



# Tanzania Coastal Management Partnership

Policy and Legal Analysis of  
Tanzania Coastal and Marine Resource Management

## **BACKGROUND DOCUMENT**

**March 1999**

Prepared by:

Francis Stolla, National Environment Management Council  
and Robert Makaramba, University of Dar es Salaam  
With Malcolm Baldwin, International Resources Group Washington DC

Working Document: 5007 TCMP

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A joint initiative between the National Environment Management Council,  
the University of Rhode Island/Coastal Resources Center and the  
United States for International Development

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## **PREFACE**

This report focuses on the policy and legal framework affecting government institutions in Tanzania concerned with coastal and marine resources. This legal analysis is essentially a review of the policies and laws now in place in Tanzania that significantly affect coastal and marine resource management. It focuses in particular on the contrast between current legislation and the many new policies established in the 1990s, including the National Investment Promotion Policy, as well as other policies to improve natural resource management. It highlights a number of ambiguities and gaps in the law that are necessary to rectify in order to realize the policy goals.

This legal analysis does not examine underlying institutional structures in terms of their effective organisation, position within the government, staffing capabilities and budgetary resources. Nor does it give more than cursory attention to the needs and opportunities for greater devolution of authority to local governments and communities. Given Tanzania's predominant reliance on central command-and-control regulation of natural resources, and its limited attention to incentives, these additional analyses remain important as reality checks on the laws and policies on the books.

This report was prepared for the Tanzania Coastal Management Partnership (TCMP). The TCMP is a joint initiative between the National Environmental Management Council, the University of Rhode Island Coastal Resources Center and the United States Agency for International Development.

This publication was made possible through support provided by the Office of Environment and Natural Resources; Bureau for Global Programs, Field Support and Research; Center for Environment; U. S. Agency for International Development, under the terms of Cooperative Agreement No. PCE-A-00-95-00030-05.

## 1.0 CONSTITUTIONAL FRAMEWORK

Under the *Constitution of the United Republic of Tanzania of 1977*, policies and laws respecting natural resource management, including coastal and marine resources, are established and implemented by the central government. Parliament has exercised its constitutional authority to make laws concerning coastal lands, resources and the environment, but, as discussed below, local governments have been delegated specific powers of implementation and enforcement that differ depending on the particular resources and laws involved.

Zanzibar, although a part of Tanzania, has a unique legal status. According to Article 2(1) of the Constitution, the territory of the United Republic consists of the whole area of mainland Tanzania and the whole of the area of Tanzania Zanzibar, and includes the territorial waters. One mainland Tanzania law (the Fisheries Act of 1970) does not cover the territorial waters of Zanzibar, and Zanzibar has its own fisheries legislation.

## 2.0 POLICY FRAMEWORK

### 2.1 National policy documents

A number of government policies adopted in the 1990s directly and substantially affect coastal and marine resources, although only a few make specific reference to them. These policies, while not themselves enforceable, constitute drafting instructions from the government for the laws established by Parliament.

**Investment policy:** The National Investment Promotion Policy (1996) is an economic policy that presents challenges and opportunities to integrated coastal management. It focuses on new investment in industry, tourism, transport, infrastructure and energy that could have potentially significant positive or negative impacts on coastal resources. While its environmental components are limited, they do exist and are important for building upon in coastal areas where development pressures and needs are strong.

The policy implicitly recognizes that Tanzania's economic development requires the ability to attract direct foreign investment. It seeks to create effective economic incentives and to diminish costly government constraints on new investment, exporting and the application of new technology. But while seeking to tap into global economic forces it also recognizes global environmental forces by citing needs to balance economic growth with more efficient and sustainable environmental management and use of natural resources. It recognizes that new investment requires, among other things, secure land tenure; that growth in tourism includes environmental preservation; and that energy development demands less dependence on bio-mass fuels. It highlights the important links between economic growth and natural resource management by citing the expected

increase in access to safe and clean water, the provision of which requires extensive infrastructure investment.

**Environmental and natural resources policies:** Among the many new national policies concerned with natural resources, few refer to coastal resources. A recent Netherlands' inventory of environmental management policies in Tanzania notes that some 20 government policies relate to environment, and therefore in most cases to such coastal resources as estuarine and coastal water quality; fisheries; coastal and mangrove forests; sand mining; coastal land use and beach ownership; and marine and wildlife habitat. These policies include the National Land Policy (1995) and other sectoral policies concerned with water (1991); fisheries (1997); minerals (1997); forestry (1998); and wildlife (1998). Tanzania's National Environmental Policy (1997) is intended to guide implementation of each sectoral policy.

