it should be made in Namibia.

The main communication channel with Commercial Bank will be the Fiscal Agent, which will give instruction for the contractors to be paid. There will also be a relationship between the Commercial Bank and MCA contracted service providers/contractors.

MCC funds will have a separate account and as such it will not be subjected to double auditing. The Procurement Agent should recruit an auditor.
Figure 8.1: Overall MCA Namibia Program Implementation Structure

MCC

NPC (ACCOUNTABLE ENTITY)

FISCAL AGENT MOF

BANK OF NAMIBIA - FOREIGN CURRENCY

MCA NAMIBIA

MCA NAMIBIA BOARD, PS & DDC

MCA NAMIBIA: UNIT

PROCUREMENT AGENT (Outsourced)

COMMERCIAL BANK

MCA NAMIBIA: Programme Manager & Deputy

MANAGER: Admin & Finance

MANAGER: EIA Sociology

MANAGER: Outreach & PRO

MANAGER: Projects

MANAGER: M & E

MANAGER: Procurement

MANAGER: Legal Affairs

MINISTRY: Education

MINISTRY: AWF

MINISTRY: ET

MINISTRY: WTC

CONTRACTORS

CONTRACTORS

CONTRACTORS

CONTRACTORS
8.7 Program Financing

Cash Flow Budget
Disbursement of the funds is expected to be received in trenches on a quarterly basis. Specific amount will be determined in accordance with MCC rules and regulations after the due diligence period when actions to be funded are agreed upon between MCC and GRN. The cash flow for implementation will be developed based on the actual activities to be implemented. The Financial Manager within the Programme Implementation Unit at NPC in close collaboration with Action Managers and affected sectors are expected to participate in this regard. The cash flow will influence the re-disbursement of the money from BON to Commercial Banks.

Interest Earnings
Interest earnings will depend on where the money is invested and the rate agreed between MCC, BON and Commercial Bank. Since the requirement of MCC is to repatriate the money from the interest back, that will be cleared during the due diligence discussions and legal documents negotiations.

Foreign Exchange Risks
Should BoN agree to keep the MCA money in US Dollar, and only pay the required amount in local currency, the foreign exchange risk will be limited. It should be noted that Namibia does not provide foreign exchange risk cover. A 5% contingency, which should also cover the foreign exchange risk, is included in the MCC budget. It is envisaged that both GRN and MCC will agree to fix the exchange rate on the day of the Compact signing as this makes the financial reporting easy.

Taxation
Namibia is a member of the Common Monetary Area and its own money is pegged one-on-one to the South African Rand. As a result, Namibia uses the monetary policy of South Africa. It is on this basis that the Bank of Namibia in conjunction with the Reserve Bank of South Africa administers the exchange control. The financial year in Namibia is from April to March each year and the tax year runs from March to February of the previous year. There are several tax regulations but the main one that will be applicable to the implementation of Grant financing are: Income Tax Act; Value Added Tax Act; and Company Tax Act.

Income tax is compulsory to all income earners including the non-residents temporally employed in Namibia as long as the income is generated from the Namibia source. However, Non-Namibian source income will be generally exempted from income tax.

Value Added tax is included in all goods and services purchased within Namibia. However, the Office of the Inland Revenue at the Ministry of Finance can refund the net amount paid at the end of each tax period. Should goods to be used in the implementation of the MCA Namibia Program be imported from outside Namibia, Customs and Excise will collect VAT at the point of entry into Namibia. Similarly, the VAT can be claimed from the Office of Inland Revenue.

International companies might be exempted from tax but businesses registered in Namibia or branches in Namibia of foreign companies deriving income from Namibia are subject to payment of tax.

Contribution by GRN
Government has committed to MCA Namibia programme and its contribution will be reflected in operational and maintenance cost, staffing, man time spend in discussing the
programme especially at political level. In monetary terms, it is estimated that over 100 million NAD per annum will be used for operational and maintenance of infrastructure build with MCC money.

**Contribution by other Development Partners**

For this proposal, the main contribution from development partners will support ETSIP. In fact, even with MCC funding in Education, without other development partners, there will be no ETSIP. It is therefore important for all parties to be committed and do their parts. Specific Development Partners’ contribution to ETSIP can be discussed with the Ministry of Education.

