

### Strengthening of the policy legal and institutional framework

As part of WIO-LaB, countries are undertaking a region-wide review of policy, legal and institutional frameworks for the management of impacts from land-based sources and activities (LSA). Key outputs from the project in this regard are:



- National reports on existing policy, legal and institutional frameworks with regard to LSA management.
- National reports on the status of ratification of international conventions relevant to LSA management.
- A new Protocol on LSAs for the Nairobi Convention.
- National implementation plans for improvement of policy, legal and institutional framework with regard to LSA management.

### Regional Marine Litter Assessment

The magnitude of the marine litter problem is not well known in the WIO Region. In order to address this information gap, the WIO-LaB Project in collaboration with the UNEP Regional Seas Programme has embarked on a region wide assessment of the problem in the WIO region. It is envisaged that this assessment would form the foundation for the formulation of strategies for sustainable management of marine litter in the WIO Region. The assessment is being executed by national and regional marine litter experts.



### Development of a Regional Annex to the GPA Guidelines for MWW Management

The WIO-LaB Project is undertaking a region-wide assessment of Municipal Wastewater (MWW) management practices and infrastructure in the WIO region in order to establish the current status of MWW management in the WIO region. At the same time, experts from the region are reviewing the regional applicability of the global GPA Guidelines on MWW Management in order to develop a regional annex to these global guidelines.



### Development of National Programmes of Action for Implementation of the GPA

National Programmes of Action (NPA) are considered an important tool for countries to design their own targeted strategies, for addressing the impacts of land-based sources and activities. The WIO-LaB Project will be providing technical and financial assistance to at least four countries for the development of their NPAs, thereafter supporting the implementation of the GPA at the national level.

### Other activities

A range of other activities will be undertaken as part of the WIO-LaB Project. These include most importantly:

- A range of national and regional training and educational programmes on LSA management.
- Stakeholder involvement and awareness raising activities.
- A small-grants programme for NGOs and CBOs operating in the field of LSA management.
- Strengthening of the implementation of Environmental Impact Assessment as a management tool in particular as it concerns transboundary and cumulative impacts.
- The development of a region-wide analysis of transboundary impacts of LSAs, and the development of a regional Strategic Action Plan to mitigate such impacts.

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Global Programme of Action,  
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For further information on the Nairobi Convention Secretariat,  
please refer to: [www.unep.org/ea/nc/secretaria](http://www.unep.org/ea/nc/secretaria)



### WIO-LaB sponsors

The main WIO-LaB financiers are the Global Environment Facility (GEF) and the Government of Norway. Substantial cash and in-kind contributions are further provided by UNEP, the Government of Belgium and the participating countries.



## IMPLEMENTING THE GPA IN THE WIO

The project "Addressing land-based activities in the Western Indian Ocean (WIO-LaB)" is an initiative of the Nairobi Convention, designed as a demonstration project for the Global programme of Action for Protection of the Marine Environment from Land-based Activities (GPA) in the Western Indian Ocean (WIO) region.

## WIO-LaB

Addressing Land-based  
Activities in  
the Western Indian Ocean



## Fostering LBA Action in the WIO region



The WIO-LaB Project is a deliberate and conscious effort of the people of the WIO region, taken in response to a call from the first Meeting of the Contracting Parties to the Nairobi Convention in March 1997. The project is furthermore a direct follow-on to the 2002 World Summit for Sustainable Development (WSSD) and the related Johannesburg Plan of Implementation, which called for "advanced implementation of the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA)". The Project was officially launched in Madagascar in July 2004 during the fourth meeting of the Contracting Parties to the Nairobi Convention (Kenya, Tanzania, Mozambique, South Africa, Seychelles, Comoros, Madagascar and Mauritius), and will be implemented over a period of four years (2004-2008).



The objectives of the WIO-LaB Project are to:

- (i) reduce stress to the marine and coastal ecosystems by improving water and sediment quality;
- (ii) strengthen the regional legal basis for preventing land-based sources of pollution; and
- (iii) develop regional capacity and strengthen institutions for sustainable, less polluting development.

The activities of the WIO-LaB Project are all geared towards achieving these objectives. With the final goal to improve management of Land-based Activities (LBA) for the better protection of the marine and coastal environment of the WIO.

### The WIO-LaB Demonstration Projects

A key part of the WIO-LaB Project is to provide assistance to participating countries to implement demonstration projects at a number of hotspots and sensitive areas in the WIO region. The projects are intended to demonstrate innovative, appropriate and cost-effective technical and managerial approaches for addressing the impacts of land-based sources and activities.



