IMPACT ASSESSMENT CASE STUDIES FROM SOUTHERN AFRICA

Peter Tarr, SAIEA

Client: Millenium Challenge Corporation

SAIEA

Southern African Institute for Environmental Assessment *... working for a better Africa*

STRATEGIC ENVIRONMENTAL ASSESSMENT OF NAMIBIA'S MILLENNIUM CHALLENGE ACCOUNT PROGRAMME

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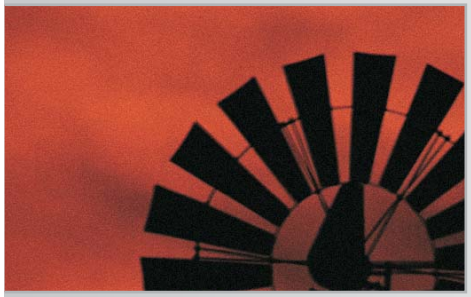

Aims of the Project

The Millennium Challenge Corporation's (MCC) US$304.5 million support to the Namibian Government aims to reduce poverty and accelerate economic growth through a number of projects in the education, agriculture and tourism sectors.

The programme will mainly invest in Namibia's Northern Communal Areas (NCAs), though some activities will be countrywide.

Brief description of the development & alternatives considered

As part of the design of the programme, MCC and its Namibian counterpart (MCA) undertook substantial consultation (over a period of some months) and due diligence assessments on the biophysical and social aspects of the proposed programme. During this pre-SEA phase, various alternatives were considered, and a number of proposed projects were eliminated based on economic and environmental criteria. Those remaining on the list, were then subjected to the SEA process. To a large extent, this list was influenced by successes of existing programmes in Namibia (e.g. Community Based Natural Resource Management) and previously articulated national priorities documented in Namibia's Vision 2030 and the third National Development Plan.

The **Agriculture** Projects (US$40mil) aim to increase the total value added from livestock in the NCAs, enhance human resource capacity and rural enterprise productivity through improved land access and management and improved livestock health and marketing.

One of the most anticipated and controversial aspects of the agriculture component was the proposed establishment of a new Veterinary Cordon Fence (VCF) along the Namibia/Angola border in order to contribute to the attainment of Disease Free Status (DFS) from Foot and Mouth Disease for the NCAs (Figure 1). This would replace the existing VCF, which was put in place further south decades ago. The existing VCF divides Namibia into two regions, benefiting farmers south of the fence, allowing them to export directly to the lucrative European Union market. Northern livestock farmers receive no such benefits and their cattle must stand in quarantine for 21 days prior to slaughter, and even then can only be exported to regional destinations. More than half of all livestock in Namibia are kept north of the current VCF on only 16% of the total land area of the country, which results in degradation of rangelands and conflict over grazing resources.

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Brief description of the development & alternatives considered

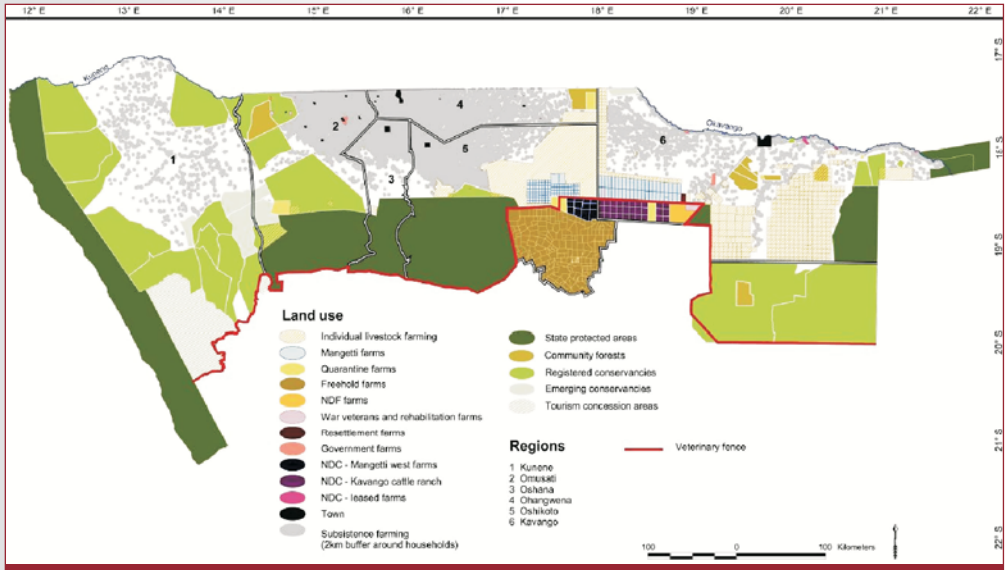

Figure 1: Northern Namibia showing land use in the NCAs and the Veterinary Cordon Fence

