Secretariat for Eastern African Coastal Area Management

SEACAM

Sustainable Financing of Coastal Management Activities In Eastern Africa

FINAL REPORT

April 2001

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United Kingdom

SUSTAINABLE FINANCING OF COASTAL MANAGEMENT ACTIVITIES IN EASTERN AFRICA

12 April 2001
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1 Introduction

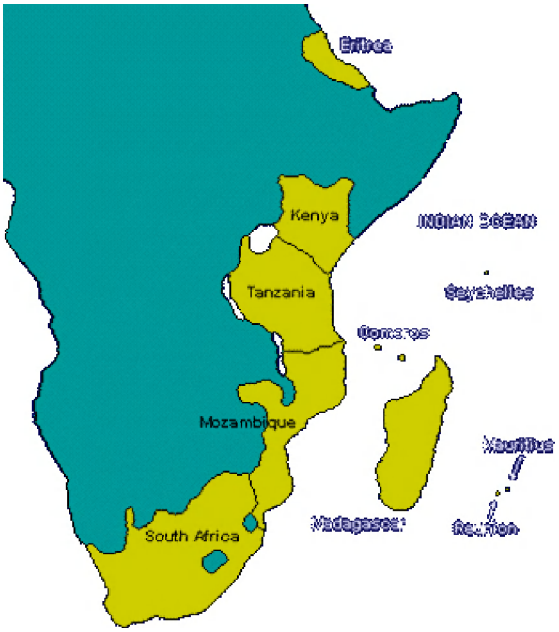
SEACAM and national agencies in eastern Africa (Engdahl & Voabil, 2001) have identified that the failure of coastal management initiatives when external financing from donors is withdrawn is a critical problem in the region. Many agencies recognise the need to incorporate 'sustainable financing' objectives into programmes in order to help solve this problem (Inamdar et al, 1999). SEACAM commissioned this piece of work to:

- Review existing approaches to sustainable financing in eastern Africa;
- Identify whether these approaches have potential for uptake and wider application within the eastern African region.

This assessment will form the basis for developing guidelines to assist project managers to incorporate realistic sustainable financing approaches into their coastal development projects.

The primary audience for this assessment is managers of government, NGO and private sector initiatives whose objective is the sustainable development of coastal areas and resources. We also hope to provide guidance to donor and government decision-makers in the region. Our regional focus is defined by SEACAM's membership of ten Eastern African and Island states (see Figure 1).

Figure 1: **SEACAM member states**



Our search for case studies has therefore focused on this region. Where appropriate, this has been complemented by relevant case studies from non-OECD countries in other regions, particularly the Caribbean and Pacific. However, we have not conducted a comprehensive search for case studies in these other regions. The report is based on meetings with coastal decision-makers and managers in Kenya Mozambique, South Africa and Tanzania and telephone discussions with further key informants, complemented by a desk-based review using internet resources and e-mail communications to contact as many coastal managers and key informants in the

region as possible. The perspective of the island states has been incorporated through the collaboration of Dr Nirmal Shah from the Seychelles.

1.1 What is Sustainable Financing?

There is little consensus to help us define just exactly what sustainable financing is. Every practitioner seems to have a different view. For this document, we derive our definition of sustainable financing from the needs expressed by agencies in the region (Inamdar & De Merode, 1999). Sustainable financing mechanisms are those that help institutions to **meet the cash flow requirements of coastal management operations**. This definition is useful because it explicitly reflects the varying and diverse financial requirements of management activities to achieve specific objectives. Sustainable financing need not be stable (since in some years income will be too low or too high), nor need it last forever (since some activities will come and others will go). What it must do is help managers to plan activities, implement those activities in response to opportunities and challenges on the ground, and do this with greater financial security. This view of sustainable financing mechanisms concurs with that of Moffat and Kyewalyanga (1998) who suggest that core elements are: financial management skills, on-going availability of funds, diversity of funding sources, and transparency / accountability.

1.2 Coastal Management in Context

Coastal areas and their resources are vital to the development of coastal states and their people. Coastal and marine areas contribute to the livelihoods and welfare of 60-75% of the population of Eastern Africa including the island states, and coastal and marine resources are the mainstay of economic development in the region including coastal tourism, fisheries and other sectors (Seychelles Conference Statement, 1996). Sound management of coastal systems is therefore essential to the livelihoods of coastal people and to the protection of economic investments in coastal areas. Recognizing this, SEACAM's member countries have signed a number of international conventions and treaties which commit them to the improved management of coastal areas and their resources (see Box 1)

Box 1: Regional government commitments to improved coastal management

At the **Nairobi Convention** for the Protection, Management and Development of the Marine and Coastal Environment of the Eastern African region in **1985**, the contracting parties declared their obligation to take all appropriate measures to prevent, reduce and combat pollution in the marine and coastal environment and to ensure sound environmental management of marine and coastal natural resources.

In the **Arusha Resolution** of **1993**, the Governments of Kenya, Madagascar, Mauritius, Mozambique, Seychelles and Tanzania formally recognised the economic importance of coastal areas and resources, and the need for protection of the resource base and environment for sustainable development in coastal areas. The Governments resolved to give emphasis to the sustainable development and integrated management of coastal areas for the benefit of coastal communities, by establishing policies that promote and enhance integrated planning and management of coastal areas, developing and implementing programmes to address environmental concerns, and various other means.

In the **Seychelles Conference Statement** in **1996**, the heads of delegation resolved and recommended that the countries of the region further support the efforts and initiatives being made in the implementation of Agenda 21 particularly in the integrated approach for the management of the coastal and marine areas. The statement included undertakings on policies and institutions, legislation, compliance and enforcement, financing, capacity-building and awareness. On financing, the heads of delegation agree to:

- encourage the allocation of adequate budgets for ICZM planning and implementation at all levels of government;
- call upon donors to support, review, revise and harmonise programs of support for ICZM in a partnership manner which builds on progress to date, identifies gaps, and allocates resources as effectively as possible;
- promote the participation of the private sector, NGOs and community based organisations (CBOs) to contribute to development in an ecologically and socially responsible manner.

1.3 The Values of Coastal Areas

Coastal areas have diverse values (see Table 1 below), which accrue to stakeholders at local, national and international levels. Many coastal areas generate valuable benefits to those who are not directly involved in coastal management.

Table 1: **Economic values of coastal areas**

Value type	Sub-type	Example	Time frame
Direct	Consumptive	Fish, mangrove, subsistence products Mariculture products	Short term, local
	Non-consumptive	Tourism	
Non-use value		Existence & cultural values	
Indirect		Ecological services	
Option values		Future genetic values etc.	Long term, global

Some of the only comprehensive data on economic valuation of coastal areas and activities in the region comes from South Africa. Here, direct economic benefits from coastal ecosystems have been estimated at 168 billion rand per annum (US$ 21.8 billion), equivalent to 35% of South Africa's annual GDP. Indirect benefits are estimated at a further US$ 17.1 billion per annum. Whilst we accept that South Africa's economy is an exception rather than the rule in Africa, these figures are illustrative of the scale of benefits that coastal areas can deliver. Even in South Africa, the total amount of funding at the national level for coastal management is small given the above figures. Government funding for coastal management comes from two sources – the revenue budget and from the Marine Living Resources Fund MLRF). The latter consists of revenues from fishing permits, levies and fines. Efforts to increase funding for coastal management have focused on improved enforcement of fisheries regulation to generate more funds for the MLRF. The Oceanographic Research Institute depends on government funding, private sector donations and consulting work. Donor funding for coastal management in South Africa has increased significantly. However, government and donor budgets are limited and

coastal management activities face strong competition from other sectors (Emerton, 1999a).

Box 2: **The Coastal Zone in Eastern Africa and the Island States**

The coastal zone of Eastern Africa and the island states is characterised by geographical, ecological and human diversity and includes unique coastal habitats and high biodiversity. High levels of endemism along the southern African mainland and the oceanic islands contribute to unexpected marine diversity in the region. Coastal zone management in this region must take into account widespread poverty, rapid population growth, inappropriate or poorly planned development and a lack of integrated planning and management. This has resulted in environmental degradation and resource depletion in many areas, and increasing conflicts among stakeholders. In major cities and surrounding areas, there are cases of severe coastal pollution and habitat destruction, and these effects are gradually spreading into less densely populated areas. The need for integrated coastal management and for regional cooperation in confronting coastal management issues has been recognised by SEACAM.

Sources: Coughanowr et al. (1997), www.seacam.mz

Long-term financing is essential for cost-effective investment. For example, community-based or co-management approaches generally take longer to set up than the conventional 3-5 years afforded by donor-funded projects; the cost-effectiveness of research and monitoring increases over the long-term especially as long-term uninterrupted data sets become available (Sankey, pers. com.)

Coastal management activities are over-reliant on a limited set of income streams, such as government or donor financing and tourism, none of which are secure in the long-term as pressure on government budgets increases, donor priorities change and tourism patterns ebb and flow. In the context of regional governments' international commitments and growing pressures on coastal areas, there is an urgent need to secure the longer-term financing for coastal management activities.

Box 3: Economic incentives for coastal management

Incentive measures seek to address the underlying causes of coastal resource depletion, particularly the problem that people or organisations benefit from exploitation without paying the social costs involved. The first priority is the removal or reform of perverse incentives such as subsidies, tax relief and below-cost resource pricing in the agricultural, energy, forestry, fisheries, mining and transport sectors, which degrade coastal resources. Economic incentives include well-defined and secure property rights (common, private or state), usually combined with enhanced market values for coastal resources (for example through eco-tourism or certification). Promotion of alternative income-generating activities aimed at reducing exploitation pressures is often a major component of strategies to reduce over-exploitation of coastal resources. Fiscal incentives, such as taxes, fees and charges, also raise revenues.

Source: IUCN (in press)

It is useful to group approaches to sustainable financing under the following broad categories – although, of course, there will be some overlap between them:

Revenue-raising:

- **International financial flows** – include financing from international donors, debt-for-nature-swaps and international offset systems (like the CO_2 offset mechanism associated with the UN Climate Change convention). International financial flows reflect some of the off-site values of coastal areas including climate regulation, biodiversity values, and willingness to pay for conservation.

