

Policy Analysis and Options

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Opposite page: Opening a trench for electric cables in the coast of Zanzibar. © Matthew D. Richmond.

OVERVIEW OF NATIONAL POLICY FRAMEWORKS

In most, if not all, of the countries in the western Indian Ocean (WIO) region, there are established or evolving public policy frameworks that anchor or support the legal, institutional and other governance frameworks. For example, there is an evolving integrated coastal zone and river basin management policy framework for Kenya, while integrated coastal zone management (ICZM) policies and institutional regimes exist in Mozambique, Mauritius, Tanzania, and South Africa. Moreover, there are developments in that direction in the other countries of the region, as described in the following sections.

An important challenge facing the countries of the region is the need to align their framework policy instruments so as to give more deliberate attention to the coastal and marine environment. Alternatively, the countries should consider specific consolidated policies to address these issues in a more concerted, focused and sustainable manner. Either way, new or evolving policy instruments at the national level need to be as closely aligned to the Nairobi Convention framework as possible. It is interesting that, with the exception of the four countries mentioned above, none of the other WIO countries at present have specific policy instruments on the coastal and marine environment.

NATIONAL POLICY FRAMEWORKS

Kenya

The Draft National Environment Policy (2012) aligns sectorial policy with the Environmental Management and Coordination Act (EMCA). It is a framework for integrating environmental considerations into sectorial policies, development plans and decision-making processes and for regional and international cooperation in environmental management. It calls for sustainable management of terrestrial and aquatic resources to improve the livelihoods and raise the standard of living for coastal communities.

The National Oceans and Fisheries Policy (2008) is rooted in the provisions of the 1982 UN Convention on the Law of the Sea, the Maritime Zones Act (1989) Section 5, and the Presidential Proclamation of June 2005. It affirms Kenya's sovereignty over the exploration, exploitation, conservation and management of ocean resources and focuses on resource management in territorial waters and the Exclusive Economic Zone (EEZ). It addresses most aspects of fisheries management and development, including environmental conservation, regional cooperation, research, surveillance and monitoring, social responsibility and governance. The preparation of specific fishery management plans is given high priority, but certain regulations need to be adopted to allow these plans to be effective (Samoilys and others, 2011). This policy and the ICZM Action Plan have similar objectives and should be harmonized to avoid duplication.

The Draft Wetland Policy (2009) recognizes the economic importance of coastal, marine and inland wetlands

and proposes stringent measures to counter the (primarily human) threat to their long-term sustainability. Its integrated approach complements other sector policies and fulfils Kenya's obligations under the Ramsar Convention and other multilateral environmental agreements and protocols. Education on the importance of wetlands, a greater consultative process with civil society and political goodwill should pave the way for adoption of this policy. However, no clear legal framework governs wetland conservation and management, and different aspects of the Policy are handled by Kenya Wildlife Service (KWS), Kenya Forest Service (KFS), National Environment Management Authority (NEMA), the Fisheries Department, water sector institutions, regional development authorities and communities.

The National Land Policy (2009) underpins a system of land administration and management that allows all citizens to gain access to land and to use it. It calls for the equitable and environmentally sustainable use of land resources and requires policies, regulations and laws to be aligned with the EMCA. Its guidelines for formulating land use and management practices take into account the fragile nature of the coastal zone. Land use has major implications for the marine and coastal environment, thus reform in land tenure is imperative for achieving the ICZM Action Plan's objectives.

The Regional Development Authorities Policy (2007) calls for equitable socio-economic development through the sustainable use of natural resources by:

- Formulating integrated regional development plans in consultation with all those involved;
- Closing gaps in regional resource mapping; and,
- Attracting resource-based investment that benefits communities.

The policy is the framework for streamlining and strengthening the Coast Development Authority (CDA) and the Tana and Athi River Development Authority (TARDA) in coastal zone development and management. However, equitable allocation of government funds to socio-economic development in the new era of devolution is questionable, particularly in the case of marine fisheries. An assessment of the immediate development needs of marine fisheries is called for.

With regard to poverty-reduction policies and strategies, the government acknowledges the role that the environment plays in spurring economic growth and reducing poverty. This is recognized in the National Poverty Reduc-

tion Plan (1999–2015), the Poverty Reduction Strategy Paper (launched in 2001) and currently Kenya's over-arching policy framework, Vision 2030, which cites environmental degradation as a cause of poverty and argues for better environmental protection. Moreover, and of relevance to the coastal zone, the Draft Forest Policy (2012) calls for, among others, the sustainable use, conservation and management of forests and trees; sustainable land use through soil, water and biodiversity conservation; and the participation of the private sector, communities and others in forest management to conserve water catchment areas and create employment.

Finally, Kenya has an evolving Integrated Coastal Zone Management (ICZM) Policy, partly in acknowledgment of the numerous statutes relating to the conservation of the coastal zone that can result in duplication, overlap, inconsistency and ineffectual penalties. Although the EMCA (introduced above) prevails in cases where sectorial policies conflict, its effective implementation requires that statutes and financial and technical support be harmonized.