After assessing the likely impacts of the proposed VCF, the SEA Team identified three clearly defined alternatives. They were:

- Alternative 1: No Action - VCF is not constructed. Maintaining the status quo, with the Namibia/Angola border effectively open for livestock, has the advantage of flexibility of movement and reduced vulnerability of farmers to a generally unfavourable and unpredictable climate. This option was expected to be politically unpopular!

- Alternative 2: Construct the VCF only in 3 - 4 years time. The delay would hopefully allow frame conditions (e.g. local governance and land tenure) to be put in place to mitigate the VCF's expected negative impacts and to prepare the 'receiving areas' for livestock that would be brought back from Angolan pastures.

- Alternative 3: Construct the VCF much later (maybe 5-10 years time). This achieves the same flexibility as Alternative 1 in the short medium term, and gives a more realistic period of time for government to put frame conditions in place and prepare for mitigation.

The SEA Team recommended Alternative 3 as the best option, but the more precautionary option 1 was in fact decided upon eventually.

The **Indigenous Natural Products (INP)** activities (US$8mil) aim to increase the volume, quality and value of the natural products (e.g. hoodia and devil's claw, two plants with medicinal qualities) harvested by producer and processor organizations and to advance operational and business capacity.

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The **Tourism** Projects (US$34mil) will help to grow the Namibian tourism industry by targeting income streams to conservancy households, which include some of the poorest populations in Namibia, while conserving the natural resources that serve as the foundation for the tourism industry. A range of technical assistance services and grant funding will be provided to a number of high-tourism potential conservancies. Investments will also be made in tourism marketing, park management reform, and the construction of park management infrastructure in Etosha National Park.

The **Education** Projects (US$104mil) will improve access to text-books and other learning materials, and construct and/or renovate schools, technical centres and libraries around the country.

Environmental setting

Namibia's land area of 824,000 km^2 includes a 1,600 km long narrow coastal plain, one of the world's oldest deserts (the Namib), fringing mountains and an inland plateau that rises to 2,000 m above sea level in places.

Namibia is one of the most arid countries in the world. Rainfall is highly variable and unpredictable, ranging from less than 50 mm per annum in the west to 700 mm in the north-east. Only 8% of the country receives more than 500 mm per year, the minimum considered necessary for dryland cropping.

The only perennial rivers in Namibia are found along the northern and southern borders. The interior watercourses are ephemeral rivers, which flow occasionally following heavy rains in their catchments.

Spectacular and varied scenery and wildlife provide the wilderness experience that growing numbers of international tourists seek. Several wildlife species are economically important for hunting either as trophy animals or for meat. Consequently, trading in live game is a fast growing business and wildlife prices are escalating. Wildlife populations are generally concentrated in the State Protected Areas but increasing numbers of wild animals occur on freehold farms and communal conservancies. The establishment of conservancies and community-based natural resources management (CBNRM) has led to increases in wildlife in many of the communal areas.

Namibia is sparsely populated with approximately 2.1 million people. While the country has experienced steady economic growth since achieving independence, as a consequence of its history, approximately 27% of its population lives in poverty (particularly in the NCAs), and in 2006, its per capita annual income was just $3,000. Additionally, the distribution of wealth and income is highly unequal, unemployment is high (approximately 30% in 2006), and the HIV prevalence rate is more than 19%. More than 57% of the entire population of Namibia resides within the NCAs.

Namibian natural grass-fed, hormone-free beef is widely recognized as being of high quality. Namibia's Meat Board ensures traceability of meat and livestock to farms of origin by means

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Environmental setting

of a comprehensive data management system. The scheme is intended to create confidence by satisfying consumer requirements and ensuring compliance with internationally accepted standards for livestock production and trade and meat quality.

