The Role of Knowledge Management and Information Sharing in Capacity Building for Sustainable Development

An Example from South Africa

Rejoice Mabudafhasi
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Abstract

The coastal areas of the Northern Cape, South Africa, and the transfrontier region with Namibia are in a state of rapid transformation from a mining-based economy to one supporting diverse and sustainable livelihoods. Land-based diamond mining activities are in the early stages of decommissioning while a number of planning and development initiatives are underway. Key obstacles to integrated planning and development in the region are insufficient and inaccessible information. Knowledge management and information sharing mechanisms can facilitate meaningful participation and promote decision-making at the local level. The Distance Learning and Information Sharing Tool (DLIST) is an Internet based knowledge management tool that promotes transparency and collaboration and provides open access to information resources for sustainable development.

Keywords

Knowledge Management, Capacity Building, Distance Learning, Integrated Coastal Management, Sustainable Development South Africa, Namibia.
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## Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>BCLME</td>
<td>Benguela Current Large Marine Ecosystem</td>
</tr>
<tr>
<td>CB</td>
<td>Community-based</td>
</tr>
<tr>
<td>CBNRM</td>
<td>Community-based Natural Resource Management</td>
</tr>
<tr>
<td>CDM</td>
<td>Consolidated Diamond Mines</td>
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<tr>
<td>CI</td>
<td>Conservation International</td>
</tr>
<tr>
<td>DEA&amp;T</td>
<td>Department of Environment and Tourism</td>
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<tr>
<td>DLIST</td>
<td>Distance Learning Information Sharing Tool</td>
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<tr>
<td>DFID</td>
<td>Department for International Development (Britain)</td>
</tr>
<tr>
<td>IDP</td>
<td>Integrated Development Plan</td>
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<tr>
<td>FAMDA</td>
<td>Fishing and Mariculture Development Association</td>
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<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
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<td>GTZ</td>
<td>German Technical Co-operation</td>
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<tr>
<td>KM</td>
<td>Knowledge Management</td>
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<tr>
<td>MCM</td>
<td>Marine and Coastal Management</td>
</tr>
<tr>
<td>MET</td>
<td>Ministry of Environment and Tourism (Namibia)</td>
</tr>
<tr>
<td>MPRC</td>
<td>Multi-purpose Resources Centre</td>
</tr>
<tr>
<td>MSP</td>
<td>Medium-sized Project (relating to the GEF)</td>
</tr>
<tr>
<td>NACOMA</td>
<td>Namib Coast Biodiversity Conservation and Management Program</td>
</tr>
<tr>
<td>NAMDEB</td>
<td>Namibian Division of De Beers</td>
</tr>
<tr>
<td>NCCWG</td>
<td>Northern Cape Coastal Working Group</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
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<tr>
<td>NORAD</td>
<td>Norwegian Government Funding Agency</td>
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<tr>
<td>SANPARKS</td>
<td>South African National Parks</td>
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<tr>
<td>SDI</td>
<td>Spatial Development Initiative</td>
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<tr>
<td>SNTRA</td>
<td>South-North Tourism Route Association</td>
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<tr>
<td>TFCA</td>
<td>Transfrontier Conservation Area</td>
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<tr>
<td>TFP</td>
<td>Transfrontier Park</td>
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<tr>
<td>WHS</td>
<td>World Heritage Site</td>
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<td>WSSD</td>
<td>World Summit for Sustainable Development</td>
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1. Introduction

The coastal areas in the Northern Cape, South Africa, and the transfrontier region with Namibia are in a state of rapid transition. For many decades access to 90 percent of the coastline remained restricted due to diamond mining activities (Figure 1). However, viable land-based diamond deposits in the ancient coastal marine terraces are now becoming depleted causing the major mining houses to begin to scale down their mining activities. This will result in the opening up of vast tracks of coastal areas for land uses other than mining. Downscaling by the diamond mining industry, the largest employer in the region, is already having a dramatic effect on the livelihood of inhabitants. Typically the loss of one job translates to a loss of income for an entire family or extended family. Fortunately alternative livelihood options are emerging through a number of development initiatives and planning processes. Activities in the coastal areas currently include livestock farming, agriculture, fishing and harvesting of living marine resources, mariculture, tourism and conservation. All of these activities are likely to expand in a post-mining era. Careful and pro-active planning that involves all role players is essential if the negative effects of downscaling are to be mitigated through the development of new livelihood options and better utilization of the region’s attributes.