Others Actions in the MCA Namibia investments are also receiving assistance from development partners and these are reflected in the document, under the heading: “Participation of Development Partners”.

**8.8 Investment-level Program Implementation Structures**

**Education**

At the level of the Ministry of Education, or other education sector sister ministries, Permanent Secretaries will continue to be the accounting officers and overall supervisors in terms of policy directives and technical specifications for MCA funded activities implementation. Educational institutions/organizations are envisaged to have their own structures in place that would facilitate proper coordination between them and the MCA contact point, at both the Ministry and NPC.

While the Permanent Secretary may not be the accounting officer to MCA in terms of financial accountability, he/she will be the overall authority for sector activities coordination and reporting through to the MCA and Minister. There should therefore be transparency in resource coordination, allocation, utilization and reporting between MCA and sector ministries. This is to be done in a manner that will ensure coordination amongst development partners and harmonization within and outside government structures.

Support directed to educational institutions that are independent of the Ministry of Education’s operations will be channeled by MCA directly to such institutions, namely UNAM, Polytechnic of Namibia and COSDECs. However, there will be need for a close liaison and coordination between MCA Namibia. For example, there should be a central coordination point within MoE that would link the directorate responsible for donor coordination directly to the Permanent Secretary. The Directorate Planning and Development manage the current coordination, however as far as MCC/MCA expectations in terms of technical expertise, knowledge and skills in handling the envisaged volume of MCA funded activities, this would require additional reporting and coordination. Appointment of an expert to work closely with the Directorate Planning and Development to ensure timely liaison with sub-programme directorates and regional directors is a must to have ahead of implementation. Other affected education sector ministries also have similar arrangements. The implementation structure is presented in Figure 8.2.
Livestock Marketing and Production

The DVS has standard design for Veterinary Stations. Construction would be carried out through public international tender with technical evaluation to be carried out by the relevant agencies to ensure that construction and installations are done according to standards.

Once completed, a Veterinary Doctor, one Chief Animal Health Technician and other support staff would staff each veterinary station. DVS has made budgetary provision for the staffing of the stations. These staffing structures, in collaboration with the Community Animal Health Agents, who are independent livestock service providers, would be the key actors in the testing and the tagging of livestock in the NCAs.

The building work (extensions, renovations and new construction) for the veterinary stations would be implemented by DVS with support from the Ministry of Works, Transport and Communication. Private building contractors would be engaged, according to MCC guidelines, to carry out the actual construction but will be supervised by DVS.

The tagging of livestock would be sourced out to the Meat Board of Namibia, which in turn will contract the private company to order and supply the tags to the farmers. The farmers would have been trained by then on how to carry out the tagging themselves. Training of the farmers is a part of the package. The private company will monitor whether the tagging was done correctly. The NNFU being a representative body of communal farmers would play a crucial role in soliciting the farmers’ understanding, cooperation and support for the intervention. The whole hierarchy of DVS, together with community structures such as CAHAs as well as traditional authorities would be involved in the execution of the project.
and they are presented in Figure 8.3. Meat Board of Namibia will supervise construction of the Veterinary Stations.

Figure 8.3: Implementation structure for Veterinary Stations and Tagging of Animals

The unlocking of Eiseb will be implemented directly by the MLR with collaboration from the MAWF. The Regional Land Boards and other local structures and institutions would be involved in the selection of resettlement beneficiaries.

A Steering Committee comprising of MAWF, MLR, Agribank representatives, Regional Land Board, Regional Council, NNFU, NAU would be established to oversee the execution of the program component.