Apart from direct contributions to GDP, agriculture in general (and the livestock sector in particular) plays a very important socio-economic role, providing an estimated 70% of the country's population with some kind of subsistence.

The commercial farming sector, which is almost exclusively based on livestock farming, is the largest employer in Namibia, accommodating between 25,000 and 30,000 agricultural labourers and their dependants. In the NCAs, livestock provide a variety of benefits, including meat, milk, dung and draft power for cultivation.

Despite high percentage ownership of livestock in the NCAs, this has not translated into high economic benefits for most owners. In addition to practical constraints (distance from markets and banks, inadequate marketing) most farmers in the NCAs place a higher priority on more traditional aspects of their livestock, and slaughter only occasionally when needed. Traditionally, livestock numbers are generally more important than economic value i.e. non-productive, older animals that could be slaughtered for income are rather retained, resulting in very low off-take rates. This attitude has contributed to the serious degradation of rangelands in the NCAs.

SEA process followed

The SEA team

The SEA was conducted by a team of 15 consultants from 5 countries. This achieved the desirable combination of local and international expertise and perspectives. Disciplines represented on the team included livestock and rangeland management, wildlife conservation, environmental assessment, natural resources management, resource economics, geographic information systems (GIS), stakeholder consultation, issues involving gender and vulnerable groups, and land tenure.

The SEA process

The key objectives of this SEA were to:

1. Determine which investments are most likely to contribute to the MCC's poverty reduction goal in a sustainable fashion;

2. Identify and suggest mitigation options to address cumulative impacts of MCC investments;

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SEA process followed

3. Help clarify tradeoffs between different investments in the same region;

4. Promote inter-ministerial and multi-donor coordination, particularly in the sectors where MCC is investing; and

5. Promote the integration of MCC-funded activities into the broader suite of ongoing development actions in northern Namibia.

This SEA was conducted in two phases:

- Phase I: Social and Environmental Assessments to inform design of the final programme

- Phase II: Full SEA on the final programme

Originally a third phase – A Resettlement Action Plan – was planned but once the VCF was abandoned, this process was no longer required.