- **Domestic economic instruments** – include taxes, subsidy reduction and deposit-refund schemes:

  > *"Removing or phasing out costly subsidies that distort the economy and lead to the loss of biodiversity may be the single most cost-effective way of financing investments in conserving biodiversity." (McNeely, 1999: 3)*

  Domestic economic instruments are designed to capture on- and off-site values of coastal areas that accrue to society at large. They use appropriate pricing policies at the national level to create fiscal incentives and disincentives that promote sustainable management practices. Domestic instruments can use some form of 'green accounting' through national statistics to establish the real contribution of social and environmental capital (or its depletion) to national economic growth.

  Admission/User Fees – rely on appropriate pricing policies to charge users for access to environmental goods and services. User fees are generally applicable when sufficient user groups exist, and when those user groups can afford to pay for access to coastal resources. Further key issues revolve around the practicalities of revenue collection and monitoring.

Cost-sharing:

- **Creating markets/ property rights** – include Individual Transferable Quotas (ITQ's) and Development Permits. This type of instrument can be a sustainable financing mechanism when it results in a management system that is self-supporting – i.e. it does not rely on continuous financial support to maintain it. Fisheries quotas (for example in New Zealand) occasionally meet this criteria.

- **Partnerships/ co-management** – including public-private partnership and local community involvement. These approaches generally have two objectives. The first is to share both the costs and benefits of coastal management activities with a broader group of stakeholders. A second objective is to reduce the opportunity costs of sustainable management activities to local communities. The issues that they address are often distributional – where the costs of sustainable management are faced by one group whilst the benefits tend to accrue to national or even global stakeholders. Biodiversity conservation is a good example.

Box 4: Basic definitions

Taxes are compulsory unrequited payments to general government (benefit distributions are not proportional to taxpayers' payments).
Charges or user fees are compulsory requited payments i.e. a service is provided in proportion of the payment (sewerage charges). Charges can also be paid into specific funds and earmarked for specific environmental purposes.
Emission charges or pollution taxes are direct payments based on the quantity and quality of pollutants discharged e.g. water effluent charges, air pollution charges, noise charges etc).
Product taxes increase the relative prices of products which create pollutions when they are manufactured, consumed or disposed of e.g. carbon and sulphur taxes on fuels, fertilisers , pesticides, batteries etc.
Source: OECD, Environmental Taxes and Green Tax Reform, Paris, 1997

Table 2: Examples of economic instruments proposed for biodiversity conservation in the Seychelles

	market creation	fiscal instruments	charge systems	financial instruments	liability systems	bonds and deposits
tourist activities	increased enterprise and sales		entry, landing, use fees			beach waste deposits, refundable mooring etc.
fisheries activities	fishing quotas	differential activity and equipment taxes	variable license by scale			
industrial pollution	tradable pollution permits, netting	effluent charges, pollution taxes, technology subsidies	waste collection and disposal charges, wastewater treatment charges	loans for clean technologies	environmental liability	refundable waste deposits, hazardous chemical bonds
urban and construction	transferable development rights	differential property and land-use taxes, subsidies to revegetation	waste collection and disposal fees	landscaping loans, sewerage loans		reafforestation and restoration bonds
biodiversity utilisation	farming, new product uses and value-added	product taxes, subsidies to alternative enterprises	user charges	loans, compensation for alternative enterprises		

Source: Republic of Seychelles (1997) National Biodiversity Strategy and Action Plan, p.72

1.4 Specific characteristics of coastal area management

A number of specific characteristics of coastal areas are of relevance to the design of sustainable financing mechanisms.

Coastal areas are highly interconnected and do not have clear boundaries. For example, local fisheries conservation efforts may be undermined by over-exploitation of fisheries stock elsewhere along the coast. Long, complex chains between sources of degradation and the degraded resource (for example, most coastal pollution derives from land-based sources) mean that the 'polluter pays' principle is not always

simple to apply. For this reason local-level management initiatives are unlikely to successful without co-ordinated efforts at the regional or macro-level. There is clearly a need for sector-wide and even cross-sectoral approaches to management and financing.

Inter-sectoral competition over resources (for example conflict between forestry and fisheries sectors over mangrove management) means that an integrated approach is needed. This may require additional financing. Some coastal management activities (although by no means all) are characterised by high capital costs like boats, buildings and machinery. Where benefit-sharing or compensation-based approaches are adopted, substantial revenues are needed to meet the demands of the relatively high populations found in many coastal areas.

Many coastal resources have traditionally been regarded as common property or even open access. Many resources are important to the livelihoods of a wide range of users (for example, beaches are important to both tourism operators and artisanal fishers), and this hinders clarification or strengthening of property rights. It is particularly difficult, but not impossible, to establish tenure rights over fisheries resources.

In this document we define coastal management activities to include coastal protected area management and ecosystem/ species conservation, fisheries management, coastal forest management, waste management, land-use planning and research & education. Our assessment has focused on coastal protected areas, ecosystems/ species conservation, fisheries and coastal forests, as these are the sectors where the specific characteristics of coastal areas are most relevant. For other sectors, such as pollution control, waste management and research, much of the experience of non-coastal areas is directly relevant to coastal areas.

2 The cash flow requirements of Coastal Management Activites

If our definition of sustainable financing is those mechanisms that help institutions to meet the cash flow requirements of coastal management operations, then understanding the cash flow requirements of coastal management activities is the starting point of an analysis of whether or not a sustainable financing mechanism is appropriate to any region or country.

Our review of coastal management activities, coupled with the country reports (Engdahl & Voabil, 2001), provide a succinct place to begin to understand cash flow requirements of coastal management requirements. We recognise that coastal management activities are financed through a range of sectoral ministries that do not disaggregate coastal and inland spending, so it is not always possible to calculate actual budgets for coastal management. For most activities, a range of budgets could be defined, from a level that will maintain basic minimum standards to investment in reversing degradation and/ or pro-active management (Siegel, pers. com.). It is not simple, therefore, to assess coastal management budgets against desirable expenditure.

Despite these limitations, we felt it would be useful to create a simplified overview of principal coastal management activities and their potential cash flow requirements. The country reports (Engdahl & Voabil, 2001) illustrate some of the diversity of coastal management activities. It is possible, however, to group this diversity of activities into a small number of clusters. This assessment, which is not intended to be definitive, is presented in the table below:

Activity	Cash flow requirement
1. Management Plans, Policies and Legislation to promote sustainable coastal development	Periodic and variable
2. Implementation activities including improved co-ordination between agencies, regulation, monitoring and enforcement of policies and legislation	Long term, but inputs are ultimately dependent on demand/ activity
3. Capacity building, demonstration projects and research to enhance the capacity of implementers to do their jobs better	Long term, dependent on policies and users
4. Engaging, involving and participating with the public over critical issues of coastal management	Long term, dependent on uptake

This analysis reveals that the cash flow requirements of coastal management activities are generally variable. In particular, we should expect to find that the bulk of costs associated with coastal management activities reside with implementation activities. These activities (ranging from Protected Area management through to pollution control and regulatory compliance) will also vary in their cash flow requirements, with cash demand being largely determined by the scope of activities that authorities need to take in order to address key management challenges. To some extent, therefore, we find that for most implementation objectives there is a linkage between user groups, management activities and costs. This is important because one of the principal ways of meeting sustainable financing requirements (but not the only way) is through diversifying income sources by charging user groups. This method of financing – which generally uses market-based-instruments – scales income with activity. Putting it simply, more users lead to greater income that can be used to finance more management activity to cope with the additional users.

3 Critical assessment of sustainable financing approaches

For the purposes of this document, if the objective of sustainable financing is to create more predictable cash flow, then it is possible to define at least four characteristics to achieve that objective:

- **A single, guaranteed source of finance** from government or donors that lasts over the long term. Trust Funds are one mechanism that are increasing in popularity in the environment sector.
- **Diversified income streams,** which reduce the reliance of a management authority on a single source of finance. This is a key source of improved sustainability. But this only will be viable where user groups have sufficient wealth, and where they can be charged cost-effectively. It also needs institutional reforms to promote both efficiency and effectiveness and seldom delivers greater financial sustainability on its own.
- **Increased administrative efficiency** – reducing the unit costs of coastal management activities. The administrative burden of any management operation is of critical importance. There is little point in collecting taxes if all that the taxes are for is to pay for tax collectors! Cost-effective linkage between the income and the activities to address key management challenges is key, as is good governance characteristics like financial transparency and auditing.
- **Incentives for local institutions to manage activities and budgets in a more cash-sustainable manner**. These incentives may include:
    - Revenue retention mechanisms (keeping the money that an area makes through its charges or taxes);
    - Incentives like bonuses, promotions and other 'perks' that reward good management practices within national / regional agencies.

  Revenue retention mechanisms are less attractive to those agencies responsible for areas with under-developed markets – since they will no longer benefit from cross-subsidies from those areas that generate surpluses. There is also a critical concern over what to do with management surpluses that may have been generated through coastal management operations and cannot be utilised effectively in that sector. One of the principle roles of government is to ensure effective allocation of resources to national social priorities (whether governments actually do this or not is an important issue of national governance). 'Earmarking' revenues to specific purposes reduces government capacity to do this.

These four characteristics can be used as framework against which we can review case studies from eastern Africa and elsewhere that have been chosen for inclusion in this document. This review is presented on the table overleaf. A full description of each of the case studies follows in chapter 7.

Clearly, the four characteristics we have proposed are not mutually exclusive. In theory, initiatives that contain elements of all four scenarios are likely to be most financially sustainable. In practice, as we can see from the table overleaf, this is rare. We discuss reasons for this in the following section.

4 Summary of Findings

This section sums up the data presented in Table 3.

1. We reviewed a total of 21 case studies, 14 of which were from the eastern African region. Of the remaining 7 case studies, 2 were global initiatives (the Marine Market Transformation Initiative and the Marine Stewardship Council).
2. Of all the case studies, only two could be described as depending on a secured single source of finance. However, most initiatives are supported by government and / or donor funds to some extent.
3. The vast majority of case studies (17 of them) reflect attempts to diversify income by charging user groups (local or international) for access to or use of resources.
4. Only four of the 21 cases used instruments to improve administrative efficiency.
5. 13 cases contained approaches that attempted to create incentives to promote more sustainable cash management through revenue retention. We report no examples where alternative incentive schemes like professional enhancement (promotions, bonuses, etc) have been implemented.