The ICZM Policy brings together all those involved in the development, management and use of the coastal zone within a framework that facilitates the coordination and integration of activities and decision-making processes. The ICZM Action Plan (2010–2014) was a first for Kenya, seeking to protect fragile ecosystems while pursuing sustainable development. Its thematic areas are integrated planning and coordination; sustainable economic development; conservation of coastal and marine environment; environmental risks and management of shoreline change; capacity building, information and public participation; and implementation through institutional and legal frameworks (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

Mozambique

The National Strategy for Sustainable Development derives from the 2002 World Summit for Sustainable Development and integrates recommendations from the Johannesburg Plan of Implementation into the national agenda. It is an important national initiative rooted in local knowledge, local ideas, local expertise and local solutions. The priority areas are biodiversity conservation, land degradation, health, education, agriculture, water, energy and technology transfer. The National Council for Sustainable Development and the Council of Ministers are responsible for its implementation. Once approved, it will be incorpo-

rated into all sectorial plans.

The National Environmental Policy is the principal planning instrument for the environment sector. It calls on the state to provide incentives for the sustainable use of natural resources. It integrates environmental issues into economic planning, recognizes the role of the communities in environmental management and monitoring, and acknowledges a role for the private sector in managing the environment. It also defines the strategy that provides the framework for the Ministry for Coordination of Environmental Affairs (MICOA) and recommends multi-sectorial coordination.

The Strategic Plan for the Environmental Sector (2005–2015) combines nine instruments: the Action Plan for the Fight against Drought and Desertification; the Strategy for Urban Environment Management; the Coastal Zone Management Strategy; the Strategy and Action Plan Controlling the Fight against Soil Erosion; and, the Strategy to Combat Deforestation and Burning. Others are the Urban Solid Wastes Integrated Management Strategy; the Hazardous Wastes Management Strategy; the Biodiversity Strategy; and, the Action Plan for Biodiversity Conservation. Its priority areas are biodiversity conservation, land degradation, health, education, agriculture, water, energy and technology transfer.

There are 15 policy instruments relevant to environmental management, though not restricted to coastal areas. These are the National Action Plan to Combat Desertification and Drought; the National Forests and Wildlife Policy and Strategy; the National Tourism Policy and Strategy; the National Fisheries Policy; the National Land Policy; the Agrarian Policy; the National Water Policy; and the Strategy and Action Plan for Biodiversity Conservation in Mozambique. Others are the Energy Policy and Strategy (1998); the National Environmental Policy (1995); the Policy for Disaster Management (1999); the National Policy for Land Use Planning (1996); the National Action Program for Adaption to Climate Change; the Policy (1996) and Strategy (2006) for Meteorology Development; and the Conservation Policy and Implementation Strategy (2009) (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

Tanzania

In Tanzania, the National Environment Policy (1997) provides the framework for introducing environmental considerations into the mainstream of decision-making. It

stresses the importance of formulating legislation for effective and comprehensive environmental management. Its objectives are to:

- Achieve sustainability, security and equitable resource use to meet the needs of present and future generations without degrading the environment or risking health and safety;
 - Prevent and control the degradation of land, water, vegetation and air to conserve and enhance natural and manmade heritage, including the biological diversity of unique ecosystems;
 - Improve the condition and productivity of degraded areas, including rural and urban settlements;
- Raise public understanding and community participation in the connection between environment and development; and,
- Promote international cooperation on the environmental agenda.

Other policies and instruments guiding environmental management are the National Forest Policy (1998); the Forest Action Plan (1990/91 – 2007/08); the Management Plan for the Mangrove Ecosystem in Tanzania (1991); the Agricultural and Livestock Policy (1997); the National Tourism Policy (1991) (reviewed 1996), and the Integrated Tourism Master Plan (1996–2005). Additional ones are the National Fisheries Sector Policy (1997), the Draft Investment and EIA Guidelines for Marine Parks and Reserves in Tanzania and the 2001 Mariculture Development Guidelines; the National Land Policy (1995), town and city master plans; district and village land-use plans; the Wildlife Policy of Tanzania (1998); and, the Sustainable Industrial Development Policy (1996).

Policies and regulatory instruments related to ICZM include the National Integrated Coastal Environment Management Strategy; the National Steering Committee on Integrated Coastal Management; the Integrated Coastal Management Unit; inter-sectorial working groups; the development of a climate change adaptation strategy; and several ICZM projects. In Zanzibar, the National Environmental Policy (2013) outlines the conservation and protection of environmental resources and an ICZM plan (even though there is no specific ICZM legislation).

Comoros

For the Comoros, a National Policy, an Environmental Action Plan and Environmental Strategy were elaborated in 1993. The basic principles and objectives of the National

Policy on the Environment may be summarized as follows:

- To ensure a rational and sustainable management of resources;
- To define or reinforce sectorial policies;
- To safeguard and protect the biological diversity and zones with ecological or cultural interests;
- To develop or promote environmental knowledge and awareness; and
- To put in place appropriate mechanisms for the management of marine and coastal areas by elaborating a development policy aimed at ensuring the protection of the coastal area, taking into account its tourist potential; rational management and exploitation of marine resources, and the control and regulation of pollution in marine and coastal areas.