Figure 8.4: Implementation Structure for Eiseb Block
The NAU and the NNFU would jointly administer the BTE under the Joint Presidency Committee (JPC) and would retain overall responsibility for the funding and performance of the project. The JPC has a proven track record implementing the ECF-SP (Emerging Commercial Farmer Support Program) and would make use of a similar structure. The Project Steering Committee (PSC), with its technical advisors, will commission through the MCA Namibia procurement agency all the studies and “groundwork” needed to facilitate the project, such as: an EIA, investigation and specification of technologies, and others. This will lead to the preparation of tender documents according to the technical and development objectives of the action, including tenders for BOT (Build, Operate and Transfer). BOT is a recognized public private partnership model, which has been implemented by institutions such as the World Bank in many parts of the world. The model has been chosen for the BTE activity to ensure efficient operation of the IPPs and harvesting SMEs, while at the same time ensuring that the developmental objectives of the BTE action are met. The PSC will still provide input, monitor and evaluate the project, make the necessary policy decisions, and set the objectives for the project contractors and consultants.

The day-to-day management of the bush harvesting and electricity generation businesses will be outsourced to the BOT agents, who will have the necessary technical expertise. Through a BOT agreement, a private contractor would be responsible for the project management and operation activities. Operation activities include both bush harvesting and the running of the electricity generation plant. Since the project includes more than one wood gasifier and gen-set, the PSC would need to decide whether the number of contractors needed to operate all of the plants, or each gasifier unit and gen-set. The JPC and PSC would also need to decide on issues such as an equitable profit-sharing scheme using the profits generated from the sale of electricity by the initial BOT contractor and subsequent contractors.

A detailed business plan will be undertaken to assess how best to run the BOT venture, but the basic institutional arrangement is shown in Figure 8.5.

The JPC would be the owners of the project plant and equipment (gasifiers, gen-sets, shredding equipment, etc.). The JPC would lease the plant and equipment to the respective contractors and SMEs. However, it may be that some of the less expensive equipment (such as chain saws and protective equipment) is sold to bush harvesting SMEs, instead of the JPC retaining ownership and keeping track of many small items over the long term.
Figure 8.5: Implementation Structure for BTE Action

Joint Presidency Committee (NAU and NNFU)

Development Leg

ECF-SP (Emerging Commercial Farmer Support Program)*

Technical Steering Committee

PMU (Project Management Unit)

BTE (Bush to Energy Action)

Technical Steering Committee**

BOT Operator

Commodity & Advocacy Leg

LPF (Livestock Producers Forum)

CPF (Crop Producers Forum)

Note:
*) Refer to MCA investment 2.2.3
**) The dotted green line between the ECF-SP and the BTE technical SC illustrates that the SC for the BTE action includes the development partners as for the ECF-SP, but in addition draws expertise in the field of wood gasification and BOT arrangements.
Following the line of responsibility as set out in the figure above the following main institutions, the main agencies involved and their functions are briefly summarized below:

- **Joint Presidetny Committee (JPC)**
  - NAU and NNFU
  - Functions as per constitution: Act in the interest of all Namibian farmers and the agricultural industry

- **Development Leg**
  - NAU and NNFU
  - Functions as set out in the JPC constitution: Act in the interest of especially previously disadvantaged Namibians entering the field of agriculture, in the wider national interest

- **(ECF-SP) Project Steering Committee (PSC)**
  - NAU and NNFU, MAWF, MLR, Agribank, Donor
  - Functions as set out above, with emphasis on steering current projects (ECF-SP and BTE). Special responsibility is to set policy framework.

- **BTE technical committee**
  - NAU and NNFU, MME, Nampower, ECB, Specialists in fields of BTE and BOT
  - In collaboration with policy guidance from the JPC and the PSC responsible for the design tenders, as well as technical and developmental management of the BOT tender, as well as advising recruitment of other services as required (such as commissioned studies).

- **BOT agent**
  - Private sector agents
  - Responsible to build and operate the BTE plants according to specifications agreed upon. Employ and train harvesting SME. Allow insights into their operations to evaluate and promote IPPs.
Implementation of the ECF-SP will be outsourced to a Program Management Unit. The institutional placement of the PMU is shown in Figure 8.6.

The NAU, NNFU, MLR, MAWF, Agribank and development partner(s) are represented on the Technical Steering Committee. This committee has already been established with clear Terms of Reference. It met regularly over the past 18 months. Both the NAU and PMU are implementing agencies.

**Fig 8.6: Implementation Structure for ECF-SP**

Quarantine facilities are built to be used by communities and are normally managed by the Directorate of Veterinary Services. Similar arrangements will be put in place for the MCA Namibia action.

