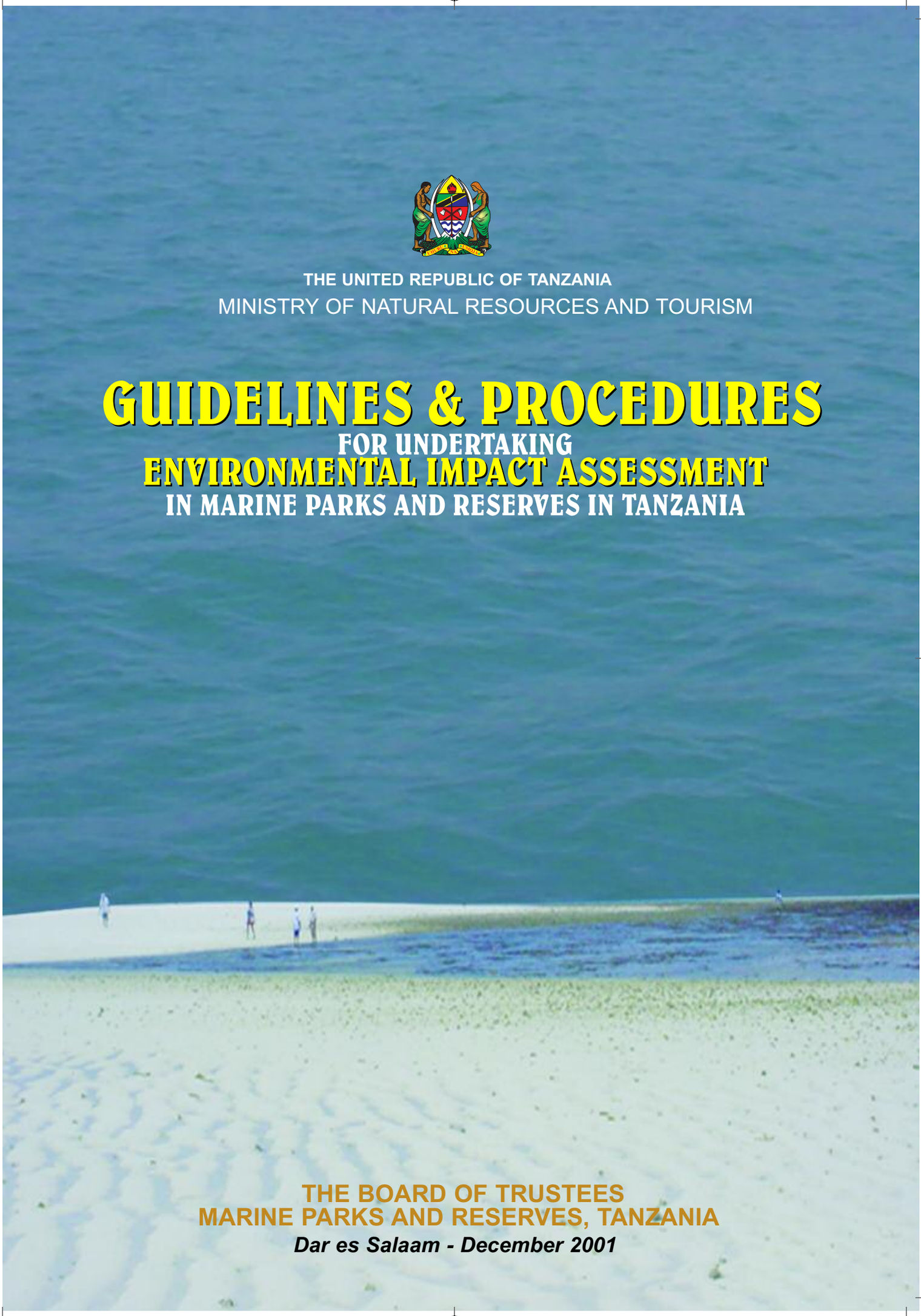


THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF NATURAL RESOURCES AND TOURISM

GUIDELINES & PROCEDURES

FOR UNDERTAKING
ENVIRONMENTAL IMPACT ASSESSMENT
IN MARINE PARKS AND RESERVES IN TANZANIA

THE BOARD OF TRUSTEES
MARINE PARKS AND RESERVES, TANZANIA

Dar es Salaam - December 2001

CONTENTS

Statement

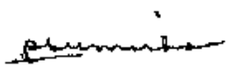
Being regulators of marine protected areas, spurred by the national requirement to participate fully in the globalized economy, we are inviting private investments in the protected areas.

Conscious of the great responsibility we carry on behalf of our fellow citizens, and being aware of the basics of free enterprise, we feel it is pertinent to make some few rules and regulations that will guide investment and operations in the fragile ecosystem. We have been entrusted to oversee and protect for the benefit of the present and future generations.

We have put up some few but basic conditions and guidelines that must be adhered to before an investment could be set up in marine protected areas. These test cases which will be improved from time to time as need arises, include the environmental impact assessment of whatever venture or investment is intended to be put up in the marine protected areas.

We are thankful to the World Wide Fund for Nature (WWF), Tanzania office, for facilitating the whole exercise of working out these guidelines. The same gratitude is extended to all our stakeholders who put up their initiatives in one way or another to make this project a reality.

Our guidelines on environmental impact assessment are not final. They must be worked upon and complimented by those requested by the National Environmental Management Council (NEMC) as required by the law.



Manager,
Marine Parks and Reserves Unit
Ministry of Natural Resources and Tourism

CHAPTER 1

INTRODUCTION

1.1. ENVIRONMENTAL IMPACT ASSESSMENT – THE INTERNATIONAL CONTEXT

Environmental assessment is recognised internationally as a key-mechanism for translating the principles of sustainable development and environmental protection into strategies and actions that can be applied to development initiatives.

Box 1.1: What is environmental impact assessment (EIA)?

"EIA is a process which is concerned with identifying, predicting and evaluating the foreseeable impacts, both beneficial and adverse, of proposed development activities by providing alternatives and mitigation measures, and aims to eliminate or minimise negative impacts".

The principles of EIA as a regulatory tool have been in existence for a long time and are recognised by many international authorities including the Brundtland Report (1987), the World Conservation Strategy (IUCN, 1980), the North-South Commission (1981) and the proclamation of the UN World Charter for Nature (1982). EIA has increasingly become recognised not merely as a regulatory tool, but as a positive process that can improve development initiatives and help to focus on, and realise, the long-term benefits of sustainable development.

Box 1.2: What is sustainable development?

"… (Sustainable development) … is a process of change in which the exploitation of resources, the direction of investment, the orientation of technological development and institutional change are made consistent with future as well as present needs (UNCED 1987:9).

Principle 17 of the Rio Declaration (1992), to which Tanzania is signatory, states that:
"Environmental impact assessment, as a national instrument, shall be undertaken for proposed activities that are likely to have significant and adverse impact on the environment and are subject to a decision of a competent national authority."

1.2 EIA REQUIREMENTS IN NATIONAL LEGISLATION AND POLICY IN TANZANIA

The national body mandated to formulate national EIA requirements and to oversee their implementation is the National Environment Management Council (NEMC). The National Environmental Policy (1997) recognizes the importance and significance of EIA in achieving environmentally sound development (Chapter 4 paragraphs 63 to 67) and outlines a national policy on cross-sectoral EIA requirements.

At the time of writing these guidelines, national legislation making EIA a routine and mandatory process for relevant development projects, is under preparation. NEMC have also drafted national guidelines on the EIA process in readiness for the forthcoming legislation.

In the meantime, EIA has increasingly been recognized as an important tool towards sustainable development in a number of other sectoral policies developed in recent years (see Box 1.7).

Box 1.3: EIA in relevant national policies Tanzania

i) National Environmental Policy (1997)
EIA is indicated as one of the instruments for environmental policy.
"EIA as a planning tool shall be used to integrate environmental considerations in the decision making process, in order to ensure that unnecessary damage to the environment is avoided and possible mitigation measures are identified. It shall be a mandatory requirement to ensure that environmental concerns receive due and balanced consideration in reconciling urgent development needs and long-term sustainability before a final decision is made" (Chapter 4: pg. 27).

ii) National Forest Policy (1998)
"EIA will be required for the investments which convert forest land to other land use or may cause potential damage to the forest environment." (Chapter 4:pg. 36).

iii) National Bee-keeping Policy (1998)
"EIA will be required for investments which will take place inside or around bee reserves and apiaries, and which may cause potential damage to the bees, bee products and bee fodder plants." (Chapter 4: pg. 34).

iv) National Policy for National Parks in Tanzania (1994)
"To avoid adverse effects on the environment and to ensure that environmental quality is maintained, restored and enhanced, EIA will be required on all major actions, developments, activities within and adjacent to national park boundaries, including but not limited to major actions proposed by TANAPA, other agencies, organisations and private entities" (Chapter 2: pg 11).

v) The Wildlife Policy of Tanzania (1998)
"…enforcing EIA process for proposed developments in Protected Areas (PAs) and requesting for environmental planning for developments to be carried out in wildlife areas outside PAs in order to minimise negative impacts" (Chapter 3: pg 13).

vi) National Fisheries Sector Policy and Strategy Statement (1997)
"To protect the productivity and biological diversity of coastal and aquatic ecosystems through prevention of habitat destruction, pollution and over exploitation…Develop environmental impact assessment (EIA) guidelines and ensure that EIA is carried out and taken into consideration in all fisheries sector projects. "(Chapter 3: pg 11).

vii) National Land Policy (1995)
The management of coastline:
"Coastline land development shall be done after an environmental impact assessment (EIA) study has been carried out" (Chapter 7:pg 26)

viii) Model: Production Sharing Agreement, 1995
In the "Model: Production Sharing Agreement" between the Government, Tanzania Petroleum Development Corporation (TPDC) and ABC Oil Company, Article 22 focuses on environment and safety in petroleum prospecting and drilling:
"The Company should undertake at its sole expense (but as a legitimate recoverable cost), one or more comprehensive Environmental Impact Assessment studies prior to, during and after operations. This requirement is mandatory…." (pg. 66)

ix) Proposed Integrated Coastal Management Strategy currently under preparation.

Box 1.4: EIA in Legislation as Instruments for Implementing Policies

i) Marine Parks & Reserves Act No. 29 of 1994:
Section 13 of this Act explicitly requests a prior undertaking of EIA for all activities in marine parks and reserves in accordance with requirements and procedures that may be laid down in subsidiary regulations under the Act and/ or in accordance with policies laid down in any relevant General Management Plan. Section 16 further requires that within the buffer zone of a marine park, no land may be allocated for, or put to, new use without first undertaking an EIA.

ii) Fisheries Act No. 6 of 1970
This does not explicitly refer to the need for EIA although under Section 7 it gives the Minister a mandate for making regulations when he/she is satisfied that the fisheries environment is tampered with. The Fisheries Principal Regulations, 1989 (G.N. No. 317) also conveys similar requirements.

iii) Territorial Sea and Exclusive Economic Zone Act, No. 3 of 1989
Section 12 points out the application of other laws to safeguard natural resources. Article 61 of the Law of the Sea Convention on conservation of the living resources proclaims to take into "account the best scientific evidence available". Meanwhile Article 62 on utilisation of the living resources points out compliance with the "conservation measures and with other terms and conditions established" . Although the law does not explicitly call for EIA the implications calls for its application.

iv) Petroleum (Exploration and Production) Act. No. 27 of 1980
This Act requires the holder of petroleum exploration licence to conduct investigations that include "physical impact studies into the possible effects of that industry (petroleum exploration, construction, establishment, operation and transportation) on the environment". (Section 34, Sub-section (2), (h). Section 48 restricts operation in areas considered environmentally sensitive.