Table 3 :Case Studies Reviewed in this document

Activity	Examples of approaches cited in this document	Secured single source of finance	Diversify Income	Improve administrative efficiency	Revenue Retention or other incentive
National Policies and Plans	None				
Land use planning	Tradeable Development Rights, Cyprus			✓	
Fisheries and other Resource Licensing	Marine Market Transformation Initiative			✓	
	Marine Stewardship Council			✓	
	Fisheries taxes in Tanga, Tanzania		✓		✓
	Retained Revenues from Mangroves in Tanga, Tanzania		✓		✓
Protected Area Management	Tanzania National Parks		✓		
	Zanzibar Red Colobus, Tanzania		✓		
	Kisite / Mpunguti, Kenya		✓		✓
	Bazaruto NP, Mozambique		✓		✓
	Debt-for-Nature Swap, Madagascar	✓			
	Private sector Management of Chumbe, Tanzania		✓		✓
	NGO management of Cousin, Seychelles	✓	✓		✓
Pollution and Waste Management	User charges for waste management in Dar Es Salaam, Tanzania		✓		
	Refundable Deposits for Waste Management, Seychelles		✓	✓	✓
	Public-private partnerships for waste management, Philippines		✓		
Research	Galapagos, Ecuador		✓		✓
	Raptor research, Mexico		✓		✓
Engaging, involving and participating with the public over critical issues of coastal management	Fisheries co-management in Mozambique		✓		✓
	Co-management at Olifants Fishery, South Africa		✓		✓
	Co-management in Kosi Bay, South Africa		✓		✓
	Mangrove Stewardship Agreements, Philippines		✓		✓

5 Potential for uptake and replication of these initiatives in eastern Africa

In this section, we attempt to describe some of the reasons why the pattern of approaches to sustainable financing looks like it does in eastern Africa. This analysis will then lead us on to a better understanding of whether or not particular approaches are likely to have potential for further uptake and replication.

To summarise, the key emerging issues in the eastern African region are:

- There are few examples of secure financial resources from any single source;
- A focus on diversifying income through user charges and on-site values, and an emphasis on coastal protected areas rather than other approaches to coastal management like pollution control, land use planning and licensing;
- Few market-based instruments like accreditation schemes, property rights reforms or contracting out arrangements that might promote administrative efficiency; and
- Development of limited revenue retention initiatives – generally focused on sharing revenues at specific locations – but few examples where this had been broadly integrated into national initiatives or legislation. Concern about the administrative costs of these kinds of mechanisms.

The reason for these patterns becomes clearer when we examine the particular pre-requisites of sustainable financing mechanisms and compare these with the existing institutional and economic backdrop of most eastern African countries:

Secure financial resources are expensive and not necessarily efficient – because they tie up large quantities of capital that are directed to specific objectives for long periods of time. Fewer governments in eastern Africa or donor agencies are prepared to make this kind of commitment. Some opportunities exist in the private sector, primarily from international NGOs that benefit from global willingness to pay. However, because these kinds of funds are so limited, only the most globally exceptional coastal areas are likely to be able to attract them. The pre-requisite is therefore high global values. In the eastern African region, only two areas have managed to attract these kinds of resources: Cousin Island in the Seychelles, and the trust fund arrangements resulting from the debt-for-nature swap in Madagascar.

Diversifying income sources to charge users is generally administratively simple, but may be insufficient in itself to promote financial sustainability. One pre-requisite for diversifying income is that sufficient market value exists to tap into. User charges, fees and taxes are not going to work for areas which do not have user groups and markets to generate revenues. In addition, market-based-instruments require basic fundamentals, like effective regulatory frameworks, in order to work. Very often, these frameworks do not exist. A second pre-requisite relates to governance and administrative efficiency. More income does not automatically lead to greater financial sustainability since the increased income can easily be lost through inefficiency, corruption or because insufficient incentives are in place to promote sustainable cash management. The many examples of diversified income in eastern Africa (like Kisite / Mpunguti in Kenya) reflect the high potential for capturing income from a diverse user base and high tourism values. But fundamental questions about the use of earned revenues and market regulation remain.

Increased administrative efficiencies rely on the fundamentals of good governance including a strong rule of law, regulation, transparency and accountability. Administrative efficiencies generally come from the creation of improved property rights, tenure reforms, and market-based instruments like accreditation schemes. In effect, they take regulatory control away from administrators (the government in most cases) and devolve it to the market. In the context of coastal systems they require strong consistencies in the way governments approach property rights and market regulation. Given the high public goods values of many coastal resources, and the fact that it is difficult to monitor and enforce regulations nationally, as well as internationally, we should not be surprised at the lack of initiatives that promote administrative efficiencies.

Incentives to promote sustainable cash management need to be institutionalised at the policy level to be cost-effective. Revenue retention (often revenue-sharing with local communities) activities are important in the region and serve as useful pilot cases. To increase their potential to scale-up, the lessons and principles from these projects need to be incorporated in to regional and national legislative frameworks. Without these frameworks, the pilot studies like the fisheries co-management projects in Mozambique and Tanga will remain as limited exceptions, rather than general rules. The success of these frameworks will ultimately depend on principles of good governance and the capacity within communities and institutions to implement these principles. The same rules apply to incentives for personnel who are responsible for coastal management initiatives. Promotions and perquisites that reward sustainable cash management require changes in organisational culture that may be initially threatening to many people in governments and NGOs alike. One key attribute that is in short supply throughout the eastern African region is sufficient capacity and management skills to effectively deliver the outcomes that sustainable cash management requires. These findings are summarised in the table overleaf.

Table 4 Summary of management activities and financing characteristics

<table>
<tr><th>Activity</th><th>Potential for secured source of finance</th><th>Potential to diversify income</th><th>Increasing administrative efficiency</th><th>Incentives for sustainable cash-management</th></tr>
<tr><td>National plans, policies and legislation</td><td>Low – given the periodic nature of this activity</td><td>Low – generally a national priority with little rationale for additional tax burden on users locally</td><td>Few examples, and uncertainty of how to achieve this given the nature of national policy planning</td><td>Can promote this for regions etc, but less certainty about how to achieve better cash management for this activity</td></tr>
<tr><td>Implementation, Compliance and Regulation</td><td rowspan="3">Global sources are limited, but some application where global benefits are high (e.g Cousin Island in the Seychelles). Few governments in the region have the capacity to make long term commitments from Treasury budgets</td><td>High, but dependent on market and ability to pay (e.g Mpunguti / Kisite, Kenya). Places without developed markets will not be able to diversify income</td><td>Market-based instruments and tenure reform need effective regulation and governance (e.g. Refundable Deposits for waste management in the Seychelles)</td><td rowspan="3">Decentralisation, trust funds and other revenue-retention activities – e.g. The Marine Resources Trust in South Africa
Major limitation in the region is legal frameworks and institutional capacity to manage cash-flow better.</td></tr>
<tr><td>Capacity Building and Research</td><td>Occasionally for research – depends on markets and ability to pay (e.g. Galapagos, Ecuador)</td><td>Contracting out (purchasing services from NGOs or the private sector) are attempts to improve efficiency</td></tr>
<tr><td>Engaging the public</td><td>Dependent on whether private sector or other interest groups have the capacity to pay and whether local institutions have the capacity to implement</td><td>Most approaches are pilot studies which will be difficult to scale-up without legislative changes. Little capacity in the region to effectively implement better cash management.</td></tr>
</table>

6 Conclusions and Recommendations

1. Coastal management activities have specific cash flow requirements that will vary over time and in different locations. For this reason, we should not expect that any single sustainable financing approach can be universally applicable across the range of management activities. Steps should be taken to understand the cash flow requirements of coastal management activities on a national and regional level since this is the starting point for understanding where and when sustainable financing mechanisms may be required.
2. Achieving sustainable financing requires a combination of certain characteristics. In this report, we identify four: access to a secure long term source of funds, diversified income, administrative efficiency and institutional incentives for improved management of cash flow. Each of the four key characteristics of sustainable financing have advantages as well as significant disadvantages. They are not equally applicable in all circumstances, and they require a certain level of economic activity, rule of law or critical mass in terms of institutional capacity before they will work. Some approaches to sustainable financing – especially those that require competitive, well regulated markets (like accreditation schemes or market-transformation initiatives) are not likely to initially succeed given some of the weaknesses in the institutional and economic framework of eastern African countries. This does not mean that they should not be attempted. Rather,

that it is important to understand and address the underlying institutional and policy weaknesses first.

3. Key constraints to financial sustainability are access to secure funds and diversified income streams. In some cases, coastal management initiatives will not be able to compete with other social and environmental priorities in order to attract global or government finance. In other cases, local user groups and local markets are too small or under-developed to generate sufficient, predictable streams of revenue for management activities. Cost-benefit analyses and market tests are an important first test to assessing the potential for uptake of sustainable financing approaches.
4. Increasing the diversity and level of income through any one instrument cannot assure greater financial sustainability without institutional incentives and reforms to promote greater administrative efficiency. Additional income can be lost to central Treasuries, or simply directed to ineffective activities. In eastern Africa, there is a critical lack in the legislation to promote local retention of taxes, as well as chronic lack of capacity and incentives to manage cash flow and financial resources for long-term social, environmental and financial viability of coastal areas. Clearly, a priority is to lobby for legislative changes and to help build these skills and institutional capacity in the region.
5. Attempts to create incentives for more sustainable cash flow management through revenue retention must consider important broader implications. In those areas where markets are small and under-developed, revenue retention is likely to result in financial starvation, since little income will be available for management activities. Revenue retention in large, developed markets (like some of the tourism markets in the Seychelles or Mauritius) could lead to inefficient management practices. 'Earmarking' money in this way also reduces the capacity for government to re-allocate resources to national social priorities (although whether this actually happens or not is a central issue of public accountability and good governance).
6. There are few examples of professional incentives like perquisites or promotions that are linked to performance indicators to promote more sustainable cash flow management. Addressing this problem will need both institutional capacity building to address issues of 'corporate culture' (many organisations, especially government agencies, within the region are not used to these kinds of incentive measures) as well as training in core financial planning and management skills.