Should a need arises for DVS to outsource the function, a Project Steering Committee will be set up to oversee the work of the contracted implementation agency. This Agency will detail the tender specifications for the lease of the quarantine camps, clearly reflecting maintenance responsibilities. It will also be responsible to draft the Performance Agreement.
with the private sector management company, to be endorsed by the PSC. DVS would continue to set the standards and to provide veterinary certification control to ensure the acceptability of the meat from the quarantined animals to the consumers, while the contractor would run the feedlot/quarantine facilities.

Ownership of the quarantine camps will continue to rest with GRN with supervision by DVS.

**Figure 8.7: Implementation Structure for Quarantine Camps**

The feedlots will be owned and controlled by GRN. In a PPP arrangement, MeatCo will lease and manage the feedlots guided by a Performance Agreement with GRN, which clearly stipulates maintenance obligations.

There will be a Project Steering Committee composed of DVS State Veterinarian, MeatCo, MeatBoard, Green Scheme Agency, NAU and NNFU. MeatCo who in turn uses contractors will implement decisions of the Committee. Building and construction has to be done according to MeatCo specification.
Tourism

Implementation for all components will be coordinated by the Tourism Sector Coordinator, (or Action Manager) located in the MCA Namibia Unit. The Coordinator will be therefore be responsible for ensuring excellent coordination with the other sectors in the MCA investment, as well as with MET as the sector’s line Ministry.

To ensure effective implementation of this significant investment, a combination of existing capacity and a new team is proposed. All components will receive support from the whole team (including complex teams), but since implementation of the Resource Development and Management component is envisaged to be most challenging, much of the dedicated team is proposed primarily for this component.

The other three components, Marketing, Barrier removal and Capacity-building and Empowerment will be implemented through partnership with other partners: NTB, Tourism Council, commercial banking partner(s) and the private sector associations. This will require effective coordination between these partners and the rest of the tourism sector investment, which is the responsibility of the Tourism Sector Coordinator.
Two levels of management are proposed for implementation of the RD&M component, comprising in total 4 regional teams, coordinated and supported by a headquarters unit. These will largely involve externally appointed technical assistance-type personnel.

Although the “complex development team” itself will only be supported for the 5 years of MCA investment implementation, the implementation is designed to take advantage of, and complement, existing arrangements – to strengthen them and leave them better placed to ensure the sustained development of the complexes. In the interest of sustainability, it is preferable to build on existing arrangements, rather than developing new, project-specific institutions. Namibia has a strong mix of government and non-government actors in the tourism and environment sector. The Ministry of Environment and Tourism itself has a significant field presence, encompassing a broad range of expertise and experience. However, it currently lacks the capacity to directly implement the proposed extra-budgetary activities itself.

A principal task of the regional teams will be to coordinate support from the existing projects and initiatives, particularly in terms of capacity, and to ensure participation of as wide a group of actors as possible. By coupling this, with the strong, high-level support from government for this type of approach, and a high level of long-term investment from both public and private sectors, the long term benefits from the MCA investment will be assured.

**National Project Implementation Team**

Based in Windhoek but operating across the regions, this team will:

- Provide overall project management and administration.
- Undertake national level planning and liaison with stakeholders.
- Complete technical plans of necessary infrastructure and manage the tender processes.
Provide technical support and leadership to the Regional field-based implementation teams;

- Secure private sector and/or JV investments.
- Provide legal and contracting services.
- Ensure that the target ERRs are maintained throughout the duration of the project.
- Report on project progress.

The National project team will consist of the following technical support positions:

1) Tourism Sector Coordinator (one of the Action Managers to be recruited by MCA Namibia through Procurement Agent and to be based at NPC)
2) Senior Park planner with experience outside parks
3) Civil engineer or experienced quantity surveyor
4) Senior resource economist
5) Joint Venture facilitator with extensive experience in the sector
6) Tender specialist with qualifications and experience in legal matters

Regional Field-Based Implementation Teams (x 4)

There will be four regional field based teams (NE, NC, NW & S) who will be responsible for:

- Translating national level plans into local-level implementation plans.
- Providing local level project management supervision.
- Liaison with stakeholders in particular local authorities.
- The establishment of local collaborative management authorities in each area.
- Training local stakeholders to take over and maintain the developments.
- Local level project monitoring and reporting.