The Environment Action Plan of Comoros (1993) includes the study of marine and coastal ecosystems; improvement of legislative and regulatory mechanisms; protection and development of biodiversity; alleviation of pressure on natural resources; and collection and treatment of household garbage/ domestic waste (Decree N°93-214/ PR of December 31 1993).

The National Policy and Action Plan on Environment exists but unfortunately the institutional structures charged with the responsibility of execution/implementation have some limitations, such as on human resources, technical and financial capabilities. The main limitations are essentially as follows:

- Inadequate personnel at the Directorate General of the Environment since it was instituted in 1993;
- Extent and complexity of problems that require resolving before implementation;
- Weak legal and regulatory systems;
- Weak and inefficient institutions;
- Low level of education and knowledge of actors in various environmental disciplines;
- Insufficiency in communication, information and sensitization between government and public entities on one hand and the population on the other; and,
- Constant and regular mobility or turnover of managers and directors in the administration of the environment (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

Madagascar

Madagascar has a policy on the protection, management and measures against pollution. The Government, under

the coordination of the Ministry of Environment, Waters and Forests, created the Steering Committee for the implementation of the policy in collaboration with financial partners, other concerned ministries and departments, and the executing agencies of the National Environment Plan.

However, the regulatory structures are less known, indeed absent in the policies on the protection of the environment in Madagascar. The existing structures that could respond meaningfully are the Environmental Mediators provided for by the Decree n°2000-028 of 14 February 2000. Nevertheless, to be more effective regarding protection of the environment, the role of the Environmental Mediators must be expanded to include management activities, to fight pollution of the environment, and in particular the marine and coastal environment (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

Mauritius

Mauritius's first National Environmental Strategy and Action Plan (NEAP) was prepared in 1988 and the second NEAP was prepared in 1999, covering the period between 1999 and 2010. The NEAP 2 report represented an environmental diagnosis of the Republic of Mauritius, assessing the pressures and their subsequent impacts on the environment. The NEAP 2 sought to set the principles of sustainable development by providing environmental services, encouraging responsible environmental practices and enforcing appropriate environmental standards in order to conserve the heritage, safeguard health and welfare, and enhance the quality of life of all Mauritians.

The NEAP identified inadequate disposal of urban wastewater as a growing threat to the quality of groundwater, the principal source of domestic water supply of the country, as well as to marine and coastal zone ecosystems. As a follow up of the NEAP recommendations, the Government launched the Sewerage Master Plan (SMP) Study covering a period of 20 years. Completed in 1994, it identified the technical, institutional, legislative and financial constraints. The National Sewerage Program (NSP) was prepared, comprising priority projects to be implemented over the following decade.

In Mauritius, policy instruments incorporate key environmental principles, including "polluter pays" and "precautionary principles". Transparency, accountability and good governance practices are cornerstones of environmental policies, combined with strengthened joint public, private and community sector participation.

Other key policy instruments in Mauritius include the National Development Strategy (NDS) 2003, the National Biodiversity Strategy and Action Plan (NBSAP) 2006–2015, the National Environment Policy (NEP) 2006 and the Vision 2020 Tourism Strategic Plan (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

Seychelles

In the Seychelles, the main policy document relating to the protection of the environment is the Environmental Management Plan of Seychelles (EMPS) 2000–2010. It aimed for the protection of the environment to be undertaken in a planned and coherent manner involving all stakeholders. One of the guiding principles of the EMPS was fulfilling international and regional environmental responsibilities pertaining to environmental management. The guiding principles of the EMPS include the following:

- Honouring and pursuing the Constitution of Seychelles, particularly Article 38 which states that it is the right of every person to live in and enjoy a clean, healthy and ecologically balanced environment;
- Integrating, developing and pursuing the provisions of Agenda 21 into its national environmental management plans and programmes in order to strengthen Seychelles' commitment to Agenda 21 and compliance with its principles;
- Maintaining and managing conservatively the diversity, health and productivity of Seychelles' ecosystems in order to safeguard its basic ecological integrity; and,
- Controlling and minimising pollution, particularly of coastal and marine waters to reduce negative impacts to receiving ecosystems.

Ten thematic areas were included to cover all major social and economic sectors as well as certain key subjects of relevance to environmental management such as environmental economics. The thematic areas include Land Use, Coastal Zones and Urbanisation; Biodiversity, Forestry and Agriculture; Energy and Transport; Water, Sanitation and Waste; Tourism and Aesthetics; Environmental Economics, Mainstreaming and Sustainable Financing; Regulatory, Policy and Institutional Mechanisms; and, Commerce, Industry and Production. The Plan also covers cross-cutting themes such as education, awareness and advocacy; partnerships, public consultation and civil society participation; training and capacity building; management; science, research and technology; monitoring and assessment; and vulnerability and global climate change.

Programmes were proposed for the thematic areas.

The EMPS 2000–2010 seeks to integrate environmental issues into all development sectors, though it lacks the profile and institutional backing of previous EMPS. Furthermore, it was originally prepared with the expectation of major programme funding which never occurred. Implementation currently depends on the available programme budgets of the Government and the initiatives of non-governmental organizations in finding funding for biodiversity projects.