This paper investigates the role of knowledge management (KM) and information sharing in facilitating integrated development planning in the coastal areas of the Northern Cape, South Africa, and the transfrontier region with Namibia. The paper describes how the Distance Learning and Information Sharing Tool (DLIST), a Global Environment Facility (GEF) funded IW:LEARN pilot project, is attempting to aid a collective approach to sustainable development. As DLIST works on the principle of information gathering from a wide range of sources, “lessons learned” from current initiatives are discussed briefly and recommendations are made for the World Summit for Sustainable Development (WSSD) in Johannesburg 2002.
2. Background

2.1 From Mining to Post-mining

The mining industry has been the dominant force for many decades in the transfrontier region that includes Namaqualand, as the western part of the Northern Cape Province is known, and the southern parts of Namibia. To fully understand its impacts and the implications of decommissioning for the coastal areas in the Northern Cape and Southern Namibia, it is necessary to review briefly the events that have led to the status quo.

In Southern Namibia commercial exploitation of diamonds began in the early twentieth century. While mining was confined to within a few kilometers of the coast, a 100 km wide restricted area, the Sperrgebiet was declared to restrict access to the tightly controlled diamond business. The Sperrgebiet has been closed to the public for more than eighty years. In 1994, NAMDEB was established as an equal partnership between the mining company and the Namibian government. The Sperrgebiet contains significant levels of biodiversity and is considered a national conservation priority [References 1, 2, 3]. In view of the multiple-use potential of the area, the Government of Namibia agreed that the area should be more fully utilized and a Land Use Plan was commissioned by the Namibian Ministry of Environment and Tourism [Reference 4]. From the point of view of environmental protection, diamond mining in the Sperrgebiet is a double-edged sword: while surface damage in the coastal regions are considerable, the bulk of the Sperrgebiet’s 26 000 km² has remained in a near-pristine state.

On the South African side, commercial mining operations began in earnest in 1928 with the establishment of the State Alluvial Diggings (SAD) at Alexander Bay. This led to restricted access to the coast extending from the Orange River Mouth to south of Port Nolloth, an area managed by the South African Department of Mineral and Energy Affairs. In 1992 the Alexander Bay Development Corporation became Alexkor Ltd., a company in its own right with a Board of Directors and the South African Government as the sole shareholder. The activities of the mining company have since broadened and it has invested in the development of varied non-core activities including tourism and mariculture [References 5, 6]. The Alexkor Ltd. Amendment Bill passed in 2001 paves the way for the privatization of the mine and large-scale strategic planning for the post-mining era.

Extensive decommissioning of land-based mining operations throughout the region has resulted in substantial levels of unemployment. Following the history of the once lucrative copper mines in the interior of Namaqualand, the land-based diamond mines of the coastal areas are fast losing their erstwhile power to uphold the economy. The conversion from a largely mining-based economy to alternative livelihood options will require greater attention to sustainable and innovative utilization of the region’s “natural advantages.”
2.2 The Region’s “Natural Advantages”

The cold, nutrient-rich Benguela Current System is a major force shaping both the physical land and the ecology along the Namaqualand and Namibian coastlines, and into Angola. The upwelling process characterizing the Benguela Current System results in a phenomenally high biomass of plants and animals and many organisms occur along this coast at densities and biomass levels unequaled elsewhere in the world. Today, the coastal and marine resources of the region are still largely exploited by outsiders and processed in larger centers such as Cape Town [Reference 7]. The Marine Living Resources Act of 1998 is aimed at addressing these issues and is slowly resulting in institutional strengthening and equitable redistribution of resources.

On land, one of the most potentially sustainable resources is tourism. The area is blessed with spectacular landscapes, both inland and along the coast. The Richtersveld is home to astonishing biodiversity [Reference 8] and is described by international organizations such as Conservation International (CI), and botanical experts as one of the world’s most significant biodiversity “hotspots” in arid regions. Importantly, despite surface damage caused by the mines, the diamond mining industry has successfully curtailed outside influences along the coast by controlling access to the diamond-rich areas and buffer zones. This has resulted in the protection of significant near-pristine sections of the coast, some of which are worthy of the designation of Sensitive Coastal Area (SCA). The main challenge in the development of tourism will be to ensure that the region’s local inhabitants are the main beneficiaries of the industry.