These policies reflect common themes that respond to the 1992 United Nations Conference on Environment and Development's ("The Rio Summit") "Agenda 21," by supporting "integrated resource management" and "balance between sustainable development and environmental protection." Environmental impact assessments (EIAs) are endorsed in the land and environmental policies. The land policy calls for greater protection of sensitive areas (e.g., mangrove areas and marshlands are to be protected for public benefits, and hotel and home construction is to be regulated to protect coastline erosion and public access). But policies do not provide or implement guiding strategies for effective governance of coastal and marine resources when sectoral interests conflict, as they so often do.

**International conventions:** Tanzania has ratified a number of international conventions concerned with natural resource and environmental management that reflect national policy, and require domestic legislation to implement. Many have substantial importance for coastal resources.<sup>1</sup> As with national policies, implementation of these conventions requires follow-up legal action by the National Assembly.

### 3.0 LEGAL FRAMEWORK

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<sup>1</sup> These include: the UN Framework Convention on Climate Change adopted in May 1992, ratified; Convention on International Trade in Endangered species on Wild Fauna and Flora adopted in 1973, ratified; the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, adopted in 1989, acceded; the UN Law of the Sea Convention, adopted in 1958, ratified; the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern Africa Region, adopted in 1985, acceded; the International Convention for the Prevention of Pollution from Ships (MARPOL) of 1973; MARPOL Protocol signed in 1978; and the 1985 Protocol Concerning Co-operation in Combating Marine Pollution in cases of Emergency in the Eastern African Region, acceded. The 1971 Ramsar Convention on Wetlands of International Importance Especially as Waterfowl Habitat, as amended, has not been ratified by Tanzania.

Once adopted by the executive branch, policies and international treaties require legislation as well as regulations and action plans. Hence policies and ratified conventions are only the tip of the pyramid; the operational legal framework embraces the legal structures needed to establish, maintain and oversee specific government objectives. The legal framework must provide institutions with the statutory, regulatory and enforcement tools they require. However, this legal framework alone will not suffice. The government must provide institutions with the necessary leadership, political support, funding and staff for management and operational results.

### 3.1 Framework of existing legislation

**Central government management of natural resources:** Tanzania has an extensive array of land and natural resources management laws that establish strong central, and weak local, government. Existing laws emphasize command-and-control management tools and extensive bureaucratic engagement in economic activities. The need for market-based, tax or other economic incentives has been noted by the National Investment Promotion Policy, but neither policies nor the existing legal structure have focused on incentives as alternative means to manage natural resources, or to encourage environmentally-friendly investments and practices.

**Land and natural resource management:** Basic land legislation dates back 70 years when all land was declared public, with significant new legislation following independence.<sup>2</sup> Under the current laws, land management is highly centralised. The president must approve the disposition of land, acting through the commissioner for lands, and the commissioner must approve land use plans even if planning authority has been delegated to local government.

Major sectoral laws were passed after independence in 1961.<sup>3</sup> They establish strong central government ministries that have delegated little of their authority over natural resources to local governments. Local governments may pass by-laws to protect natural resources under the two local government acts, with authority to make violations criminal and enforce them. The Ministry of Regional Administration and Local Government must approve by-laws of city, municipal or town governments, or district councils (where there are villages). The district councils must approve their village council by-laws.

*The Forest Ordinance* provides a useful illustration of the central government's predominant natural resource management role and the limited role of local government. It permits the minister to declare any unreserved land a territorial or local authority forestry reserve. Territorial Forestry Reserves (TFRs) are to be managed by the minister

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<sup>2</sup> The Land Ordinance of 1923; Town and Country Planning Ordinance Cap 378 of 1956; and Land Acquisition Act of 1967.

<sup>3</sup> Principal legislation pertaining to coastal and marine resources uses include: the Forest Ordinance of 1957; Mining Act of 1979 and Amendments of 1998; Fisheries Act of 1970; the Marine Park and Reserve Act of 1994; the Territorial Sea and Exclusive Economic Act of 1989; Deep Sea Fishing Authority Act of 1997; Merchant Shipping Act of 1967; and the Water Utilization (Control and Regulation) Act of 1974. Others include the Petroleum Exploration and Protection Act of 1980 and the Wildlife Conservation Act of 1974.

responsible for forests, and district authorities manage Local Authority Forestry Reserves (LAFRs). Although, in practice, LAFRs are managed by districts, district forestry officers receive some direction from the Ministry. The minister may revoke district management and re-centralize management if the forest has been mismanaged. Upon creation of forestry reserves, citizens are given the right to claim customary rights or interests in the land, and within specified time limits they may receive compensation if so permitted by the district commissioner. No provisions exist for “village-managed” forest reserves, although under the local government (district authorities) registered villages may have authority to enact by-laws for management of forests within village boundaries so long as they do not conflict with provisions of national law, such as Ordinance prohibitions against cutting “reserved” trees or conducting commercial felling on public lands without a license.