1.3 MARINE PROTECTED AREAS IN TANZANIA

The marine and coastal resources of Tanzania support local communities in coastal regions and do contribute greatly to the national economy. But of late, these resources have come under increased pressure due to over fishing, use of destructive fishing practice, mangrove deforestation, pollution etc. Furthermore, unregulated tourism and other development activities along the coast pose considerable environmental and socio-economic strain at both micro and macro levels. In order to maintain the integrity of the marine ecosystem and ensure sustainable use of the resources the government has declared some parts of the coast "Marine Protected Areas (MPAs)". An MPA can be declared as either "a Marine Park" or "a Marine Reserve".

MPAs aim at retaining the areas in question in their natural state, thus protecting habitat for the productivity of ecosystems and endangered species as well as protecting scenic and coastal areas against erosion and other environmental abuse. The establishment of a MPA, therefore, is considered the optimum management strategy for conservation of the area's critical biodiversity values and attaining sustainable utilisation of marine resources.

Box 1.5: Why create a Marine Protected Area?

"Marine protected areas" are created essentially:
- To preserve biological diversity;
- To maintain essential ecological processes and life support systems;
- To ensure the sustainable utilisation of species and ecosystems; and

Since the coastal environment supports the social, cultural and economic livelihood of local communities through the provision of basic existence- food, shelter, incomes and employment, an

MPA helps to enhance the living standards of the communities. The MPA could also take advantage of the natural endowments and aesthetic attractiveness of the coastal and marine environment to promote recreation, tourism and education oriented activities to compliment local and national income.

Box 1.6: What is a marine park or marine reserve?

For areas under the jurisdiction of mainland Tanzania, the declaration of marine parks and marine reserves are governed by the Marine Parks and Reserves Act, No.29 of 1994 and can include:

- Any area within territorial waters or the exclusive economic zone or any island or coastal area declared as a marine park or reserve by the Minister for the time being responsible for marine parks and reserves;
- all submerged or dry land, waters, airspace, tideland, and subsoil within the area as described in the declaration notice or general management plan of the area; and
- a buffer zone, namely any area outside of, but generally adjacent to, a marine park boundary that is designated as such under the General Management Plan of the park in question.

At the time of writing these guidelines, the following areas are MPAs as provided for under the Marine Parks and Reserves Act, No.29 of 1994:

Marine Parks	**Marine Reserves**
1. Mafia Island Marine Park; 2. Mnazi Bay-Ruvuma Estuary Marine Park	1.Fungu Yasini Marine Reserve 2. Mbudya Island Marine Reserve 3. Bongoyo Island Marine Reserve 4. Pangavini Island Marine Reserve 5. Maziwe Island Marine Reserve

In Zanzibar (including Pemba), marine protected areas are designated under separate legislation specific to Zanzibar. Gazetted areas include:

1. Chumbe Island Marine Sanctuary;
2. Menai Bay Conservation Area (MBCA) in Unguja;
3. Mnemba Conservation Area in Unguja;
4. Misali Island Conservation Area (MICA) in Pemba;

The guidelines herein apply specifically to areas covered by the Marine Parks and Reserves Act, No.29 of 1994. They would only apply to marine protected areas in Zanzibar if the Zanzibar Government adopted them.

Although development within marine protected areas is essential for sustainable financing of MPAs in Tanzania, however such developments should ensure sustainable use of resources. In order to ensure that is done, the marine parks and reserves authorities have to ensure that the proposed investments/development projects or activities within the protected areas comply with the following:

a) Do not compromise the special sensitive and fragile ecosystems typical to marine parks and marine reserves, and other valued ecosystem components.
b) Meet all the requirements of the approved General Management Plan and/or buffer zone.
c) Do not contradict the purpose and objects of marine parks or reserves.

This is safeguarded by a policy of subjecting all investments or development activities to Environmental Impact Assessment (EIA) prior to their acceptance within the marine park or reserve, and ensuring that the recommendations of the EIA are agreed by the investor before implementation.

Box 1.7: Who are the management authorities for marine parks and reserves?

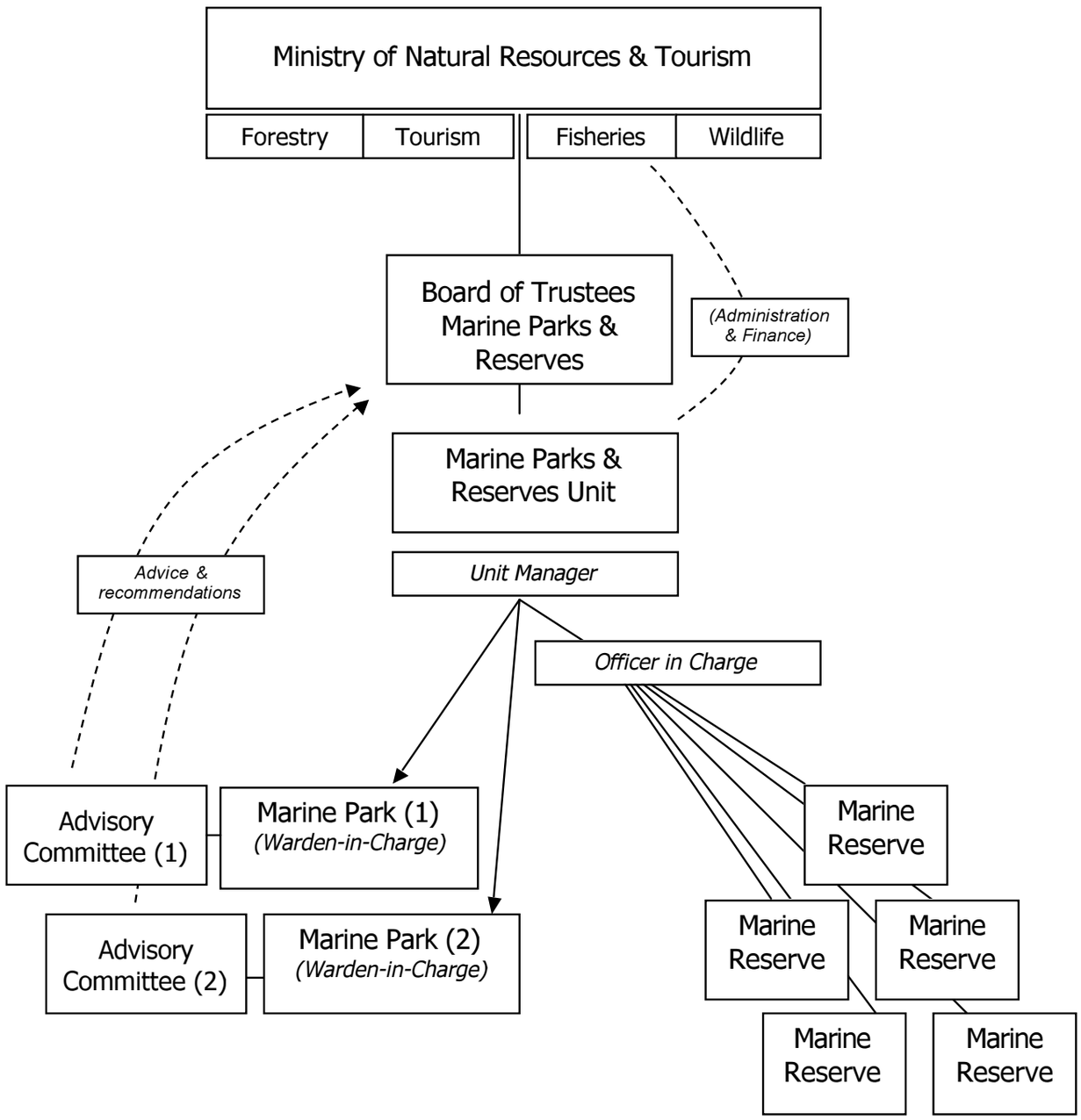
The management authorities for marine parks and reserves in Tanzania include:

- The Ministry of Natural Resources and Tourism;
- The Board of Trustees, Marine Parks & Reserves, Tanzania;
- The Marine Parks and Reserves Unit, under the Unit Manager;
- Advisory Committees of individual marine parks;
- The park management of individual marine parks, under the Warden-in-Charge;

The first point of contact of the marine park and reserve management authority for the Project Proponent should be:

- The Warden-in-Charge of the marine park in question in the case of a marine park;
- The Officer in Charge (Marine Parks & Reserves Unit, DSM) in the case of a marine reserve.

THE MANAGEMENT STRUCTURE OF MARINE PARKS & RESERVES IN TANZANIA



1.4 THE PARTICULAR NEED FOR EIA IN MARINE PARKS AND RESERVES

Tanzania's marine parks and reserves are, by definition, endowed with special environmental characteristics, including high levels of marine biodiversity including endangered and rare species such as turtles, dugong, black corals and seahorses. These require protection. Moreover marine systems demand special attention because:

- the interactions between marine and coastal habitats are cryptic and poorly understood; and
- Marine ecosystems have no defined boundaries and ecological processes operating at large regional scale are complex and unpredictable.

But unlike terrestrial national parks, marine protected areas are intended for multiple resource-uses, neither ejecting existing residents from the area nor forbidding, on principle, existing and future uses of the resources within their boundaries. Marine protected areas have valuable ecoonomic value not only to local residents, but also to a number of commercial sectors including tourism, fisheries and minerals, oil and gas extraction. The pressure to invest in some areas can therefore be high. There is therefore a high demand in marine protected areas to device management mechanisms that will create the balance between conservation and long-term productivity on the one hand and provision of livelihood benefits and economic development on the other. On this regard it is important to emphasize that EIA is considered, not in terms of restrictions and regulations, but as a creative analytical tool that can improve the design of projects.

It is not only commercial projects that can benefit from environmental impact assessment. Subsistence or artisanal level resource-use and local community development also needs to be regulated in marine protected areas in order to ensure sustainability. Unguarded exploitation of resources by artisanal users can be as destructive and/or unsustainable as any large-scale commercial project.

1.5 HOW EIA GUIDELINES RELATE TO NATIONAL EIA GUIDELINES

As mentioned in section 1.2 above, the National Environment Management Council (NEMC) has drafted guidelines for the EIA procedures and requirements to be introduced at a national, cross-sectoral level. The guidelines and procedures described herein are not an alternative to the NEMC guidelines, rather they are complementary, and indeed can only be practically applied in conjunction with the NEMC EIA Guidelines. On the key procedural stages of the EIA itself the guidelines herein draw directly, on or refer directly to, national procedures, and NEMC plays the same central role in screening and reviewing EIAs in marine parks and reserves as it will do/does nationally. The NEMC guidelines provide many of the important details on the procedure and technical aspects of the EIA process itself, especially with regard to the stages in which NEMC is directly involved such as screening and reviewing of the EIA. It is essential that investors and EIA practitioners intending to submit a project to the EIA process in a marine park or reserve obtain a copy of the NEMC EIA guidelines to complement the ones set out herein.

