REPORT FOR THE

ON THE ASSESSMENT OF THE STATUS OF THE ABIDJAN CONVENTION IN THE BENGUELA REGION AND IMPLICATIONS FOR THE BENGUELA CURRENT COMMISSION

BY

Heidi Currie

Shaheen Moolla &

Domingas Paim

2 November 2007

TABLE OF CONTENTS

ACRONYMS

BCC	Benguela Current Commission
BCLME Programme	Benguela Current Large Marine Ecosystem Programme
EIA	Environmental Impact Assessment
EEZ	Exclusive Economic Zone
GEF	Global Environmental Facility
ICZM	Integrated Coastal Zone Management
LME	Large Marine Ecosystem
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
MEA	Multi-lateral Environmental Agreement
MET	Ministry of Environment and Tourism
MFMR	Ministry of Fisheries and Marine Resources, Namibia
MLRA	Marine Living Resources Act, 1998, South Africa
MPA	Marine Protected Area
NEMA	National Environmental Management Act, 1998, South Africa
NEPAD	New Economic Partnership for African Development
OSCP	Oil Spill Contingency Plan
SADC	Southern African Development Community
SAMSA	South African Maritime Safety Authority
SAP	Strategic Action Plan
SEIS	State of the Environment Information

	System
SSA	Special Sea Area
WACAF	West and Central African Action Plan

1. Introduction & Terms of Reference

On 8 October 2007, Heidi Currie (Namibia), Shaheen Moolla (South Africa) and Domingas Paim (Angola) were requested to advise the Benguela Current Large Marine Ecosystem Programme on the status of the Abidjan Convention in the Benguela Current Region and the implications for the Benguela Current Commission.

The terms of reference for this report specified that the report needed to be brief and must address the following pertinent issues:

1. Provide a brief overview of the Abidjan Convention and it's current status in the BCLME region, ie. in Angola, Namibia and South Africa;
2. Provide country perspectives on the Abidjan Convention and detail current difficulties in implementation and reasons for these;
3. Outline the current activities being carried out by the three countries that relate to the aims of the Abidjan Convention;
4. Provide a summary of those BCLME projects that address key areas of the Abidjan Convention and how these project recommendations (where applicable) can be implemented by the Benguela Current Commission;
5. Suggest ways in which the Abidjan Convention can best be adopted by the region and it's recommendations implemented; and
6. Provide relevant annexes to the report.

2. Methodology

This Report was compiled by Heidi Currie (Namibia), Domingas Paim (Angola) and Shaheen Moolla (South Africa). Due to the limited time period provided for the compilation of this Report (21 days), each of the country representatives was tasked with obtaining comment and advice from representatives of the respective member state governments on a uniform set of questions. These questions are provided in **Annexure A.** In addition, and where it was possible, meetings were held with government officials to expedite the receipt of input to the questions provided in Annexure A.

3. A Guide to the Abidjan Convention

3.1 Setting the Context: The BCLME SAP

Concluded in 2000 by Ministers representing each of the three BCLME member states, the BCLME SAP has a number of agreed joint policy actions to manage marine pollution in the BCLME region and to minimize ecosystem impacts. These include the following:

- **Harmonizing environmental quality objectives**

The SAP envisages that the Benguela Current Commission (BCC) will endeavor to provide effective regional communication to co-ordinate efforts to control marine pollution, minimize impacts and develop cost effective solutions. This will include, *inter alia,* the development of regional environmental quality indicators, proposals for marine pollution control and surveillance, regional monitoring and inspection of the coastal zone and regional enforcement of standards. The focus will be on prevention rather than cure. In the case of point source pollution, the BCLME member states ought to have developed waste quality criteria for receiving waters by June 2004.

☛ **Oil Pollution contingency plans and regional policy**

All three BCLME member states are obliged to have oil pollution contingency plans in place. The BCC is tasked with harmonizing these plans as far as possible and to develop necessary mechanisms for sharing technology and expertise, and in the event of a major oil spill, for the sharing of clean-up equipment and provision of expert advice. A regional Oil Pollution Contingency Plan ought to have been developed by 2005 to minimise transboundary (cross-border) impacts of oil pollution from activities in the EEZ's of the respective member states.

☛ **Implementation of MARPOL 73/78**

It is envisaged that the BCC will co-operate with SADC member states to devise a common strategy for the implementation of MARPOL 73/78 in the BCLME and SADC regions.

☛ **Addressing the problem of marine litter**

The growing problem of marine litter will be addressed first by a regional public awareness campaign (which will have seafarers as its primary focus) and second by harmonising legislation, enforcement and implementation of standards at a regional level. Locally and nationally, activities will be facilitated and coordinated.

3.2 The Abidjan Convention

All African coastal nations participate in UNEP's Regional Seas Programme that was initiated in 1974. The Regional Seas Convention conceived of as an action-orientated programme in order to address both the causes and consequences of environmental degradation in marine and coastal areas. The Regional Seas Programme comprises regional action plans, each of which is underpinned by a regional convention throughout 11 participating regions. Twenty-two coastal

nations presently participate in the West and Central African Action Plan (WACAF)[1], including the three BCLME countries.

The West African region is governed by the Abidjan Convention, which came into force on 5 August 1984. Stretching from Mauritania to South Africa, the Abidjan Convention area exceeds 14 000 km, spanning 22 countries and three distinct large marine ecosystems (LME's), namely the Guinea, Benguela and Canary Current LME's. These coastal ecosystems include deltas, mangroves, sea grass meadows, wetlands, barriers and lagoons. The member countries are Angola, Benin, Cape Verde, Congo, Democratic Republic of Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mauritania, Namibia, Nigeria, Sao Tome and Principe, Senegal, Sierra Leone, South Africa, Togo and the United Republic of Cameroon.

From an economic perspective, the most important resources include fisheries, diamonds, oil and gas and other minerals like limestone and sand. Tourism is also an important and growing sector.

The Abidjan Convention applies to the marine environment, coastal zones and related inland waters falling within the jurisdiction of the Contracting States of the West and Central African region. As such, the Abidjan Convention provides an overarching legal framework for all marine related programmes in West and Central Africa. It further aims to provide a supervisory lead role in the arena of integrated management based on a new work programme incorporating the ongoing environmental initiatives of applicable large marine ecosystem programmes, NEPAD's various environmental initiatives, as well as initiatives of other sub-regional programmes and partners, such as the International Maritime Organisation, World Wildlife Fund for

[1] Senegal, Mauritania, the Ghambia, Ghana, Guinea Bissau, Guinea Conakry, Liberia, Sierra Leone, CoteD'Ivoire, Benin, Togo, Equatorial Guinea, Nigeria, Sao-Tom and Principe, Gabon, Cameroon, Congo, the Democratic Republic of Congo (Zaire), Angola, Namibia and South Africa.

Nature, the International Conservation Union, the German Government's Development Programme (GTZ), UNESCO's International Oceans Commission, the American National Oceanic and Atmospheric Administration and the Food and Agriculture Organisation.[2]

The Abidjan Convention's scope includes addressing marine and coastal pollution and harm caused by a number of sources, including from ships, dumping, land-based sources, sea-bed exploration and exploitation and atmospheric pollution. The Abidjan Convention seeks to encourage member states to co-operate in combating pollution in cases of emergencies and to co-operate in scientific and technical areas. Member are further encouraged to take steps to mitigate the impacts of coastal erosion, to implement systems of protected areas and to include environmental impact assessments in evaluation processes

The objectives of the Abidjan Convention include:

- The Prevention, reduction and control of pollution in the Convention Area;
- Sound environmental management of natural resources;
- Co-operation in combating pollution in cases of emergencies and the formulation of emergency protocols; and
- The establishment of national laws and regulations for the effective discharge of pollution.

More specifically, the various forms and sources of pollution covered by the Abidjan Convention includes:

- Pollution from ships;
- Pollution caused by dumping from ships and aircraft;
- Pollution from land-based sources;

[2] *See* Ajao, E. (2005) *Report of a Comprehensive Review* p. 15, 31.

- Pollution from activities relating to exploration and exploitation of the sea-bed;
- Pollution from or through the atmosphere; and
- Coastal Erosion.