**Water management:** In 1991 the government launched a comprehensive water policy for overall development and management of water resources in the country. The policy focuses on participatory planning and cost sharing in the construction, operation and maintenance of community-based domestic water supply systems. It focuses on effective implementation of the water supply program. It does not, however, adequately address cross-sectoral interests in water, watershed management or sustainable river basin management.

Water use allocation and water pollution control, so critical to coastal management, are highly disaggregated among government agencies. Separate departments manage these functions, with each responsible for its own operations independent of others. As a result, as with land resources, there is a multiplicity of public agencies with overlapping responsibilities for managing water, and decisionmaking tends to be fragmented. Different agencies often have conflicting plans to develop the same publicly owned water or land.<sup>4</sup> Strictly speaking there is no “water law” in Tanzania in the sense of a clearly ascertainable and easily accessible body of rules on water resources management. Water law is a mix of common law principles reflected in judicial decisions that affect riparian rights, and statutory law affecting water rights and obligations. Under the *Water Utilization (Control and Regulations) Act*, a user who requires water for industrial, agricultural, forestry or mining use must obtain a water right from the relevant state authority.

The 1991 water policy recognizes the inadequacy of environmental sanitation, and sewerage and drainage capacity in urban areas. To control water pollution the colonial state enacted the *Public Health (Sewerage and Drainage) Ordinance*, which deals with the preservation of public health by measures of sewerage, drainage and sanitation. The *Waterworks Ordinance* and the *Public Health (Sewerage and Drainage) Ordinance* are still good laws, and apply to township and municipal authorities. In the coastal and marine environment, the relevant laws (*Fisheries Act*, the *Territorial Sea and Exclusive Economic Zone Act*, the *Deep Sea Fishing Authority Act* and the *Marine Parks and Reserves Act*) all contain some provisions on water pollution. Apart from these statutes there are a few other laws which indirectly relate to water pollution.

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<sup>4</sup> The principal legislation governing water resources management in Tanzania is the Water Utilization (Control and Regulation) Act No.42 of 1974 and its Amendment Act No.10 of 1981, and Written Laws (Miscellaneous Amendment) Act No.17 of 1989 and General Regulations.

The Ministry of Water has responsibility for setting water quality standards. Act No. 10 of 1981 sets two “temporary” standards for effluent and receiving water, namely those for direct discharge into receiving waters and for indirect discharge via municipal treatment works. The Act also establishes “Temporary Standards of Quality of Domestic Water.”<sup>5</sup>

An example of the diverse but potentially important legal and institutional regimes affecting water and coastal resources is the Rufiji Basin Development Authority, established to manage development of land through which the Rufiji River flows to the Indian Ocean.<sup>6</sup> Most of its functions are cross-sectoral, with direct impact on the coastal area, including forestry, flood control, and energy, industrial and agricultural development. The Act does not establish the authority’s duty to cooperate with the range of institutions concerned with coastal resources, such as the Rufiji Water Office, established in 1993 as one of the two operating river basin institutions gazetted.<sup>7</sup>

**Coastal resources under law:** Although no legislation currently defines a coastal area in Tanzania, a Ministry of Lands notice under the *Town and Country Planning Ordinance* established a coastal band in 1992. Reserved only for public use, and allowing only structures that are moveable or temporary, the zone was first set at 200 m from high tide, then 100 m, and now 60 m.

**Judicial review:** Following British common law, judicial review of government agency actions under the law is essentially confined to procedural questions and whether agencies acted arbitrarily or unreasonably. The rights of citizens to seek judicial redress against agency actions are also limited, as was the case in the U.S. until the late 1960s and early 1970s. Standing to sue requires a showing of direct economic harm, and for a citizen to be able to sue the government, a notice of 90 days is required under the Government Proceedings Act of 1967, as amended.

### 3.2 Status of policy and legislative reform

**Implementation of new policies:** Of the many policies affecting coastal resources that need implementation under new law, only the Mining Act of 1998 has responded. The Tanzania Investment Act of 1997 responds to the National Investment Promotion Policy. None of the other resource policies impacting the environment, fisheries, wildlife and forestry have been translated into new legislation.

The traditional sectoral approach to coastal resource management by central government agencies therefore remains largely unchanged, despite the reform goals of policy documents. There remains a sharp contrast between existing land law and the new land policy that envisages integrated mechanisms for protecting public values of sensitive

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<sup>5</sup> Temporary Rural Water Quality and Temporary Effluent Standards were established in 1973 and 1977.

<sup>6</sup> Rufiji Basin Development Authority Act, Act No. 5 of 1975.

<sup>7</sup> Wami Basin, Pangani Basin, Rukwa Basin, Ruvu River Basin, Ruvuma Basin, Lake Victoria Basin, Internal Basin, Rufiji Basin, and Lake Tanganyika Basin. See GN No. 59 of 1978.



areas, specifically beaches, and calls for a Coastal Zone Integrated Development and Management Program.