In summary, we consistently find that institutional weaknesses associated with lack of financial management skills, experience and performance incentives are the biggest constraints to improving the financial viability of coastal management activities in eastern Africa. Managers need much greater exposure to effective financial management tools, in combination with the right mix of employment conditions to promote their uptake and application. In the longer term, critical issues of market regulation and governance need to be addressed, but this issue can only be effective once the right people and skills are in place.

7 Assessment of Existing Sustainable Financing Approaches

7.1 Protected areas and ecosystem/ species conservation

Many protected areas in the region are financed through a combination of government subvention, donor funding and, increasingly, user fees and charges for tourists and royalties and levies on commercial operators. The increasing emphasis on tourism fees and charges reflects the relatively high value of tourism in the region together with high income of users.

Box 5: User fees for Marine Parks and Reserves (Tanzania)

For all marine parks and reserves in Tanzania, entry fees of T. Shs 500-1000 per day for adult nationals and US$ 10 per day for adult non-nationals (with different rates for children and resident expatriates) were introduced in July 1999. Other user fees introduced included camping permits, guide fees, filming fees, scuba diving and fees for use of glass-bottomed boats, private and commercial leisure boats. Finally, the Government introduced fees of 10% per bed night payable by hotels or lodges within marine parks and reserves. Revenues raised go to the Marine parks and Reserves Conservation and Development Fund (CDF) to support the marine and freshwater conservation programme. This fund is administered by the Marine Parks and Reserves Unit.
Source: Marine Parks and Reserves Unit (1999)

Box 6: Tourist fees for Zanzibar Red Colobus in the Jozani Forest (Tanzania)

Tourists visiting the Zanzibar Red Colobus of Jozani Forest in Zanzibar pay a park entry fee of US$ 8 each. 30% of these park entry fees are retained for the management of the protected area, and the Government of Zanzibar has agreed that a further 48% is retained and granted to the local communities through a community development fund, as a form of benefit-sharing. Efforts to raise the profile of the Jozani Forest as an important ecotourism destination in Zanzibar has led to a five-fold increase in tourism-generated income over 3 years. The Jozani-Chwaka Bay Conservation Project is a partnership between CARE-Tanzania and the Commission for Natural Resources Zanzibar, with financial support from the Government of Austria.

Source: Jozani-Chwaka Bay Conservation Project: Project Summary

This mechanism has been particularly successful where revenues are retained by the protected area management authority at the national level as in Kenya and Tanzania. For example, in Kenya, all revenues are remitted to the parastatal Kenya Wildlife Service (KWS) and a proportion is then returned to each protected area as its annual budget allocation. This approach recognises the divergence between revenue-earning potential and management costs of some protected areas. It also mitigates incentives for protected area managers to focus on encouraging commercial use at the expense of conservation management.

Box 7 The Seychelles Gold Card Programme

The objectives of the Seychelles' gold card programme include providing the necessary funds to protect and enhance the environment of all the Seychelles Islands, to sensitise all visitors to the merits of nature conservation, and to attract up-market visitors to the Seychelles by developing consumer brand loyalty through the 'Friends of the Seychelles'. The gold card is issued 'for life' to encourage repeat visits, and the visitor is automatically enrolled as a 'Friend of the Seychelles' with a chance to win a free holiday. It incorporates the departure tax and entrance fees to marine national parks and nature reserves. The card costs a total of US$ 100. Market reaction has been mixed with tour operators at the upper end of the market responding more favourably than those at the lower end. This reaction reflects the Tourist Board's aim of increasing the share of up-market tourism in the Seychelles tourism industry. Funds raised through the card are to be ploughed back into infrastructure development which will improve the quality of the tourism product.

Sources: www.seychelles.net, www.ttg.com.sg

Box 8: Financing mechanisms for marine protected area management (Kenya)

One of the few comprehensive economic analyses of a coastal management activity is presented by Emerton and Tessema (2000). They studied the financial and economic costs and benefits associated with the management of Kisite Marine National Park and Mpunguti Marine National Reserve, Kenya.

The problem

Like many marine protected areas Kisite and Mpunguti suffer from:

- Low perceived economic value (especially to higher levels of government and the treasury);
- Limited and insecure finances; and
- High opportunity costs – meaning that local people are 'unwilling or unable to support conservation efforts'.

Emerton and Tessema identified that the inequality in the distribution of costs and benefits between different stakeholder groups was the key to understanding the economic constraints to effective management. They showed that in 1998, for example, whilst the MPA generates some US$130,000 for the Kenya Wildlife Service, only US$ 19,000 (less than 15%) are returned to the park to cover management costs. When looked at from the perspective of local users, the authors were able to show that in the same year local benefits were dwarfed by opportunity costs imposed by the MPA. Local communities gained US$39,000, but faced an opportunity cost of some US$ 172,000 as a result of forgoing fishing activities. Although good data were not available for the private sector tourism industry, the authors speculate that gross revenues accruing to tour operators dwarf both of the benefits accruing to KWS and to local communities. But even in this case, it is likely that the distribution of benefits will be highly skewed. Benefits retained locally, as opposed to nationally or internationally, will be low.

These inequalities are a threat because 'most community members perceive the MPA to be an economic liability rather than and asset' – and these local stakeholders have a powerful role to play in ensuring the sustained survival of marine resources in the area. Furthermore, with such low levels of financing for the KWS management in the region, there is little incentive for local staff to improve, invest and promote conservation activities.

Potential Solutions

Emerton and Tessema suggest a number of solutions to meeting the challenges at Kisite and Mpunguti. They separate these options into those that contribute to the costs of park management and those that reduce opportunity costs faced by local people.

Meeting the Costs of Park Management:

- **Improved revenue collection and charge systems** – options include understanding willingness to pay and increasing current park fees accordingly. In addition, introducing monthly or quarterly, as opposed to the daily charge system (which is costly to administer) may provide dividends.
- **Additional financing options** – through for example voluntary contributions (encouraged by 'value-added' services like souvenirs, maps, etc), private investment, and contributions from international donors that recognise biodiversity and other global values of the area.
- **Incentive-driven revenue retention and improved administration** – linking budget allocations to revenues earned may create real incentives for Park wardens to improve tourism services and amenities for potential tour operators.
- **Cost sharing through co-management** – informal relationships between the park management, tour operators and local people could be formalised and extended to reduce the inequalities of costs and benefits between different groups. These types of arrangements rely on reciprocity – so that each group feels that it is better of as a result of the relationship. Cost-sharing arrangements with the park management might be easier if, for example, they were reciprocated by lower fees for tour operators.

Reducing The Opportunity Costs Faced By Local People:

- **Improving local development activities** – through increased resources, but also through better local participation and improved governance over how existing village development funds (a levy on tour operators) are used.
- **Increasing livelihood options through sustainable utilisation activities** – productive activities like farming of edible products, sea cucumbers, oysters, crabs etc are viable options and may take some of the pressure off unsustainable harvesting of these resources.
- **Increasing the flow of funds between tour operators and local people** – through local sourcing of services and products, and better enforcement of fees for the use of village land and sea areas.

This case study encapsulates many of the key concerns related to the financial viability of marine management initiatives and sets out common-sense approaches to resolving outstanding difficulties. The solutions highlighted here illustrate the central importance of **diversified sources of income, improved administrative efficiency, and creation of incentives to promote better cash-flow management** as mechanisms to achieve financial sustainability.

Source: Emerton and Tessema (2000)

The experience of Bazaruto National Park in Mozambique demonstrates the importance of enshrining royalties and levies on commercial operators in legislation, with realistic and effective penalties for non-compliance.

Box 9: Voluntary contributions of tourism operators to Bazaruto National Park (Mozambique)

In the Bazaruto National Park in Mozambique, private hotels were established through the Tourism Department with no reference to park management or the relevant authority. For many years, hotel operators have refused to contribute to park management on the grounds that they are already heavily taxed, and there is no legal requirement for them to do so. They have more recently been persuaded to make a small contribution dedicated to community development in the archipelago, but this is erratic and tends to be withheld if there is a disagreement with either local communities or park management.

Source: DNFFB (pers. com.)

Tour operators contribute funds for the management of Mafia Island in Tanzania, but this amount is relatively small in comparison to the overall budget (Daffa, pers. com.)

The Kenya experience also demonstrates the importance of maintaining a diverse income base, as over-dependence on tourism revenues can leave protected area management vulnerable to a volatile industry. User fees which concentrate on tourists do not address other forms of resource use (Ngoile). Where marine protected areas contribute to improved fish catches, fisheries taxes may be a logical financing mechanism. However, it is often difficult to conclusively demonstrate the impact of no-take zones on neighbouring fisheries (Liehman, pers. com.; Siegel, pers. com.).

Even KWS is still heavily dependent on donor funds, and this points to the need to develop longer-term donor financing mechanisms, such as debt-for-nature swaps which generate sufficient funds for management costs to be financed from interest payments only, or ongoing bioprospecting concessions.

Box 10: Debt-for-nature swaps to fund Montego Bay Marine Park (Jamaica)

The Jamaica National Parks Trust Fund was established in 1991 and capitalised in 1992 with money from a debt-for-nature swap. The aim was to institutionalise a mechanism for attracting additional financing for conservation efforts in Jamaica. USAID provided US$ 200,000, and the Puerto Rico Conservation Trust contributed US$ 100,000 for The Nature Conservancy to buy US$ 438,000 of Jamaican debt owed to US and Canadian banks. Additional contributions have also been received from environmental foundations, foreign governments, domestic companies and individuals, which raised Fund assets to nearly US$ 1.2 million in 1995. The Fund is managed by the Jamaican Conservation Development Trust primarily as an endowment trust, paying its expenses through investment income and leaving the principal untouched. However, this is still insufficient to meet the operating costs and other expenses of Jamaica's two national parks, including the Montego Bay National Marine Park.

Source: IUCN (1994) and USAID (1995)

Box 11: Marine bioprospecting (Zanzibar)

The US National Cancer Institute (NCI) has contracted the Coral Reef Research Foundation (CRRF) based in Palau to make collections of marine organisms for pharmaceutical research in a number of countries including Zanzibar, Tanzania. Collecting is very selective, with a limited number of species taken from a wide area. No hard corals, threatened, endangered or locally protected species are collected. Collectors are mainly interested in soft-bodies sessile invertebrates which rely on their chemistry for self-defence rather than spines, jaws or other physical defence system. Collections are targeted to areas of high diversity.