#### A wetland-lagoon system for wastewater management at Shimo La Tewa Prison, Mombasa - Kenya

The goal of the project is to demonstrate a sustainable manner of pollution control of Kilwaipa Creek by designing and constructing a coupled wetland-lagoon sewage treatment system of Shimo La Tewa Prison in Mombasa. The aim is to treat wastewater emanating from the prison premises by use of natural systems with minimum energy requirements, while exploring opportunities for recycling of treated wastewater for irrigation and aquaculture.



#### Development of eco-tourism in the Marine Park of Toitara - Madagascar

The demonstration project will involve the local community in the management of a new Marine Park around the coastline of Toitara. The principal objective of the project is to support the socio-economic development of the region and the livelihoods of local communities through the development of ecotourism activities, while fostering community engagement in the management of land-based sources and activities.



#### Application of vetiver grass for erosion and leachate control at a landfill site in Dar es Salaam - Tanzania

The project will demonstrate the potential use of vetiver grass in erosion control and leachate treatment of an old dumpsite within the Msimbazi riverbed. The aim is to promote the use of vetiver grass as an effective, affordable and sustainable measure to: (i) reduce leachate flow into the river and improvement of the water quality; (ii) reduce soil bank erosion; (iii) beautify the dumpsite area; (iv) increase community awareness and (v) develop marketing opportunities for vetiver products.



#### Solid Waste Management in Port Louis Harbour - Mauritius

The project aims at demonstrating an integrated approach to the management of solid waste in the Port Louis Harbour. The project includes activities for the prevention of influx of domestic waste into the port area, the influx of oily and other wastes from onshore and offshore activities and the collection and disposal of such wastes in an environmentally safe manner. The project is based upon a strong partnership between government, the Port Authorities, port users and other stakeholders.



#### Integrated Algal Ponding System technology for the polishing and beneficial of effluent from municipal sewage treatment facilities - South Africa

The project aims at demonstrating the benefits of the Integrated Algal Ponding System (IAPS) technology to coastal communities. IAPS technology is a potentially effective method for the treatment of municipal wastewater and for polishing of treated effluent from conventional sewage treatment systems. Advantages of this technology are its low cost, ease of operation and the production of algal biomass (freshwater or marine) as a by-product, which is of commercial value as a fertilizer and a protein-rich animal feed.



#### Enhancing the ecological function of mangroves - Mozambique

The proposed Project aims at contributing towards the enhancement of the productivity and functional integrity of mangrove ecosystems in Mozambique through demonstrating effective land and resource use practices in a selected demonstration site located in the province of Namatito. The scope of the project includes restoration activities, the introduction of alternative sources of energy and building material and the development of alternative livelihood activities.



#### Wastewater management on Pomba Island - Tanzania

The project will involve the construction of a waste- and stormwater collection and treatment system in the Ilaligini area in Choke Choke District, Pemba. The project will demonstrate methods for separation of household wastewater and storm water and proper channelling of these streams to prevent flooding, contamination and pollution of the marine environment. The system features a wastewater treatment system based upon constructed wetland technology.



#### Integrated management and protection of the coastal zone at Isamila, Mohéli - Comoros

The project aims at demonstrating Integrated Coastal Zone Management practices at a selected demonstration site on Isamila beach, an important marine turtle nesting area in the Mohéli Marine Protected Area. The project introduces a community-based management approach aimed at lifting pressures from land-based activities while generating direct benefits to the community through the development of ecotourism activities.



#### Use of native species to control soil erosion within The Black River Gorges National Park - Mauritius

This pilot project will demonstrate the feasibility of using native plants to reduce land degradation and erosion within the Black River Gorges National Park in Aquilulus, in an area cleared in the past to provide pasture for deer. Storm drains will also be constructed to reduce problems associated with surface runoff. The area will be used as a demonstration site for sustainable land management using native vegetation species in the wider region.

## Other WIO-LaB Project Activities

### Assessing the Status of Marine Pollution

As part of the WIO-LaB project, countries have embarked on a region-wide assessment of environmental pollution in the coastal zone, including its sources. The task of undertaking this programme is given to a network of national academic and research institutions. Key WIO-LaB activities in this regard are:

- Identification and assessment of pollution hot spots
- Implementation of a Regional Water and Sediment Quality Monitoring Programme;
- Development of National Pollution Status Reports;
- Capacity building through training and equipment purchase;
- Development of water and sediment quality objectives and standards.

The results of this activity are expected to provide governments in the region with up-to-date information with regard to the status of pollution in their coastal zones, including data on hot spots, which will allow the definition of targeted action. The capacity built will ensure that long-term monitoring activities can be adequately implemented.



### Development of a regional node to the GPA Clearinghouse Mechanism

The WIO-LaB project is supporting the Nairobi Convention Secretariat in the development of a web-based information management system, which will host relevant data and information on the WIO Coastal and Marine Environment. The system will function as a regional node for the GPA Clearinghouse Mechanism, and will be established in collaboration with relevant national institutions and regional and international project partners.