No bill has yet been introduced to implement the policy of requiring Environmental Impact Assessments (EIAs), but two new laws have taken some initial steps toward recognizing EIAs. The Mining Act of 1998 (not yet gazetted and therefore not in effect) requires a mining rights holder to prepare an EIA before operations, and the Marine Parks and Reserves Act of 1994 requires that no construction within a park can begin without an EIA under a management plan. These are limited and possibly unduly inflexible applications of EIAs. They emphasize the need for a legislative framework to mandate EIAs for projects likely to have significant environmental impacts, and to establish clear responsibilities for EIA administration, coordination, enforcement and technical review.

**Conflicting or ambiguous laws:** Several current laws appear to be in conflict or fail to address coastal resource conflicts and therefore can contribute to delayed, costly, or poor resource management decisions. For example, mining appears to be allowed within forest reserves, although it is restricted within wildlife reserves.<sup>8</sup> Despite the ultimate authority of the central government, in practice a large number of issues arise concerning whether local or central government agencies can allocate use of natural resources in the coastal area, including fisheries, water, and minerals. Either local authorities or the Ministry of Lands may allocate land, and although central authority remains paramount, the on-the-ground practice can create disputes and leave titles uncertain. In the management of forestry, local government can carry out functions similar to those of the central Forestry Division, and in practice both give permits for forest use in forest reserves.

**Additional critical legal gaps:** Besides these conflicts and the above-cited needs to implement policies, other significant gaps in efficient natural resource management exist. For Tanzania to manage its coastal resources in accordance with growing international experience and legal norms, several additional laws are needed.

1. **Water Quality Standards:** A basic need is to establish a comprehensive environmental law, which addresses conservation issues pertaining to water resources. Water pollution activities in Tanzania are generally attended separately. Water pollution legislation needs to establish permanent standards for water effluent quality standards in important bays, estuaries, and rivers.
2. **Oil spill contingency plan:** An additional key need is for Tanzania to provide for a national contingency plan for oil spills from shipping and port operations, which pose ever-present and potentially severe risks to seagrass and other coastal resources.
3. **Toxic substances and hazardous waste management:** A single instrument concerned with management of toxic chemicals is needed. Toxic chemicals affect coastal zone management because some of them bio-accumulate through food chains with essentially

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<sup>8</sup> The Wildlife Policy of Tanzania prohibits mining in National Parks (NPs), Game Reserves (GRs) and the Ngorongoro Conservation Areas (NCAs). The *National Parks Ordinance*, protects mining within wildlife areas and allows the President to grant mining rights within a national park. The Trustees of National Parks have authority to impose conditions on granted mining rights. The *Mining Act*, 1998 allows mining within wildlife areas but permission of the relevant wildlife authorities is required.

irreversible effects. The problem is still relatively small, but there are no adequate facilities to handle hospital or other hazardous waste. It is critical, and cost-effective, to ensure that new industry is established within internationally recognized norms for controlling toxic pollution. A single legal instrument in Tanzania can provide for the management of toxic chemicals and begin to establish a regulatory scheme to ensure that toxic chemicals are properly managed from "cradle to the grave."

### **3.3 Institutional Framework**

Corresponding to the legislation, many sectoral-based ministries share coastal and marine resource planning, management and enforcement duties. These include the Ministries of Natural Resources and Tourism (with forest, fishery, tourist and park regulatory responsibilities); Lands and Human Settlement; Trade and Industry; Water; Agriculture and Co-operatives; Foreign Affairs and International Relations; Energy and Minerals; Communication and Transport; and Home Affairs. Responsibilities are divided among the many divisions within each ministry. In addition the vice president's office (NEMC and the Division of Environment), Ministry of Regional Administration and Local Government, and the Ministry of Justice and Constitutional Affairs have important coastal and marine responsibilities.

The institutional framework is even wider, however, because of local government. Its precise role in natural resource management depends on the particular sectoral legislation. Currently the only Act specifically requiring central government coordination with local government is the Marine Parks and Reserves Act of 1994. The major natural resource management responsibilities of central and local governments are summarized in the table on the next page.