The National Biodiversity Strategy and Action Plan (NBSAP) was prepared in 1997 pursuant to Article 6 of the Convention on Biological Diversity (CBD), which requires all contracting Parties to “develop national strategies, plans or programs for the conservation and sustainable use of biological diversity.” The NBSAP summarised the descriptive data and information in the Biodiversity Assessment and identified the country's vision for biodiversity and its objectives, needs and gaps and the actions required to bridge the gaps. It provided a timetable for action over a plan period of 5 years (1997–2003). Issues common to both the NBSAP and the EMPS include sustainable management of marine resources including coral reefs as well as capacity building for assessing, monitoring and forecasting.

The Seychelles Plan *d'Aménagement du Territoire* or National Land Use Plan, finalised in 1993, is the primary guide to land use decision-making by the Town and Country Planning Authority. It covers only the three main islands of Mahé, Praslin and La Digue. The plan provides a guide for land uses in sensitive and protected areas, though it is an advisory document without legally-binding status. Several reviews have noted that the scarcity of level land has created competition for land and pressure for land reclamation along the shoreline. The EMPS states that “the lack of planning, zoning and integrated management of government land leads to *ad hoc* land and water development, resulting in pollution, erosion and conflicting uses.” It recommends “better integration of land use planning and environment through updating the National Land Use Plan and cross-linking it with EMPS; and updating and better implementation of the Town and Country Planning Act 1972 and the Environment Protection Act 1994, with cross-referencing to MENR legislation and EMPS.”

In spite of the Town and Country Planning Act 1972, the land use plans only seem to be used as planning instruments on an *ad-hoc* basis and plans are not followed through with detailed land use/development plans. Inappropriate

land use has occurred throughout the island, leading to deforestation, erosion, pollution and aesthetic problems, especially in the coastal zones.

The land use planning system in Seychelles is apparently in urgent need of reform to provide a professional basis for transparent land use decision making that separates technical planning from political decision making, and that places an emphasis on ensuring effective long-range plans are established and used to guide approvals for individual developments. There is a need to legalise the National Land Use Plan.

The other major policy document is the Solid Waste Master Plan which includes incineration, storage, and disposal of hazardous and medical waste. This minimises the movement of waste and disposal at source (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

South Africa

An extensive public participation process known as the Consultative National Environmental Policy Process (CONNEPP) was carried out relatively soon after the birth of South Africa's post-apartheid Constitution which culminated in the *White Paper on an Environmental Management Policy for South Africa* (N/749 in *Government Gazette* No. 18894 dated 15 May 1998) ("White Paper on Environmental Management"). This in turn led to development and enactment of the National Environmental Management Act No 107 of 1998 (NEMA).

Two important general features underpin the White Paper on Environmental Management and thus the NEMA: the notion of "sustainable development" and the specific endorsement of the definition and analysis offered by the 1987 Brundtland Report; and secondly, it reflects the sentiments behind the transition to democracy and its socio-economic implications.

An altogether separate policy process was initiated soon after with respect to the coastal zone. This started in 1997 and was firstly underpinned by a discussion document titled *Our Coast Our Future: Coastal Policy Green Paper: Towards Sustainable Coastal Development in South Africa*, Department of Environmental Affairs and Tourism September 1998 (the "Green Paper"). This Coastal Policy Green Paper formed the basis of an extensive public consultation process in which all interested and affected parties were invited to comment. These were collated and condensed to produce the *White Paper for Sustainable Coastal Development in South Africa* which was promulgated in 2000.

The Coastal Policy White Paper in turn led to the preparation and finalization of the Integrated Coastal Zone Management Act No 24 of 2008 which came into effect in 2009. The Act plays a pivotal role in improving the management of the coastal zone of South Africa (UNEP/Nairobi Convention Secretariat and WIOMSA 2009a).

GLOBAL AND REGIONAL POLICY INSTRUMENTS

Montreal Guidelines

After the 1982 UNCLOS was adopted, the Montreal Guidelines for the Protection of the Marine Environment against Pollution from Land-based Sources were prepared by an expert group under the auspices of UNEP and adopted by its Governing Council in 1984. These Guidelines represented the first attempt to address the problem of land-based pollution at a global level (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b).

Agenda 21

One of the documents adopted at the 1992 Rio Summit was Agenda 21. Chapter 17 on the marine environment includes some key elements, emphasizing the focus on sustainable development and an integrated approach to the protection and preservation of the marine environment. Although Agenda 21 is a 'soft' law or policy instrument and not a 'hard' convention, many of its provisions have laid the foundation for incorporation in subsequent 'hard' law as evidenced by a number of multilateral environmental agreements (MEAs) entered into over the last twenty years (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b).