On the other hand, marine parks & reserves have their own management structure and procedures for submission and approval of development proposals. For obvious reasons the NEMC guidelines do not detail how the NEMC process is accommodated by particular sectors or management bodies, so the guidelines herein aim to fill that gap. In this respect, the guidelines and procedures herein summarise the overall EIA process and explain how the NEMC guidelines are applied in the context of activities and developments undertaken within marine parks and reserves.

1.6 THE AIM OF THESE EIA GUIDELINES

These guidelines aim at giving practical guidance for environmental assessments to all parties involved in development activities in marine parks and reserves in Tanzania, especially

Investors/developers, marine parks and reserve authorities, (e.g. Mafia Island Marine Park, Mnazi Bay Ruvuma Estuary Marine Park (MBREMP), the Marine Parks and Reserves Unit), local authorities, and local people.

1.7 TARGET AUDIENCE FOR THE GUIDELINES

These guidelines are intended to be used by any person involved in developing a new project or expanding an existing project in a marine park or reserve, or any person involved in the management and conservation of marine parks or reserves:

- Developers/investors
- Local administrators
- National authorities
- Local communities
- EIA practitioners

1.8. ACTIVITIES SUBJECT TO EIA IN MARINE PARKS & RESERVES

The Marine Parks and Reserves Act, No.29 of 1994 requires that some form of assessment of environmental impact be conducted for all activities within a Marine Park or reserve:

Box 1.8: EIA requirement for activities within a marine park or reserve

Section 13 (3) of the Marine Parks and Reserves Act, No.29 of 1994 states that:
"No construction or other activities within the marine park or reserve, including the activities authorised under section 13 shall be undertaken without conducting an assessment of the environmental impact of such activities pursuant to legal, policy or practical requirements or pursuant to the general management plan or regulations under this Act or any general management plan for the area of the marine park or reserve."

Box 1.9: EIA requirement for activities within a marine park buffer zone

Section 16 (2) (a) of the Marine Parks and Reserves Act, No.29 of 1994 states that:
" ... no authority shall allocate land and put to new use any area within a buffer zone unless:
(a) an assessment of the environmental impact of the proposed activity is conducted pursuant to legal requirements, policy, practice or pursuant to any applicable general management plan or regulations under this Act; and …".

The requirement to conduct an assessment of environmental impact for all activities clearly presents a broad challenge. Many activities, particularly subsistence level or small-scale commercial activities by local communities cannot realistically be subjected to detailed, individual impact assessment. Moreover they are too numerous even to receive individual scrutiny to determine if EIA is required. Many such activities will instead fall under the umbrella of broader land-use and will be subsidiary components of general management plans developed for individual marine parks, and possibly reserves. These subsidiary plans will themselves be subjected to impact assessment, thus extending the provision of impact assessment to all the small activities conducted under the auspices of the subsidiary plan. More substantial commercial projects on the other hand may be considered on an individual basis to determine if they need to be submitted to environmental impact assessment.

The process to determine whether a given project must undergo impact assessment (and indeed the level of assessment) is known as screening and the body designated nationally to undertake EIA screening is the National Environment Management Council (NEMC). Therefore all commercial

projects proposed for implementation in marine parks and reserves are required to register with NEMC and undergo the screening process. The screening process and its possible outcomes are described in detail in the NEMC EIA Guidelines. Briefly there are 3 possible outcomes to the NEMC screening process:

- Requirement for full EIA required
- Requirement for preliminary assessment required
- No EIA requirement

Not withstanding the above process, the final decision as to the kind of impact assessment required for an activity within a marine park or reserve lies with the relevant marine parks & reserves authority. This takes account of the universal requirement for some form of impact assessment stated in Box 1.8 above.

Generally, the marine parks & reserves authority will be guided by NEMC, who will themselves take account of the special nature of the marine park or reserve during the screening. However, in cases (likely to be few) where the NEMC screening process determines that an activity is not required to undertake either a full EIA or a preliminary assessment, and yet the activity cannot be deemed to fall under a subsidiary development plan, the MPA authority will indicate to the Project Proponent what type of impact assessment is required. In such cases the marine parks & reserves authority is likely to demand for a preliminary assessment.

1.9 GENERAL PRINCIPLES

All development in marine parks and reserves should be guided by the following principles:

The Precautionary Approach Principle

In order to protect the fragile marine parks and reserves' ecosystem, the precautionary approach shall be widely applied by the Marine Park and reserve authorities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

Polluter Pays Principle

MPAs management authority adopt the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting the practical value of the investment to an unreasonable extent. It follows from this that environmental costs of developments should be internalised into the financial planning of any development, especially through mitigation measures, monitoring and evaluation.

Sustainable Development

In permitting development in marine parks or reserves the management authorities should be mindful of their commitment to sustainable development, including, inter alia:

- Protection of biodiversity;
- The duty not to transfer, directly or indirectly, damage or hazards from one area of the marine environment to another or transform one type of pollution into another;
- Promotion of the use of best available technology and best environmental practices;
- Maximising sustainable benefits especially for resident communities; and
- The duty to co-operate on a regional basis for protection and preservation of the marine environment, taking into account characteristic regional features.

Stakeholder Participation and Transparency

It is recognised that an essential component in the planning and implementation of marine protected area management in Tanzania is stakeholder participation. This extends to stakeholder representation on decision-making bodies, timely disclosure of relevant information to stakeholders in an accessible format and regular ad hoc consultation with them as and when issues arise.

1.10 CONTENTS OF THE GUIDELINES

Chapter 2	Represents an overview of the EIA procedure as a whole, including contributions to the process by both project proponent and relevant management authorities.
Chapter 3	Gives guidelines to the project proponent and his/her consultants on how the EIA should be undertaken. The guidelines are customised from the National EIA guidelines found at NEMC.
Chapter 4	Gives guidance to the management authorities responsible for marine parks and reserves and for EIA procedures in Tanzania, on what should be done at different level of the process.
Appendix 1.	Gives a check list for preparation of a detailed project proposal. The checklist is intended to guide the project proponent and reviewing/approving authorities on the detailed information needed to enable an informed decision on the investment.
Appendix 2.	Gives the general and special environmental characteristics of the marine parks or and reserves. These are intended to assist the project proponent, his/her consultant and the relevant authorities on areas which need special attention for the sake of maintaining the ecological integrity of the protected areas. This checklist should be used in conjunction with the General Management Plan of a given marine park or reserve.
Appendix 3	Contains the guidelines on how to select a suitable site for a given development.
Appendix 4	Outlines what the Letter of Intent should contain.
Appendix 5	Is a copy of the EIA registration form from NEMC

These guidelines will be used in conjunction with the National EIA guidelines and sector specific guidelines where they exist. The intention of these guidelines is to assist the project proponent, his/her consultant not to overlook certain aspects of EIA, which may be vitally important for the ecological functioning of the marine parks or reserves.

Box 1.10: What is a general management plan?

Section 14 (2) of the Marine Parks and Reserves Act, No.29 of 1994 states that the Minister should adopt a General Management Plan for each marine park that should contain:

- a full description of the nature and location of the marine park;
- a description of the biological, environmental, geologic and cultural resources of the area, and their use by local residents;
- detailed objectives of the marine park;
- a detailed account of how objectives will be harmonised and carried out, including proposed activities, development and zoning;
- a description of local resident users;
- a description of buffer areas surrounding the marine park.

Note that, although the above legal requirement for a general management plan only extends to marine parks, marine reserves may also have such a plan either individually or collectively.

CHAPTER 2

OVERVIEW OF THE EIA PROCEDURE

2.1 INTRODUCTION

Because of the diversity of investments that would be made in Marine Parks and Reserves, each investment will have its unique socio-economic requirements, and thus will have to be treated independently. Therefore, institutional/inter-agency co-ordination will be essential to ensure an efficient processing of investment permits without overlooking the special conservation requirement of the sensitive ecosystems in the marine protected areas.

The objectives of the investment procedures are to:

- Enhance multi and sectoral co-ordination in project development and execution
- Ensure participation of all key stakeholder in the process development
- Lay down a clear roadmap towards efficient investment approval procedure.

Investment in a marine park or reserve will involve scrutiny and concurrence to two main aspects:
i) Technical issues such as site selection for the proponent in planning technically feasible, environmentally friendly and socially acceptable projects; and
ii) Regulatory issues such as applying for permits, licences, title deeds and water rights.

In both respects, the development would involve registration with:

- The marine park and reserve management authority for initial assessment
- NEMC for EIA screening
- Tanzania Investment Centre (TIC) for processing large investments
- Sector ministries (Natural Resources and Tourism, Water, Lands, Industries and Commerce etc.) for technical matters
- District and local communities for land and water use permits.

Box 2.1: The Tanzania Investment Centre (TIC)

The Tanzania Investment Centre (TIC) facilitates permitting assistance for large-scale investments: a minimum of $300,000 for foreign investors and $100,000 for Tanzania investors. Therefore,

- The investment does not correspond to the physical scale of the project.
- Small scale projects approval procedure follow a different route.
- Foreign owned and nationally owned projects are subject to different approval proceedings

In short, after preparing basic description of the project, it would be appropriate for the investor to conduct preliminary consultations with the above institutions in order to make an assessment to whether appropriate conditions exists on the proposed project site; availability/suitability of project site, compensations, conflicts of occupancy, land/ water use rights, local reactions to the project and local authorities granting approval. These activities are pre-feasibility assessments, which should be done long before the development of a fully-fledged project proposal.

In this regard, these procedural guidelines are conceived on the following premises:

- The acceptance or rejection of any development in the marine park or reserve shall be guided by the ecological sensitivity of the site requested and the impacts of the proposed development on the ecosystem and the communities living within or near the proposed site.
- The physical size of the project and magnitude of investment shall not be used as credible indicators of the severity of impacts on marine parks and reserves' sensitive ecosystems.

- The development within the park or reserve shall not be guided by short-term economic gains.
- All projects planned in marine parks or reserves whether large or small, whether the project meet the TIC minimum threshold or not, MUST undergo an approval process through the marine park and reserve management authority that assures suitability of the project to marine park or reserve.
- According to the Marine Parks and Reserves Act, No. 29 of 1994 (Section 27), any person aggrieved by any decision of any authorised officer or body in connection with a marine park or reserve, may appeal to the Board of Trustees and further, to the Minister, and that the decision of the Minister shall be final.
- Co-ordination of the whole process of submission and review of environment impact assessments will be by the park or reserve management or else by the Marine Parks and Reserves Unit in Dar es Salaam.
- The respective Sector (Ministry or District Sector Department) shall assure the project's technical feasibility, NEMC will assure its environmental suitability and TIC the project's business feasibility.
- All projects shall undergo an environment screening process at NEMC or Designated District Office. When deemed necessary a full EIA will be conducted.
- Rights to land and water use need to be obtained at Regional, District and Village level as appropriate. It should be noted that while the District Land Office is empowered to grant title to a plot of land in a marine park, the Marine Parks and Reserves Act, No. 29 of 1994 (Section 22) and subsequent subsidiary regulations, approval for any given use of that land is required from the marine park itself.
- Other Approvals and Permits: TIC certificate of incentive, Land / Water use permits and EIA Certificate shall be issued after the project has been approved by the Marine Park and reserve management authority. The latter shall grant the final approval.
- The Marine Parks & Reserves Unit, or a designated Warden-in-Charge of a marine park, shall assure that all proceedings are legally conducted.
- The Marine Parks & Reserves Unit shall establish a mechanism for monitoring and evaluating the entire approval procedure to be sure all steps were followed and appropriate documents are officially valid.
- In order to ensure the above, the approval procedure shall be handled through the Marine Parks & Reserves Unit, or a designated Warden-in-Charge of a marine park.