2.3 Integrated Development Planning

Within the transfrontier region a number of planning and development initiatives are occurring simultaneously. Planning processes include, among others: The Gariep Spatial Development Initiative (SDI); a three-country transfrontier conservation area (TFCA) initiative spearheaded by Conservation International and an array of government departments and agencies; a Transfrontier Park that joins the existing Richtersveld National Park (RNP) with the Ais-Ais Park in Namibia; an Integrated Development Planning (IDP) process; and various sector plans and strategic plans for the mining houses. The joining of the Sperrgebiet with the Ais-ais/Richtersveld Transfrontier Park will create a three-country transfrontier unbroken string of protected areas (Figure 2).
This “Big Picture” on paper must now translate into areas that are protected effectively and will bring as much benefit to the people of the three countries of Angola, Namibia and South Africa. What is evident from the picture is that coastal areas of Namibia are far better protected than in the Northern Cape. However, there is progress in the transfrontier region. The emerging integrated conservation and development framework in the transfrontier region consists of a lattice of existing and proposed areas that will be protected or will fall under some sort of resource management system (Figure 3).
Development initiatives underway in the region include a number of poverty alleviation projects funded through the South African Department of Environmental Affairs and Tourism (DEA&T), a NORAD program funded through the DEA&T and a Global Environment Facility PDF Block A award for Medium-Sized Project (MSP) for which local government has been the proponent since its inception.

Undertaking truly integrated development planning in this region is presents a major challenge. In order to facilitate planning for sustainable development, obstacles to the process must first be understood. The following have been identified as major impediments to planning in the transfrontier region:

- Participation in planning is a new experience for many of the people. Planning in South Africa was previously imposed in a “top down” manner on the majority of the population. Although recent policies and legislation require integrated
development planning by local government, difficulties are experienced in its implementation and lessons continue to emerge [Reference 9]. Although strongly rooted in the law, not all role players understand the significance and benefits associated with large scale planning initiatives such as the Integrated Development Planning (IDP) process.

- Reliable information is frequently difficult to obtain. Information flow remains restricted to the educated and privileged tiers of society and there is a tendency to “privatize” information that is considered a valuable currency. Participatory planning is challenging when people are insufficiently informed. Access to information and its poor flow through society is considered to be a major constraint in development planning. Planning by the major role player in the region, the mining industry, is often considered insufficiently transparent and exclusive.

- Despite the involvement of multiple role players in initiatives in the transfrontier area, the lack of a formal overarching integrated planning framework makes it difficult to prepare a single plan for sustainable development at sub-national levels.

The question arises as to the role of knowledge management (KM) and information sharing in overcoming these obstacles to integrated development planning. Specifically, given the diversity of development activities and planning processes underway in the transfrontier region, can KM improve the synchrony, synergy and harmonization of the different integrated conservation and development initiatives by facilitating information sharing and improving access to relevant information? The premise would be that information sharing and improved accessibility to knowledge for a range of role players would facilitate convergence in planning for sustainable outcomes.

3. The Need for Information Sharing

The gradual conversion of an entire region from an economy based largely on mining to one supporting diverse and sustainable livelihoods, presents many challenges. Lack of information and poor information flow between the different parties in the region are identified as the most persistent obstacles and has manifest in striking ways. Poor people have inhabited a coast that is extremely rich in natural resources without knowing the value of them, let alone obtaining access to them. This lack of information prevents meaningful participation by local people in planning processes. Poor information flow prevents synergy between different initiatives and can create serious conflicts. It is from this context that the issue arose of how best to improve information sharing in a geographically vast and marginalized area where much of the crucial information is available only in restricted localities and is accessible to a select few.
4. The Distance Learning Information Sharing Tool (DLIST)

A meeting of the Northern Cape Coastal Working Group (NCCWG)\(^2\) was held in late 1998 to identify opportunities for coastal management in the region. A subsequent workshop facilitated by the World Bank investigated the opportunities for strengthening information sharing in the region. Workshop participants including a range of Northern Cape and Namibian stakeholders, welcomed the possibility of a Distance Learning Information Sharing Tool (DLIST) for the region.

Broad-based workshops followed throughout the region, and were augmented by smaller intensive sessions with groups such as the Namibian regional councils of Erongo and Karas, all levels of government, the Multi-Purpose Resource Centers (MPRCs), and project leaders of other programs. The purpose of these interactions was to determine the sources of existing information and knowledge, mechanisms with which to access them and to assess information needs of the different stakeholders.