Washington Declaration and Global Programme of Action

In 1995, at an inter-governmental conference in Washington, United States, dealing specifically with land-based marine pollution, two key documents were adopted: the Washington Declaration on the Protection of the Marine Environment from Land-based Activities, and the Global Programme of Action (GPA). The latter is a 'soft' law agreement or policy instrument reflecting the resolve of nations to address the impacts of land-based sources and activities (LBSA) and physical degradation of the coastal and marine environments. As such, it is an action-oriented programme with the over-arching goal to address the negative effects of land-based activities. Though it has a coordination office

based in the Netherlands, it is not an international institution. Rather, it is an inter-governmental programme that addresses the inter-linkages between freshwater and the coastal environment and has a close working relationship with the UNEP Regional Seas Programme (RSP). Chapter 2 of the GPA (paras. 29 to 35) sets out its objectives which include the strengthening of regional cooperation agreements, such as the Nairobi Convention, and where necessary to create new ones to support effective action, strategies and programmes (GPA 1995).

The GPA has identified at least nine pollutant or source nodes across most of the UNEP's RSPs, including the WIO region. These include municipal wastewater, heavy metals, litter, nutrients, oil, physical alterations and destruction of habitats (PADH), sediment mobilization and persistent organic pollutants (POPs) (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b).

World Summit on Sustainable Development and Johannesburg Plan of Implementation

The third significant development was the 2002 World Summit on Sustainable Development (WSSD) held in Johannesburg. This adopted the Johannesburg Plan of Implementation (JPOI) which included provisions dealing with oceans, coasts and islands (Recommendations 30-36). It also endorsed the provisions of Agenda 21 and reiterated the importance of sustainable use and management of the marine environment in reducing poverty and achieving the goals of sustainable development (eg UN 2002). Furthermore, the JPOI specifically endorsed the GPA.

Rio+20

The issues and commitments under Agenda 21 and JPOI were revisited during the Rio +20 conference held in Rio de Janeiro in 2012 to mark 20 years since the 1982 Rio Summit. Some of the outcomes of the Rio+20 directly affect the governance of coastal and marine environments, including that of the WIO region.

CHALLENGES AND GAPS, INCLUDING KEY ISSUES FOR POLICY IMPROVEMENT AND REALIGNMENT

It is interesting that although the WIO countries are closely connected geographically, ecologically, historically, economically, and even culturally and politically, their national legal, institutional and policy frameworks are not adequately synchronized or integrated, in the manner, for

example, of the European Union (EU). While there are significant differences in the models of the WIO region and the EU, what is needed, as a minimum, is a forum or framework for pursuing policy commonality on coastal and marine environment. That framework is currently the Nairobi Convention, its protocols and Action Plan. The main challenge is the extent to which countries are willing to align their national frameworks to the emerging regional legal and policy frameworks.

Another important challenge for policy across the WIO region is the existence of widespread and often serious pollution and degradation of the coastal and marine environment both from land-based and sea-based sources and activities, with very similar causes, effects and manifestations. This is in spite of the existing legal, institutional, policy and other governance frameworks.

Moreover, the legal, policy and institutional responses from the WIO countries has been characteristically similar. On the one hand, there is acknowledgement that a lot of the LBSAs and sea-based sources causing coastal and marine pollution are largely legitimate socio-economic activities which should be protected, encouraged and enhanced; and on the other, that these activities have environmental consequences, and therefore ought to be controlled or regulated. In all national cases, there is obvious legal, institutional and policy dilemma as to the appropriate middle ground. In efforts to create the middle ground, sometimes national legislation and policy frameworks are merely facilitative of the rational exploitation of these activities and sources, while giving environmental considerations a lukewarm treatment. In some cases there is only peripheral legislation for the sectors (for example tourism) while any substantive legislation is absent or is otherwise general land use and planning legislation. In yet other cases, laws adopt a "command and control" approach rather than an integrated or participatory approach which encourages voluntary compliance with incentives instead of prohibitions and penalties (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b). The evolving ICZM policies are probably the most significant changes for the future.

The traditional sector approach to policy formulation, legislation and even institutional set up remains problematic, with numerous areas of overlap, duplication and contradiction among the legislature (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b). The main policy dilemma is how to encourage or enhance integrated

policy, legal or institutional approaches without undermining governance structures that have been established over long periods.

Fortunately, there is increasing understanding and adoption of integration, and particularly ICZM. Up to fairly recently, the concept of ICZM did not exist and or find expression in most of the WIO countries. The major issues in the Region which necessitate ICZM include destructive fishing methods and associated ecosystem/habitat destruction; marine oil pollution from tanker traffic and ballast discharge; eutrophication and siltation of coastal waters; and spiralling population growth in coastal zones, especially in urban centres, fed by high birth rates and massive immigration (Linden and Lundin 1996). Existing institutional constraints include short-term planning horizons and lack of participation; weak policy and regulatory environment for encouraging rational resource use and restraining the impacts of growth; administrative weakness and lack of coordination across sectorial agencies; and, limited opportunities for developing human potential in the growing populations of the region. A Workshop and Policy conference on ICZM in Eastern Africa took place in Arusha, Tanzania in 1993. A key outcome of the Arusha meeting was to encourage the establishment and development of ICZM as the best vehicle to deal with the multiple and complex issues of the coastal zones in the region (Linden and Lundin 1996). Consequently, some countries in the WIO region including Kenya, Madagascar, Mauritius, Seychelles, Mozambique and South Africa, have established multi-sectorial environmental policies backed by a fairly strong legal regime for resource management (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b).