CRRF, which works wherever possible with a local collaborator agency, follows a set of guidelines laid out in a 'Letter of Collection' which specifies a variety of benefits to the host country, including full sets of voucher specimens, opportunities for host country scientists to participate in developing compounds from promising specimens. The discovery process can cost several million US dollars and is funded by the U S Government. The US Government guarantees fair economic compensation and protection of biodiversity rights in the event that a compound of commercial value is discovered. Interesting compounds are licensed to pharmaceutical companies on the condition that they negotiate an agreement with the country of origin for royalites or other economic compensation. NCI does not sell drugs itself and so can act as an 'honest broker', and the US Government does not benefit directly from commercialisation of anti-cancer drugs discovered through this programme.

Source: www.reefnet.org;

Adopting a partnership approach transfers some or all of the costs to the private sector or local communities. Examples for the private sector are found in Tanzania and the Seychelles.

Box 12: Private management of Chumbe Island Coral Park (Tanzania)

Management of Chumbe Island has been delegated to a private company specifically formed to manage the Park. About two thirds of the investment costs of approximately US$ 1 million were financed privately by the company. Small donor funds have covered some additional project components, such as a visitor centre, patrol boats, nature trails and baseline surveys. The Government contributed by awarding a lease and management contract to the company. Running costs are mainly covered by income generated through ecotourism. Volunteers from several countries provide professional support.

The costs of private sector management are probably lower and incentives for financial efficiency are probably greater than for a donor-funded project. However, private sector investment needs:

- a conducive political, legal and institutional environment;
- long-term tenure security;
- limited competition from state-managed or open access areas with low/ no access charges.

In the Chumbe Island case, revenues from ecotourism would not be sufficient to cover capital repayment costs and generate profits if the project were managed for commercial objectives. However these costs were substantially increased by

bureaucratic delays and other obstacles, and the prospects for commercial viability would be stronger if the investment environment were improved. There is a limit to how far private investors can be expected to involve all potential stakeholders. Involving a single group of stakeholders with broadly compatible objectives is feasible (e.g. fishermen interested in sustainable fish catches).

The initiative has faced a number of policy and legislative constraints, in particular the need to deal with seven different ministries. The initiative also faces the same tax rates as for-profit enterprises even though it is not-for-profit. As an NGO, CHICOP would lose security over their investments, and it cannot be registered as a charity because of the revenue generation element.

Sources: Riedmiller (2000); Riedmiller (n.d.); Carter (pers. com.)

Box 13: NGO management of Cousin Island Special Reserve (Seychelles)

Cousin Island is a small, uninhabited island in the Seychelles. In 1968, it was purchased by the International Council for Bird Preservation (now known as Birdlife International) which raised funds through an international campaign for conservation of endemic land birds. Tourism to the island has a strong awareness-raising and environmental education component.

Entry is free for residents, while foreign tourists pay a landing fee. These landing fees together with project funding total some US$ 320,000, which is sufficient to cover all recurrent expenditure. Further revenues could be generated through souvenir sales, but these must be displayed to visitors and a sales assistant must be present. The surplus is reinvested in biodiversity conservation on the island. Capital investment, such as infrastructure improvements, is financed through grant funding.

A key lesson learned is the importance of having a management team comprised of local staff when a reserve or similar site is purchased by a foreign entity, even an NGO.

Source: Birdlife Seychelles

A further example of private management of an island ecosystem is Mnemba in Tanzania. In this case, the island is of greater importance to the livelihoods of local fishing communities and conflicts have not yet been successfully resolved by the private (for-profit) manager, ConsCorp. (Francis, pers. com.)

An alternative mechanism for co-opting private sector investment in coastal management is through accreditation or certification of marketed products produced through environmentally and socially sustainable practices.

Box 14: Marine Market Transformation Initiative

The objective of the Marine Market Transformation Initiative (MMTI) is to develop a series of initiatives to push global and regional markets towards environmentally and socially sustainable practices. The MMTI will focus on three market segments:

- live coral reef fish trade,
- shrimp mariculture,
- reef-based tourism.

Through product certification, the MMTI aims to attract a premium to environmentally and socially responsible production.

Source: Hatziolos (n.d.)

7.2 Fisheries management

Fisheries activities in the region have conventionally been subject to a number of licenses and taxes. Increasing the level of retention of these revenues can contribute to sustainable financing. Examples can be found throughout the region – we use an example from Madagascar to illustrate by example.

Box 15 Fisheries taxes in Madagascar

Since 1993, fisheries taxes and levys have been earmarked by national legislation to support specific coastal activities. Funds are directed to the FDHA (Fonds de Developpement Halieutique et Aquacole - Funds for Development of Fishing and Aquaculture) which promotes sustainable fisheries activities whose objectives meet criteria set out by the Fisheries Department. An example is the project "Programme to reduce poverty and promote sustainable fishing methods" conducted initially in the South-West region (Toliara) and which is now being continued in the South-East (Fort-Dauphin) and the Centre West (Morondava).

Source: Josephine Ranaivison, pers. comm. (cnre@bow.dts.mg)

Box 16: Fisheries taxes for fisheries management in Tanga (Tanzania)

The major cost of fisheries management at Tanga in Tanzania is enforcement, particularly of the ban on dynamite fishing. At present, boat fuel for village patrols, allowance for marine police or the navy are covered by the Tanga Coastal Zone Conservation and Development Programme with financial support from Irish Aid The programme is working to improve district revenues and encourage district authorities to contribute to the costs of enforcement. Revenues are derived from taxes on fish lands, but there is a problem of avoidance, and various alternatives including privatisation and catch estimates are being discussed. Two districts are now contributing, for example Tanga municipality has contributed T. Shs. 6 million (nearly 8,000) to village patrols. However, only one municipality in the project area receives sufficient revenues to cover management costs. An additional T. Shs. 5 million is allocated for enforcement in the area by the national fisheries department using revenues retained from tariffs on fish exports.

Source: van Ingen (pers. com.)

The Tanga approach demonstrates the need for cross-subsidisation within sectors, where management costs cannot be covered by revenues raised within a specific sub-sector.

Box 17: Fisheries co-management in Zambezia and Nampula (Mozambique)

In Mozambique, revenues from fishing licenses are allocated to the central treasury (40%), the fisheries investment fund (50%) and administration (10%). Important

problems facing the small-scale fisheries sector are localised over-fishing and the increasing use of mosquito nets in estuaries, migration by artisanal fishers in response to different fishing seasons along the coast leading to conflicts between artisanal fishers, conflicts between artisanal fishers and the semi-industrial fleet, and the lack of resources at the local level for management and enforcement. Fisheries co-management is seen as the solution. Fishing committees responsible for local management issues have been established along the coast of Zambezia and Nampula. Representatives from each committee meet on an annual basis to deal with macro-level issues, such as migration, with the costs shared by committee members and the government. In a pilot zone, the committees have undertaken to control the use of mosquito nets in return for an extension of the zone closed to the semi-industrial fishing fleet.

Source: Falcão and Mussa (pers. com.)

Box 18: Co-management of the Olifants River Harder Fishery (South Africa)

Following a series of stakeholder workshops to analyse problems and develop solutions, fisher committees are responsible for:

- deciding the number of licenses to be issued (within a government-defined maximum);
- developing allocation guidelines;
- reporting offenders;
- resolving internal fishery disputes;
- collecting and analysing local level data.

Regulations on mesh size and net length and demarcation of restricted zones are subject to joint management.

Source: Moffat & Kyewlayanga (1998)

The approach adopted for regulating gillnetting in Kosi Bay includes similar elements to Individual Transferable Quotas (ITQs), an approach to fisheries management which revolves around creating markets through property rights reforms. However, ITQs have only been extensively tested in OECD countries.

Box 19: Co-management of gillnetting in Kosi Bay (South Africa)

Meetings between Kosi Bay Reserve staff, residents and Community Authorities concluded that that it was important to involve local residents in managing gillnetting. Gillnetting permits are allocated by Community Authorities and the Induna (traditional chief). Permits are shared and can be transferred. Communities are responsible for monitoring, although this is cross-checked by law enforcement officials. Data and information gathered through community monitoring is very valuable. However, some illegal gillnetting continues, especially as the small size of legal gillnets reduces financial returns, and is rumoured to be reaching commercial scale.

Source: Kyle (1995)

Box 20 Individual Transferable Quotas ~ an innovative model for property rights reform

Rights-based management systems, which enable people to negotiate access and assert their entitlement to resources on an on-going basis, are an important tool to broker better development opportunities. ITQs are one class within the rights based (or 'entitlements') approach. They were first introduced in New Zealand in 1986 but are now being used in Iceland, Australia, the USA and Canada. An ITQ is a percentage of the total allowable catch which is set annually on the basis of scientific advice. ITQs are allocated to individuals, generally on the basis of catch history – a process called 'gradfathering'. They can also be auctioned to the highest bidder. They appear to work best if they are able to evolve into 'real' property rights with minimum interference from government. Their value increases over time, they can be freely traded and people can choose to form cooperatives or sell their shares and leave the fishing industry. In the best scenarios, the secure income offered by ITQs can be used as a basis on which to raise capital and encourage investment in the sustainable future of the fishery. Monitoring of harvests can be simplified dramatically, as ITQs create an incentive for owners to catch free riders operating in the market (de Alessi, 1998).

ITQs have been criticised because, whilst economically and environmental efficient, they can lead to social inequity. They enable large commercial companies to buy up all of the rights to fish stocks, often resulting in marginalisation of small independent fisherfolk. Against this should be weighed the fact that people are compensated for their entitlement to their proportion of the catch - without the ITQ, the commercial operator could have simply pushed them aside. The approach commends itself where there is uncertainty as to the level of the stock, for as long as it is subject to regular review, the yield can be adjusted in line with productivity.