## Central and Local Government Natural Resource Management

Subject Matter	Central Government	Local Government	Comments
<b>Land Allocation</b>	Commissioner of Lands grants land rights; President revokes/ acquires land rights	Land Committees approve land rights	Once investment approved, land rights are also granted. Villages dispose of land to foreigners
<b>Water Allocation</b>	Water Officers grant water rights	Establish, maintain and control water supplies and impose water rates.	
<b>Water Pollution Control</b>	Ministry sets water quality standards	Prevent water pollution.	
<b>Fisheries</b>	Director of Fisheries issues fishing licenses Licenses big trawlers	Director must approve village by-laws on fisheries.	Lack of powers on part of district to control and monitor big trawlers
<b>Forest Use</b>	Director of Forestry and Beekeeping issues logging licenses	District authorities manage Local Authority Forestry Reserves (LARFs)	No provision for "village-managed" forest reserves. Lack of "tree tenure."
<b>Wildlife</b>	Director of Wildlife issues hunting, taking and capturing licenses	No mandate	
<b>Mining Rights</b>	President/Commissioner of Mines grants mining rights	No mandate	Sand mining along beaches under central government licenses
<b>Tourist Hotels Development</b>	Tanzania Investment Centre; Tanzania National Tourist Board; and Tourist Agents Licensing Authority	No mandate	TIC gives CoAs for investment after sectoral Ministries comment. No specific need for environmental consideration by TIC. Approval for beach hotel construction.

### 3.4 Policy Development and Coordination

#### 3.4.1 Policy analysis and coordination institutions

**Policy analysis:** Tanzania's important new natural resource and environmental policies established in the 1990s do not rest on analyses of the economic costs or benefits of their implementation. Yet this is a major issue. There is tension, on one hand, between concerns that current policies and laws are not enforced and, on the other, ministers' complaints of insufficient staff, funds or equipment to carry out existing mandates. Considerable resources will be required if the new policies add to existing practices by requiring improvements in institutional skills and procedures, more interagency interaction and more effective regulation. If so, they may increase administrative costs. On the other hand, new policies could be implemented through legislation that could

vastly improve administrative efficiencies. These issues and opportunities do not appear to be reflected in the policy documents.

**Coordination of policies, planning and management:** There is a strong need for more efficient coordination of governmental actions, expressed, for example, in the Forestry policy. They have appropriately been addressed at a high level of government. The vice president's office currently coordinates environmental affairs through the Division of Environment (DOE) and the National Environment Management Council (NEMC). The National Environmental Management Act of 1983 charges NEMC to serve primarily as an advisor with additional coordination functions. However, its precise role and authority remains ambiguous. The National Environmental Policy designates "the Ministry responsible for environment" as the source of "overall policy guidance and advice" on environmental vision, policy and goals.

### 3.4.2 The role of the Environmental Impact Assessment (EIA)

Tanzania's National Environmental Policy envisages EIAs as a major, mandatory planning tool to reconcile "urgent development needs and long-term sustainability before a final decision is made."<sup>9</sup> The National Energy Policy cites the need for environmental impact analysis at every stage of energy development. The Wildlife and Mining Policies cite needs for EIAs, and the Marine Parks and Reserves and Mining Acts each require them.

#### 3.4.2.1 Defining the purpose of EIAs

Tanzania has been developing EIA guidance documents based on extensive analysis of EIA experiences in a number of developed and developing countries. If EIAs are to aid government planning, worldwide experience shows that their effectiveness depends on:

- Whether they are adopted at the earliest possible planning stage when alternatives are practical to consider
- Whether they link with effective ongoing land use planning processes
- Whether they integrate into regional/national sectoral development planning

If Tanzania wants EIAs to help planning, then a regional EIA should focus on coastal and marine resource impacts from proposed sectoral plans for transportation, water resources, tourism, and industrial or energy development.

EIAs usually function at the project level. Their utility for project analysis requires that they are integrated into pre-feasibility studies, when alternatives are reasonable to consider, and mitigation measures can be built into project design.

Although Tanzania appears to be focused primarily on EIAs for project-level impact analysis, the EIA process could also be a useful tool for regional coastal resource

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<sup>9</sup> National Environmental Policy, Chapter Five, section 88.

management as well. But whatever the scale of the EIA application, it offers a unique opportunity to engage local communities and the interested public, including business interests, into the assessment and decisionmaking process.

**EIAs as a tool for integrated coastal resource management:** An effective EIA process is absolutely critical for integrated coastal resource management. No other region is more prone to competing uses and multiple approval requirements. A highly practical benefit of the EIA is that it can streamline coordination of the multiple government regulatory or planning decisions usually required for any major coastal plan or project. It allows an applicant to obtain all legal approvals (or better, a comprehensive approval) on the basis of one satisfactory environmental document. Whatever additional information an agency may require can be supplementary. In carrying out this key coordinating function the EIA process can, at the same time, help make government decisionmaking transparent and meaningful for local communities and the public.

**EIAs as a tool for sustainable economic development:** In coastal areas particularly, the EIA process can help further the goals of Tanzania's Environmental and National Investment Promotion policies. EIAs can help the Tanzania Investment Center assess the environmental impacts and attributes of proposed projects and coordinate the review process for other agencies. The Center was recently established under the Investment Act as "the primary agency of Government to co-ordinate, encourage, promote and facilitate investment in Tanzania and to advise the Government on investment policy and related matters."<sup>10</sup> A useful model is Sri Lanka's Board of Investment, which uses the EIA and a trained environmental cadre to screen new investments.