With regards to specially protected areas, the Abidjan Convention states that contracting parties must take appropriate measure to protect and preserve rare or fragile ecosystems as well as habitat. The Convention also states that contracting parties shall develop technical, as well as other guidelines to assist the planning of their developmental projects. States are to include EIA's in any planning activity that may cause substantial or significant and harmful changes to the Convention Area. Contracting parties are also encouraged to co-operate in the fields of scientific research, monitoring and assessment of pollution in the Convention Area.

The activities of the Abidjan Convention are coordinated directly by the Nairobi-based Joint Implementation Unit of the Nairobi and Abidjan Conventions and the Abidjan-based Regional Coordination Unit will increasingly be coordinated at the regional level through collaborations and partnership between the Convention and the GEF-sponsored Large Marine Ecosystem projects under implementation in the Convention area. The Convention designated Cote d'Ivoire as the Depository, and UNEP as the Secretariat. The Regional Coordinating Unit is based in Abidjan.

4. Status of Abidjan Convention in the BCLME Region & the Implementation Measures

4.1 Status of the Abidjan Convention in the BCLME Region

Angola and Namibia are Contracting State Parties to the Abidjan Convention but have not ratified the Convention. South Africa ratified the Abidjan Convention in 2002 and is the only BCLME country to date to have done so.

4.2 Implementation of the Convention in South Africa

The **Constitution of the Republic of South Africa, 108 of 1996** is the supreme law and all state and private action is measured against these constitutional provisions. Chapter 2 of the Constitution comprises the Bill of Rights, which sets out a number of inalienable fundamental human rights. Section 24 guarantees all people in South Africa the right to an environment that is not harmful to human health or well-being and to have the environment protected for the benefit of present and future generations.

The **National Environmental Management Act, 107 of 1998** is South Africa's framework or umbrella environmental legislation, providing the principal tools to guide the management of South Africa's environment and embraces three broad fields of environmental concern:

- Resource conservation and exploitation;
- Pollution control and waste management; and
- Land use planning and development.

The **National Environmental Management Act** also requires EIA's for activities that may adversely impact on the environment, socio-economic conditions and cultural heritage.

In 1998 a new **National Water Act** was promulgated for South Africa. Its purpose includes, *inter alia*, protecting aquatic and associated ecosystems and their biological diversity and reducing and preventing pollution and degradation of water resources. The Act defines a water resource as including a watercourse, surface water, estuary, or aquifer.

Chapter 3 of the **National Water Act** deals with pollution prevention and in particular the situation where pollution of a water resource occurs or might occur as a result of activities on land. The person who owns, controls, occupies or uses the land in question is responsible for taking measures to prevent pollution of water resources. If these measures are not taken, the catchment management agency concerned may itself do whatever is necessary to prevent the pollution or to remedy its effects, and to recover all reasonable costs from the persons responsible for the pollution.

All industrial, sewage and storm water discharges are permitted by South Africa's Department of Water Affairs and Forestry and all discharges are monitored for chemical and bacterial content. Provisions in the National Water Act allow for the control of water quality entering the sea via rivers. Standards are set for the quality of effluent discharged into rivers. There is no direct control over the quality of water runoff from non-point sources. To fulfill its legal obligation in terms of the management and control of land-derived waste water under section 21 of the National Water Act, the Department of Water Affairs and Forestry developed the **Operational Policy for the Disposal of Land-derived Water Containing Waste to the Marine Environment of South Africa.** The policy is comprehensive and covers issues such as the regulation of land-derived discharges into the marine environment.

South Africa is also a signatory to **MARPOL**. The MARPOL convention is overseen and implemented in South Africa by the Department of Transport, and more particularly by its agency, the South African Maritime Safety Authority (SAMSA). SAMSA is responsible for implementing a number of laws, regulations and marine circulars aimed at ensuring, *inter alia*, compliance with MARPOL. The most pertinent are briefly discussed below.

The **Marine Pollution (Control and Civil Liability) Act, 6 of 1981** provides for the protection of the marine environment from pollution by oil and other harmful substances, the prevention and combating of such pollution, and the determination of liability in certain respects for loss or damage caused by the discharge of oil from ships, tankers and offshore installations, which is in line with Article 5 of the Abidjan Convention dealing with pollution from ships.

The Marine Pollution (Control and Civil Liability) Act prohibits the discharge of oil from ships, tankers and offshore installations, but provides exemptions in the case of, for example, the oil being released as a result of damage and steps being taken as soon as practicable to stop or reduce the escape of oil. The Act provides reporting procedures for discharges of any harmful substance.

The Act also establishes the powers of SAMSA to take steps to prevent pollution at sea where a harmful substance is being or is likely to be discharged. SAMSA may, for example, require the master of a ship to unload a harmful substance from a ship or tanker, or to transfer the substance to another ship or tanker.

In terms of the Act, the owner of a ship, tanker or offshore installation is liable for any loss or damage caused by pollution resulting from the discharge of oil. The owner is also liable for the costs of any measures taken by SAMSA to reduce damage resulting from such discharges. Tankers carrying more than 2 000 tons of oil are subject to compulsory insurance.

The **Dumping at Sea Control Act, 73 of 1980** provides for the control of dumping of substances in the sea. This Act gives legal effect in South Africa the London Convention for the Prevention of Marine Pollution by Dumping of Wastes and other Matters, 1972. "Dumping", means deliberately disposing of at sea from any vessel, aircraft, platform or other man-made structure, waste by incinerating or depositing in the sea. It does not, however, include the disposal at sea of any substance incidental to or derived from normal operations of a vessel. Nor does it include legally depositing at sea any substance for a purpose other than its mere disposal.

Schedule 1 of the Act refers to "Prohibited Substances" which include organohalogens, mercury, persistent plastics and high-level radioactive waste. Schedule 2 refers to "Restricted Substances" and includes arsenic, lead, cyanides, fluorides, scrap metal and ammunition. A general permit may be issued to authorize the dumping of any substance not mentioned in Schedules 1 and 2.

With respect to mining and petroleum extraction and exploration, the **Mineral and Petroleum Resources Development Act, 28 of 2002,** provides for the sustainable development of South Africa's mineral and petroleum resources. The Act gives effect to the environmental management principles as set out in section 2 of NEMA which applies to all prospecting and mining operations, serves as the guidelines for the interpretation, administration and implementation of the environmental requirements of the Act. The impact of prospecting or mining on the environment as contemplated in NEMA must be monitored. Person involved in mining and petroleum extraction and exploration must also manage all environmental impacts, as far as is reasonably practicable, rehabilitate the environment affected and are responsible for any environmental damage, pollution or ecological degradation that may occur.

The Act also states that any person that has applied for a mining right must conduct an environmental impact assessment and submit an environmental management programme. Any person who applies for a reconnaissance permit, prospecting right or mining permit must submit an environmental management plan.

South Africa's marine fisheries and aquaculture are regulated in terms of the Marine Living Resources Act, 1998, as well as a comprehensive suite of regulations and policies. The Marine Living Resources Act of 1998 is the principal legislative instrument regulating marine living resources and aquaculture in South Africa. No other legislative instrument, save the Constitution, prevails over a provision of the MLRA in so far as the regulation of marine living resources is concerned. The MLRA repealed the Sea Fisheries Act of 1988 but kept alive section 29 of the Sea Fisheries Act, which provided for the determination and collection of levies on fish landed and fish products sold. The MLRA provides for the orderly exploitation of marine living resources and the exercise of control over marine living resources in a fair and equitable manner for the benefit of all the citizens of South Africa. In terms of section 2 of the MLRA, the Minister of Environmental Affairs and Tourism and any organ of state must have regard to a number of objectives and principles when exercising any power under the MLRA. These are:

(a) *The need to achieve optimum utilisation and ecologically sustainable development of marine living resources;*
(b) *The need to conserve marine living resources for both present and future generations;*
(c) *The need to apply precautionary approaches in respect of the management and development of marine living resources;*
(d) *The need to utilise marine living resources to achieve economic growth, human resource development, capacity building within fisheries and mariculture branches, employment creation and a sound ecological balance consistent with the development objectives of the national government;*
(e) *The need to protect the ecosystem as a whole, including species which are not targeted for exploitation;*
(f) *The need to preserve marine biodiversity;*

(g) *The need to minimise marine pollution;*

(h) *The need to achieve to the extent practicable a broad and accountable participation in the decision-making processes provided for in this Act;*

(i) *Any relevant obligation of the national government or the Republic in terms of any international agreement or applicable rule of international law; and*

(j) *The need to restructure the fishing industry to address historical imbalances and to achieve equity within all branches of the fishing industry.*

For the purposes of this Report, Section 43 of the MLRA makes provision for the declaration of Marine Protected Areas and states that no person may "*discharge or deposit waste or any other polluting matter*" in an MPA and that no person may "*carry on any activity that may adversely impact on the ecosystem of that area*". South Africa has 17 MPAs that have been declared under the Marine Living Resources Act (and preceding legislation). These 17 MPA's protect some 1% of the South African marine area (EEZ) and approximately 17% of the coastline.