Preparations were then made for an Internet-based Distance Learning Information Sharing Tool (DLIST). DLIST was incorporated into emerging regional integrated conservation and development planning frameworks, including the DEA&T’s Poverty Relief and CoastCare programs, the IDP process and the South-North Tourism Route (Odendaal, 2002). For instance, poverty alleviation funding from the DEA&T was used to establish a Multi-Purpose Resource Center in Hondekliptbaai, while other poverty alleviation programs provided computer training of a variety of community-based organizations (CBOs) and individuals. The CoastCare program of the Chief Directorate of Marine and Coastal Management and the DEA&T’s NORAD program assisted in the establishment of offices with internet access facilities that now serve both as information gathering and dissemination points.

DLIST\(^3\) aims to facilitate information sharing and knowledge management, through the following broad objectives:

- To foster networking opportunities between coastal role players involved in sustainable development, in order to establish functional information and knowledge sharing “communities of practice”
- To optimize planning and implementation of effective and appropriate integrated coastal zone management solutions for the region, through collaborative problem solving and planning
- To develop an internet-mediated learning environment that assists in developing a strategic development plan for the region

\(^2\) Northern Cape Coastal Working Group

\(^3\) Distance Learning Information Sharing Tool
To create an ongoing and self-sustaining learning and information-sharing tool that promotes knowledge exchange, problem analysis, development of a collaborative approach to problem solving, and provision of an opportunity to contribute to planning processes.

To achieve these objectives, DLIST would have two main components: distance learning and information sharing. The distance learning component would be based primarily on short modules that cover various aspects of Integrated Coastal Management (ICM) that could be accessed on the DLIST website. The website modules would be supported by short courses on an as-needed basis. The information sharing component of DLIST would focus on various means of gathering information, organizing it, making it accessible and on promoting a two-way flow of information between stakeholders and a common “pool of knowledge” and between one another.

The following ideas emerged from the detailed discussions on how DLIST should function and were incorporated into development of the tool:

- Information from a wide range of sources should flow into a central “pool of information” where it would be organized and packaged in a manner that would make it more accessible to a wide audience.

- The flow of information should be a continuous process considering the dynamic nature of the region. Information content should be steered largely by the needs of the users.

- Flow of information should be a two-way process encouraging both retrieval and contribution. Hence the common “pool” of information will assist planners, developers and role players to optimize synergy and reduce conflict as much as possible.

- Information exchange facilitated by DLIST should assist role players to develop consensus on development priorities, funding strategies and action plans to implement coastal projects and programs.

- A need exists for both an ICM training course and an information sharing function closely interwoven with one another. The former should be at a level that is understandable to CBOs and local councilors. Higher level ICM training could be accessed through courses offered by universities. Several large donor programs, including the Benguela Environment Fisheries Interaction and Training (BENEFIT) program, the Benguela Current Large Marine Ecosystem (BCMLE) program, and the Namib Coast Biodiversity Conservation and Integrated Ecosystem Management (NACOMA) Program have funds allocated to intensive ICM training, if necessary.

The information sharing element of DLIST can best be described as a “pool of knowledge” that is constantly growing. Information flows into the pool from a range of sources, or “information communities” that are linked to the “pool of knowledge” in a manner facilitating retrieval of useful information on an as-needed basis. Every
effort is also made to link “information communities” up with one another directly. The DLIST “pool of knowledge” can be presented as a circle (the “pool”) with two-way arrows leading into it from “knowledge communities” or “informants” (Figure 4). In addition to those knowledge communities represented in Figure 4, numerous additional informants contribute to DLIST on a regular basis including government departments, development agencies and programs, CBOs and private individuals. Each informant thus contributes to knowledge sharing. DLIST is likely to play an increasingly useful role to bring emerging large-scale development and planning initiatives together.

Figure 4

Common Pool of Knowledge
DLIST recognizes that coastal management is, to a large extent, a political process that involves a number of key actors and interest groups in addition to government. These coastal stakeholders and groups have varying perspectives on coastal management and coastal management decisions often result from the interplay between these different groups [Reference 10]. Decisions tend to be based on available information. The issue therefore arises as to who maintains control of the information on DLIST. For DLIST to be an “honest broker” it must promote transparency and provide open access to information resources, while operating independently from political processes or development agendas set by powerful role players. The problem of information control is partly overcome by providing different parties with the opportunity to manage the content of their own “information kiosks” attached to the DLIST information platform. Furthermore, the DLIST platform is designed to support bulletin boards and discussion forums, to which any party can contribute. At the grassroots level, DLIST-related information is disseminated to the broader public through a local government newspaper and supported donor agencies and the private sector.