It is interesting that ITQs have only been implemented in the developed world. As far as we know, no developing country examples exist. It appears that ITQs may work best when the following preconditions exist:

1. Catch is landed at a few, well monitored landing points (so markets and authorities can immediately evaluate performance against quota).
2. Scientific authorities have sufficient capacity to monitor fish stock and set quotas.
3. Governance and arbitration mechanisms exist to ensure that those who break quotas can be made accountable.

Private sector partnerships for fisheries management have received less attention than co-management with local fishing communities, but an interesting example comes from Patagonia.

Box 21 A partnership approach: Public-private collaboration in the Patagonia Coastal Zone Management project (Argentina

The Patagonia Coastal Zone Management project provided information to local fishing and whale-watching industries that helped make them more efficient at the same time as reducing their threat to coastal biodiversity. The coastal zone management plan reserved zones for inshore fishers, reducing competition from large offshore fishing fleets. In exchange, the fishers agreed not to work in sensitive areas. Whale-watching boat owners agreed to only make trips with full boats, reducing the number of trips and trip costs, while maintaining income and lowering the impact on rare right whales. The initiative was led by influential people from the region who played a valuable role in fostering government support. The main lesson from this initiative is that public/ private sector partnerships must directly address private sector costs and perceived risks, and offer benefits to private firms.

Source: GEF (1998b)

Finally, the Marine Stewardship Council has currently only certified fisheries in OECD countries. While scope for fisheries certification in the region is limited because of the amount of population data (including long-term trends) necessary to indicate sustainable offtake, it may be feasible for some of the higher-value fisheries on the western cape of South Africa.

Box 22: Marine Stewardship Council

The Marine Stewardship Council (MSC) is an independent, no-profit organisation, formed through a partnership between the World Wide Fund for Nature (WWF) and Unilever Plc, a private company. Unilever has gained an enhanced environmental image in return for supporting the MSC and changing its own fish-buying practices. The MSC has established a broad set of principles and criteria for the voluntary certification of sustainable fisheries. Fisheries meeting these standards will be eligible for certification by independent accredited certifying firms. Three fisheries have been certified so far are Alaska salmon, Western Australia rock lobster, and the Thames blackwater herring.
Sources: www.msc.org; www.sustainablebusiness.com;

7.3 Coastal forest management

As in inland areas, financing mechanisms for coastal forest management have emphasised co-management approaches. The example included here combines co-management with retention of revenues derived from permits. A further example from outside the region is based on a transfer of usufruct rights.

Box 23: Proposal for retained revenues for mangrove management in Tanga (Tanzania)

Under the mangrove management plan being developed for the Tanga area, the following division of revenues from permits has been proposed:

- 60% retained at village level;
- 25% retained at district level;
- 15% remitted to central level.

Of the 60% retained at village level, 50% should be used for mangrove management, and the remainder for other village purposes.

Source: van Ingen (pers. com.)

Box 24: Mangrove Stewardship Agreements (Philippines)

The aim of the Mangrove Stewardship Agreements is to restore the more traditional communal ownership of forests. Local communities (or private individuals) can obtain a 25-year usufruct lease over a given mangrove area with the right to cut trees selectively, establish new mangrove plantations and collect the fish and shellfish of the area based on a mutually agreed mangrove forest management plan. The Department of Environment and Natural Resources which implements this scheme

will assist the local communities and individuals to prepare the management plan if necessary. Local NGOs are also contracted to assist in initial community organising activities, which include an awareness campaign of the benefits obtainable from mangrove areas and an explanation of the steps involved in obtaining a stewardship agreement.

Source: FAO (1998)

Accreditation schemes are growing in popularity. Large international agencies like WWF and the World Bank are committing to aggressive targets to promote forest accreditation (through schemes like, but not limited to, the Forestry Stewardship Council). While most accreditation schemes have focused on timber certification, there is a recent move towards the certification of non-timber forest products (NTFPs). This is significant as the timber values of coastal forests in the region are generally low (although charcoal from Kiunga in Kenya is exported to Saudi Arabia). A further constraint is that the markets for the most significant coastal forest products, local construction timber, fuelwood and charcoal, do not generally place a premium on certified products.

A further example is the Conservation Enterprise Fund, an International Financial mechanism sponsored by the IFC and the GEF.

Box 25: Conservation Enterprise Fund to support private sector investment in biodiversity protection

The Conservation Enterprise Fund (CEF) was established by Conservation International in April 1999 to make investments in small-medium sized companies which directly contribute to the protection of biodiversity, primarily in the areas of ecotourism, agroforestry or non-timber forest products. The CEF is financed through a loan of US$ 100,000 from the Global Environmental Facility of the International Finance Corporation (IFC). The CEF makes debt or equity investments of US$ 25,000-250,000. Investment terms vary, but most are at or below market rates in the country in which the company operates.

Source: www.conservation.org

Where the scope for user fees and certified products is limited, external long-term sources of funding for forest management must be sought. Coastal forest management in Madagascar continues to benefit from the first debt-for-nature swap in the African region, agreed in 1989.

Box 26: Debt-for-nature swaps for coastal forest management (Madagascar)

With funds from USAID, WWF purchased US$ 3 million of Malagasy external commercial debt at approximately half its face value. The Malagasy Central Bank converted these funds into local currency at the full face value. The funds are administered by WWF, and used to finance a long-term support programme to the Ministry of Water and Forests, including management activities in coastal forests. Most of these activities can be financed from interest payments alone, so that the fund is declining at a very slow rate and financing will be provided into the long-term.

Source: Siegel (pers. com.); www.panda.org

7.4 Waste management

We found two examples of sustainable financing initiatives related to waste management in the eastern African region: user charges in Dar es Salaam, and the use of refundable deposits to encourage better waste management and waste reduction in the Seychelles.

Box 27: User charges for waste management in Dar es Salaam (Tanzania)

In Dar es Salaam, waste management has been sub-contracted to a private enterprise. Charges are levied on users to cover the costs of waste management. The level of charge varies by residential area in a form of means-testing. This approach is now being replicated in other Tanzanian municipalities.

Source: Daffa (pers. com.)

A constraint on the wider use of residential user charges to finance waste management activities is the need for a large number of concentrated users, such as occurs mainly in urban areas. User charges could also be levied on commercial/ industrial waste producers. A difficulty here is that much of the waste-related pollution of coastal areas is linked to inland sources, but it is difficult to trace these sources and apply the 'polluter pays' principle.

Box 28: Refundable Deposits for Waste Management (Seychelles)

Refundable deposits are levied on the organisers of all public events to cover the costs of waste disposal and clean-up activities. This approach could be extended to include refundable beach waste deposits targeted at the tourism sector, and refundable mooring fees to offset costs of reef damage.

Source: Emerton (1999)

Outside of the region there is more emphasis on the use of public-private partnerships in the waste management sector. One example that we cite is the Batangas Bay demonstration site in the Philippines, where a public-private consortium has been formed to manage municipal and industrial waste.

Box 29: Public-private partnership for waste management in Batangas Bay (Philippines)

Batangas Bay is a demonstration site under the GEF/ UNDP/ IMO Regional Programme for the Prevention and Management of Marine Pollution. A public-private sector partnership was established to contribute private sector expertise and financing to develop, construct and operate efficient and effective environmental facilities and services. Six companies submitted expressions of interest for four projects dealing with municipal solid waste, agricultural waste, ship and port waste and industrial hazardous waste. A consortium of companies was eventually selected as the private partner for an integrated waste management facility. Companies have also negotiated voluntary agreements with government on waste reduction and participate in marine monitoring programmes.

Lessons from this approach include:

- Projects need to create a forum to bring different types of stakeholder together, particularly the private sector and different levels of government.

- The private sector needs a range of incentives and enabling conditions to promote active participation (e.g. ensuring that government representatives in such a forum have real decision-making power and policy influence so that the forum provides a real opportunity for the private sector to influence policy and decisions which will affect them).
- Representation of the private sector by an association reduces appearances of special treatment to individual companies, provides a means for broader private sector concerns to be expressed, including environmental concerns.

Sources: www.unesco.org/csi/wise; GEF (1998);

7.5 Land-use Planning

In many countries, financing of new planning initiatives has revolved around partnership and creating property rights. Many of these activities promote sustainable financing because they reduce the administrative costs of coastal management and also create market incentives for sustainable resource management. We illustrate these approaches through case studies in Madagascar, where rural communities can gain tenure for natural resources though secure contracts with the government, and Cyprus where tradable development permits have been issued to encourage biodiversity conservation.

Box 30: Local Resource Management Contracts (Madagascar)

Under Malagasy law, a rural community can enter into a contract for secure local resource management with the State. The contract provides for the management of a renewable natural resource within a demarcated community area by the rural community in return for secure land tenure. The community is assisted in this process by a qualified environmental mediator chosen by the community. The contracts are made for a trial period of three years but are renewable. Access to the demarcated area is exclusive to the community making the contract, and the commune is required to enforce this. This example demonstrates how improved security of tenure for local can create incentives for a longer-term perspective on resource utilisation and can lead to more sustainable management practices.

Source: Babin et al. (1997) cited in FAO (1998)

Box 31: Tradable Development Rights (Cyprus)

The Government of Cyprus has designated part of the Akamas Peninsula in coastal Cyprus as a non-development area in order to protect the area's high biodiversity. A system of transferable development rights has been proposed in order to raise funds and reduce the costs of conserving the area. Instead of being compensated for development rights foregone, landowners are able to trade these rights for property in other areas or sell their rights to concerned conservation organisations.

The replicability of this mechanism in Eastern Africa is limited. In several countries in the region, land is owned by the state which allocates certain rights to private individuals/ companies/ communities. This may imply that landholders do not have automatic development rights and so both the need for compensation and the scope for tradable development rights is limited. For example, in Mozambique, land rights cover 'use and benefit,' and any form of land development activity requires a license, which the state is entitled to refuse. Landholders do not have rights over forestry and wildlife resources (except subsistence rights in the case of communities), as these are administered separately. However, in order to safeguard forest management, it may be possible for conservation organisations to apply for forest management rights

for the purposes of conservation. In addition, this approach requires relatively sophisticated legal system, which is not available in several countries in the region.

Source: Panayotou (1994a) cited in Emerton (1999)

In South Africa, a proposal to finance land-use planning through user fees is in development.