2.2. PROCEDURE

Step 1: Submission of a Letter of Intent

The Project Proponent shall submit to the Marine Park and Reserve management authority, a Letter of Intent (LoT) describing clearly the Project Concept for initial assessment. The list of contents of the Letter of Intent is shown in Appendix IV.
For developments within the buffer zone of a marine park (the extent of the buffer zone is defined in the General Management Plan for the marine park in question) the Marine Parks & Reserves Act, No. 29 of 1994 contains a special requirement for notification to be given to the Warden-in-Charge:

Box 2.2: Written notification by Project Proponent for developments in buffer zones

The Marine Parks and Reserves Act, No. 29 of 1994, Section 16 (2)(b) states that written notification of any proposed development, allocation of land or new use in buffer zones must be submitted to the Warden or Unit Manager not less than thirty days prior to preparation of the environmental impact assessment.

Step 2: Initial Assessment

The Marine Parks and Reserves management authority shall carry an initial assessment of the Project Concept (see section 3.1) and communicate in writing the outcome of the initial assessment

to the Project Proponent within 14 days. Notification shall also be sent to TIC (whenever applicable), NEMC/Designated District Office, District Authorities and Responsible Sector. The decision may be one of the following:

Positive outcome: Project Proponent to conduct an EIA
The development is acceptable in principle in the marine park or reserve. Full approval is subject to a positive EIA, technical, business feasibility evaluations and approval of detailed project proposal. In this case the Project Proponent shall be instructed to contact NEMC and respective sectoral ministries in order to prepare an Environmental Impact Assessment report (EIS) and a detailed project proposal. The PP will be informed of the important documents (which may be obtained at cost) to facilitate the EIA study and project proposal preparation. These may include, but not limited to, (a) MPR EIA/Investment Guidelines (b) National EIA guidelines (c) the General Management Plan for the marine park or reserve in question (d) Relevant Policies and sector specific guidelines where they exist.

Negative outcome: Project Concept Rejected
The development in the marine protected are is not acceptable, on principle. In this case reasons for rejecting the project should be given, for example the type of project is prohibited or the resource use threshold for the area has been exceeded.

Step 3: Registration at NEMC

Box 2.3: What if an EIA has already been done?

If it is evident in the initial assessment phase that EIA has been made, the Detailed Project Proposal, the accompanying Environmental Impact Statement (EIS) and Recommendations from NEMC or Designated District Office shall be subjected by the marine park and reserve management authority to an in-depth assessment.

Step 4: Screening by NEMC
Refer to NEMC EIA Guidelines

Step 5: Scooping and developing Terms of Reference for the EIA
Refer to NEMC EIA Guidelines

Step 6: Undertaking the EIA:
EIA is the responsibility of the PP. The PP shall follow the National EIA Procedure to conduct the EIA study. Chapter 3 of these guidelines provides the major steps that are found in the NEMC draft National EIA Procedure and Guidelines (NEMC, 1997).

On completion of the EIA study the Project Proponent shall submit the EIS to NEMC or Designated District Office (DDO) for review. NEMC or a DDO shall carry out the EIA review and furnish the PP with an EIA review report. The Project Proponent should simultaneously notify the Marine Park management authority when the EIS is submitted to NEMC.

Box 2.4: What is a Designated District Office

In the proposed general national EIA guidelines and procedures, it is proposed that district sub-offices will screen relatively less contentious projects. Prior to NEMC establishing such offices all projects are screened at the head office.

Step 7: Review of the EIA report and EIS by NEMC
Refer to NEMC EIA Guidelines

Step 8: Finalising Detailed Project Proposal
The PP shall revise and expand the Preliminary Project Proposal incorporating recommendations and mitigation measures outlined in the EIA report or the Environmental Impact Statement (EIS). The PP is expected to incorporate all EIA recommendations in the final detailed project proposal as well as appending the EIS and letters of approval from the District Planning Office, the District Land Office and the relevant Village Council. A checklist provided in Appendix I may be used as a guide.

Step 9: In-depth Assessment at the Marine Park and Reserve management authority
The PP shall submit to the appropriate marine park and reserve management authority the EIS and NEMC's EIA review report, together with the detailed project proposal for an in-depth assessment and subsequent approval or rejection of the proposal.

Step 10: Determination by the Board of Trustees
The results of the review and in-depth assessment will be forwarded to the Board of Trustees, Marine Parks & Reserves, Tanzania for final determination. The result will be communicated to the Project Proponent within 90 days of being forwarded (ordinarily the Board meets quarterly).
See section 4.8 for further details of the determination process.

Step 11: Project Implementation and Monitoring.
If the project proponent gets an approval to implement the project in a marine park or reserve, she / he shall sign a Contract of Agreement, which shall bind the project proponent to implement the project Environmental Management Plan and Monitoring Protocol.

Step 14: Environmental Auditing
Following implementation of the project, the Marine Parks and reserves management authority (and NEMC or Designated District Office) may subject the project to periodic environmental audits, at the discretion of the Warden-in-Charge or other authorised marine park / reserve officer. Such audits may result in recommendations with regard to infrastructure or operational features of the project that the Project Proponent may be legally bound to adopt, subject to relevant subsidiary regulations under the Marine Parks and Reserves Act, No. 29 of 1994.

Figure 2.1. Flowchart showing the procedure for undertaking EIA in marine parks & reserves in Tanzania

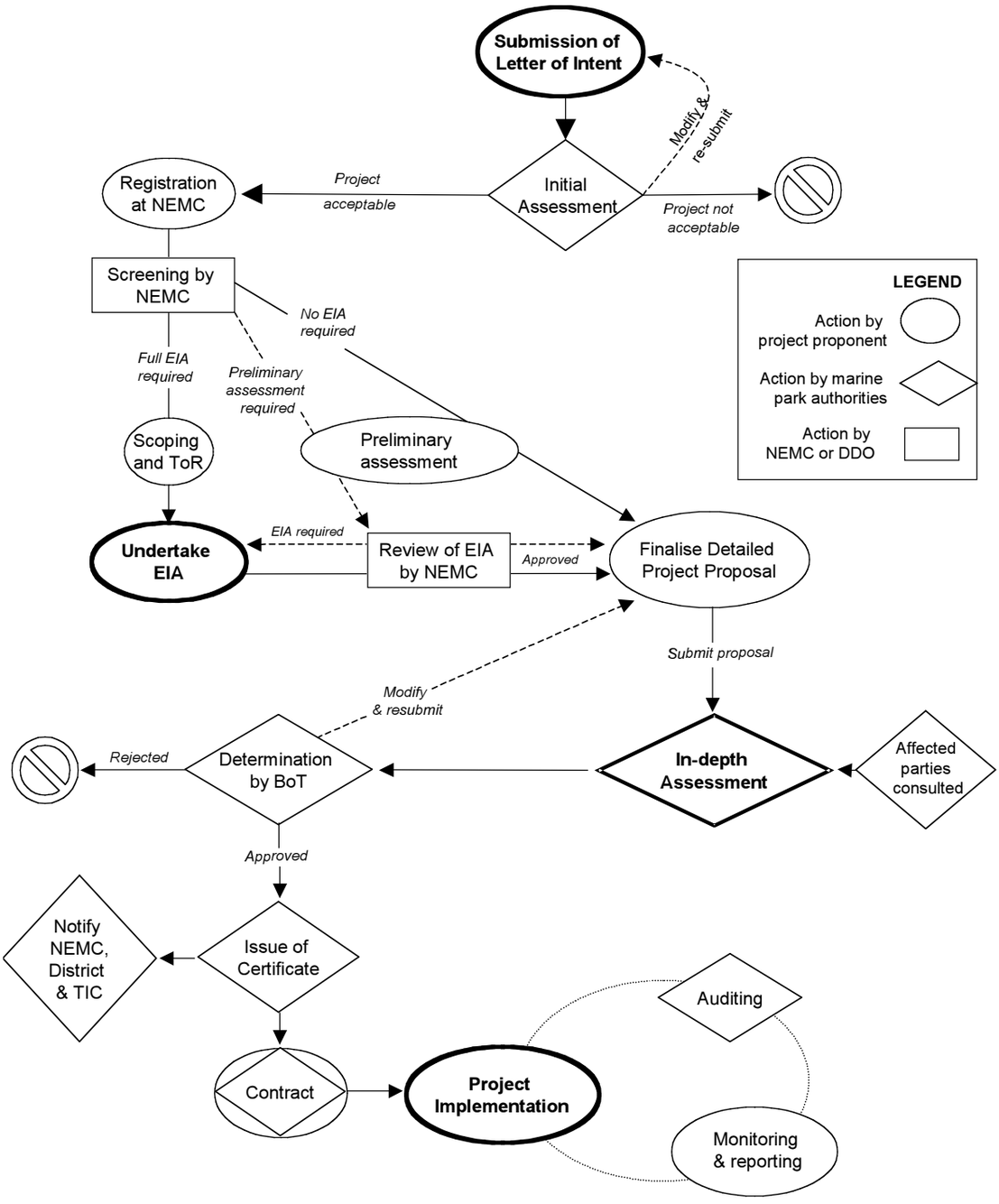


Table 2.1 **Summary of the Roles and Responsibilities of Different Parties Involved in the Marine Parks and Reserves EIA Process**

	Role of NEMC or Designated District Office	Role of Investor	Role of Marine Park/Reserve Authority	Role of Sectoral Ministry/Department	Time Frame
STEP 1 **Preparation & Submission of Letter of Intent**		Submit Letter of Intent to the marine park and reserve management authority	• Provide to the investor relevant documents; EIA • Guidelines, General Management Plans, subsidiary regulations, Marine Parks Act etc.		2-5 days
STEP 2 **Initial Assessment at by MPR authority**			• Determine the acceptability of the project in marine park or reserves. • Communicate Initial Assessment outcome within 14 days.		14 days
STEP 3 **Registration for Environmental Assessment**	Provide to project proponent NEMC EIA registration forms	Register project at NEMC or Designated District Office.	Provide NEMC contact details to Project Proponent if required	Provide appropriate sector guidelines, policies and legal requirements.	5 days
STEP 4 **Screening**	Determine the level of assessment using **checklists for screening projects in marine parks and reserves.** Prepare and submit to project proponent a screening report.		The marine park and reserve management authority represented in the screening panel/consulted in the screening exercise.	Represented in the screening panel	30 days
STEP 5 **Scooping & TOR for the EIA study**	Approve ToR for the EIA study in consultation with the marine park and reserve management authority	• Undertake scooping **using general scooping guidelines and specific scope of issues to be covered in a MPR** • Compile and submit to NEMC a scooping report and draft ToR	Provide to project proponent/ consultant relevant information, data, stakeholder identification and important contacts etc.	Provide to project proponent/ consultant all relevant information, data, stakeholder identification and important contacts etc.	14-30 days
STEP 6 **Undertaking the EIA study**		• Preparation • EIA practitioner /consultant compiles baseline information and undertakes the study. Prepare an EIS	• Provide guidelines on environmental characteristics for marine parks and reserves • Specify minimum content for the EIS.	Avail for consultation	Depends on PP
STEP 7 **Reviewing the EIA** (determining	Review the EIS report using guidelines of review of EIS for		• Ensure EIS is accessible to a wide range of stakeholders.	Participate in the review process or conduct independent review	30 days