By facilitating information sharing, DLIST also acts as an agent of transformation. It enables a dynamic collective voice at the local level to be heard, as well as those of partners who support sustainable development. The input of DLIST into the Global Conference on Oceans and Coasts at Rio + 10 therefore represents more than government, academic or expert opinion but also the people who are most affected by coastal development. DLIST’s inclusive approach and close affinity with the planning processes in the region also makes it an excellent planning tool. In contrast to other internet-based tools such as government websites or university level distance learning courses, substantial value is placed through DLIST on knowledge and information held by local partners and communities. Such knowledge helps to define the context of development in the region, and can thus be very useful to donors, government and other agencies that have a role in promoting sustainable development in the region. Most importantly, the flow of information through DLIST significantly influences the imbalance that exists between those who have knowledge and those who do not.

5. The Road beyond Johannesburg 2002

Knowledge management is a fast growing field. Its power in achieving higher sustainability in regional development has yet to be measured conclusively. The deployment of DLIST to facilitate the regional conversion from a disaster prone baseline to a sustainable situation through information sharing and KM has already yielded several “lessons learned” that have strong relevance for the World Summit on Sustainable Development in Johannesburg 2002 and for implementing its recommendations and targets:
(a) The growing emphasis placed on the role of KM by the World Bank and other institutions is encouraging. However, knowledge is greatly influenced by the underlying information. Therefore, every effort should be made to incorporate knowledge from the “end users” of natural resources and particularly from those who will be most affected by local and regional planning and implementation. Information should come from a variety of sources, including specialist studies, and processed with sustainable outcomes as a goal. KM should not take place afar, rather, mechanisms should be established to decentralize KM to sub-national levels.

(b) Despite good intentions, planning still occurs in many parts of the developing world in a “top down” manner. This presents difficulties in forming the strong partnerships between agencies at different levels that are necessary for sustainable development. Effective KM can facilitate the harmonization of divergent planning and development initiatives in a region, particularly where an integrated development planning system is still in progress. The “collective consciousness” can be far more effective in moving a region toward sustainability than documents that are inaccessible to all but a few, or may be out of context and difficult to implement. KM tools should therefore be made available at the sub-national levels to organizations, local government and other agencies that have a strong role to play in sustainable development.

(c) Poverty alleviation initiatives are more likely to attain their objectives if they are placed in an integrated development framework. Where such a framework is not clearly delineated, as is often the case in developing regions, knowledge management can assist program managers and local people to identify and agree upon emerging frameworks. Thus the ad hoc placement of projects is avoided while synergetic links are more rapidly established. The implementation of poverty alleviation initiatives should therefore be linked as far as possible to “knowledge pools” that value local needs and knowledge, and feed lessons learned back into the common knowledge pool in an iterative manner.

(d) Effective management of coastal resources requires rational and informed use of resources by coastal inhabitants and other role players. Information exchange should therefore begin at the earliest possible stages in the life-long learning process. CoastCare and other poverty alleviation projects in the region have proven to be effective instruments for environmental education and literacy training. As in many other developing regions, illiteracy represents a significant constraint to development along the West Coast of South Africa. Ninety-five percent of the participants in the northern Cape CoastCare program were functionally illiterate and as a result were extremely vulnerable. Truly sustainable development cannot be achieved unless these issues are addressed. Basic education should not be the sole responsibility of education departments. Coastal poverty alleviation and development programs and facilities should be utilized to overcome illiteracy at every opportunity. Natural resource management should therefore be embedded in Further Education Training (FET) at secondary school level and environmental education should be infused into all levels of schooling.

(e) Large industries such as the mining houses possess enormous capacity to facilitate sustainable development. Such industries should be encouraged to engage in
integrated development planning from a regional perspective, and contribute in terms of infrastructure, knowledge dissemination and technical expertise.

(f) Environmental rehabilitation is desperately lacking in the transfrontier region. Despite an array of enabling legislation, regulations are often not enforced and environmental degradation continues with impunity. The lesson emerging here is that Environmental Assessment (EA) capacity should be strengthened locally, for instance at the local government and CBO level. Through KM local role players can be effectively linked into supporting structures such as legal assistance centers and Multi-Purpose resource centers to prevent further environmental damage.

It is worth noting that DLIST fits very well into the priority framework outlined by the New Partnership for Africa’s Development (NEPAD) which is a pledge by African leaders to eradicate poverty and place their countries on a path of sustainable growth and development. Access to information and KM in the interest of sustainable development will play a pivotal role in extricating the continent from the malaise of underdevelopment and exclusion in a globalizing world [Reference 11]. DLIST could also contribute to the African Process for Promoting Sustainable Development of the Marine and Coastal Environment, to ensure local ownership and participation. Finally, however, the responsibility of ensuring the continued operation and effectiveness of a mechanism like DLIST lies with its users at ground level and their partners that believe information sharing is pivotal to equitable development.
References


End Notes

(1) "Transfrontier Conservation Area" refers to a relatively large area straddling frontiers between two or more countries that covers large-scale natural systems and encompasses one or more protected area.