Box 32: User fees to finance land-use planning by coastal trust (South Africa)

The proposed Amatola Coastal Trust will be a non-profit making company dedicated to regional-level coastal management, and responsible for zonation, controlling vehicle access points, monitoring, data collection and collation, and education. The Trust will be implemented by the Amatola District Council assisted by a committee representing coastal stakeholders. Start-up financing will be drawn from a combination of the East London transitional local council, the private sector and NGOs. Eventually, all operating costs will be covered by funds raised through retained permit fees for vehicle access and other user fees.

Source: Marine Working Group (2000) Draft business plan. Marine Working Group: East London

7.6 Research and education

Sustainable financing approaches for research activities generally focus on user fees (such as bench fees and facilities fees).

Partnerships with wealthier universities or research institutes can be an important mechanism for financing research programmes and occasionally research facilities, as previously in Inhaca Island in Mozambique. In South Africa, the fisheries industry contributes to the financing of the Sea Fisheries Research Institute (Liehman, pers. com.). In Tanzania, the private sector, including breweries which contribute to marine pollution, participate in the financing of marine research in Tanzania, through the Marine Association for Conservation of Tanzania (MACT) (Daffa, pers. com.).

Subscriptions/ membership-based approaches tap into willingness to pay values. Examples are the River of Raptors programme in Mexico and the Charles Darwin Foundation Galapagos, Ecuador.

Box 33: Tourism user fees to finance raptor research (Mexico)

Pronatura Veracruz is a relatively small NGO which runs a conservation and community-based environmental education programme in the coastal state of Veracruz in Mexico. This area includes the world's largest migration corridor for raptors. Pronatura Veracruz sells guided tours to observe raptor migration. Each visitor automatically becomes a member of the Amigos del Rio Rapaces programme, and receives a biannual newsletter with information and articles donated by recognised names in the birding world, notes on the progress of Pronatura's conservation and environmental education programme and easy to follow instructions on how to resubscribe. (Donations are tax deductible in the USA.) In 1999, 138 active members donated an average of US$ 158 each. Costs of running the membership scheme are estimated at about 10% of income. Funds are used to

cover the costs of a raptor monitoring programme. The main lesson concerns the importance of frequent and timely communication – the newsletter is time to coincide with the migration season.

Source: www.planeta.com

Box 34: User fees to support research in the Galapagos (Ecuador)

The Charles Darwin Foundation (CDF) Inc. and the Galapagos Conservation Trust (GCT) are not-for-profit registered charities set up to raise funds for conservation, environmental education and scientific research in and on behalf of the Galapagos Islands.

CDF Inc has more than 8,000 members and raises funds from individuals and institutions. With a contribution of US$ 25 or more, 'friends of Galapagos' receive the following benefits:

- a one-year subscription to "La Carta", an English-language newsletter;
- annual subscription to "Noticias de Galapagos", the English-language scientific journal of the Charles Darwin Foundation;
- an annual science review, published by the Charles Darwin Foundation;
- participation in private lectures and other educational fora of Galapagos conservation;
- a Tui de Roy colour photograph (with a gift of US$ 100 or more).

The contribution is tax deductible for U.S. citizens.

The GCT is UK-based and organises events and functions for members in the UK. UK tax-payers can increase the value of their subscription at no cost to themselves by paying with a Deed of Covenant. Legacies to registered charities are also exempt from inheritance tax. CGT also makes use of volunteers, for example in preparing and maintaining their website.

Source: www.darwinfoundation.org

8 Innovative Financial Tools and Market-Based Instruments

8.1 Innovative international financial flows

The principal types of innovative international financial flows that could play a role in the region are debt-for-nature swaps, bioprospecting concessions and possibly carbon offsets.

8.1.1 Debt-for-nature swaps

Debt-for-nature swaps are an agreement between an international donor or environmental NGO and a debtor country for the cancellation of debt in return for specified commitments by the debtor country. In most cases, debt swaps have been facilitated by an international NGO like WWF and Conservation International.

Debt swaps became popular in the late 1980s and early 1990s especially in the high-biodiversity, heavily indebted countries of Latin America. They have since declined in importance due to lower discounts on debt purchases, but this situation may change with the current emphasis of international development agencies and donor countries on the HIPC initiative.

- The concerns associated with debt swaps relate to their non-market nature, which means that there is no guarantee that the recipient country will use the money effectively. (In Madagascar, this problem was resolved by channeling funds to a WWF-administered programme.)
- Debt swaps often release large amounts of money in a short period of time. This can cause considerable market distortions and efficiency problems, especially if the recipient institution is weak. This is a serious conern in eastern Africa. Trust funds or other mechanisms can be utilised to manage debt swap funds more effectively, for example by releasing interest payments only.
- Further opportunities for debt swaps for the eastern African region should be explored in combination with an analysis of institutional pre-requisites to ensure effective management of financial resources once they are received.

8.1.2 Bioprospecting

Bioprospecting deals – where a pharmaceutical company or other medical research establishment pays a royalty on access to potential new drugs derived from nature – are certainly one source of finance (see Box 11). But these deals may not generate sizable revenues needed by management authorities. Generally, the potential for new discoveries is limited by diminishing discovery rates (the most promising species have already been tested, although the test rate among marine organisms is much lower than for terrestrial species). In addition, pharmaceutical technologies and *in vitro* synthesis of drugs reduce the reliance on natural sources. To be 'sustainable' and to provide incentives for conservation, payments must be based on ongoing royalties rather than one-off payments for access although this is higher risk for the producer country (Richards, 1999).

8.1.3 Carbon offsets

Carbon offsets involve a country or company which emits CO^2 paying companies or countries that choose to reduce their CO^2 emissions by switching to renewable energy sources, reducing deforestation (of mangroves, for example) or sequestering CO^2 by growing trees. The precise arrangements are still under negotiation following initial proposals were made in the UN Framework Convention on Climate Change (FCCC) in 1992. However, the lack of specific clarity on the functioning of carbon offset trading has not stopped companies and countries from embarking on speculative ventures. Costa Rica has perhaps the most advanced carbon offsetting procedures, primarily focused on the forestry sector. The scope for carbon offset trading for coastal management needs to be explored more fully, in particular the question of whether patchy coastal forests and effectively non-renewable coral reefs can provide an appropriate resource base.

Box 35: Carbon Trading in Costa Rica

The Costa Rican Office of Joint Implementation (OCIC) was established in 1996, specifically to create 'certified tradeable offsets' (CTOs) from forestry related activities and protected areas in the country. OCIC was established with support from the World Bank and the Earth Council among others.

OCIC aims to sell CTOs for 18m tonnes of carbon, the first batch of which (200,000 tonnes) was sold at $10 per tonne. The objective is to invest the returns from these sales into the Protected Areas Programme which includes 28 national parks, directly to land owners to create incentives for reforestation, and to other environmental initiatives. Certification and verification of offsets is conducted by independent agencies (in this case SGS Forestry) and the government.

Source: Richards, M. (1999).

8.2 Domestic economic instruments

8.2.1 Taxes

The difference between taxes and user fees/ charges rests on whether a defined access right or service is received in return (for example, contrast fish landing taxes with fishery license fees). In theory, taxes on users of a coastal resource should compensate for the costs to society of that use - the polluter pays principle. Well-designed taxation systems also create incentives for responsible use. In practice, most revenues raised are usually directly to the central treasury, and only a proportion is retained to cover the costs of management.

In developing countries, three constraints limit the use of taxation to finance coastal management:

- the need to attract investment has led to government reluctance to impose higher taxes or resource use charges;
- limited enforcement and revenue collection capacity;
- the urgent need to increase central budgets limits the scope/ willingness for revenue retention at the local or sector level.

8.2.2 User fees/ charges

This study has found an emphasis on user fees, especially entrance fees for tourists to protected areas. They are administratively easy to collect, especially where high income users with single entry point. It is important to set the price correctly, so that it either covers management costs or raises the maximum amount of net revenue, without exceeding carrying capacity. Increased charges will, in most cases, reduce the total number of users or amount of use. As noted above, it is also important that both user fees and revenue retention are backed by legislation(van Ingen, pers. com.).

A widespread concern in developing countries is that many local users are poor and cannot afford to pay charges which would cover the collection costs. However, it is generally accepted that willingness-to-pay is much greater where funds are reinvested in conservation/ management (Ngoile, pers. com.; van Ingen, pers. com.). The legality of the retention mechanism is doubtful. Some coastal managers argue that user fees could be charged on a much wider range of local activities (for example, fuelwood and charcoal extraction) especially if locally-controlled and reinvested. Cultural factors also play a role. In southern Mozambique, where most of the tourists are South Africans, willingness-to-pay is very low as user fees for state-managed resources in their own country are generally low, and (probably) they doubt that funds will be spent effectively. Operators do not cooperate and retain most of the revenues themselves.

It is also clearly essential to ensure that user charges do not encourage unsustainable levels of use (Ngoile, pers. com.), especially as high species diversity implies low population numbers for particular species (Rumisha, pers. com.).

8.2.3 Bonds/ deposits

Bonds/ deposits cover the mitigation costs of private sector activities, as well as provide incentives for users to reduce the impact of their activities or repair any damage in order to reclaim the deposit. As the deposit is posted in advance, the mechanism is relatively easy to enforce. With innovative thinking, bonds/ deposits could be replicable in a range of sectors across the region. They are especially valuable where mitigation costs are unknown and a sizeable refundable deposit can be collected (e.g. deposits against habitat restoration following mining of sand dunes).

8.3 Creating markets/ property rights

8.3.1 Individual Transferable Quotas and Tradable development rights

Individual transferable quotas (ITQs) have been used extensively in the developed world but hardly at all elsewhere. In essence, ITQs are property rights to a proportion of fish catch. In their purest form, these rights can be bought and sold on the open market. They can even be put up as collateral to obtain credit from banks. For further discussion, see Box 20.

Tradable development rights (TDRs) have proved a valuable tool in OECD countries, but no examples were found in the region. For TDRs, land development rights are separated from land ownership rights. Development rights claimed back by the state as part of coastal planning activities can be traded for development rights in less sensitive areas rather than compensated in cash. This reduces the cash costs of restricting development rights. Alternatively, conservation organisations can purchase the development rights to prevent development.