**Basic EIA requirements:** Making the EIA process work well requires good guidance documents, and broad understanding of the process within government, NGOs and the private sector. Highly specific impact assessment guidance documents for EIAs can be critical, and the lead can be taken in Tanzania for guidance on mariculture, coastal tourism development, port development, ocean outfalls and other issue areas.

EIA success hinges primarily on having effective administrative and technical guidance throughout the process. A single agency must be charged with administering and enforcing the EIA, keeping reasonable and predictable schedules, and handling problems along the way. The agency will require experience in legal and administrative procedures as well as other technical skills, because efficient coordination requires responding to a variety of agency planning and decision processes, as well as diverse data requirements.

A separate EIA technical review body may also be established. To determine the adequacy of an EIA, it must possess, or have access to, a range of scientific, legal, economic and other technical skills for timely, relevant review.

The EIA process will prove costly and unwieldy unless it is integrated into (or replaces) existing legal and administrative procedures and is tailored to the unique attributes of Tanzania's laws and institutions. It need not add an additional time-consuming

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<sup>10</sup> Tanzania Investment Act, 1997, No. 26, section 6.

procedural layer. Instead, it can help identify attractive sustainable development options and avoid costly mistakes.

## **4.0 IMPLEMENTATION AND ENFORCEMENT**

### **4.1 Regulatory Framework**

As noted above, Tanzania's current natural resource management system relies on an extensive regulatory, command-and-control approach that is carried out largely under the direction of central government agencies (see table on page 9). Allocation of land, forestry, water, fishery and mineral resources requires government approvals and annual permits. In addition to being narrowly, or sectorally, based, the system depends on an extensive bureaucracy and entails high transaction costs. In addition to the administrative costs borne by the government, the regulatory system can be costly to private parties seeking approval. Unfortunately these regulatory costs, especially those incurred by individuals or businesses, have not been analyzed.

A characteristic of the regulatory regime in Tanzania is that most penalties for natural resource violations are criminal. Fines are usually low, and they are not, in any event, levied on the basis of the damage done to the natural resources.

### **4.2 Regulatory enforcement**

Compliance with the regulatory regime governing Tanzania's coastal and marine resources requires highly effective enforcement, high rates of voluntary compliance, or both. Unfortunately, compliance rates are generally believed to be poor. Violations and poor enforcement of prohibitions of fish dynamiting, coral mining, mangrove destruction and unlicensed sand mining are widely cited by professionals concerned with coastal management in Tanzania.

Enforcement efforts currently reside with local police and with the natural resource officers of central and local government agencies. The local natural resources committees that deal with management under local government employ natural resource officers. They are primarily revenue collectors, whose collection of fees includes those for fish landings and use of timber. They are not, however, involved in preventative enforcement or natural resource management.

There is no government unit concerned with coastal resources that is comparable to the Community Conservation Service (CCS), which was established by policy (not law) to help park officers develop strategic actions plans and help guide CCS rangers and assistants in the field.

Experience in Tanga under the Tanga Coastal Zone Conservation and Development Program (*See Box 1*), illustrates ways in which village involvement in coastal

management helps communities see its direct benefits and support enforcement. Joint enforcement efforts, focused on fish dynamiting, have engaged the Tanzanian Navy since in 1997, in cooperation with village patrol units. Previous efforts to enforce dynamiting prohibitions through the local police have proved unsatisfactory. Since the vigorous Navy efforts, it has been estimated that there has been a 40 percent reduction in fish dynamiting.

A vexing, underlying problem, however, is the lack of quantitative data on enforcement to support these observations. Reliable statistics are not available to measure enforcement progress or compare enforcement efforts. It would be desirable to have information on enforcement of all the key coastal resource regulations concerning:

- Allocations or licenses granted and withheld
- Prosecution and conviction trends for various offenses
- Fines collected
- Equipment existing and required for enforcement actions
- Staff required and available for monitoring and enforcement
- Staff training obtained and necessary for these tasks
- Overall budget requested by relevant ministries for funding these efforts

Unfortunately no system of central recordkeeping covers the disposition of natural resource cases. With a few exceptions, there are no available data on coastal resource enforcement expenditures by the most important enforcement agencies, as compared to other budget line items. For example, data on enforcement records for dynamiting fish in Tanga will require the painstaking exercise of going through all the police and court case files. Data on enforcement costs can be obtained from the budget estimates in speeches tabled before Parliament by the various relevant Ministries.