Each field-based implementation team will consist of the following technical support persons:

1) Park planner and local-level team leader
2) Civil technician to oversee and quality control construction projects
3) Community liaison officer and joint venture facilitator.
Green Scheme

Private companies through a public tendering process will be used in all planning, design and construction activities to ensure on time completion of planned projects. Service providers are expected to come from all over the SADC Region, and government is in the process to relax its working permit requirements for at least neighboring countries.

Figure 8.10: Implementation Structure for MCA Namibia Investment into the Green Scheme

Indigenous Natural Products

Successful implementation of the activities detailed above will require close cooperation with existing and on-going initiatives in the natural products sector.

Specifically it is important to acknowledge the roles of the IPTT (chaired by the MAWF’s Directorate of Agricultural Research and Training, with secretarial services from the NBRI and financial management by NAB) and the Plant Sector Development Forum (PSDF), chaired by NAB. The IPTT is a decision making body, contracts service providers and approve the results of NAB.

On the other hand, the NAB is entrusted with financial Management and it is the link between the IPTT and MCA Namibia through MAWF.

In addition to five MAWF representatives, other IPTT members include MET (2 members), MTI (2 members), Ministry of Education, UNAM, PoN, NNFU and NAU, the DRFN, CRIAA SA-DC, NACSO and Oontanga Oil Producers CC.

At community level, CBNRM are established with local community partners. The local information and technical support from IPTT is passed through Eco-Regional Satellite Centres. There supply chain is coordinate by the Supply Chain Development Officers. Experienced commercial managers under the direction of PPT’s private sector partners manage the extraction facility, quality control and marketing components.

It is recommended that supervisory management of the MCA indigenous natural products investment be entrusted to the IPTT, with inputs from the PSDF, and that the IPTT moreover be explicitly mandated to alter budgets if and when clear market signals suggest it is appropriate. Where and when necessary, specialised sub-committees will be created to
address specific activities as may be identified. This is in line with the Terms of Reference of IPTT.

In most cases the choice of implementing agency is determined by existing relationships between producers and business development service providers. If MCA open-tender procurement rules dictate another way of choosing implementers it is strongly suggested that new service providers be instructed to build on existing structures and cooperate with existing stakeholders.

Figure 8.11: Implementation for MCA Investment into Indigenous Natural Products

**Rural Access Roads**

Outside the SWAP, a separate and dedicated coordination set-up for the implementation of the MCA roads will be established.

At implementation level, the MWTC together with the RA and RFA will take the lead in ensuring that the various steps towards actual construction are completed timely and construction commissioned without delay. They will also manage the various contractors and ensure compliance with the set standards.

The RA has capacity for the monitoring of construction of the MCA roads and is represented in almost all parts of the country. Yet, part of this function will be outsourced, for which budgetary provision has been made.

The MCA Roads Review Forum will be established with the following members: MWTC, RA, RFA and the MCA Program Manager from NPCS. Members will perform the following functions:

- MWTC will have overall sector coordination and supervisory authority, policy and regulations and it will be the link between NPCS and other members of the Forum.
- RA will supervise the contractors and issuing the Terms of Reference and technical specifications. Contractors will construct the roads.
- In addition to other national roads, the RFA will be responsible for future maintenance of MCA funded roads.
The MCA road Review Forum will review the overall MCA road construction and maintenance as well as monitoring and evaluation of the impact of MCA funded roads on regional activities.

The MWTC, RA and RFA staff can benefit from the MCA Namibia Bursary Trust in terms of training Civil Engineering and Transport economists. Apart from the scholarships, the secondment of experts by cooperating partners especially those who are willing to train Namibians will be appreciated.

Figure 8.12: Implementation Structure for MCA Namibia Investment into Rural Access Roads
8.10 Monitoring & Evaluation Plan

The benchmarking and OVIs for each of the actions that find their way into the final agreement between MCA Namibia and MCC – as per the Compact – will be detailed in preparation of the MCC Due Diligence and further fine-tuned during the Due Diligence itself. In the MCA Namibia Program Logical Framework (as presented in Section 1), a number of possible OVIs and sources of verification are suggested. Together with the assumptions used in the ERR analyses, these will form the basis for the detailing and fine-tuning of the M&E indicators.