	Role of NEMC or Designated District Office	Role of Investor	Role of Marine Park/Reserve Authority	Role of Sectoral Ministry/Department	Time Frame
(determining adequacy of EIS)	marine park and reserves projects Organise Public Reviews • Submit to the marine park and reserve management authority recommendations on the EIS		• Provide advice/participate in the review process. Undertake independent review of EIS and recommendations from NEMC or District Office.		
STEP 8 **Preparation of Detailed Project Proposal**		Prepare a detailed project proposal incorporating the EIA recommendations (use Annex 5 as a guide)		Provide advice on technical/business feasibility of the project	Depends on PP
STEP 9 **In –depth Assessment by MP or MR authority**		Submit to the marine park and reserve management authority the EIA report, NEMC review report, and detailed project proposal	• In - depth Assessment conducted by the Advisory Committee of the park or reserve • Involvement of all interested parties	Provide assistance and advice to the marine park and reserve management authority.	Up to 90 days
STEP 10 **Determination by the Board of Trustees**			Board of Trustees considers recommendation and approves, or rejects or recommends modification Set the approval conditions		Up to 30 days
STEP 11 **Environmental Management and Monitoring**		• Project proponent prepare management and monitoring plans • Project proponent sign a compliance contract i.e. commitment to implement the identified impact management measures.	Set and/or endorse monitoring criteria.	• Endorse monitoring criteria • Review monitoring reports or conduction own monitoring	
STEP 12 **Environmental Auditing**	Subject the Project to periodic Environmental Audits.		• Represented in the auditing panel • Approve Audit report • May conduct own independent audits	• Represented in the auditing panel • Approve Audit report • May conduct own independent audits	

CHAPTER 3

ROLES AND RESPONSIBILITIES OF THE PROJECT PROPONENT

3.1 INTRODUCTION

EIA is part of the basic component in the development of a project and the different steps in the EIA process should coincide with particular phases of the project. EIA should commence before project design details have been finalised and well before project implementation.

Box 3.1: EIA in the project development cycle

STEP IN THE EIA	PHASE OF PROJECT
	Concept
Screening	Pre-feasibility
EIA study	Feasibility
Mitigation	Design
Environmental Management	Operational
Monitoring and Audits	Operational
	Decommissioning

The guidelines are customised from the [Draft] general National Environmental Impact Assessment Guidelines and the steps are similar in all respects. The roles and responsibilities of institutions involved in the EIA process described in Table 2.1.

3.2. SUBMISSION OF LETTER OF INTENT

Box 3.2: Roles and responsibilities of the project proponent

The project proponent shall be responsible for:
- Submission of a letter of intent to the Marine Park and reserve management authority;
- Undertaking a feasibility study and developing a preliminary project proposal (these are optional stages at the discretion of the Project Proponent and are not detailed herein)
- Registration of a concept, or proposal with the NEMC or Designated District Office;
- Scooping and compiling the Terms of Reference for the EIA study;
- Organising and undertaking the EIA study;
- Preparing detailed project proposal document including Environmental Management and Monitoring Plans and submission for approval; and
- Compliance to the management and monitoring plans.

3.3 REGISTRATION WITH NEMC

The Project Proponent shall officially register at NEMC or Designated District Office, his/her intention to undertake a development activity in a marine protected area. This is an administrative procedure involving filling in a registration form (Appendix 2) and paying appropriate registration fees. Details provided on the registration form will enable the offices to screen the project.

NEMC shall prepare and submit to the Project Proponent a Screening Report with any of the following three decisions: rejection, conducts an EIA study, or conduct a Preliminary Assessment.

The project proponent shall be provided with necessary documentation (relevant policies, legal and administrative requirements, guidelines etc.) for the EIA study.

Preliminary Assessment is an investigation that is undertaken to obtain just enough information to determine whether or not there will be significant adverse environmental impacts based on the existing information. The assessment may require extra information to be gathered from the field. Preliminary Assessment shall be the responsibility of the project proponent. The Preliminary Environmental Report shall be submitted to NEMC for review.

3.4 UNDERTAKING THE EIA

3.4.1. SELECTION AND COMMISSIONING AN EIA PRACTITIONER

After registration, the project proponent may wish to commission expert EIA practitioners or consultants to undertake certain activities in the EIA process on his/her behalf, depending on the experience and capability of the Project Proponent and existing partners or staff. If expert practitioners are not engaged, there is a danger that the resulting EIA report and EIS will be wanting and may be deemed inadequate by the NEMC review.

As part of the institutionalisation of EIA in Tanzania, NEMC will certify EIA practitioners. A register of practitioners would be available from NEMC. The Project Proponent will also be well advised to check with NEMC whether any regulations exist governing who may undertake a valid EIA (none exist at the time of writing these guidelines).

3.4.2. SCOOPING AND TOR FOR THE EIA STUDY

The project proponent shall prepare Terms of Reference (ToR) for the EIA. In order to be able to prepare adequate ToR, scooping shall be undertaken. The scooping guidelines as provided by the NEMC's draft EIA guidelines should apply.

The main tools during scooping will be the preliminary project proposal, the General Management Plan of the particular protected area, subsidiary regulations, and other technical literature relevant to the area, site reconnaissance and public consultations.

Box 3.3: The objectives of the scooping study

- Identifying components of the biophysical and social environment, which may be impacted, positively or negatively, by the project and for which there is a public concern or there is specific provision in the Marine Parks and Reserves Act or the General Management Plan to restrict or prohibit them.
- Setting clear limits or area of influence (spatial, jurisdictional [as provided by the zoning plan], temporal boundaries) of the project activities in accordance to the GMPs.
- Listing and assigning priority to issues and potential impacts which are directly or indirectly related to the proposed project.
- Identifying the likely data/information requirement for undertaking EIA.
- Preparation of ToR for impact assessment.

The following questionnaire checklist is designed to assist the project proponent or consultant during the scooping.

Identification of Issues

i. What policies, legislation and administration authorities are relevant to the proposed project?

ii. What are the physical, biological, ecological, chemical, socio-economic and cultural

characteristics that may be impacted by the proposed project? (reference should be made to relevant chapters in the GMP and to special environmental characteristics of marine parks or reserves, Appendix 5)

iii. Who are the main stakeholders to the project and how will they be consulted?

iv. Type of information/data needed for the impact assessment and where to obtain it.

v. What kind of impacts to be assessed?

Box 3.4: Stakeholders to be consulted

Scooping offers the first opportunity to involve stakeholders in the project by identifying issues that are of concern to them and tapping their knowledge of the environment.
The stakeholders to be consulted should include but not limited to:

- The general public, especially the local community with fair representation of men and women and age groups, farmers, health and social workers, fishermen, traders etc.
- Professionals and other skilled people with special and considerable knowledge on marine and coastal environments, marine parks and reserves.
- Authorities and relevant institutions such as the marine parks and reserves authorities, other designated agencies for environmental protection, ministries and government departments with direct bearing to the proposed project, and District authorities.
- Other interested/affected parties including commercial investors, local community-based and non-governmental organisations, religious groups, professional associations, societies and occupational groups.

Setting Study Boundaries

i. How does the proposed project fit in the GMPs, the Marine Park or Reserve-zoning scheme?
ii. What is the likely area of influence (both within the Marine Park or reserve and within the buffer zone) of the project activities?
iii. What are the limits of the impacts to be considered in terms of spatial boundaries, temporal boundaries, and jurisdictional boundaries?
iv. Is there any adjacent or remote areas related to the project activities, within the Marine Park, Reserve or Buffer zones, which should be considered with respect to impacts of particular aspects of the project?

Project description

Describe the project in details to provide adequate information for the impact assessment.

Environmental description

Reference should be made to relevant chapters in the GMP and the special environmental characteristics of the marine park or reserve.

Reviewing of Alternative options

Which alternatives have been assessed in terms of site sensitivity, technological options, economics, environmental consideration etc.? The alternative should also consider no-project option.

Scooping Report

The project proponent/Consultant shall prepare a scooping report showing the results of the scooping exercise. This will serve as a record for interested and affected parties and as guidelines for the impact assessment evaluation.

The scooping report shall include all items outlined in the NEMC's EIA draft guidelines.

Compiling of ToR for the EIA

The contents of ToR will depend on local conditions and circumstances of each specific project.

Generally, however, ToR shall:

- Provide formal guidance for practitioners on the range of issues that must be addressed in the EIA process;
- Clarify to the proponent as to what is expected of him/her;
- Provide the proponent with the basis for project analysis;
- Provide the review agency with a tool for compliance; and
- Establish the framework for review process by providing 'bench marks' against which EIA process (as a whole) and EIS (in particular) shall be evaluated.

The TOR shall also indicate the expected contents of the EIS.

The draft ToR shall be submitted to NEMC or Designated District Office for review and subsequent approval or disapproval. It should also be copied to the relevant officer of the marine protected area.

3.4.3 Undertaking the environmental impact assessment

The general approach towards identifying potential impacts and relevant environmental factors is to use a checklist covering the major areas of impact. The checklist in Appendix 3 is provided for guidance; however, the general checklist provided in the NEMC's draft guidelines is also applicable. It is worth remembering that an EIA study is not confined to negative impacts, but should also highlight positive impacts that may in fact mitigate or partially mitigate some of the negative impacts.

3.4.4 Public participation in the EIA process

Inter-agency, public and NGO consultation shall be initiated as part of the environmental impact assessment process for any development in the marine park or reserve.

The draft EIA procedures (NEMC, 1997) specify that:
"During the scooping stage, the proponent and consultants should conduct a mandatory scooping programme that includes public consultation with local authorities and the public, specifying the involvement of interested parties and the methodology for public participation (meetings, adverts/notices, surveys/interviews, workshops, advisory groups). During the EIS evaluation the project should be subject to a public review. After the EIS is reviewed, a public hearing may be required where strong public concern about the project and its impacts may be expressed."