One is therefore left with convincing, but still spotty and anecdotal, evidence of poor enforcement. This experience is common throughout the developing world. Reasons for lack of enforcement in developing countries generally are often cited in Tanzania as well. They cover the entire spectrum of enforcement needs, beginning with lack of political will to enforce, which is reflected in budgetary failure to provide essential enforcement resources for monitoring, testing, analyzing, and publicizing conditions and trends. Corruption is a common problem, beginning at the levels of usually poorly paid inspectors or rangers, and reaching to top levels. Opportunities for petty corruption are facilitated by the proliferation of required approvals and transactions. Lack of salary or position rewards for good performance by government employees, such as vigorous and successful enforcement of natural resources regulations, is a constraint. So is the lack of incentive for environmentally friendly performance by businesses. Finally, overlapping government agency responsibilities, difficulties in getting convictions in court, court delays and low penalties can powerfully discourage vigorous enforcement.

It is important to emphasize that many, if not most, of these issues exist in *developed* countries as well. Resource constraints even in developed countries mean that, as a practical matter, sound coastal resource management cannot rely simply on enforcement,

which is particularly true in a developing country like Tanzania. Successful enforcement *everywhere* depends on the same basic needs:

- Substantial community support
- Strong support by the courts
- A media watchful over government as well as resource users
- Effective monitoring of resource conditions and trends
- Economic incentives to maximize voluntary compliance
- Legislative oversight of agency compliance
- Efficient enforcement systems



## **Tanga Coastal Zone Conservation and Development Program (TCZCDP)**

The TCZCDP is a one billion Tanzanian shillings program jointly funded by The World Conservation Union (IUCN) and Irish Aid. It supports collaboration between central government, regional and district authorities and villages, involving about 150,000 people in 45 villages in Tanga Municipality, and Pangani and Muheza districts, on the 150 km of the Tanga Region coastline which stretches from the Kenya border to Sadani. The TCZCDP focuses on user groups at the village level and helps communities manage their own resources.

The program has managed to solve the problem of resource tenure through management agreements that stipulate roles, responsibilities and sharing of benefits. To resolve resource management conflicts in between central government and local authorities, the program has entered into the Memorandum of Understanding with the Mangrove Development Program of the Forestry Division to address problems of beach erosion and declining fish catches caused by mangrove cutting through re-planting efforts.

The TCZCDP also has developed a means to exchange information and share data through consultative meetings and technical workshops. It arranges study tours by villagers to other coastal areas of Tanzania, particularly Mtwara and Lindi, so they can learn from their experience.

The program has also managed to create a joint enforcement efforts of by-laws by cooperating with the Navy in combating the problem of dynamiting fish.

A key goal is to create a sense of ownership of the program. Some villages have entered into management agreements for protection of certain areas of the coastal zone by declaring them conservation areas. These now await gazetting by the Director of Fisheries. Under the agreements, villagers have established a mechanism for village patrol units, which are supported by the TCZCDP through training of the militia, and provision of patrol boats, fuel, and radio communication equipment.

To build management capacity and awareness, the program has been involved in helping judicial officers and police prosecutors gain skills and ecological knowledge. In addition, conducts seminars and workshops for villagers on the importance of conserving marine resources.

The TCZCDP has also developed monitoring indicators that will be translated into Kiswahili. It will then train villagers in their use for monitoring and surveillance. Monitoring is particularly crucial given the importance of water pollution in urban areas along the coast, such as Tanga and Dar es Salaam.

The program faces challenges of all sorts. These include lack of accountability on the part of some villagers and government officers in exposing culprits involved in dynamiting fish; delay in prosecuting and deciding cases involving dynamiting fish; inadequate coordination among the various parties involved in coastal resource management; overlapping jurisdictions in resource allocation; poor capacity on the part of resource officers to implement and enforce regulations; and unsustainability of programs in terms of government funding that fosters an over-dependence on donor support.

The TCZCDP illustrates the ways in which coastal zone management policies might *facilitate* rather than *implement* resource management. It has found *awareness* and *training* to be crucial, along with the exchange of information. Its success at the community level suggests ways in

which enforcement of regulations can be fostered by establishing a sense of ownership of and participation in the resource management effort.

### **4.3 Revenue laws affecting compliance**

One cannot, with any degree of certainty, establish the extent to which revenue collected by local government authorities from resource allocation and utilization is used in the conservation of the resources. Efforts by researchers to obtain any data on this aspect to determine whether the revenue so collected is being used for other development activities or for conservation purposes have been unsuccessful. The Local Government (District Authorities) Act, 1982, empowers district councils to regulate and monitor the collection and utilization of revenue from village councils.

There is nothing comparable in the coastal resources arena to Tanzania's Wildlife Protection Fund (TWPF). The TWPF, however, offers a potentially useful model for a possibly similar fund focused on coastal/marine issues.