The MCA Namibia team has familiarized itself with the various MCC formats for M&E and has made a start in setting up the M&E system for the MCA Namibia Program.

Frequency of monitoring actions and evaluations will be discussed and agreed between MCA Namibia and MCC. Some OVIs are likely to show results in the earlier part of the MCA Namibia Program implementation, others only much later.

MCA Namibia intends to undertake a number of periodic (sample) surveys to collect relevant information to inform the implementation process. It will also support the Tourism Satellite Account effort as an important tool in tracking the actual transformational impact on the economy from tourism development. M&E will serve multiple purposes – guiding and fine-tuning of implementation during the MCA Namibia period, ensuring cost-effective and timely implementation of agreed activities and measuring the impact on the ultimate objectives set for the program. MCA Namibia will carry the motto “poverty reduction through economic growth” through till the end of the implementation period, and beyond ...

The idea of implementing the MCA Namibia Program within existing structures was influenced by the need for sustainability after the MCC assistance comes to an end. Since all activities are implemented within sectors no problems are foreseen.

The MCA Namibia Unit in the National Planning Commission will remain with the staff from NPCS, who gained experience during the MCA Namibia Program implementation. They will continue to work within the spirit of the MCA – poverty reduction through economic growth – with Government line ministries and agencies and NGOs, CBOs, private sector, and other development partners. This unit will continue with monitoring and evaluation and ensure that the MCA Namibia investments are well taken care of.

The Government, through its sector Ministries will start making preparations at the beginning of the fifth year on what is likely not to be completely completed so that if extra resources are needed in year six, the Government will see to it that the work commenced will not be left unfinished.

It is normal practice with the development partners that program equipment is donated to the Government upon the completion of a project. MCA Namibia and MCC will agree on the most appropriate mechanism before the signing of the Compact.

The MCA Namibia Program offers a mixture of actions that will be implemented at different starting and finishing time. During Due Diligence – once investments, actions, delivery and implementation mechanisms have been agreed – MCA Namibia will have better insight into the measures it should anticipate to facilitate a smooth exit after the five year investment period.
References

Education


Livestock


DVS (2006), 2005 Lives
tock Census, DVS, Windhoek.


Kirsten, JF et al, (2000), Livestock marketing in the northern communal areas of Namibia, NOLIDEP study, MAWRD, Windhoek.

Omaheke (2004), Regional poverty study: Omaheke, NPC, Windhoek.


Tourism


Namibia Tourism Development Programme, 2004. Towards a national tourism strategy. NTB, EU, MET.


**Cash Crops: Green Scheme**


PriceWaterhouse Coopers (2005), Working document, Cost benefit analysis of the horticultural sector, Windhoek


Sartorius Von Bach and H. Binding (2003), Feasibility study on Sendelingsdrif, unpublished.


**Cash Crops: Indigenous Natural Products**

Bennett, B. (2006, draft).  *Natural Products: The New Engine for African Trade Growth. Consultancy to Further Develop the Trade Component of the Natural Resources Enterprise Programme (NATPRO)* Natural Resources Institute, Greenwich, UK


Du Plessis, P. (2002) Final report on Phase One of the Promoting Indigenous Fruit in Namibia project Indigenous Plant Task Team (IPTT), Windhoek


Hoodia Growers Association of Namibia (2006 draft) Hoodia cultivation proposal to EU EDF9 RPRP


Omaheke Regional Council (2006 draft) Kalahari Wild Silk proposal to EU EDF9 RPRP


**Rural Access Roads**

Burmeister & Partners (2005), Windhoek – Luanda Corridor, Windhoek

Meatco (2005), Cattle-Off-take Estimates, Windhoek.

Ministry of Works, Transport and Communication (2006), Preparation of a Sector Wide Approach (SWAP) in the Namibian Road Sub-sector to Realign the Development Cooperation with the Major Development Partners, Windhoek.