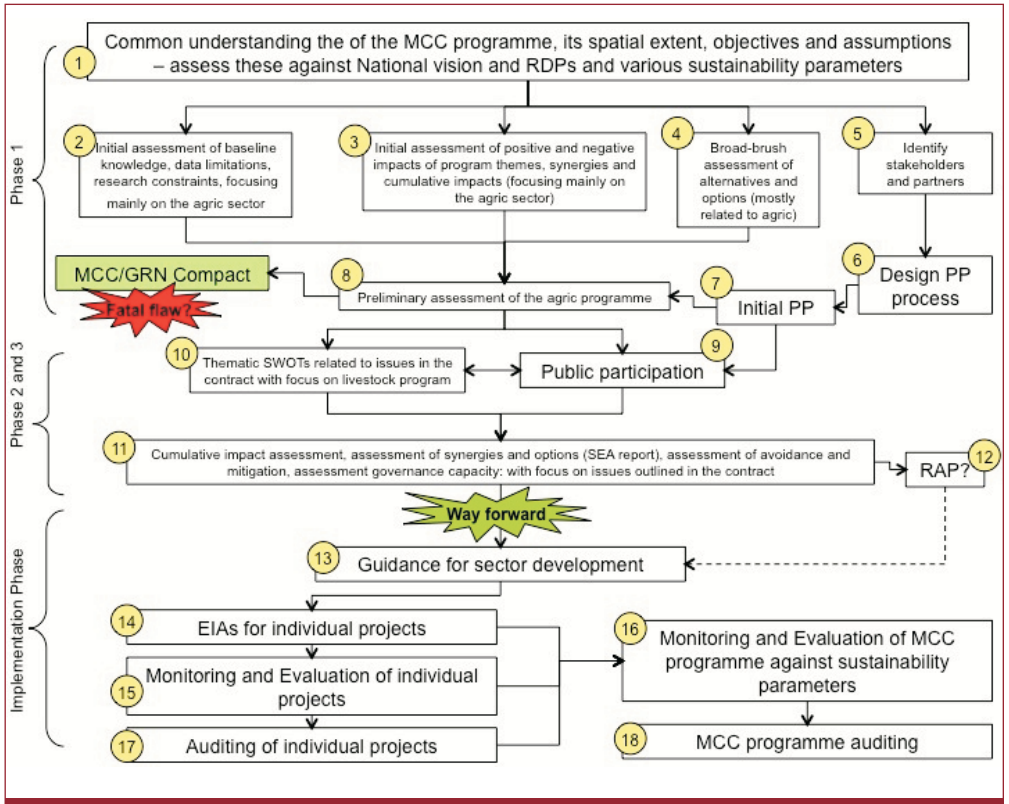

Figure 2: Sequence of activities in the SEA

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SEA process followed

Phase I of the SEA involved conducting a preliminary social and environmental assessment relating specifically to the Veterinary Cordon Fence and Disease-Free Status to inform final programme design. The Phase I Report provided MCC/A with targeted information regarding impacts of proposed investments on project-affected people, costs of proposed mitigation, and other information needed for initial decision making and to finalize the Namibia Investment Memo.

Based partly on the SEA team's Phase I recommendation that constructing the VCF within the envisaged timeframe would carry a high social and environmental risk, MCC/A decided not to construct the VCF.

Phase II of the SEA addressed over-arching, multi-sectoral environmental and social impacts that could result from implementation of the various components of the programme. Phase II was conducted in two parts:

2. Detailed **Thematic Analysis Reports (TARs)**: The thematic reports covered the main themes of livestock, INPs, tourism, and education. They assessed proposed activities using three interlinked analytical frameworks: the natural environment; livelihoods of the rural poor; and the policy and institutional landscape. The analyses combined an assessment of the current situation and trends with an assessment of the linkages and cumulative impacts arising from activities.

2. **Full SEA**: Building from the TARs, the second part of Phase II was the production of a full SEA, the core of which was an assessment of cumulative impacts (within themes, between themes, and between the Compact and other activities being implemented in Namibia); and linkages in and across the various proposed projects. The TARs served as the basis for identifying, analyzing, and providing mitigation measures for cumulative impacts, and for identifying linkages among projects that could strengthen the sustainability and success of each project.

Maps were produced as part of the SEA to illustrate interventions on a spatial basis and to provide other baseline information (e.g. Figure 3). In addition, a geographical information system was produced for MCC/A to use during programme implementation.

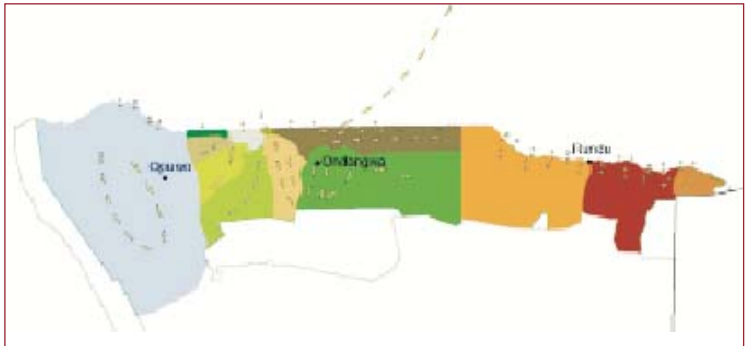

Figure 3: Map showing cattle movements in the NCAs and into Angola to the north

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SEA process followed

The heart of the SEA is the analysis of environmental and social impacts. This was done using an impact assessment matrix, customized for Namibian circumstances. Instead of listing basic environmental components (air, water) along the horizontal access (as in an EIA), the SEA Team identified sustainability criteria e.g. maintenance of access to natural resources etc.

The matrix highlighted key impacts, allowing the thematic teams to determine their magnitude, spatial extent, duration of impact, probability of occurrence, and significance before mitigation or enhancement is applied.

Thematic teams then provided recommendations based on the impact assessment discussion. Recommendations included mitigation measures, enhancements, and guidance for implementation. *Mitigation measures* are required to minimize the negative cumulative impacts identified by theme teams, while *recommended enhancements* can help improve sustainability and success.

Once the thematic reports were completed, a workshop was held with members of the SEA team to:

- Compile linkage diagrams for each theme (e.g. Figure 4);
- Identify linkages between themes;
- Compile action plans for the interventions needed to prevent unintended negative consequences of programme activities;
- Construct a matrix of synergies and antagonistic effects between all the programme components; and
- Develop a Strategic Environmental Management Plan (SEMP) to address the antagonistic effects and enhance the synergies.