The TWPF, established under the Wildlife Conservation Act of 1974<sup>11</sup> provides support to state agencies involved in wildlife conservation. The money for the fund consists of sums provided by Parliament; 25 percent of the proceeds of sale of any forfeited trophy or any other article; and other sums or property paid into the fund by the government or any person. The Act does not specify the purposes or duties of the fund. Its role is to support the various state agencies involved in wildlife conservation, acting essentially as a retention fund, which receives 25 percent of all game revenues, and 100 percent of all revenues from observer, conservation, permit and trophy-handling fees.

### **4.4 Monitoring and Research**

Lack of data on coastal and marine resource conditions and trends inhibits good management as well as practical determinations of enforcement priorities. Trend data on sand mining (Ministry of Minerals), fish dynamiting (Department of Fisheries), coral reef conditions and losses (Land Division), mangrove conditions and losses (Forestry and Beekeeping Department), and ambient water quality and effluent discharges (Ministry of Water) are among the key needs for managers and enforcers.

Currently Tanzania's research institutes are not mobilized or coordinated to address these critical and practical data gaps. Research concerned with protection of the coastal and marine environment in Tanzania is carried out on a sectoral basis, and a number of institutions are involved. Key institutions are: the Tanzania Commission for Science and Technology (COSTECH); the Tanzania Fisheries Research Institute (TAFIRI); the University of Dar es Salaam (IMS); the Kunduchi Fisheries Training Institute; and the Mbegani Fisheries Development Center. Apart from these institutions there are also a few institutions which are involved in sectoral research and development such as the Institute of Marine Sciences (IMS); the Tropical Pesticides Research Institute (TPRI); the Tanzania

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<sup>11</sup> Act No.12 of 1974 as amended by Act No. 21 of 1978

Forestry Research Institute (TAFORD); the Tanzania Agricultural Research Organization; and the Serengeti Wildlife Research Institute (SWRI).

The brief review below of a select few of the above agencies suggests that there are institutions and opportunities in place for establishing monitoring and research that focuses on the key coastal and marine resource issues of concern to managers, regulators and enforcers.

**The Tanzania Commission for Science and Technology (COSTECH):** COSTECH<sup>12</sup> is the principal advisory organ of Government on all matters relating to scientific research and technology development. The main purpose of establishing COSTECH was to redress the need for a framework for scientific formation and effective dissemination and utilization of scientific data and information. COSTECH seeks to: (a) formulate policy on the development of science and technology, and recommend its implementation by the Government; (b) monitor and coordinate the activities relating to scientific research and technology development of all persons or bodies concerned with such activities; and (c) acquire, store and disseminate scientific and technology information.

Essentially COSTECH is the Government's scientific research watchdog and data bank. Under the Act establishing COSTECH, upon acceptance by the Government of the advice of the Commission, COSTECH must then examine the research and development programs of national research institutions, whether or not affiliated to the commission,<sup>13</sup> and advise<sup>12</sup> on the best ways to achieve research objectives.

**Tanzania Fisheries Research Institute (TAFIRI):** Fisheries research is vested in TAFIRI,<sup>14</sup> which could play a major role in marine research. If funds permit, the Institute can generate data that will assist decisionmakers concerned with the conservation and protection of the marine environment and resources. Among its many statutory functions, the Institute is to carry out and promote: inquiries, experiments and research in fisheries and aquaculture generally; to coordinate research in fisheries; and to establish and operate a system of documentation and dissemination of fisheries findings and research. It is to advise the government, public institutions and others engaged in the fishing industry in Tanzania on the practical application of the findings and research. Apart from these general functions, TAFIRI also may collect and publish statistics relating to fisheries and the fishing industry, and promote and develop instruction and training in fisheries.

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<sup>12</sup> Established under section 4(1) of the Tanzania Commission for Science and Technology Act No.7 of 1986.

<sup>13</sup> The Second Schedule to the Act contains a list of institutions affiliated to the Commission. Virtually all research institutions in existence or coming into being after the Act was passed, are automatic affiliates to the Commission, regardless what is provided in the laws establishing them. Section 12(2) of the Act enjoins the Commission to maintain a system of collaboration, consultation and cooperation with the enlisted institutions. Under Section 13(1) of the Act, the Commission may require any person engaged in an activity affecting or relating to science and technology within Tanzania to furnish it with such information related to that research or activity. Failure to comply with such request upon conviction incurs a fine not exceeding five thousand shillings or imprisonment for a term not exceeding six months or both (section 13(2)).

<sup>14</sup> Established under Section 4(1) of the Tanzania Fisheries Research Institute Act No. 6 of 1980

**Institute of Marine Sciences (IMS):** Apart from TAFIRI, the other institution that is involved in fisheries and marine research is the IMS, which is part of the University of Dar es Salaam, and based in Zanzibar. The IMS is a center for marine sciences education, research and training. The IMS has undertaken a number of programs in the field of fisheries and marine sciences, and is the obvious national center for marine and coastal zone environmental information

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