The **Air Quality Act of 2004** was promulgated with the aim of reforming South African law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development. The Air Quality Act repealed old order legislation dating back to the 1960's. The Act requires the Department of Environmental Affairs and Tourism to, *inter alia*, determine national norms and standards aimed at regulating air quality monitoring. Norms and standards for ships emissions, including fishing vessels, have not yet been determined.

The National Biodiversity Act of 2004 sets out objectives within the framework of the NEMA to provide for the management and conservation of biological diversity in South Africa, including within South Africa's territorial waters, EEZ and continental shelf.

The National Biodiversity Act makes provision for the establishment of the South African National Biodiversity Institute (SANBI). The Act also makes provision for the design of a National Biodiversity Framework, which must be implemented by the Minister of Environmental Affairs and Tourism by June 2007. Chapter 4 of the National Biodiversity Act makes provision for the protection and conservation of threatened ecosystems and species so as to maintain ecological integrity. The Act provides that the Minister of Environmental Affairs and Tourism may categorise and manage ecosystems in accordance with the ecological state they are considered to be in. The following categories are provided for:

- Critically endangered ecosystems
- Endangered ecosystems
- Vulnerable ecosystems
- Protected ecosystems

It is worth noting that in 2006, the Minister of Environmental Affairs and Tourism informed Parliament that as a result of the promulgation of the National Biodiversity Act in 2004, the first-ever National Spatial Biodiversity Assessment (NSBA) was published in 2006, which was the first-ever comprehensive spatial evaluation of biodiversity in South Africa. The results of the NSBA were alarming. The NSBA showed that 34% of South Africa's terrestrial ecosystems are threatened with 5% critically endangered; 82% of South Africa's 120 rivers are threatened with 44% critically endangered; three of South Africa's 13 groups of estuarine biodiversity are in critical danger; with 12% of marine bio-zones under serious threat.

4.3 Implementation of the Convention in Angola

Angola has not yet ratified the Abidjan Convention. However, the Angolan government has indicated that steps are being taken to ratify the Convention. A memorandum is being prepared by the Ministry of Environment and Urban affairs to be sent to the Ministry of Foreign Affairs, following which it will be submitted for parliamentary approval. This process will take about 15 days.

Although the Convention has not yet been signed, the Angolan Government is aware of its importance and has developed some activities in this regard, in cooperation with various users and regulators of the ecosystem, which include the Ministries of Transport, Petroleum and Environment.[3] One of the main aspects in this regard pertains to coastal zone management.

The **Constitution of the Republic of Angola (*Lei Constitucional da República de Angola*), 1992** was signed into law after a number of amendments and provides the basis for the Environment Framework Act through two articles, (12 and 24), enabling environmental protection and conservation and the right to a healthy and unpolluted environment.

Article 12.2 states that –

> *"The State shall promote the protection and conservation of natural resources guiding the exploitation and use thereof for the benefit of the community as a whole."*

[3] Pers. Comm.Dr. Kudikuenda

Article 24 states that –

1. *All citizens shall have the right to live in a healthy and unpolluted environment.*
2. *The State shall take the requisite measures to protect the environment and national species of flora and fauna throughout the national territory and maintain ecological balance.*
3. *Acts that damage or directly or indirectly jeopardize conservation of the environment shall be punishable by law.*

The **Environment Framework Act, No 5/98,** is administered by the Ministry of Urban Affairs and Environment. This Act provides the framework for all environmental legislation and regulations in Angola. It provides the definitions of key concepts including protection, preservation and conservation of the environment, the promotion of quality of life and the use of natural resources. This law incorporates key international sustainable development declarations and also establishes citizens' rights and responsibilities.

The Environmental Framework Act provides for guidelines and principals for the prevention and combating of pollution and stipulates that the government should determine urban and non-urban environmental quality standards. These have not yet been determined.

The **Decree on Environmental Protection for Petroleum Activities, No. 39/00** is administered by the Ministry of Petroleum and aims at protecting the environment from petroleum exploration and production activities. It defines the environment as including, *inter alia*, fauna, flora, soil, water, landscape, cultural values, atmosphere, etc. and is applicable to terrestrial and marine petroleum related activities.

The decree also establishes rules and procedures of management, removal of deposits and wastes resulting from oil activities.

The aim of the **Environmental Impact Assessment Decree No 51/04** is to establish standards and procedures regulating EIAs of public and private projects. Articles 6 and 7 describe processes and contents of requisite EIAs as well as the technical activities involved and required.

The introduction of the **Aquatic Biological Resources Act No 6-A/04** emphasises "*the need for the conservation and sustainable renewal of aquatic resources, requiring appropriate measures to ensure that resources are used in a responsible manner.*"

The law sets out principles governing the use of aquatic resources, the regulations governing fishing and the granting of fishing rights, special rules for the protection of aquatic resources and ecosystems, regulations on fishing vessels and ports, scientific research, the monitoring of resources and the licensing of fish processing and marketing establishments.

The **Aquatic Biological Resources Act** also addresses the issue of Marine Protected Areas, providing a definition and ecological criteria to establish such areas. According to the **National Biodiversity Strategic Plan**, some areas along the Angolan coast can be considered as protected as the *Ilhéu dos Pássaros* – an island that serves as a reproduction area for important birds – and the *Iona National Park* important for the reproduction of various turtle species.

4.4 Implementation of the Convention in Namibia

Namibia has not yet ratified the Abidjan Convention and during consultations with the Deputy Director in the Ministry of Environment and Tourism, he indicated that Namibia has no intention of doing so at this stage, as there are no perceived advantages and Namibia is already party to a number of multilateral environmental agreements.[4]

The supreme law of Namibia, **the 1990 Constitution**, addresses principles of state policy in chapter 11, with provisions concerning the environment contained in article 95:

Article 95 (l) of the Constitution commits the Namibian Government, *inter alia*, to the maintenance of ecosystems, essential ecological processes and the biological diversity of Namibia.

Article 100 of the Constitution of Namibia, titled "*Sovereign Ownership of Natural Resources*" provides that the "*Land, Water and Natural Resources above and below the surface of the land and in the continental shelf and within the territorial waters and the exclusive economic zone of Namibia shall belong to the State if they are not otherwise lawfully owned*."

Article 91 outlines the role of the Ombudsman, whose office is established in terms of Chapter 10 of the Constitution. The Ombudsman is explicitly empowered to investigate complaints concerning the over-utilisation of living natural resources, the irrational exploitation of non-renewable resources, the degradation and destruction of ecosystems and failure to protect the beauty and character of Namibia.

[4] Pers. Comm. Sem Shikongo, 18 October 2007, Namibia

Namibia does not have dedicated environmental protection legislation, although it has been indicated that the draft **Environmental Management Bill** will be promulgated next year.[5]

The **Water Resource Management Act** was promulgated on 23 December 2004, and provides for the management and conservation of all Namibia's water resources, including the sea, inland waters, and meteoric water.[6] The abstraction, use and supply of water, pollution and administration are covered by the ambit of this act. Pollution control is regulated by way of a permit, which applies the following criteria when issued:

- The impact of the discharge on existing water uses;
- The use of water from any source into which the discharge will be made;
- Any known impact of the proposed effluent discharge on the environment, including those emanating from owners and land occupiers in the vicinity of the water resource;
- The need to ensure efficient and beneficial use of water resources.