The SEA also provides a comprehensive package of mitigation, recommendations, monitoring, and indicators in the form of Environmental Management Plans. These implementation tools are located in the respective TARs. An overall Strategic EMP (SEMP) focused on cumulative effects and linkages. Recommendations developed as a result of this SEA include measures that the Namibian government should undertake to help ensure the success of the programme and its project components.

Public participation in the SEA

The SEA team undertook a number of field trips during both phases of the SEA to the northern regions of Namibia and one excursion into southern Angola (the latter to verify cattle information and obtain a trans-border perspective). Approximately 20,000 kilometres were driven in order to reach the scattered communities in remote areas. The goal of the trips was to gather information to inform the TARs, using a focus group discussion methodology (Figure 5). Participatory methods were particularly useful when aiming to increase the level of stakeholder involvement and elicit responses that might not be possible in large public meetings or from quantitative questionnaires. It was also particularly effective when literacy and education levels were low, in groups where there was controversy or complexity, and for engagement of specific community groups, such as women, youth,

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SEA process followed

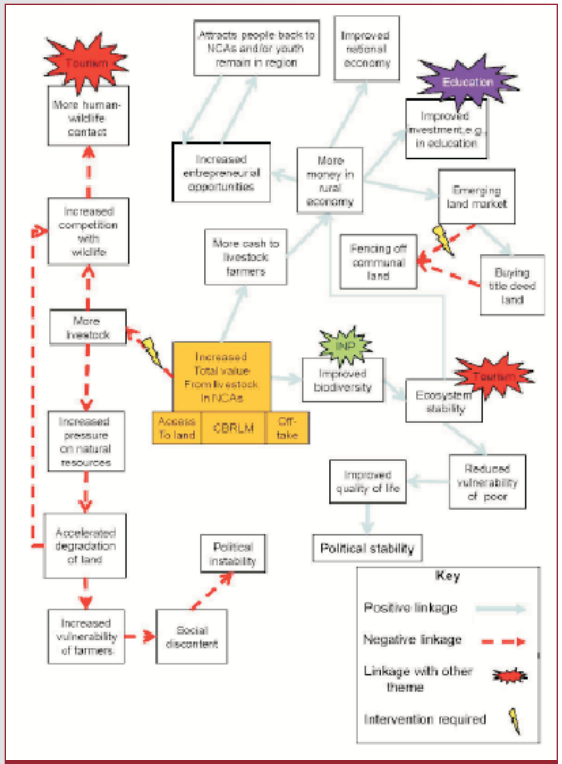

Figure 4: A linkage diagram highlighting points of interconnection between programme components

vulnerable groups, minorities, or the elderly. Where possible, key informant interviews were conducted to provide additional information and further triangulation of findings.

As in most societies, men and women in rural Namibia play different roles within the private and public spheres, resulting in different access to resources and finances, contacts and relationships, personal skills, opportunities and power. Men and women also have different priorities and perspectives on key issues, and may be differently impacted by interventions, with women traditionally bearing disproportionate negative impacts. Good practice encourages seeking out the views of women.

As part of the field trips, women-only focus group discussions were conducted, and where appropriate, female-headed households were interviewed separately. Priority was given to the fact that women are not a homogenous group and that not all women have the same interests and priorities. Other vulnerable groups targeted as part of the focus group discussions were the San and child-headed households.

The key difference in the public participation process in this SEA compared to EIAs, is that stakeholders (especially directly affected communities) could compare their own needs to the ideas proposed in the MCC/A programme early enough in the process to affect real decisions. To a large extent, their inputs influenced programme and project design.