(2) The White Paper for Sustainable Coastal Development in South African Coastal encourages the formation of provincial coastal working groups that will be pivotal structures linking the local level realities of the coastal areas to the various line departments and tiers of government. The NCCWG was launched in 1998.

(3) The DLIST website, www.dlist.org, became operational in February 2002. DLIST is funded by the Global Environment Facility (GEF) through IW:LEARN, a Washington-based NGO. It is one of two global KM pilots for coastal regions. The task manager of DLIST at the World Bank, Mr. Andy Hooten (ahooten@worldbank.org) is responsible for assessing the success of the pilot project.

(4) The DLIST “pool of knowledge” has drawn from many sources, briefly described they include:

- The Integrated Development Planning (IDP) process contributed a vast amount of information on the region, including a situational analysis, a Vision for the Richtersveld, development priorities and local knowledge. The DLIST “pool of knowledge” obviously informs the IDP in return. The IDP is conducted under the auspices of the local government.

- The Richtersveld Youth Forum held a Richtersveld Youth Summit in 2001 to determine the needs, observations and aspirations of the Youth, and to clarify their role in sustainable development of the region. The Youth Summit was organized by Connected Cultures and involved learners from Connecticut and Richtersveld.

- The Multi-Purpose Resource Centers (MPRCs) in Hondeklipbaai and Sizamile, Port Nolloth have produced useful information on their areas. These centers are hubs for training and computer access, and play a watchdog role for the area at the local level. They contribute useful “lessons learned” during the implementation of projects and are increasingly utilized by members of the communities.

- The South-North Tourism Route (SNTR) is a collection of community-based tourism attractions, product owners and services ideally located to inform tourism-related planning frameworks and play a lobbying and monitoring role for tourism development in the region.
• The DEA&T’s cluster of poverty alleviation projects include among others, tourism infrastructure projects, waste management projects, tourism facilities, and a succulent nursery. The success rate for Richtersveld projects are high (over 80 percent) due to local level identification of the projects that are incorporated into appropriate existing planning frameworks.

• The Richtersveld Tourism Association (RTA) informs tourism development through the Vision and Mission of its members and its proposed action plan for the year.

• The Succulent Karoo Ecosystem Plan (SKEP) represents a broad-based planning process facilitated by Conservation International. It aims to preserve the Succulent Karoo biome through an inclusive planning process that incorporates both the interests of conservation and the “end user” communities.

• The TRANSFORM program is a partnership between GTZ and the DEA&T operating in the Richtersveld in community-based resource management, capacity building in protected areas and integrated planning.

• DEA&T’s CoastCare program contributes to KM in a variety of ways, including monitoring of coastal activities, raising environmental awareness, providing input into Agenda 21 status of the Northern Cape coastline and identifying viable livelihood projects.

• The Richtersveld NORAD program is particularly concerned with the compilation of indigenous knowledge and the preservation and sustainable utilization of cultural heritage. The program will be the main driver in a process leading to the declaration of the Richtersveld as a World Heritage Site (WHS).

• The Fishing and Mariculture Development Association (FAMDA) has the task of developing the fishing and mariculture industry in the Northern Cape in a sustainable and equitable manner. Activities include awareness raising, facilitating quota applications, fund-raising and development of a sector plan for the development of the industry in the Northern Cape.

• The Integrated Conservation and Development Planning Workshop held in Alexander Bay on 2-3 April 2001, an initiative of the DEA&T, was facilitated by the DLIST team. Additional contributors included Conservation International GTZ/TRANSFORM and the Peace Parks Foundation (PPF). The workshop contributed tremendously through information sharing and strengthening of collaborative partnerships.

• Transfrontier meetings concerning the management of the Orange River Mouth TFCA and the Richtersveld Ais-ais Transfrontier Park are becoming more inclusive in terms of community representation and informing the Integrated Development Plan (IDP) and the broader regional planning context.
• *Alexkor Ltd.* is currently engaged in an inclusive post-mining development planning process. The mining company has a wealth of resources including knowledge of the coastal areas, infrastructure that can be made available to new developments, technical expertise and training facilities.