A further challenge for policy improvement and alignment is that most national legislation tends to create huge pools of authority or power in central government line ministries (sometimes with sweeping ministerial powers) and in public entities (usually parastatal organizations) which are almost exclusively controlled by the executive. This means that decision making, implementation and enforcement remain a government prerogative and function. It is probable that many national institutions have been ineffective or inefficient because of so much central government interference in their operations (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b).

However, although most of the existing policies, legislation and institutions are sector specific (such as tourism, fisheries, mining, water or forestry) there is an increasing

trend towards multi-sectorial legislation, policy and institutional arrangements to facilitate a more cohesive vertical and horizontal co-ordination and integration. Each of the countries has established key national institutions responsible for policy formulation and co-ordination of environmental activities, including within coastal zones. They include ministries responsible for environment (with responsible state ministers); environmental protection agencies with statutory powers; and inter-ministerial committees. Examples include South Africa's DEAT; Mozambique's MICOA; Seychelles' MOET; Kenya's Ministry of Environment and Natural Resources and NEMA; and, Tanzania's Division of Environment (DOE) under the Office of the Vice-President, and NEMC. Many of these institutions work on established framework policies and action plans, with deliberate reference to coastal and marine environment. Good examples of such policy instruments with significant emphasis on the coastal and marine environments are in the island states of Comoros, Madagascar, Mauritius and Seychelles. However, only Mauritius and Mozambique seem to have created distinct coastal zone management units, in 1999 and 1995 respectively, in apparent efforts to institutionalise coastal zone management (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b). In addition to the national institutions, some of the larger countries in the region, such as South Africa, Madagascar, Mozambique and Kenya do have regional or provincial, county and local, environment and coastal management institutions. In Madagascar and Kenya there is a recent deliberate move towards decentralised government and this also affects environmental governance.

Finally, there are several regional and international laws that should be of interest to the region. They include the Nairobi Convention and its protocols (1985, revised 2010), under which the region is organized as a UNEP Regional Seas Programme and, the United Nations Convention on the Law of the Sea (1982). Also relevant are the Ramsar Convention on the Protection of Wetlands especially as waterfowl habitat (1971) (reviewed 2000), the Convention on Biological Diversity (1992), and the 1972 Convention on International Trade in Endangered Species (CITES), among others. Many of these conventions and treaties have been signed, ratified or acceded to by the countries of the region and are at various levels of national and regional implementation. However, it is arguable that the full potential of these instruments has not been felt in

the protection and promotion of the coastal and marine environment of the WIO region. It is expected that the global and regional instruments should constitute a firm basis for concerted regional action against LBSA and sea-based sources of pollution and degradation, and synergize with national arrangements to establish firmer ground for a healthier coastal and marine environment for the WIO region (UNEP/Nairobi Convention Secretariat and WIOMSA 2009b).

SYNERGIES AND TRADE-OFFS BETWEEN POLICIES

In view of the challenges discussed above, there is justification and scope for policy synergies and trade-offs. It is accepted that legitimate socio-economic activities within the coastal zone of the WIO region should be protected, encouraged and enhanced. Examples include urban and infrastructure developments, tourism establishments, ports and harbours, agriculture and mariculture, fisheries and others. It is recognized that because these activities have environmental consequences, they ought to be controlled or regulated. The challenge for WIO countries is to build in synergies and trade-offs in the processes and details of policy instruments. For example, there should be synergistic and integrated formulation of conservation policies dealing with natural resources such as water, forests, wildlife, fisheries or other biodiversity resources. Such synergies should also affect the legal, regulatory and institutional frameworks that concern the conservation policies.

There also needs to be a deliberate effort to introduce synergies and trade-offs within policies which promote developments and extraction of natural resources. The latter include policies related development of ports and harbours, urban and infrastructure developments, fisheries, water supply and sanitation, tourism, agriculture and irrigation, land-use and planning, among others. Perhaps an approach that combines ICZM and ecosystem based management (EBM) and their related frameworks and tools, would offer the best solution.

While sector-based approaches are common in the countries across the WIO region, it is feasible to integrate policy synergies and trade-offs in regional and national over-arching policy frameworks, including ICZM frameworks. Each important natural resource pool and socio-economic sector concerning or affecting the coastal and marine environment should be elaborated with synergies and trade-offs kept in perspective. Fortunately, there is an

increasing trend towards multi-sectorial legislation, institutional and policy arrangements to facilitate better co-ordination and integration at various levels. This should mitigate the conventional tension between 'conservation' or environmental policies and 'development' or socio-economic policies, as well as inter- and intra-sectorial policy instruments.