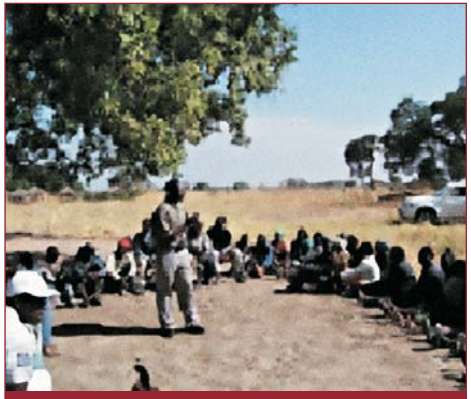

Figure 5: A public meeting in the Northern Communal Area

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Main environmental impacts & issues per thematic 'sector'

Livestock and range management

The following negative impacts were expected to result from the construction of the new VCF:

- Social tensions in livestock 'receiving' areas (assuming livestock previously grazing in southern Angola will be relocated within the NCAs of Namibia)
- High cost of mitigation (primarily involuntary resettlement, developing the 'receiving areas' and support services)
- Reduced livestock for HIV/AIDS-affected and poor households, as the VCF and herd relocation would likely result in split herds, reduced availability of livestock which can be borrowed and reduced employment for temporary livestock labourers.
- Reduced migration options for certain species of wildlife, thus escalating wildlife - human - livestock conflicts.
- Quarantine camps require large tracts of land (> 5,000 ha) and, without careful consideration of local stakeholder interests, may cause people to lose access to livelihood resources (water, veld products, grazing, etc.). If poorly managed, land degradation could occur in the quarantine camps through continuous overgrazing or under-utilization. If located in important wildlife areas, quarantine camps could lead to declines in wildlife populations, lead to increased human – wildlife conflicts, and impact negatively on transboundary conservation and tourism initiatives.
- Zoning (identification and demarcation) of specific areas for land management interventions in the NCAs may result in the loss of 'free access' to land for persons who previously used the land, leading to possible conflict within communities.
- Providing boreholes could have negative and positive impacts, such as causing further land degradation with subsequent loss of biodiversity, or (if done well) spreading livestock over a wider area and improving herding options. It could also increase conflict between water users.
- Development of new veterinary service centers could result in the indiscriminate disposal of hazardous, medical, and sanitary waste.

Indigenous natural products

- The intended establishment of a central database that is populated with relevant market information may pose a risk to the resource base. If this information is not managed appropriately through a system of controlled and differential access, there is a risk that it will be used irresponsibly, driving harvesting pressures unsustainably upwards.
- If correctly implemented, access to information should increase the ability of producers to make sound business decisions, thus improving INPs and the benefits they generate. However, if access to this information is not well managed, this information may contribute to elite capture or an enhancement of private initiatives rather than collective strategies focused on women and marginalized groups.

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Main environmental impacts & issues per thematic 'sector'

Tourism

At a strategic level the main concerns of the Tourism Project were (in order of priority):

1. Guarding against mass tourism (with the resultant cumulative impacts)
2. Increased Human Wildlife Conflicts (as wildlife increases in conservancies)
3. Inter-regional and inter-conservancy rivalries for MCC funds
4. Inability of communities and/or individuals to manage increasing levels of cash, with possible negative social and environmental impacts.

At a project level, the main components that could cause significant negative, site specific impacts are (in order of priority):

1. Construction and operation of lodges in sensitive areas;
2. Construction of staff villages in Etosha National Park;
3. Political sensitivities around allocation of concessions in the northeast parks; and
4. Construction of game camps in conservancies, which would reduce the total land area for other wildlife.

Education

- The greatest potential impact during construction of schools etc. will be social and health impacts due to the influx of construction workers.
- Construction activities have the potential for low to medium negative effects on community health and school learners due to localized and temporary levels of dust, noise, litter, and pollution.
- Improved sanitation and water supply in the new institutions, as well as greater demand for such services as people become better educated and have more disposable income, may have a long-term impact on water supplies across the country.

General

Though not an impact as such, the SEA Team expressed doubt that the Namibian government has the capacity to manage US$304.5 million in the short space of 5 years. It also doubted the wisdom of MCC insisting on a 5-year implementation programme, when a much longer time frame would be more realistic and effective.