The above Act provides for the declaration of a water management area for the purpose of protecting any water resource at the risk of contamination, depletion, extinction or disturbance from any source.

International treaties and agreements, regarding internationally shared water resources may be entered into in terms of the Act.

An **Environmental Assessment Policy** was published by the Ministry of Environment and Tourism in 1995. Meaningful enforcement of this policy, however, remains problematic and irregular, although it

[5] Midori Paxton, MET / SPAN project, Namibia.

[6] Water derived from or occurring in the atmosphere

stipulates that all listed polices, projects and programmes[7] are subjected to EIAs. The listed activities include (among others) resource utilization, mining and mineral exploration, tourism and recreation facilities, effluent and desalination plants.

This policy enshrines the user pays principle and sustainable development, whilst promoting accountability and ensuring that environmental costs are considered, although the implementation and enforcement of this policy is ineffective.

The range of legal powers to implement effective coastal management would be significantly enhanced if the **Water Resource Management Act, 2004**, and the **Environmental Investment Fund of Namibia Act, 2001** were brought into force. By the same token, the draft **Pollution Control and Waste Management Bill**, **Environmental Assessment and Management Bill**, and **Parks and Wildlife Bill** need to be enacted, including regulations thereunder.

Existing legislation, such as the **Marine Resources Act**, **Aquaculture Act** and **National Heritage Act** may be used to implement some aspects of integrated coastal zone management (ICZM) through the mandated conservation and protection of marine resources and maintenance of pristine water quality, as required for declared aquaculture zones.[8]

Section 52(3)(e) of the **Marine Resources Act** stipulates the following:

> *'Any person who discharges in or allows to enter or permits to be discharged in Namibian waters anything which is or may be injurious to marine resources or which may disturb or change the ecological balance in any area of the sea, or which may detrimentally affect the marketability of marine resources, or*

[7] Including government as well as the private sector

[8] The declaration of these zones however also appears to be hampered, as the imposition of restrictions in order to protect the coastal environment is not facilitated

which may hinder their harvesting, shall be guilty of an offence and liable on conviction to a fine not exceeding N$ 500 000.'

The **Minerals (Prospecting and Mining) Act 33 of 1992** regulates the reconnaissance, prospecting and mining for minerals, and related matters in Namibia. Mineral rights are vested in the Government of Namibia, and companies or individuals apply to the Ministry of Mines and Energy (MME) for licenses to explore and mine mineral deposits.

When licenses lapse or are cancelled or the license holder abandons the area (including reconnaissance, prospecting, retention or mining licenses), the license holder is required to take all necessary steps to remedy any damage caused to the environment through their activities.

The above Act also requires the license holder to report all incidences in which mineral(s) are spilt into the sea or on the land, or if this is polluted or damage is caused to any plant or animal, to the Minister of MME, and take all steps necessary, in terms of what is considered to be good practise,[9] to remedy the situation. Where the license holder fails to do this in good time, the Minister is to take the necessary steps to remedy the situation, at the expense of the license holder.

Applicants for mining licenses are obliged to give the Minister details regarding the anticipated effects of proposed prospecting and mining operations on the environment, and include proposed prevention and minimisation steps required.[10]

Section 57(1)(b) enables the Minister to direct applicants regarding environmental protection, the conservation of natural resources and the prevention of waste hereof. Where license holders fail to comply with such directions, the Minister may take the specified steps and recover the costs hereof from the license holder.

[9] Defined in section 1 of the Act

[10] Section 91(f)(ii) and (iii)

Section 122(2)(b) addresses pollution prevention by authorising the Minister to declare any prospecting or mining operation only permissible by special Ministerial authorisation, and subject to any conditions or terms he may determine.

Section 130 makes mineral license holders liable for damage to the environment and other losses or damage caused.

If any minerals or group of minerals are spilled in the sea, on land or in any water, during the course of any mining-related operations, and if any plant or animal life is endangered or destroyed, or damage or losses are caused to any person, then the license holder is required to report the spillage and consequent pollution to the Minister, and to remedy the damage caused. In the event of non-compliance with this provision, the Minister may take necessary steps himself, and recover costs form the license holder through legal process.

To date there are no formally promulgated MPAs in Namibian waters, although section 51 of the Marine Resources Act empowers the Minister of Fisheries and Marine Resources to declare marine reserves. A project involving a legal review and consultation with stakeholders, aimed at the declaration of Namibia's first MPA is currently underway, and it is anticipated that the country's first MPA around the islands along the southern coastline will be declared by the end of this year.

The only legislation addressing air pollution and quality standards in Namibia at present is the dated, pre-independence **Atmospheric Pollution Prevention Ordinance 11 of 1976**. Air pollution from vessel stacks is currently not monitored or enforced, and neither are air pollution requirements in terms of MARPOL enforced.

5. Current BCLME Activities that Complement the Abidjan Convention

The BCLME Programme directly supported the funding of a number of projects within the BCLME Region that aim to give effect the objectives and intentions of the Abidjan Convention.

Although a number of these projects are analytical reports, two recent projects are intended to be important tools for managers. These include the State of the Environment Information System (SEIS) (http://seis.bclme.org/) and the Environmental Early Warning System. SEIS is a website aimed at providing up-to-date information and data about the state of the natural environment, the state of living marine resources, the impacts of mining, drilling activities and pollution sources and ecosystem trends. In an attempt to improve pollution monitoring within the BCLME SEIS identifies the following negative or adverse impacts on the Ecosystem:

- Mining and Petroleum;
- Marine Outfalls and Dumping at Sea;
- Dredging;
- Shipping; and
- Other human impacts.

The following activities and report supported by the BCLME Programme will significantly complement and give effect to the Abidjan Convention if implemented by the BCLME Member States:

- The Oil Spill Contingency Plan (**Annexure B**);
- MARPOL Implementation Assessment and Recommendations (**Annexure C**);
- The Development of a Common set of Water and Sediment Quality Guidelines for the Coastal Zone in the BCLME (**Annexure D**); and
- Base-line Assessment of Source and Management of Land-based Sources of Marine Pollution in the BCLME Region (**Annexure E**).

Other reports that have been commissioned by the BCLME Project and that have a bearing on the Abidjan Convention include:

- Analysis of threats and challenges to marine biodiversity and marine habitats in Namibia and Angola;
- Data gathering and gap analysis for modeling the cumulative effects of offshore petroleum exploration and production activities on the marine environment of the BCLME;
- Data gathering and gap analysis for assessment of the cumulative effects of marine diamond mining activities on the BCLME;
- Assessment of the cumulative effects of sediment discharge from on shore and near shore diamond mining activities on the BCLME;
- Marine litter;
- Regional oil spill contingency planning in the BCLME;
- Transboundary pollution monitoring; and
- Assessment of the need for waste reception facilities in ports across the BCLME.

These reports are available from the BCLME Project Coordination Unit in Windhoek, Namibia or at www.bclme.org.

6. Implementing the Abidjan Convention: Defining a Role for the BCC

By February 2007, Angola, South Africa and Namibia had signed the Interim Agreement that established the Benguela Current Commission (BCC). The objective of the BCC Interim Agreement is to give effect to the BCLME SAP by establishing the BCC as a formal institutional structure aimed at facilitating cooperation within the BCLME Region.

The agreement applies to the BCLME area as well as to all human activities, aircraft and vessels under the jurisdiction or control of the contracting party to the extent that these activities, or the operation of such aircraft or vessels result, or are likely to result, in adverse impacts. The Interim Agreement also

states that the Contracting Parties shall co-operate in the implementation of the BCLME SAP and negotiate, agree and bring into force a more comprehensive legal instrument.

The Interim Agreement also gives the BCC the mandate to consider and make recommendations, in accordance with the national laws of the Contracting Parties, on, *inter alia* –

- The establishment of a system of MPA's;
- Environmental impact assessments and other procedures for the planning and approval of new projects and activities which have the potential to impact on the BCLME Region;
- Processes and standards for minimizing and remediating environmental impacts resulting from mining and dredging activities;
- Contingency plans for dealing with extreme pollution events and oil spills; and
- The adoption and enforcement of harmonized regulatory frameworks for the discharge of sewerage, pollutants, waste and other pollution control measures.