Box 3.5: Objectives of public consultation

The Project Proponent should consult with the public:

- To conduct meaningful consultations with all relevant stakeholder groups;
- To promote mutual understanding with all interested stakeholders and provide them with relevant information in a form and language that is accessible and graspable to respective groups;
- To identify potential environmental and social impacts that will specifically affect stakeholders, especially by directly tapping into and consulting local knowledge and perspectives of the social and physical environment;
- To solicit recommendations on how the project could be enhanced to take better account of these impacts;
- To supplement the EIA report by incorporating details of the public consultation process;
- To demonstrate that the concerns raised have been given due attention by outlining in the detailed project proposal how the concerns have affected the project design;

The Marine Parks & Reserves Act, No.29 of 1994 and also the general management plans of marine parks and reserves strongly recommend the collaborative management and community participation. Therefore all development or activities to be developed in the marine park or reserve shall have a strong component of public participation. The affected groups and local NGOs shall be informed and consulted in a meaningful way as part of the EIA. This shall include information dissemination, consultation and public participation prior and during project construction and operation. The goal of this interaction shall be to achieve smooth and consensual project implementation as far as possible.

Important stakeholders could be identified from approved GMP. But the general categories will be: Direct stakeholders: Those people or organisations directly affected by the project, e.g. Local community (village heads and individuals, fishermen farmers etc.) government authorities (marine park authorities, NEMC, Local Government etc., Ministry of Natural Resources and Tourism; Ministry of Agriculture) and other investors.

Indirect stakeholders: Those who are not direct participants in the project, but who may experience indirect or cumulative impacts as a result of the project, or who have an interest in the project e.g. NGO; Academia; TCMP, etc.

During all consultations it is important for the Project Proponent to make accurate records of each meeting, including list of attendants, subject discussed and what was agreed. The Advisory Committee may require that such records be appended to the EIA report or the detailed project proposal for the purposes of the In-depth Assessment, so as to satisfy itself that proper consultations have been undertaken. Where appropriate, such consultations should be supported by letters from the stakeholders, confirming their support and/or reservations.

3.4.5 Revision of the detailed project proposal and submission to the marine park or reserve management

Right of Appeal if the project is not approved
If the project is rejected and the Project Proponent feels that the proposal has not been fairly assessed, he/she may appeal in writing to the Board of Trustees of Marine Parks and Reserves or further to the Minister of Natural resources and Tourism.

3.4.6 Environmental management planning

After the impact assessment, measures to mitigate the most significant negative environmental impacts shall be formulated into environmental management and monitoring plans.

For clarity, the measures shall be divided into:
a) Measures to be taken during the construction phase;
b) Measures to be taken during the operational phase, and
c) Measures to be taken during the eventual end-of-life decommissioning of the project.

These should be presented as shown in table 3.2.

Environmental Management Plan

Phase	Management Measures	Responsibility	Target level/ Standard	Costs
Construction				
Operations Phase				
End-of life Decommissioning				

The management plan shall show clearly the line of responsibility including project proponent's decision-making protocol, etc.

- Clear organisation & division of responsibilities internally;
- Clear maintenance and operational procedures of facilities;
- Regular performance, monitoring of maintenance and operations;
- Annual audit reviews of maintenance programme, operational procedures and responses to accidents;
- Increased consultation and liaison with the marine park and reserve management authority and designated environmental protection agency (e.g. NEMC) as an advisory body and regarding future regulations and legal requirements;
- Co-operation with other projects within the marine park or reserve in developing environmental protection measures of common areas of interest;
- Ongoing public consultation and information programme;
- Subcontractor monitoring and management;
- It is strongly recommended that all projects operating in marine parks and reserves should implement Environmental Management Systems (EMS). The EMS should be based upon and aim for compliance with international standards such as ISO 14000. To maintain the necessary level of management and operations, an environmental audit should be executed annually by projects operating in the marine parks and reserves.

3.4.7 Environmental monitoring & reporting

The Project Proponent through his consultants shall develop an Environmental Monitoring Plan, which will be implemented as part of the Environmental Management Plan to mitigate and monitor the impacts of the proposed project. The monitoring programme shall be based on the expected impacts from future activities identified during the Environmental Impact Assessment.

Box 3.6: Objectives of the Monitoring Plan

The objectives of a monitoring plan are to:
- Control risks and (significant) environmental impacts;
- Control and improve the project on the basis of practice information;
- Monitor continuous improvement;
- provide a simple framework to improve the level of environmental management;
- Co-ordinate and integrate the tasks of the proponent and the government agencies involved in project operation;
- Integrate present and future environmental management and monitoring activities.

Monitoring Plan Set-up

a) The plan shall:
- Focus on the construction related issues (and future decommissioning at the end of the project lifetime) and Operational issues;
- Indicate both short-term control and management of the most significant environmental impacts and longer-term environmental issues. This will allow a phased plan to be built up; and
- Show gaps in knowledge and how these gaps will be filled.

b) Priority should be given to effects:
- That can be measured;
- That will occur within a reasonable time frame (within 10 years);
- That have a cause-effect relationship with the project;
- That are uncertain;
- That can be mitigated or prevented;

- That play an important role in decision making;
- That are important to the public;
- That may be important to future projects; and
- That can be measured against reasonable costs.

(c) The Monitoring Plan shall:

- Include the relevant parameters, namely, monitoring frequency, sampling area, measurements and measuring devices, and target levels or standards to be achieved. See table 4.3;
- Be categorised according to the different phases of the project, namely, pre-construction, during construction, and post construction (operational phase).

Furthermore, cost estimates for monitoring (monitoring budget) shall be made and provided for by the project proponent. To ensure effectiveness, the plan shall indicate roles and responsibilities for monitoring and management of collected data.

Tanzania standards on environmental quality should be used, and where there are no Tanzanian standards, a mix of relevant international environmental quality standards should be applied. The standards are the target levels to be attained by the environmental management programme.

For the socio-economic aspects, the main monitoring method should be structured interviews with local residents conducted midway during construction and a few months after completion of the construction.

Table 3.3: Example of an Environmental Monitoring Plan

Parameter	Monitoring Frequency	Sampling Area	Measurement Unit	Target Level/ Standard	Responsibility for Monitoring	Costs

3.4.7 Time frame

The total time at NEMC is at least 120 working days: 30 days for Screening; 30 days for approval of Terms of Reference; 45 days for Review (inclusive of 21 days for Public Review); and 15 days for Approval. This time frame does not include the period the project proponent takes to fill the registration form and prepare the EIA report.

CHAPTER 4

ROLES AND RESPONSIBILITIES OF THE MANAGEMENT AUTHORITIES

This chapter intends to guide the management authorities, especially on specific tasks related to: (a) Initial Assessment (b) In-depth Assessment and Review and (c) the Approval Process. The management authorities and review committee shall give the project proponent support in planning, designing and implementing the project to minimise as much as possible the environmental hazards.

4.1. INITIAL ASSESSMENT OF THE LETTER OF INTENT

4.1.1 Purpose of the Initial Assessment

The Initial Assessment shall aim to determine the following:

i) That the type of development proposed is permitted under the Marine Park and Reserves Act, No 29 of 1994 (see Boxes 4.2. and 4.3.), and the subsidiary regulations, General Management Plan and zoning scheme of marine park or reserve in question;

ii) That the proposed project development will not significantly compromise the ecological integrity of the marine park or reserve, nor significantly threaten its biodiversity, including any rare, endemic, endangered, or threatened flora and/or fauna;

iii) To ensure the proposed development is within any carrying capacity or extraction thresholds identified in the GMP or other technical reports for the marine park or reserve in question.

Box 4.1: Activities that may be authorised by the Minister under Section 13 (2) of the Marine Parks and Reserves Act, No.29 of 1994.

a) The construction of roads, bridges, aerodromes, parks, buildings and fences;

b) Provision of water supplies and carrying out of works necessary for the purpose of the Marine Parks and Reserves Act,1994;

c) Steps to ensure the conservation, security and sustainable use of fish, animals, vegetation, aquatic substrate and land;

d) Setting aside of all or any portion of a marine park as breeding place for fish and other animals and as nurseries for aquatic flora and vegetation;

e) Recommendations of sites suitable for the erection and operation, by persons of hotels and other buildings for the accommodation of visitors, shops or similar undertakings;

f) The control, operation, establishment or management of any hotel, shop, tourist service or similar undertaking or grant of concession or license to other persons to operate such services in any marine park or the building under the control of the marine park; and

g) The sale or exchange of any specimen of animals or vegetable life in a marine park and purchase of or exchange or otherwise the acquisition of any specimen of animals or vegetable life which he/she may consider desirable to introduce into a marine park.

Box 4.2: Activities regulated under section 22 (1) of the Marine Parks & Reserves Act.

No person within a marine park or reserve shall, except in accordance with terms and conditions specified in the regulation or the provisions of the act:

a) Fish, hunt, kill or capture any fish or animal or disturb any egg, nest, roe, or spawn within the marine park or reserve;
b) Gather, collect or remove any fish, animal, aquatic flora, or vegetation, whether live or dead, or any sand, minerals, or aquatic substrate;
c) Sell or transport any fish, animal, aquatic flora, vegetation, or the products thereof or any sand, minerals, or aquatic substrate;
d) Be in possession of any weapon, explosive, trap or poison;
e) Engage in aquaculture;
f) Make salt;
g) Conduct any sport fishing, tourism or other commercial activity;
h) Operate any vessel or vehicle within any marine park or reserve; and
i) Clear or cultivate land for any agricultural use, or use or operate agricultural implements, or machinery;
j) Construct, or extend any buildings, roads or any other work ; or
k) Destroy, deface, or remove any object within a marine park or reserve."

Box 4.3: Activities prohibited under section 24 (1) of Marine Parks & Reserves Act.
No person shall:

a) Engage in any commercial activity in a marine park or reserve, unless that activity is specifically permitted under the GMP or regulations adopted for that marine park or reserve;
b) Mine or install of any heavy industry within a marine park or reserve;
c) Mine or installation of any heavy industry outside the boundaries of a marine park or reserve in a manner that causes negative effects on that marine park or reserve;
d) Deposit or discharge any oil, chemical, or other hazardous substances within any marine park or reserve or buffer zone or adjacent areas having an impact on the marine park or reserve;
e) Deposit or discharge any sewage, litter, rubbish, or other article or substance within any marine park or reserve, buffer zone or adjacent areas having an impact on the marine park or reserve except in accordance with specific permission from the Warden, and consistence with the general management plan of the marine park."

4.2. PROVISION OF REGISTRATION FORMS BY NEMC

Refer to NEMC EIA Guidelines

4.3. SCREENING OF THE PROPOSAL BY NEMC

Refer to NEMC EIA Guidelines

4.4. IMPLEMENTING THE EIA

4.4.1. Scooping and Terms of Reference

Refer to NEMC EIA Guidelines

Marine parks and reserves authority provide necessary information to Project

• NEMC approve ToR

Refer to NEMC EIA Guidelines

4.4.2. EIA Implementation

Refer to NEMC EIA Guidelines

5. REVIEWING THE EIA

5.11. Stakeholder / Public Review

The marine park and reserve management authority shall make it possible for the local community, different stakeholders and the general public to obtain information about the EIA and to submit their opinion on it.

5.12. External Review

If necessary, an external review of the EIA shall be sought for contentious projects. An independent party, who is not linked to either the marine park and reserve management authority or the Project Proponent and likely to give representatives of all stakeholders a fair opportunity to participate, should lead an external review. The cost of the external review would be borne by the Marine Parks & reserves authory.