POLICY OPTIONS AND THEIR IMPLICATIONS

From the foregoing review of policy, legal and institutional frameworks, various policy options exist with regard to the protection of the coastal and marine environment both at the national and regional level. Each of these is described below, highlighting their merits and shortcomings. The policy options available at the national level include:

Having an overarching policy instrument for the protection of the coastal and marine environment with sector players taking primary responsibility for their respective components;

- Maintaining sectorial policies and providing a coordinating mechanism (inter-sector coordination and integration); and
- Maintaining sector policies as well as sectorial implementation of the policies without having a coordinating mechanism (that is, business as usual).

National Level Options

i) Over-arching policy instrument with involvement of sector players

This entails having a single, national, over-arching policy instrument with sector players taking primary responsibility for their respective components, addressing all aspects of the coastal and marine environment and natural resources and human activities, including forests, fishing, land, mining, wildlife, agriculture, ports and harbours. Such a national environment policy would guide sectorial institutions on how resources under their jurisdiction are to be used in a sustainable manner that will ensure that the environment is conserved. The rationale for such a policy is that all aspects of the environment are connected in one way or another thus, having one central policy can identify the points of convergence and ensure sustainable environmental resources use, and that one form of pollution or degradation affecting a particular resource pool does not change to pollute or degrade other resource pools.

The consequences of an over-arching policy frame-

work include, on the positive side, better coordination of all environmental sectors, greater scope for participation of relevant stakeholders (including private sector and civil society), less government involvement in the details of implementation of policy measures, and greater focus by government on the core mandates of regulation, oversight and enforcement. Potentially there would be relatively large financial and other resource allocations. Conversely, there is evidence that in practice, large and centralized policy frameworks often suffer from operational inefficiencies, poor levels of ownership by stakeholders, expensive and often unwieldy implementation and other operational arrangements, and, weak levels of monitoring and evaluation.

ii) Maintaining sectorial policies and providing a coordinating mechanism

Here, the various environment-related sector institutions maintain their respective legal, institutional and policy frameworks but have a coordinating mechanism between the various sectors. Such an approach would ensure that the different sector policies are implemented, while bearing in mind the consequence of their activities on other sectors. The disadvantage of adopting such an option is that it could lead to “business as usual” as the various sectors have different laws, institutions and regulations that can make coordination and integration an insurmountable challenge.

However, the main argument in favour of this option is that it is central to a transformational response to decades of pollution, degradation and unplanned urban development under the typical sectorial approach to policy making. It will require a movement from sectorial coastal and marine management, to a joint approach that merges the seemingly competing interests for ocean and coastal resources and space. The coordinating body can provide oversight over activities in the coastal and marine environment and it can engage and develop internal dialogue as well as coordinate efforts with civil society, the private sector, ministries and other national bodies that serve as focal points for relevant national, regional and global programmes. Thus, an inter-sector policy coordination and integration framework can potentially contribute immensely to the effective implementation of environmental policies and programmes affecting the coastal and marine environment of the individual countries and the larger WIO region.

Implementing a Regional Policy Paper

In addition to the development and implementation of policies that attempt to integrate multi-sector instruments at the national level, much can also be achieved from policies and programmes that are embedded at the wider, regional level. Ideally, regional initiatives should support and strengthen national efforts. The scenarios described below, build on existing institutions and policies, were relevant, but also include new approaches and concepts.

The basis of this scenario entails developing an overarching regional policy that will guide the WIO region in terms of setting standards for the protection of the marine environment. This policy could be spearheaded by the contracting parties and the Nairobi Convention Secretariat. Various mechanisms and institutional arrangements could be constituted at the regional level for the purposes of coordination, implementation, oversight, monitoring and evaluation. Undertaking mutually reinforcing policies in the WIO region works to the region’s advantage because, for nations faced with limited resources, the maximization of policy synergies will help deliver social, ecological and economic benefits, reduce trade-offs and provide multiple paths for addressing common drivers and pressures.

An example of a policy that can be adopted at the regional level is the Ecosystem Based Management (EBM) approach which lays out principles that guide management towards long-term sustainability of coastal and marine ecosystems. This management cannot be single-sector but must be integrated, just as ecosystems are interconnected. The EBM can be a cross-sectorial mechanism that would facilitate the overall planning and coordination of sector policies. EBM of terrestrial systems began in the 1950s, however, its application to the marine environment is relatively new.

There are some agreements that encourage parties to adopt an ecosystem approach. These include the Implementation Agreement on Parts V, VII, XI and XII of the 1982 UN Convention on the Law of the Sea; the 1995 UN Agreement on Straddling and Highly Migratory Fish Stocks; the UN Code of Conduct on Responsible Fisheries; and the 1995 Global Programme of Action for the Protection of the Marine Environment from Land-Based Activities. In addition to these commitments to adopt EBM, many nations have declared their commitment to reaching various protection targets, including the 2020 target for representative marine protected areas under the CBD. The CBD Strategic Plan and Targets also go beyond MPAs, providing guidance on many tools and approaches

to implementing EBM (UNEP 2011).

The disadvantage of building a robust EBM that involves integrating and coordinating management across various sectors and at large scales is that it can prove to be costly. On the other hand, economies of scale are achieved in having different agencies working together to undertake training, research, monitoring and evaluation. However, ineffective management can prove to be more costly in the long-run because every time habitats and services are lost, it represents a sizeable cost to the society.