The replicability of TDRs is limited by the legal systems of many countries in the region. In some countries, land is owned by the state which allocates certain rights to private individuals/ companies/ communities. This may imply that landholders do not have automatic development rights and so both the need for compensation (especially to those who do not claim more extensive historical rights) and the scope for tradable development rights is limited. For example, in Mozambique, land rights cover 'use and benefit' and any form of land development activity requires a license, which the state is entitled to refuse. Landholders do not have rights over forestry and wildlife resources (except subsistence rights in the case of communities), as these are administered separately. However, in order to safeguard forest management, it may be possible for conservation organisations and other stakeholders to apply for forest management rights for the purposes of conservation.

8.4 Partnerships/ co-management: with private sector, with local communities

8.4.1 Community-based approaches

There is a wide-ranging literature on community-based management through formal delegation/ devolution of management authority in Eastern Africa. Of particular interest for coastal management is that delegated management over fisheries may face fewer legal obstacles than delegated management over forest resources, as the right of fishers to catch and sell fish is less frequently questioned than the rights of communities to harvest forest resources for commercial purposes and because fishing is often a primary livelihood activity which compensates for the transaction costs of delegated management.

8.4.2 Private sector approaches

Relatively few private sector partnership approaches are found in the eastern Africa region - only in Tanzania and the Seychelles is there significant private investment in coastal protected areas. This reflects a number of factors;

- In several countries, the private sector remains weak and the private sector investment framework needs strengthening. Replicability is greater in those countries in the region more open to the private sector. The Chumbe experience also points to the need for governments to create opportunities, mainly a supportive investment framework, for those private entrepreneurs who do share their conservation and development objectives. Even where private enterprises are not-for-profit, they need to break even and the lead time for coastal management initiatives is often long (for example, eight years in the case of Chumbe) (Rumisha, pers. com.)

- Colonial history and current demographics implies that it is not generally possible to hand over large areas to the private sector for conservation/ management (Chumbe and Cousin islands are exceptions). There can be a reluctance on both sides to adopt a partnership approach (Rumisha, pers. com.)

- Public-private partnership, or effective privatisation of management activities, can lead to conflicts of interest, especially where the profit motive is high. Most private sector enterprises are concerned with short-term profits rather than conservation and local development objectives, and the incentives for private operators to share benefits or revenues with local communities is often diminished. Divergence between government and private sector objectives can be addressed

through tender/ licensing systems (including EIA requirements) and ongoing regulation and enforcement. Government stills plays a critical role in the successful private management of coastal resources. However, the private sector must also gain if the initiative is to be sustainable.

Private sector investment in coastal management can be stimulated by accreditation/ certification schemes. Accreditation schemes are systems of standards introduced to promote sustainable resource use. Consumers can exercise their desire to protect the natural environment, both locally and globally, by choosing products with recognisable labels that indicate a sustainable source. The sustained success of accreditation schemes is ensured by multinational suppliers of consumer products who recognise the marketing benefits of providing products which consumers can be confidant have been produced in an 'environment friendly' way.

The Coastal Environmental Award Scheme in Tanzania is another way of encouraging private sector and individual contributions to coastal management.

Box 36: Award scheme to encourage appropriate resource management practices, Tanzania

The main aims of the Coastal Environmental Award Scheme are to promote public participation in environmental protection and coastal resource conservation, and to raise public awareness of the need for integrated management and sustainable use of coastal and marine resources. The Award Scheme is designed to encourage the use of environment-friendly technologies and to reward individuals and groups who carry out appropriate resource management practices. There are four categories of competition: for schools, groups/ villages, individuals, and commerce/ industry. The scheme is organised and implemented by district award committees in collaboration with the Tanga Coastal Management Partnership and other coastal programmes. Prizes are awarded 'in kind', and are usually materials or tools which will be useful in continuing the appropriate practice. Financial support is drawn from commercial sponsors, such as Tanga Cement Co. and Coca Cola Kwanza, and USAID.

In 2000, over 20,000 Tanzanians in seven coastal districts submitted entries. Winning activities included tree planting, environmental education, green farming, seaweed cultivation as an alternative to fishing.

Sources: www.crc.uri.edu; www.usaid.gov/environment/greencom/

The Forestry Stewardship Council (FSC) and the Marine Stewardship Council (MSC) attempt to encourage businesses to operate in a sustainable manner by providing accreditation labels to those products which fulfil their forestry or marine management criteria. FSC is of limited relevance here because it has focused so far on timber, and coastal forests in Eastern Africa probably do not contain much high-grade timber. In addition, Asia, which provides an important market, is unenthusiastic about certification. The Peoples and Plants Africa Programme, a partnership between WWF, UNESCO and Kew Gardens, is setting up a labelling scheme in Kenya and Tanzania to identify carvings which use woods from sustainable sources. The 'good wood' label will be promoted to tourists as a means of protecting the ebony and coastal hardwood stocks that are currently being degraded. Many of the 60,000 carvers in the region recognise that their current consumption of 40,000 trees per year is unsustainable and have helped identify alternative trees suitable for carving.

The strength of accreditation schemes lies in the consumer, and every agent along the supply chain to the producer, being confident of the source of the product that is purchased. Where monitoring capacities are weak or it is not possible to enforce accredited codes, the 'chain of custody' – and hence the confidence in the certification label - breaks down. There are likely to be some limitations in many eastern African countries due to lack of capacity to monitor stocks and enforce a chain of custody.

Of the international development agencies that promote private sector investment in sustainable development through capital or debt financing, the International Finance Corporation, Global Environment Facility (GEF) and CDC Capital Partners (formerly the Commonwealth Development Corporation) are some of the most relevant in eastern Africa. They provide a combination of grants, technical support and commercial funds to development activities that meet a specific set of criteria (for further information of the GEF incremental cost concept and criteria go to www.gefweb.org). The Conservation Enterprise Fund, operated by Conservation International with financing from the GEF and International Finance Corporation is one example of this kind of financial arrangement. The objective of the fund is to provide financing, at preferential rates, to new businesses that have biodiversity conservation objectives – like eco-tourism companies or suppliers of sustainably harvested forest products.

Other donor-led approaches, like DFID's Business Partnership Programme in eastern Africa directly support commercial ventures that meet poverty reduction criteria (like eco-tourism companies that locally source their supplies). This programme works through matched funding approaches and by providing technical support for defined activities.

8.5 Retention mechanisms

8.5.1 Government revenue retention

Revenue retention is an important element in strategies to secure sustainable financing. However, in many countries, governments are reluctant to increase revenue retention, given severe constraints on existing budgetary resources. The argument for revenue retention needs to be strongly supported by economic analysis demonstrating the economic contribution of sound coastal management. Lack of financial management systems and capacity at local level is a further impediment which needs to be overcome.

Decentralisation and local government reform in Tanzania gives districts greater powers for planning and implementation but funding remains a constraint. There are concerns that cash-strapped district councils will turn to exploitation of natural resources to generate funds. (Daffa, pers. com.)

8.5.2 Trust funds/ foundations

Trust funds and foundations are increasingly being used in the environment sector to sustain financial support to specified activities. The advantage of these institutions is that they can be designed to adapt to specific local needs, they can bring together a broad range of stakeholders on their management boards, and they have a set of governance rules that are enshrined in law. National-level trust funds also provide a useful mechanism for prioritisation and coordination, although many stakeholders would prefer greater autonomy (Daffa, pers. com.)

Four basic forms of trusts can be distinguished: endowment funds, sinking funds, revolving funds and umbrella funds:

- **Endowment funds** - capital is invested in perpetuity and only the accumulated interest is spent each year.
- **Sinking funds** - the interest and a portion of the capital is spent each year until the fund is exhausted over a period of 15-20 years.
- **Revolving funds** -the trust acts as a vehicle to retain income from user fees and taxes. Some portion of this income may be invested into an endowment.
- **Umbrella funds** - the trust acts as an umbrella organisation for a series of sub-accounts, each with its own governance structure.

In light of the weak private sector investment in coastal management activities, trust funds and foundations should be explored more fully as a vehicle for delivering sustainable financing in eastern Africa. They are widely used elsewhere in the world, and lessons have been learned about how to minimise their administrative costs. Three concerns remain:

a) Establishment costs of trust funds (including changes to the legal framework where necessary, and bureaucracy) can be high, since they effectively involve the establishment of a new institution;
b) Guaranteed sources of funding can result in wasteful practices;
c) It is difficult to ensure that expenditure will be effective or responsive to real demand because funds are not market based.

To resolve these issues, the design of any Trust Fund should be focused on addressing a specific market or institutional failure with the objective of improving investment conditions (through taxes or other market based instruments) over a period of years.

Box 37: **Saba Conservation Foundation (Netherlands Antilles)**

The Saba Conservation Foundation (SCF) is responsible for managing the Saba Marine Park, nature trails and other protected areas on the island, on behalf of the Island Government. The park was established over the period 1986-9 with grants totalling US$ 270,000 from the Dutch Development Cooperation, Island Government and private foundations. Visits from divers and yachts have increased dramatically since the Park was established.

SCF is a non-profit foundation, governed by a board of directors. SCF is funded through user charges on divers (US$ 3 per dive with about 23,000 dives per year), snorkelers (US$ 3 per week), Fees are collected by commercial operators as a condition for the operating permit. A yacht mooring/ anchorage fee based on the number of passengers or crew on board, or gross tonnage for larger vessels has also been introduced. All user fees are exempt from taxes. Souvenir sales generated about 18% of income. Grants provide an additional source of income which is particularly important for covering costs of expensive equipment and research. SCF also incorporates the 'Friends of the Saba Conservation Foundation' based in the USA.

The government continued to subsidise personnel costs until the end of 1992. This enabled surplus income generated through user fees etc. to be used to build up a trust fund of over US$ 100,000 by the end of 1992. This fund will be used to cover shortfalls due to fluctuating income.

In 1995, income was as follows:	US$
Dive visitor fees	41,111
Yacht visitor fees	6,111
Souvenir sales (gross)	27,778
SMP direct donations	2,556
Friends Inc. donations	2,778
Investment interest	3,889
Miscellaneous	556
Total	**84,778**

Sources: www.sabapark.com; van't Hof and Buchan (1995)

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