6. IN-DEPTH ASSESSMENT

An In-depth Assessment of the project proposal, Environmental Impact Statement (EIS) and recommendations from NEMC shall aim at establishing the following:

i. The EIA has been made (by the proponent) and reviewed (by NEMC or District Office) and the recommendations made are impartial, well thought and were made without external non-technical influence;
ii. The project proposal incorporate all recommendations made by the EIS (see Box 3.5) including compensation for residual impacts and allocation funds for management and monitoring activities;
iii. The project proposal incorporates the recommendations (contained in the EIS) on the decommissioning of the project and that funds are allocated for decommissioning activities;
iv. The site selection criteria has been in according to the GMP;
v. There was adequate involvement of the affected parties and interest groups;
vi. There are in general terms positive ratings from the EIA, the technical feasibility assessment and business feasibility assessment.

The in-depth review shall take into consideration the protection and conservation of ecosystems and areas of high species and genetic diversity as defined in the GMP as well as the socio-economic and sustainable well-being of communities in the marine park or reserve.

Guiding Questions for Review of EIS

The review committee should consider the following:
- Is the EIA an integral part of the project design?
- Has the EIA considered all distinguishable significant positive and negative effects on the environment including associated health effects, social effects and economic effect?
- Does the EIA provide a clear picture of the size, scope and significance of the environmental effect?
- Has the EIA taken into consideration the special environmental characteristics of Marine Park or reserve in question?
- Has the EIA, where relevant, considered alternatives to the project or different alternative project

design? Different location? Etc.
- Are there specific proposals for measures to eliminate or minimise negative environmental effects (and, where necessary, measures for conflict resolution and compensation for damage)?
- Are the EIA's proposals clear and does the EIA contain specific goals and indicators which are possible to integrate into the implementation and monitoring of the project?
- Have the stakeholders concerned been given sufficient information and the opportunity to participate in and exert an influence on the process?
- Does the EIA need to be supplemented in any way?
- Will the proposed activity jeopardise the ecological and socio-economic integrity of the Marine Park or reserve in question?
- Do the environmental effects of the project mean that the project, despite possible remedial actions, should not be implemented.

The in-depth assessment shall ensure that the Site selection for the project or activity has been guided by the management-zoning scheme within the GMP. The GMP identifies what can and cannot occur in each zone and set the limits of acceptable use for each zone i.e. sensitivity criteria and thresholds.

In the case of a marine park the Advisory Committee of the marine park shall supervise the in-depth assessment. Whenever, a particular expertise is lacking in the Advisory Committee, the marine park and reserve management authority shall co-opt members with the particular expertise for that particular assessment. The Advisory Committee shall review the EIS (see section 3.5), NEMC's review report and the detailed project proposal before making a recommendation to the Board of Trustees.

The Marine Park and Reserve management authority shall meet the cost of the in-depth assessment and review.

Involvement of affected/interested parties

During the in-depth assessment, the Park Warden shall provide written notice about the proposed project to the villages and other local resident users in the vicinity of, or dependent on, the marine park or reserve whose activities will affect or will be affected by the proposed project. This includes other commercial investors. The notice shall solicit comments from the village inhabitants. The village council shall serve as liaison between the members of the village or community and the Warden, Unit Manger, Advisory Committee and the Board.

The Park Warden shall ensure public access of all relevant documents.

If the EIA is not sufficient, the Marine Park and Reserve management authority shall notify the PP the need for a supplementary EIA and modifications to the detailed project proposal. This information shall state the scope and focus of the EIA.

4.8. DETERMINATION BY THE BOARD OF TRUSTEES

The Park Warden/Unit Manager shall submit a summary of the conclusions and recommendations of the Advisory Committee review to the Board of Trustees, Marine Parks and Reserves, Tanzania. The Board of Trustees shall scrutinise the summary and either APPROVE or REJECT the proposed project. The Decision of the Board shall clearly state the reasons for the recommendation.

TIC, NEMC or Designated District Office, and other District Authorities responsible for issuing of permits shall be notified, by the Unit Manager on the decision made reached by the either approving or rejecting the project stating clearly the conditions for approval and reasons for rejection.

If the project is approved, NEMC or a Designated District Office shall issue the Project Proponent with an EIA Certificate.

Duration of response from MPA
The Marine Park and Reserve management authority shall communicate to the Project Proponent in writing the outcome of the in-depth assessment, review and final decision of the Board within 90 days.

4.9. MONITORING

The EIS submitted by the Project Proponent for review by the marine park and reserve management authority shall implicitly describe measures to mitigate the most significant negative environmental impacts of the project and means of monitoring them. These measures shall be formulated into Environmental Management and Monitoring Plans that would be used to mitigate and monitor the impacts of the proposed project.
The monitoring programme shall be based on the expected impacts from future activities identified during the Environmental Impact Assessment.

Objectives of the Monitoring Plan

Are to:
- Monitor trends and changes in relevant bio-physical and socio-economic parameters;
- Provide empirical information to anticipate and control environmental impacts at an early stage;
- Co-ordinate and integrate the monitoring responsibilities of the proponent and the governmental agencies involved in project operation.

4.9.1. Who is responsible for monitoring?
The Project Proponent will be responsible for undertaking monitoring activities. In accordance with outlines contained in the project contract entered between the Project Proponent and the Marine Parks or Marine Reserve authority.

The MPA area management will ensure that the agreed monitoring schedule is adhered to and, from time to time, to verify the data being collected, as deemed necessary.

Data gathered by the Project Proponent will be presented in monitoring reports indicating:
- By whom the monitoring was carried out and what methods were used;
- What the results were;
- An analysis of the results (what do they mean); and
- Decide what follow-up actions to d be taken and by whom.

4.9.2. Timeframe

Baseline
A baseline should be established for relevant parameters prior to the commencement of any construction or other activity related to the project.

Construction/ Phase:
Monitoring must be conducted immediately after construction to assess compliance to, and effectiveness of, the recommended mitigation measures.

Operations Phase:
Once the project is operational, the monitoring plan for this phase should be put into action. This should be incorporated into the Project Proponent's/ the Marine Park and Reserve management authority's standard operational procedures.

Decommissioning Phase:
For projects involving eventual decommissioning, monitoring should be conducted before and after decommissioning activities to ascertain any impacts from the process.

Table 3.1 summarises the content of a monitoring plan.

Table 3.1: Environmental Monitoring Plan During Operation Phase

Project Phase	Parameter	Monitoring Frequency	Sampling Area	Measurement Unit	Target Level/ Standard	Responsibility for Monitoring	Costs
Construction							
Operation							
Decommis-sioning							

4.10. ENVIRONMENTAL AUDITING

The Marine Park and Reserve management authority may undertake independent environmental auditing of the project at whatever time and frequency are deemed appropriate by the Warden-in-Charge or Chief Warden. The costs of such periodic audits will be borne by the Marine Park or Marine Reserve.
The positive and negative impacts of these assessments will serve to provide instructive feedback on the adequacy of planning during the project design stage, the accuracy of investigations in the Impact Assessment stage, the wisdom of the decisions taken during the review stage, and the effectiveness of the Conditions of Approval and Environmental Management Plans instituted at the operation stage of the project. The Environmental Auditing Report (EAR) will be submitted to the Advisory Committee for evaluation.

GLOSSARY

Decommissioning	Involves activities undertaken when the project comes to an end of its operational life, including dismantling of infrastructure, disposal of potential pollutants and restoration of the environment or landscape.
Detailed project proposal	A description of a project or programme providing all details to enable decision on whether the investment should go on or not to be made.
Environmental auditing	A series of activities initiated by the project management to evaluate environmental performance of the project activities.
Environmental Impact Assessment	An activity designed to identify, predict, interpret and communicate information, and proposes mitigation measures, about impacts of proposed action or development proposal on human health and well being of the environment upon which human survival depends.
Environmental Impact Statement	An EIA study produces a number of reports which are condensed into an Environmental Impact Statement (EIS), which is the report submitted by the Project Proponent to the authorities and the public for review. A report that is prepared from environmental impact assessment, in other words the EIS is an overview of the findings of the EIA.
Feasibility study	An assessment undertaken to establish the economic and technical viability of the proposed project.
General Management Plan	See box 4.1.
Letter of Intent	Is a written document communicating formally the desire of the project proponent to develop a project in a particular environmental setting or locality.
Mitigation	Activities aimed at reducing the severity, avoiding or controlling environmental impacts of a project, through design alternatives, scheduling, or other means.
Preliminary assessment	An investigation which is undertaken to obtain just enough information to determine whether or not there will be significant adverse environmental impacts, based on existing information.
Preliminary project proposal	A description of a project or programme providing sufficient details of the intended activities to enable decision making.
Project proponent	The organisation, company, individual or institution planning to initiate a project
Scooping	A process by which all relevant issues and concerns related to the proposed project or activity are identified and prioritised.
Screening	A preliminary stage of the assessment process for quick evaluation of relatively simple and routine activities or for determining the level of effort required for evaluating more complex projects.

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APPENDIX I

PROJECT PROPOSAL PREPARATION CHECKLIST

The project proposal checklist is intended to assist the Project Proponent to include all necessary information to streamline the approval process. The checklist will also assist the Marine Park and Reserve management authority or any other designated to check the adequacy of the project proposal.

1.0 COVER PAGE

The cover page will indicate.
i. The title or type of the project proposal.
ii. The name of Marine Park or Reserve intended for development.
iii. Specific Marine Park or reserve area location (if applicable).
iv. The name of the project proponent.
v. The date and year.

2.0 EXECUTIVE SUMMARY

An executive summary not to exceed two pages will describe the project, its objectives, predicted environmental impacts and possible mitigation measures.

3.0 DETAILED PROJECT PROPOSAL

3.1 Introduction

i. Proposed project description showing the rationale for the project including its primary goals, objectives and benefits.
ii. Proposed project location and compliance justification with the Marine Park's or Reserve's approved GMP and conformance with the approved limits of acceptable use restrictions.
iii. Proposed project site description including all major topographic, natural, cultural, and existing man-made features

3.2 Proposal Description

3.2.1 Type of development, activity, program, or action:

- Description in sufficient details of the planning, construction, operating, decommissioning, and post-decommissioning phases.
- Spatial area, which will be affected by the project activities, the total area required to sustain the proposed activity.
- Time scales involved for each activity.
- The nature and type of human resources required, over how long, and how this requirement will be met.
- Types and amounts of all materials which will be used by the project, and from where and how these will be obtained.
- All outputs (products and waste material) and methods of management and disposal of theses outputs.
- Expected requirements for local facilities and services (electricity, water, sewerage, schools, health, housing, roads, transportation, parking lots and landscaping etc);

3.2.2 Architectural character

Where permanent buildings are involved the proposal should provide:

- Descriptive analysis of how the entire development blends harmoniously with the natural Marine

Park or Reserve environment.
- Descriptive analysis of how all proposed buildings (architectural style and concept) are compatible and harmonised with both the natural and cultural landscape
- Complete description of building materials and colours for exterior of buildings including foundation, walls, roof, decks, stairs, and walkways.
- Complete lighting of the facility and how this will not interfere with navigation senses of some marine fauna.