The implementation of the Abidjan Convention by the BCC is provided for by the Abidjan Convention's Institutional Arrangements. The Regional Co-ordination Unit –

- Contributes to the strengthening of programmes implemented in the framework of the WACAF Action Plan and to the sustainable management and use of natural resources of the region;
- Improves fund raising and liaison with bilateral and multilateral donors in the framework of the Action Plan for the sustainable development of the marine and coastal environment of the region;
- Enhances the regional cooperation with other major projects and initiatives in the protection and sustainable development of the marine and coastal Environment of the region, including the Guinea Current, Benguela Current and Canary Current Large Marine Ecosystem

programmes;

- ☛ Establishes and improves working relationships and cooperation with other UN and non-UN organisations on relevant projects and activities that contribute or complement those of the West and Central African Action Plan;
- ☛ Establishes a network of institutions in the countries of the region, to conduct related research and studies and set policies for addressing the environmental issues on the coastal and marine environment areas of the region;
- ☛ Improves liaison and subsequent cooperation with UN, Intergovernmental and Non-governmental Organization within the region, to enhance the implementation of the Abidjan Convention and its Work Programme.

Because of the vastness of the Abidjan Convention Area, the BCC – being the first formal large marine ecosystem commission in the Convention Area – has an opportunity to play a significant and leading co-ordinator role in the implementation of the objectives of the Abidjan Convention. The co-ordination and implementation of these objectives by the BCC will only serve to give greater impetus to the BCC's broader mandate in the Benguela Current Region – that of sustainably managing the region's fish stocks and recovering over-exploited and collapsed stocks.

7. Conclusion and Recommendations

A review of the Abidjan Convention by UNEP in 2005 highlighted that the inability of the institutions set up in terms of the Convention to implement the Work Programme is related to:

- Poor utilisation of existing resources;
- The need to address (and possibly create new) funding mechanisms;
- Poor integration of functions between responsible institutions and partners;
- The lack of effective coordination, commitment and political will;
- The need for African governments to incentivise and attract foreign funding by providing resources aimed at the implementation of the Convention.[11]

The implementation of the Abidjan Convention Work Programme is dependent on Contracting Parties paying their respective dues to a trust fund. However, the failure by Contracting Parties to pay their dues regularly has stalled the implementation of the Work Programme.

The implementation of the objectives underpinning the Abidjan Convention is without doubt of fundamental importance to member states of the BCLME Programme and the BCC. However if regard is had to the comment made by the Namibian government representative (see above para 4.4, comment by Mr Sem Shikongo), it may represent a growing and perhaps justified feeling among government officials – that of *International Agreement Fatigue*. International Agreement Fatigue will undoubtedly result as the number of environmental multi-lateral agreements increase, coupled with increased

[11] *See* Ajao, E. (2005) *Report of a Comprehensive Review* p. 17.

strains on financial and human resources, both of which are in short supply in the BCLME Region.

This Report accordingly recommends the following in order to encourage the implementation of the objectives of the Abidjan Convention, regardless of whether or not each of the BCLME Member States ratifies the Convention:

Coordination by the BCC

1. The BCC should be considered as the mechanism to implement the objectives of the Abidjan Convention in the BCLME Region. This would complement the BCC Interim Agreement, read with the BCLME SAP and the Objectives of the Abidjan Convention Joint Conference of Parties (2007, Johannesburg, South Africa).

2. As the regional implementer of the Abidjan Convention, the BCC would be able to directly facilitate coordination and harmonisation of policy, governance and legislation aimed at managing marine and coastal pollution among members of the Guinea Current LME and the Canary Current LME.

3. Furthermore, as the regional implementer, the BCC would prevent the duplication of financial costs and the duplication of human and technology deployments.

Monitoring, Reporting and Enforcement

4. As is the case with the implementation of MARPOL[12], although each of the BCLME Member States either have promulgated or are in the process of promulgating the necessary regulatory frameworks, there remain significant gaps in the monitoring and enforcement of policies and laws in the area of marine and coastal pollution prevention and management.

[12] See further Annexure C, below.

5. South Africa has a comprehensive marine and coastal pollution monitoring, reporting and enforcement strategy.

6. The BCC would be an important conduit through which South Africa's monitoring, reporting and enforcement strategy is shared with Namibian and Angolan officials. In this way, a common Benguela Current Region monitoring, reporting and enforcement policy manual could be adopted. This must include the collation and sharing of marine pollution data and pollution sources. The State of the Environment Information System (SEIS) already makes provision for such information databases and should be utilised.[13]

7. The effective utilisation and management of the SEIS website could serve as an important incentive for the Canary and Guinea Current LME's to develop similar tools. These tools should in turn be linked to a monitoring and reporting web-based tool overseen and managed by the Abidjan Convention Regional Coordinating Unit.

8. Finally, the implementation of a SSA by South Africa in March 2008 in terms of MARPOL will have a significant impact on shipping in the region, particularly on vessels deployed in Angola's EEZ that either travel through South African waters onward to Angola or that call at South African ports. A regional information session on the consequences (both practical and costs) of the implementation of the SSA should be considered as a matter of urgency. This information session should be facilitated by the BCC and should be included as a component of the SEIS website.

Resource Constraints

9. The resource constraints identified during the preparation of the MARPOL Report[14] remain applicable.

---

[13] In this regard, see http://seis.sea.uct.ac.za/php/pollution.php

[14] See further Annexure C, below.

10. Namibia indicated that the challenges experienced with the implementation of pollution management measures relate to a shortage of trained and technically skilled staff and a serious lack of equipment. A further concern raised pertained to the separate geographic locations of the Directorate of Maritime Affair's head office and coastal operational offices.

11. In Angola, port authority officials indicated that a significant challenge in the implementation of pollution management measures is a general lack of understanding and awareness of marine pollution and water quality in general, as well as a shortage of monitoring capacity for the marine environment.

12. Between Angola, South Africa and Namibia, there are a number of fisheries compliance vessels, environmental patrol vessels and surveillance aircraft that could be increasingly used as shared resources for the purposes of more effectively monitoring and enforcing compliance with domestic, regional and international instruments aimed at preventing and managing marine and coastal pollution.

Annexure A

Questionnaire

9 October 2007

Dear Sir / Madam,

The recent establishment of the Benguela Current Commission (BCC) has ushered in the final phase of the BCLME programme, which is committed to the implementation of the various obligations recorded in the BCLME (Benguela Current Large Marine Ecosystem)'s SAP (Strategic Action Plan) that was signed in 2000.

The BCLME PCU (Programme Coordinating Unit) has just requested us to provide an overview of the 1981 Abidjan Convention (for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the West and Central African Region) and its current status in the region of the three countries, Namibia, South Africa and Angola, including difficulties in implementation, current activities and projects relating thereto. Unfortunately the time line for this is very urgent, for delivery by the end of the month.

As one of the main regulatory authorities responsible for the implementation of the Abidjan Convention, we would like to request your kind assistance regarding the above. To this end, a simple template has been informed, in order to inform the provision of data and information. Thank you very much, and looking forward to hearing from you,

All the best,

Heidi Currie,
Tel: (064) 4060 39 / 4101150
Cell: +264 81 302 5207
hcurrie@feike.co.za
www.feike.co.za

Shaheen Moolla
Tel: (021) 788 9131
Cell: 082 443 2110
smoolla@feike.co.za

Questionnaire

1. a) Has the 1981 Abidjan Convention (for Cooperation in the Protection, Management and Development of the Marine and Coastal Environment of the West and Central African Region) been incorporated into your BCLME country's national legislation, regulations and policy?
   b) To what extent?

2. a) If the answer to (1) above is in the affirmative, how has the Abidjan Convention been implemented in your country and by your Institution?

   b) What difficulties have been experienced in implementing this instrument, together with its 1981 Protocol?

3. What activities have been carried out in your country relating to the main aims of the Abidjan Convention?

4. Do you regard the Benguela Current Commission as a suitable vehicle through which the aims and recommendations of the Abidjan Convention can be implemented?
   Please substantiate your answer.

5. Is there any further information regarding your country's commitment to the Abidjan Convention and its broader objectives that you would like to furnish?