With regard to coordination mechanisms, a Regional Activity Centre (RAC) could be established as a special entity, whose work program is decided by the countries in the WIO region and involves the implementation of regional agreements. This decentralized model is widespread in the Mediterranean, the Black Sea, the Caribbean and the Northwest Pacific regions. Experiences from these regions show that this model serves as a focal point in the protection of the coastal and marine environment by various stakeholders and organizations. It allows for cohesion and synergy between different working groups that are undertaking varied activities.

There are three other external institutions that can assist states in the implementation of regional policies and agreements. As discussed further below, they include regional professional organizations, think tanks and hybrid models.

a) Regional Professional Organizations

For the WIO region, WIOMSA is an example of a professional organization that supports regional governance. It is a non-governmental organization that is dedicated to promoting the scientific, educational and technological development of all aspects of marine sciences throughout the WIO, with a view towards sustaining the use and conservation of its marine resources. In achieving this, WIOMSA a) provides a forum for communication and exchange of information amongst its members that promotes and fosters inter-institutional linkages within and beyond the region; b) supports marine research by offering research grants; c) implements programmes to build the capacity of marine scientists and coastal management practitioners; and d) works to promote policy dialogue on key topics by organizing meetings and seminars (Rochette and Bille 2012b).

b) Think tanks

Think tanks are organizations that position themselves at the interface between research and policy-making. Often,

they conduct in-house research to support policy design. In the marine sphere, the Centre for Ocean Solutions (in California, USA) was created by three leading marine science and policy institutions namely, Stanford University, the Monterey Bay Aquarium and the Monterey Bay Aquarium Research Institute. The Centre combines Stanford's expertise in marine biology, oceanography, engineering, economics, law and policy with the Aquarium's experience in public education and outreach, leadership in deep-sea technology, exploration and monitoring. In addition to developing new knowledge, the Centre's researchers and staff reach out to decision-makers including governments, businesses and the non-profit sectors to translate the results of marine science and policy research into action. The Centre for Ocean Solutions works to highlight these issues in the media and outreach programmes of sponsors to inform and empower action by the general public and local, state, national and international decision makers (Rochette and Bille 2012b).

Creating a regional think tank can be original and advantageous as it is highly flexible and can address a wide spectrum of issues by building partnerships with various regional institutions such as the Indian Ocean Commission (IOC) or regional fisheries management organizations.

c) Hybrid Models

A hybrid model is an institution that is halfway between think tanks and RACs. GRID-Arendal is an official UNEP collaborating centre established in 1989 by Norway, with a mission to communicate environmental information to policy-makers, support informed decision-making and raise awareness. These are achieved through environmental information management and assessment, capacity building services as well as outreach and communication (Rochette and Bille 2012b).

All the institutional structures presented in the three categories above can contribute technical assistance and support for implementation of regional legal instruments and environmental policies for the protection of the marine environment. Each structure emerges in a specific context and therefore the WIO region must analyse the options and be innovative to ensure regional benefits are maximised. It is however important to note that the adopted coordination and cooperation framework must be acceptable to other regional organizations to which WIO countries belong, if significant strides in the protection of the marine environment are to be achieved.

POLICY EMPHASIS SCENARIOS

Whichever policy options exist at the national or regional levels, there are further scenarios that WIO region countries need to consider. Firstly, countries may consider policy instruments which largely or primarily provide incentives for voluntary compliance. This may target private sector players in the commercial sectors such as tourism, fisheries, shipping, manufacturing, oil and gas, etc. Some of the incentive and disincentive mechanisms include, amongst others, public-private partnerships which give the private sector greater latitude and involvement in coastal and marine environmental governance; tax holidays and rebates to encourage environmental protection and conservation; and higher taxation levels for certain sea-based or coastal activities or undertakings aimed at reducing pressure on sensitive coastal and marine environments. The implication is that these will be market driven, self-regulatory frameworks devoid of too much government control. However, government still performs its primary role of regulation, oversight and enforcement, although in certain sectors, such as ports and harbours, oil and gas and tourism, the government is also often a participant.

Secondly, countries may consider strengthening the

“command and control” approach in their policy formulation. Greater government control over environmental decision making, regulation, oversight and enforcement may require less consultative and participatory processes; and instead require larger policing machinery, complete with heavy penalties and fines. This approach could become very expensive and stifling of enterprise and stakeholder participation, and possibly undermine coastal and marine environmental protection in the affected countries and across the region. Finally, a scenario where a hybrid system, with both elements of incentives and policing co-existing, is presented, however, this runs the risk of essentially creating a rather weak system both ways.

The time has come for countries in the WIO region to clearly mainstream coastal and marine issues for the future. Environmental integrity of the coastal and marine areas, ecosystem services and goods, green energy, offshore resources, maritime security and others must increasingly become central pillars of national policy formulation. The region as a whole should engage in policy discussions on the foregoing issues in a concerted manner. Economic development and population projections, as well as trends in environmental degradation and/or recovery and climatic change implications, should be included in the analyses that contribute to the much-needed guiding policies of the future.

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