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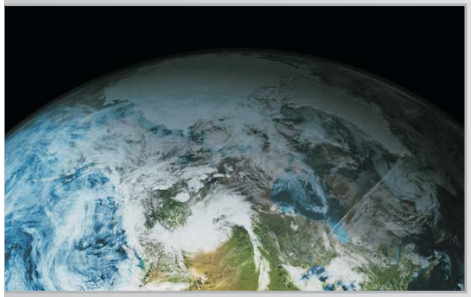

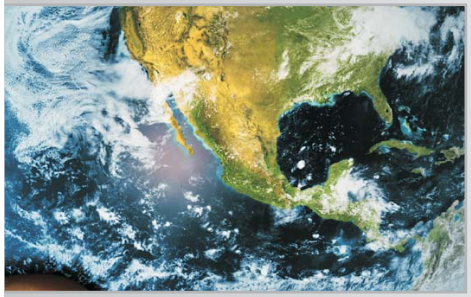

Decision-making process

The SEA was reviewed by MCC and the Namibian Government on a continuous basis, and adjustments made during the process in the event that there were factual errors or misinterpretations by the SEA Team. The Interminsterial Management Committee (consisting of government, MCC and MCA representatives) set up to oversee the SEA, received regular updates on the SEA progress and they were able to make input as they pleased. Whilst there were some controversies about the project, these were mostly of a political nature and unrelated to the SEA.

Unlike a conventional EIA, the SEA did not solicit a Record of Decision from the authorities, and there was therefore no trigger for the appeal process. However, according to both MCC and MCA, the SEA was instrumental in influencing the design of the programme. Subsequent to the completion of the SEA, the programme was finalised and project planning commenced. Based on evidence seen, the recommendations made in the SEA and the project-specific guidelines are being used as the programme enters the implementation phase.

Implementation of the EMP & compliance auditing

It appears that the SEA made an impression on the MCC, which does not yet have a strong culture of SEA. Shortly after its completion, this SEA was used as a case study in a training programme delivered to MCC staff in Washington, and feedback on that session was very encouraging. One senior MCC official mentioned that the case study helped convince some 'sceptical staff' on the value of SEA in the planning and decision making process.

However, the SEA team concluded that implementation of a programme as complex as that envisaged, with the far-reaching goal 'to reduce poverty through economic growth,' will face institutional challenges in Namibia at all levels - regional, local, community, household, and individual. It will also face challenges at the strategic level, which the SEMP identified and has tried to address. This is based on the fact that Namibia has inadequate capacity within government even without the extra work generated by the MCC programme, and there is some reluctance in some ministries to involve civil society and other partners in the implementation of plans, programmes and projects.

Given that implementation was only just starting at the time of writing this report, it is still too early to judge the extent to which the SEA will result in a well implemented EMP.

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Main elements of excellence in this EIA

The relative success of the MCC SEA can be attributed to the following factors:

- Experienced, multi-disciplinary team, combining local experts with international consultants resulted in a creative, mutually supportive and energetic unit that generated practical ideas.
- Both MCC and MCA were very accommodating when more time was needed to complete certain tasks and when aspects of the TORs needed to be revised based on SEA progress and findings, and on conditions in the field. This type of flexibility is essential for a successful SEA.
- The relatively short time set aside for the completion of the SEA (especially Phase 1) was both a challenge and an opportunity. The SEA Team was placed under enormous pressure to provide critical advice (i.e. the advisability of the VCF) very early in the process, rather than at the end. However, the pressure forced the team to focus quickly and use tools (e.g. GIS) to aid its analysis.
- Good technical tools, including matrices and linkage diagrams enabled simultaneous detailed and big-picture analysis. This helped maintain the thread of the SEA and enabled the compilation of a coherent product.
- Even in an SEA, it is possible to deliver a 'toolbox' of practical implementation aids. These included good practice guidance (e.g. how to build and operate an eco-lodge), and ToRs for EIAs for a number of different projects (e.g. lodge, school).

Lessons learnt

A number of suggestions can be made to improve the way this SEA could have been done were it to start all over again.

These include:

- Not expecting the most important decision within the first few months of the SEA - leave this to the end!
- More involvement from the Interministerial Management Committee – the SEA Team Leader should have been more pro-active in this regard
- During an SEA, consultants are more quickly exposed to high-level decision makers (e.g. politicians) than is the case with project-level EIA. In many cases, consultants are not equipped to interact with politicians. It would have benefitted the SEA and the subsequent decision making process to have had more interaction between politicians and the consultants.

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Lessons learnt

- There is no substitute for solid data! One sometimes hears the phrase that "this is an SEA so we don't need perfect data – that issue will be revisited during project level EIA". Nothing could be further from the truth: an SEA needs good, uncontested data, so that the right strategic decisions can be taken.

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