Annexure B

Oil Spill Contingency Plan

The Regional Oil Spill Contingency Planning in the BCLME Region (Project BEHP/OSCP/03/01)

Prepared by: Pat Morant and the CSIR

Status: Draft

The objective of project BEHP/OSCP/03/01 is to investigate the harmonisation of the relevant policies and strategies for oil spill contingency planning in Angola, Namibia and South Africa and to propose a protocol for the facilitation of cooperation in the event of oil spills.

The project consists of a review of the legal framework and institutional structures related to oil spill contingency planning, coastal sensitivity maps, infrastructure in place and resources available for oil spill response in the three BCLME countries.

Whilst the risk and scope of transboundary oil spills which would require close cooperation between the BCLME countries may be limited there appears to be scope for mutual aid in case of major spills.

The project was undertaken in four phases, which were continuously updated as the project progressed. These Phases were;

- Review of legal framework and institutional structures
- Workshops
- Oil Spill Infrastructure Assessment
- Finalisation of the Regional Cooperation Plan

Angola's National Oil Spill Contingency Plan (NOSCP) which is expected to be approved by the Council of Ministers in the near future applies to the

Exclusive Economic Zone (EEZ), territorial waters and the shoreline including estuaries and river mouths. The NOSCP is based on the following principles:

- Prevention of the occurrence of oil spills is paramount and this principle should guide the planning and implementation of all operations;
- Safety of human life is of the utmost priority;
- Response to an oil spill should be conducted so as to minimize the severity of the impacts on the environment and to accelerate the recovery of any affected habitat or ecosystem; and
- Response should complement and use natural forces to the maximum extent possible.

South Africa has now in place a number of different oil spill contingency plans ranging from the broad national plan to more defined plans covering specific harbour facilities.

The Ministry of Works Transport and Communication (MWTC) is, by law, the designated ministry for the management of oil spill emergencies in Namibia. MWTC, through the directorates of Maritime Affairs (DMA) and Civil Aviation (DCA), with the participation of other ministries, Government bodies and the industry developed two approaches to responding to oil spills, namely the National Oil Spill Contingency Organisation (NOSCO) and the Namibian Government Action Control Group (NGACG). NOSCO is the main organisation dealing with all oil spills in the country while the NGACG was developed at the height of petroleum exploration activities in Namibia in the late 1990s and early 2000s and was aimed at the petroleum industry with the objective of covering all incidents offshore.

It is, however, important to note that the while the NGACG is dormant, NOSCO has been active with training workshops for stakeholders which, in principle, should take place annually. However, the most recent workshop, the IMO-supported National Oil Spill Contingency Plan (NOSCP) Exercise and Workshop organized by DMA, took place in 2004. The aim of the Workshop

was to review the NOSCP and make recommendations for any changes or additions to be made in the light of the exercise and workshop findings.

Other Oil Spill Plans are industry-specific such as required by law for offshore vessels and the local port oil spill plans within the demarcated areas of their control i.e. at Walvis Bay and Lüderitz.

Under the auspices of the BCC a co-operation agreement should be drafted based on the OPRC and learning from the experiences of other existing co-operation agreements. Because of the differences in legal systems between the three BCLME countries and the advanced state of their national oil spill contingency plans it would not be practical to attempt drafting a regional oil spill contingency plan. The agreement should be effected by the necessary protocols for actual co-operation. Alternatively the BCLME co-operation agreement could form part of the existing, but probably to be strengthened, agreements at the west and east coasts of Africa

Recommendations: General

It is recommended that a co-operation agreement be established between the three BCLME countries to deal with all aspects of oil spill contingency planning and response.

It is believe that this will be more effective than a regional oil spill contingency plan because of the differences in the legal and institutional structures in the three countries. Furthermore, international experience to date has shown that regional OSCPs have been ineffective (see Chapter 9).

Recommendations: Legal

This study has established that although the three BCLME countries have their own legal systems and statutes in the area of marine pollution prevention and control, this does not present a major impediment to fulfilling the overall vision and objective of this study i.e. to propose the establishment of oil spill contingency planning and response co-operation. The legal recommendations made below are accordingly made to facilitate and

streamline the overall implementation of the OPRC through a co-operation agreement.

Adoption of OPRC

That the South African and Namibian governments be strongly urged to adopt the OPRC because its objectives and operations are strongly aligned with the objective of this study. Angola has already done so.

Enactment of domestic legislation

That the Namibian government be strongly urged to put in place domestic legislation to give effect to MARPOL 1973/78 and the 1996 Protocol. Similarly that Angola be encouraged to do so. Although the Doctrine of Incorporation applies in that country a convention cannot be applied directly against citizens particularly as far as the criminal law is concerned so Angola should be encouraged to adopt this legislation.

Co-operation agreement and protocols

Under the auspices of the BCC a co-operation agreement should be drafted based on the OPRC and learning from the experiences of other existing co-operation agreements. Because of the differences in legal systems between the three BCLME countries and the advanced state of their national oil spill contingency plans it would not be practical to attempt drafting a regional oil spill contingency plan. The agreement should be effected by the necessary protocols for actual co-operation. Alternatively the BCLME co-operation agreement could form part of the existing, but probably to be strengthened, agreements at the west and east coasts of Africa (Chapter 3).

Recommendations: Institutional

Benguela Current Commission (BCC)

Since the BCC is the envisaged inter-governmental vehicle to facilitate and streamline co-operation between the three BCLME parties it is suggested that: each of the national delegations includes a specialist on marine pollution prevention and control from their respective governments on the "Ecosystem

Health Committee", a sub-committee of the Management Board referred to in Article 10(a)(iii) of the BCC Interim Agreement.

Communication of plans

In order to achieve effective co-operation between the OSCP organisations of the three BCLME governments it is necessary that each understands the OSCP procedures of the other two. In particular the reporting procedures and chains-of-command in the three countries differ and are likely to remain different although with time it is hoped that there will be increasing commonality in these OSCP procedures. The most effective means of achieving this mutual understanding of national OSCPs would be through joint training exercises (see Section 10.6.4 below).

Financial implications

It is recommended that the three BCLME countries use Article 6(1)(a) of the OPRC as a basis for co-operation in that the Article is designed to enable a request for assistance from another country to be "fast-tracked" through administrative procedures.

Provision of mutual aid

There are a number of formal and semi-formal agreements within and between countries to enable the provision of assistance in the event of a spill exceeding a country or organisation's ability to deal with it. We recommend that these existing mutual aid agreements be maintained. Furthermore, the proposed BCC Oil Spill Contingency Planning and Response Secretariat should ensure that the nature of these agreements is communicated to all parties involved in oil spill contingency planning and response.

The BCC can provide the mechanism for formalising mutual aid procedures in the BCLME region. For example, (i) the level and location of resources stockpiled by the three countries can be determined; (ii) procedures for requesting, and responding to calls for assistance be established; (iii) financial compensation mechanisms developed; and (iv) procedures for streamlining

the movement of personnel and materials from one country to another negotiated with the relevant government departments in each country.

Recommendations: Operational

Transboundary oil spill response plans (TBOSRPs)

Although the likelihood of transboundary oil spills occurring is very low, the remoteness of the South Africa-Namibia and Namibia-Angola TBAs requires that the countries concerned pay special attention to co-operation in the event of such a spill.

The formulation of the TBOSRPs can provide the means by which cooperation between the countries of the region can be operationalised i.e. all the procedures necessary for effective cooperation can be developed namely that bureaucratic processes are streamlined to enable the rapid deployment of personnel and equipment from one country to another, not just in the case of transboundary oil spills but also in cases of mutual co-operation. It is proposed that the formulation of these TBOSRPs be accorded the highest priority once an oil spill planning and response secretariat has been established under the auspices of the BCC (see Section 10.2.2 above).

Communication

While recognising that each country has its own OSCP structure it is necessary for effective co-operation that each country understands the other two countries' modus operandi. At the senior management level this may be achieved by staff exchanges enabling participation in both desk-top and field exercises. At the operational or response level this could be achieved by joint training programmes.

Communication channels between the three BCLME OSCP organisations need to be established to facilitate the rapid transfer of information about spills and, when necessary, equipment and personnel to deal with spills. The correct communication channels for requesting assistance with personnel and/or equipment from partner States need to be identified clearly.

Customs and Immigration clearance

Each country should develop with its respective Departments of Customs and Immigration mechanisms to facilitate the rapid movement of personnel and equipment from one country to another. Speed is of the essence when dealing with oil spills thus the maximum benefit is derived from the rapid transfer of support from one country to another.

Training and capacity building

Joint training programmes for all levels of personnel should be encouraged while recognising that language may pose a problem at times.

In all three countries there is an urgent need to train existing OSR personnel and to build capacity to ensure continuity in capability and skills. Training should be undertaken both nationally and jointly. Initial training should be undertaken on a national basis and advanced training and exercises can be undertaken jointly. Because of language barriers it is suggested that initial training should be done on a national basis.

Oil spill scenario studies

Much of the BCLME coastline between Lobito, in Angola in the north and Port Nolloth, South Africa in the south is inadequately supplied with the metocean data necessary to drive oil spill trajectory and fate models. Oil spill scenarios should be modelled using inputs from models such as Regional Ocean Modelling System (ROMS) in order to refine oil spill response plans for these remote areas.

Harmonisation of coastal sensitivity mapping

All three BCLME countries should be encouraged to adopt a common approach to sensitivity mapping which should encompass criteria, software and the nature of the outputs. It is suggested that a special workshop be convened to discuss the best approach to the development of harmonised coastal sensitivity maps. A balance between high-tech and practicality should be the goal.

As discussed in Chapter 4 all three BLCME countries urgently need to develop up-to-date coastal sensitivity maps taking advantage of advances in electronic data acquisition, display and storage. The objective should be to have a common approach to, and criteria for, the coastal sensitivity maps and associated databases (See Chapter 4, Section 4.5.2). The BCC can provide the forum for developing a common approach i.e. establish the terms of reference for the preparation of the coastal sensitivity maps which can be undertaken by the appropriate authorities in the three countries or out-sourced to contractors.

Harmonisation of policies and procedures for dispersant application

Agreed criteria for the selection and application of dispersants should be developed by the three BCLME countries taking cognisance of the oceanographic regimes and biota of the three countries.

There is a need for the BCLME countries to harmonise policies and procedures for the application of dispersants. Cognisance, however, must be taken of special circumstances which may be unique to one of the countries. For example the low salinity conditions that occur in the vicinity of the Congo River mouth and off Cabinda may require a different approach to the use of dispersants in those areas.

Monitoring oil spill movement at sea

Remote sensing, particularly, of the TBAs, should be investigated to provide a cost-effective method for monitoring oil spills. For example, synthetic aperture radar (SAR) imagery could be used for such monitoring. Consideration should be given to establishing a facility in the BCLME region for processing SAR data acquired by platforms such as the European Space Agency's satellite. This information would be available in near real-time and could enable the interception of spills at sea thereby avoiding damage to shorelines and the expense of cleaning up.

Since the BCC is the envisaged inter-governmental vehicle to facilitate and streamline co-operation between the three BCLME parties it is suggested that:

each of the national delegations includes a specialist on marine pollution prevention and control from their respective governments on the "Ecosystem Health Committee", a sub-committee of the Management Board referred to in Article 10(a)(iii) of the BCC Interim Agreement.

Annexure C

MARPOL Implementation Assessment and Recommendations

Report on MARPOL 73/78: Adoption, Compliance and Monitoring in the BCLME Region

Prepared by: Feike Pty Ltd, Shaheen Moolla, Heidi Currie, Domingas Paim

Status: Submitted May 2007

The terms of reference for this report specified that the report needed to be brief and must address the following pertinent issues:

- To what extent has MARPOL, including all current Annexures, been adopted by each of the BCLME Member States;
- How is compliance enforced and encouraged by each of the BCLME Member States;
- How is compliance with MARPOL monitored by the Member States; and
- Whether it is feasible at this stage to conclude a MARPOL implementation agreement with other SADC coastal member states.

The Report found that;

1. South Africa, Namibia and Angola are signatories to the MARPOL Convention 73/78. As State Parties, the three BCLME member states are obligated to monitor and enforce compliance with MARPOL Annexures 1 and 2 at a minimum.

2. South Africa has adopted and acceded to MARPOL Annexures 1, 2, 3 and 5. South Africa has not adopted MARPOL Annexures 4 and 6.

3. Namibia has adopted and acceded to MARPOL Annexures 1, 2, 3, 4 and 5. Namibian authorities are unclear as to whether Namibia has in fact adopted Annexure 4. The International Maritime Organisation records that Namibia has adopted Annexure 4. This Report found that Namibia's principal MARPOL implementation legislation was inherited from South Africa after Namibian independence. This legislation is rather dated as it has not been amended. The dated legislative framework in Namibia has forced Namibian authorities to limit MARPOL enforcement to Annexures 1 and 5 only.

4. Angola has adopted and acceded to MARPOL Annexures 1, 2, 3, 4 and 5. Angola is currently reviewing its MARPOL implementation legislation and programmes.

5. This Report confirms that in each of the three BCLME member states, MARPOL regulation and implementation is led by the respective country's government departments responsible for transport and maritime affairs. Government departments responsible for fisheries play a support role at best. In practice, for example, South Africa's Department of Environmental Affairs and Tourism and in particular its fisheries branch, plays a rather active role in MARPOL implementation, which is complementary to the lead role assumed by South Africa's Department of Transport.

6. This Report found that, generally, there is little reliable and regular data on pollution incidences, inspection reports and measures taken to enforcement compliance with MARPOL. This Report notes that the State of the Environment Information System website should be used more effectively to record such data and to share the data.

7. A number of officials in Namibia and Angola noted that due to resource constraints, MARPOL implementation was being hampered. This Report notes that should tools and resources currently available to Angola, Namibia and South Africa be used in a more creative and

efficient manner, these resources constraints could be significantly eliminated.

8. Finally, with respect to a possible SADC MARPOL Implementation Agreement, this Report concluded that due to the challenges being faced by SADC in the Natural Resources Programme at present, it may be more feasible to consider working toward an implementation agreement with the proposed Agulhas Current LME Programme instead.

The MARPOL Report Recommends that;

Monitoring and enforcement:

- Although Namibia and Angola have adopted Annexures 1 to 5, it is unclear to what extent Angola actually monitors and enforces compliance with MARPOL. It is apparent that Namibia neither monitors nor enforces MARPOL Annexures 2, 3 and 4.
- South Africa, on the other hand, has a comprehensive monitoring and enforcement strategy, coupled with annual reports on the number of incidences recorded and sanctions applied.
- The BCC could be an important conduit through which South Africa's monitoring and enforcement strategy is shared with Namibian and Angolan officials. In this way, a common Benguela Current Region monitoring and enforcement manual could be adopted. This must include the collation and sharing of marine pollution data and pollution sources. The State of the Environment Information System (SEIS) already makes provision for such information databases and should be utilised.[15]

Resource Constraints:

- Namibia's DMA indicated that the challenges experienced with the implementation of MARPOL relate to a shortage of trained and technically skilled staff and a serious lack of equipment. A further

[15] In this regard, see http://seis.sea.uct.ac.za/php/pollution.php

concern raised pertained to the separate geographic locations of DMA's head office and coastal operational offices.

- In Angola, port authority officials indicated that a significant challenge in the implementation of MARPOL is a general lack of understanding and awareness of marine pollution and water quality in general, as well as a shortage of monitoring capacity for the marine environment.
- Trilateral training and monitoring programmes should be set up for Namibian, South African and Angolan enforcement officials and observers in the fishing sectors.
- To reiterate, many of the identified resource constraints that are hampering monitoring and enforcement of MARPOL could be overcome if the SEIS website was updated and regularly accessed.
- Finally, between Angola, South Africa and Namibia, there are number of fisheries compliance vessels, environmental patrol vessels and surveillance aircraft that could be increasingly used as shared resources for the purposes of more effectively monitoring and enforcing compliance with, inter alia, MARPOL.

Implementing Annexure 6 of MARPOL:

- Although none of the three member states indicated an intention to adopt MARPOL Annexure 6, Annexure 6 is perhaps one of the most significant of the MARPOL annexures because of its requirements to reduce the release of greenhouse gases by ships.
- Implementation of MARPOL Annexure 6 should therefore be seen in the context of country specific commitments to international instruments pertaining to managing climate change.

Annexure D

Water and Sediment Quality Guidelines

The Development of a Common Set of Water and Sediment Quality Guidelines for the Coastal Zone of the BCLME (Project BEHP/LBMP/03/04)

Prepared by: Susan Taljaard (CSIR)

Status: Submitted January 2006

The main purpose of the project was to obtain;

- A set of recommended water and sediment quality guidelines for a range of biogeochemical and microbiological quality variables, in order to sustain natural ecosystem functioning, as well as to support designated beneficial uses, in coastal areas of the BCLME region
- Best Practice Protocols for the implementation (or application) of these quality guidelines in the management of the coastal areas in the BCLME region.

The above were achieved through a critical review of international water and sediment quality guidelines and of international best practice in terms of the implementation of quality guidelines in the management of coastal areas.

The recommended set of water and sediment quality guidelines for coastal areas of the BCLME regions (Section 6) was distilled from what was considered international best practice, but what would also be practical and applicable to the coastal areas of the BCLME region. As information is developed further for specific conditions in the BCLME region, these guidelines may be modified, following the principle of adaptive management.

An important secondary objective was to get acceptance from key stakeholders in the three countries on the proposed guidelines and protocols. This was achieved through work sessions and training workshops held in each of the three countries to which key stakeholders were invited. The outputs from this project were also incorporated into an updatable web-based information system.

Recommendations

The recommended guidelines still need to be officially approved and adopted by responsible authorities in each of the three countries. It may well be that individual countries require further refinement or adjustment of these guidelines to meet requirements that might be specific to their own countries. In the case of South Africa, the South African Water Quality Guidelines for Coastal Marine Waters (DWAF, 1995b) will still stand as the country's official guidelines. However, although the 1995 documents provide extensive background information, necessary for the application of water quality guidelines that are still valid, the recommended guideline values for different variables are essentially still the same as when proposed in 1984 (Lusher, 1984; RSA DWAF, 1992). It is therefore recommended that the South African water quality guidelines be re-evaluated by the relevant authorities, taking into account latest international practice. The outputs from this study can also be used as a starting point in this regard.

The quality guidelines and protocols developed as part of this project form an integral part of the management framework for land-based marine pollution sources (developed as part of another BCLME project – BEHP/LBMP/03/01). The project's particular link to the framework is through the establishment of environmental quality objectives. In the interim, until such time as a management framework and quality guidelines have been incorporated in official government policy, it is proposed that the quality guidelines developed as part of this project, together with the proposed management framework (referring to Project BEHP/LBMP/03/01), be applied as preliminary

tools towards improving the management of the water quality in coastal areas of the BCLME region.

In adopting official water and sediment quality guidelines, it is recommended that preferred analytical methods for different chemical and microbiological variables also be included. Although techniques should be scientifically sound, it is also important that constraints with regard to infrastructure and analytical facilities within each of the three countries be taken into account. In this regard, analytical scientists with relevant expertise in marine analytical techniques need to be consulted (as this aspect was not within the scope of the current project).

The updatable web-based information system (temporary web address www.wamsys.co.za/bclme), which was developed as part of this project, can be a very useful decision-support and educational tool for marine water quality management in the coastal areas of the BCLME region. However, its usefulness in the future will rely strongly on the system being maintained and updated regularly. It is therefore important that a dedicated 'administrative home' for the system be provided once this project is terminated. In the short to medium term, it is recommended that one or more of the BCLME offices within the three countries take on this responsibility.

Although training workshops did form part of this project, they targeted only a limited number of stakeholders in each of the three countries. To facilitate wider capacity building in the BCLME region on management of marine pollution in coastal areas, it is strongly recommended that the output of this project be included in a training course. In this regard, the Train-Sea-Coast/Benguela Course Development Unit is considered the ideal platform through which to develop and present such training (www.ioisa.org.za/tsc/index.htm).

- ☛ Base-line Assessment of Source and Management of Land-based Sources of Marine Pollution in the BCLME Region (**Annexure E**).

Annexure E

Land-based Sources of Marine Pollution

Baseline Assessment of Sources and Management of Land-Based Marine pollution in the BCLME Region (Project BEHP/LBMP/03/01)

Prepared by: Susan Taljaard (CSIR)

Status: Submitted January 2006

The primary purpose of this project was to standardize the approach and methodology by which land-based marine pollution sources in the BCLME region are managed. This was achieved through the preparation of a generic (draft) management framework, including protocols for the design of baseline measurement and long-term monitoring programmes. An important secondary objective of this project was to initiate the establishment of a BCLME coastal water quality network to provide a legacy of shared experience, awareness of tools, capabilities and technical support. This network had to be supported by an updatable web-based information system that could provide guidance and protocols on the implementation of the management framework. The web-based information system also had to contain a meta-database on available information and expertise.

The main outputs of this project are;

- A proposed framework for managing a land-based source of marine pollution, including guidance on the implementation of such a framework
- Propose protocols for the design of baseline measurement and long-term monitoring programmes related to the management of land-based marine pollution sources in the BCLME
- A preliminary list of key stakeholders involved in the management of marine pollution in each of the three countries

- An inventory and critical assessment of available information and data related to the management of (land-based) marine pollution sources in the BCLME countries
- Updatable web-based information system that provides guidance on the application of the generic management framework, as well as a meta-database on available information and expertise in the BCLME region

The proposed framework is largely based on a process that was developed for the Department of Water Affairs and Forestry (South Africa) as part of their Operational Policy for the Disposal of Land-derived Wastewater to the Marine Environment of South Africa (RSA DWAF, 2004) which, in turn, is based on a review of international best practice and own experience in the South African context. The proposed framework promotes an ecosystem-based approach, identifying different components that need to be addressed as well as linkages between components. The following are considered to be key components of such a management framework:

- Identification of legislative framework
- Establishment of management institutions and their responsibilities
- Determination of environmental quality objectives
- Specification of marine pollution sources
- Scientific assessment studies
- Specification of critical limits and mitigation measures
- Design and implementation of long-term monitoring programmes.

The report concludes that:

- The proposed framework for the management of land-based marine pollution sources in the BCLME region is largely based on a framework that was developed for the Department of Water Affairs and Forestry (South Africa) as part of their Operational Policy for the Disposal of Land-derived Wastewater to the Marine Environment of South Africa (RSA DWAF, 2004a&b). However, the proposed framework still needs to

be **officially approved and adopted** by responsible government authorities in Namibia and Angola. It may well be that individual countries require further refinement or adjustment of the management framework to meet requirements specific to their own countries.

- The management framework developed as part of this project is **closely link to the recommended water and sediment quality guidelines** for the coastal areas of the BCLME region (developed as part of another BCLME project – BEHP/LBMP/03/04). In particular, the guidelines will assist in the initial establishment of environmental quality objectives. In the interim, until such time as a management framework and quality guidelines have been incorporated in official government policy, it is proposed that the management framework developed as part of this project, together with the recommended water and sediment quality guidelines (referring to Project BEHP/LBMP/03/04), be applied as preliminary tools towards improving the management of the water quality in coastal areas of the BCLME region.
- The **updatable web-based information system** (temporary web address www.wamsys.co.za/bclme), developed as part of this project, can also be a very useful decision-support and educational tool for marine pollution management in the coastal areas of the BCLME region. However, its usefulness in the future will strongly rely on the system being maintained and updated regularly. It is therefore important that a dedicated 'administrative home' for the system be provided once this project is terminated. In the short to medium term, it is recommended that one or more of the BCLME offices within the three countries take on this responsibility.
- Although training workshops did form part of the project, they targeted only a limited number of stakeholders in each of the three countries. To facilitate wider capacity building in the BCLME region on management of marine pollution in coastal areas, it is strongly recommended that the output of this project be included in a **training course**. In this regard, the Train-Sea-Coast/Benguela Course Development Unit is considered the ideal platform through which to develop and present such training (www.ioisa.org.za/tsc/index.htm