3.2.3 Type of Services:

- Services and activities provided for marine park or reserve users: information and interpretative/education programs and activities, restaurant(s), bar(s), toilet(s) gift shop(s), laundry, television(s), satellite television dish, swimming pool, tour drivers, tour vehicles, communication systems, and/or other services.
- Number of staff to be employed on-site
- Type of accommodations, services, and benefits provided to staff.

3.2.4 Utility and Support Facilities

- Maintenance/Workshop/Storage facilities (location, size, number, and description)
- Water supply
  - Water right approval (type, location, and quantity certificate)
  - Borehole (depth and water quality and quantity and recharging potential)
  - Pipeline (required below ground; length and type of pipe; depth and type of bedding or support)
  - Water hauling (types of vehicles and frequency of delivery)
  - Water treatment technique if required
  - Header tanks (type, construction material, configuration, volume, above or below ground)
  - Type, size, and number of pumps/lift stations
  - Consumption use rate; estimated water use for the entire project and how the figures were arrived at e.g. litres per bed, etc
  - System viability analysis – availability and volume use projection justification

- Sewage Disposal/Treatment
  - Type of system; estimates in litres per day for the entire project showing basis for the estimates
  - Location, size, and volume
  - Treatment method(s)
  - Maintenance technique and schedule
  - Maintenance access and frequency
  - System viability analysis – comparison of volume generated to treatment system size and capacity justification

- Solid Waste Disposal/Treatment
  - Location, type, and volume
  - Type and frequency of collection and transport
  - Treatment and/or disposal methods
  - Maintenance access and frequency
  - System viability analysis – projected generation volumes and disposal capacity justification

- Power Supply
  - Location, type, and size; total kilowatts required and how it was determined
  - Source, noise mitigation and visibility
  - Transmission technique
  - System viability analysis – projected use and generation capacity justification

- Fuel and chemical storage
  - Types, amount and use of fuel land chemicals stored on site

- Container storage size and description
- Type and source location of fuel used for cooking in both lodge and staff housing

- Other Utilities and Support Facilities

3.2.5 Roads and Access Systems

- All proposed roads, access related structures, and circulation patterns (rationale land description);
- Measures taken to ensure that all roads and access related structures have minimum visual impact;
- Rationale, specifications, and locations for cut and fill;
- Rationale, specifications, and locations for culverts, bridges, drift crossings, and other special drainage features;
- Rationale and specifications for surface treatment of roads: tarmac (only if approved by the GMP/EIA, morrum, dirt tract);
- Estimated volume of daily traffic;
- Estimated types/numbers of vehicles generated by this project;
- Estimated types/number of service vehicles and delivery schedules/times;
- Parking areas (rationale for size and location);
- All proposed walk trails.

3.2.6 Landscaping

- Source location of all soils and native plant materials to be used in landscaping scheme;
- Species identification (scientific name) of all native plant species to be use on-site in the landscaping scheme; and
- Water source, amount, and distribution technique description to maintain landscaping

3.2.7 Community Benefits

- Explicit itemisation of benefits and drawbacks associated with the project including direct and indirect benefits to communities e.g. from employment, community development assistance.
- Avoidance of interference of traditional and local fishermen.

3.2.8 Energy and Water Conservation Techniques

- Description of energy and water conservation techniques that are incorporated in the project design

3.2.9 Permanent Surface Disturbance

- The amount of surface area (square meters) within the marine park or reserve that will be impacted by the placement of all man-made developments and roads as a result of this project

3.3 CONSTRUCTION PHASE DESCRIPTION

- Length of construction phase and phasing stages; duration and breakdown of construction phase.
- Full list of equipment to be used during construction.
- Number of construction workers required (maximum number of people on site at any one time); number of construction workers per construction stage.
- Source of all construction materials including access required.
- Number of trucks/types to be used.
- Peak periods of truck movement through Marine Park or Reserve.
- Temporary staff quarters location/size/plans for removal.
- Temporary water and sewer provisions and plans for removal.
- Temporary construction access to site from existing roads and plans for removal/mitigation/revegetation.
- Waste disposal.

- Power source/location.
- Temporary equipment storage (godown)/location, number of structures and size
- Daily hours (starting time/stopping time/number of days per week) of construction activity.
- All existing access roads within marine park, reserve or buffer zone boundary that will be used during construction.
- First aid/medical/emergency services.
- Food supplies for on-site workers (source and frequency of provisions, cooking fuel source).
- Total number of square meters surface area disturbance to occur during construction.
- Plans to avoid/mitigate adverse environmental impacts during and after construction.
- Detailed description of restoration of impacted areas once construction is complete.

3.4 TEMPORARY ACTIVITIES (E.G. CANOEING, SPORT FISHING, SCUBA DIVING AND SNORKELLING, WALKING TRAILING ETC.)

For the temporary activities the proposal shall provide:
- Length of the proposed activities on a given site.
- Type of temporary construction activities.
- Full list of equipment/facilities to be used during the specified period.
- Number of workers required (maximum number of people on site at any one time).
- Number of trucks/types or other facilities to be used.
- Peak periods of truck movement through Marine Park or Reserve.
- Temporary staff and guest quarter location/size/plans for removal.
- Temporary water and sewer provisions and plans for removal.
- Temporary constructions access to site from existing roads and plans for removal/mitigation/revegetation.
- Waste disposal.
- Power source/location.
- Temporary equipment storage (godown)/location, number of structures and size.
- All existing access roads within Marine Parks, Reserves or buffer zone boundary that will be used for the entire period.
- First aid/medical/emergency services.
- Food supplies for on-site workers and guests (source and frequency of provisions, cooking fuel source).
- Total number of square meters surface area disturbance to occur for entire period.
- Plans to avoid/mitigate adverse environmental impacts during and after the activity.
- Detailed description of restoration of impacted areas once the activity comes to an end.

3.5 ECONOMIC FEASIBILITY OF THE PROPOSAL

- Market viability analysis of project.
- Cost/Benefit analysis.
- Projected revenue and profits for developer, the Marine Park and Reserve management authority and the government in general as a result of project.
- Projected pay back period.

4. REQUIRED PROPOSAL PLAN GRAPHICS

4.1 FIGURE 1. MARINE PARK OR RESERVE SITE LOCATION MAP

Conceptual Marine Parks or Reserves map with general site location identified.

4.2 FIGURE 2. SITE DEVELOPMENT PLAN

A site plan at 1:200 depicting the location and interrelationship of the entire development including

all structures, vehicular and pedestrian circulation systems, staffing, utility and support facilities, water and sewer systems on an AO or A1 size sheet with 1 meter contours. These maps will include, identify, size, and locate to scale the following:

a) Major topographic and natural features including:
- Rock formations.
- Surface water – drainage, streams, rivers, ponds, lakes, etc.
- Trees and vegetation.
- All trees above 20cm dbh (diameter breast height) will be specifically identified. Trees above 20cm dbh to be cut down will be identified.
- Hills/mountains/volcanic features or other unusual landforms.
- Any other major topographic or natural features.

b) Existing facilities, residential areas, developments, utilities, and road systems (A graphic technique will be used to allow the reader to distinguish between existing and proposed facilities. Developments, and road systems).

c) Location of all proposed roads, parking areas, walk trails, bridges, drifts or other access system associated developments (represented to scale) including:
- Proposed access and internal road circulation and parking areas.
- Proposed vehicle service access, loading and parking areas.
- Proposed vehicle circuits.
- All road sections located on a slope steeper than 7% slope.
- Proposed nature trails.
- Proposed tourist walking safari areas.

d) Site Plan “footprint’ that accurately portrays the exact location, size, and configuration of all proposed developments, structures, utilities, and graphically identifiable actions including:
- Guests structures.
- Staff quarters.
- Service facilities.
- Maintenance and storage.
- Bore hole/water pump/pipe line/header tanks.
- Sewage collection and treatment system.
- Refuse pit/trash disposal system.
- Electric power source and transmissions system.
- Other proposed developments, facilities, utilities, roads, trails, parking areas or any other proposed activities or actions that can be identified graphically.
- Landscaping scheme.
- Seismic considerations.

e) Site plan will be oriented on an AO or A1 sheet with north arrow on top of page.

f) Map scale (1:200).

g) Prevailing wind direction arrows.

h) Date of the drawing.

i) Planning, Design, and Architecture Firm name and address.

j) Principal Architect’s name and signature in “title block” on each drawing sheet.

4.3 FIGURE 3. ARCHITECTURAL DRAWINGS (IF APPLICABLE)

The project proponent shall provide scaled elevations of all buildings from all directions. These shall include the type of walling and roofing materials to be use, the window and door details, guttering and down pipes if used and all exterior features of the completed building.

4.4 FIGURE 4. FLOOR PLANS (IF APPLICABLE)

Detailed Floor Plans for all structures and structure levels; the floor plan should include among other details: wall widths, door widths, window openings, door swings and dimensions of wall lengths

4.5 FIGURE 5. CROSS-SECTIONS (IF APPLICABLE)

Scaled drawings of typical sections through all buildings that are indicative of the major functions and interior layout of the building. Also shown on these shall be the roof structure, floor structure, and approximate foundation depth and foundation design

4.6 FIGURE 6. ROADWAY SECTION DIAGRAMS

Provide roadway section diagrams that include cross slopes, drainage slopes, cut fill slopes and roadway structural materials

APPENDIX II

SPECIAL ENVIRONMENTAL CHARACTERISTICS OF THE TANZANIAN MARINE PARKS AND RESERVES

The objectives of EIA in Marine parks or reserves cannot be met without paying attention to the special features of the marine and associated environments. Although marine parks and reserves are not uniform areas in many respects, common features can be recognised in the functioning of the ecosystems, socio-cultural conditions etc. This affect the investigations that are carried out, the choice of methods and approaches and the time span of the assessments.

The EIA Practitioner, therefore, shall need to:
- Identify those features that are particularly important in the marine park or reserve.
- Provide general description of the environment and sources of information for anyone requiring a more extensive description (especially the EIA reviewers)
- Identify areas that require special attention in the assessments. The areas may represent:
  - Unique or sensitive geomorphological characteristics or biotopes, (fragile ecosystems such as marine and lacustrine, beaches, mangrove swamps, onshore and offshore coral reefs outcrops, continental shelf, estuaries, coastal mudflats; coastal riverine and terrestrial wetlands; delta's, marshlands, swamps and lagoons and their special species composition)
  - Special importance for the functioning of marine ecosystems
  - Sites with special spiritual, cultural and other social economic values
  - Protected area by law or treaties.
  - Areas prone to investment pressure and/or exploitation of marine resources

This Annex provides the general environmental characteristics of the marine ecosystem, which need to be conserved. Environmental Impact Assessment shall specifically focus on these ecological components to ensure that the proposed development does not harm the well being of these characteristics.

Specific environmental characteristics which shall guide the process of site selection will provided to the General management Plan of a particular marine park or reserve.

1. COASTAL LAND AND COASTLINE FEATURES

Various vegetation types occur on coastal land, some are being threatened and thus a careful consideration is required during the site selection. The common vegetation types include:
- Coastal forest reserves;
- Farmed lands;
- Shrubs;
- Grasslands;
- Mangroves and mangrove swamps;
- Flood plains; and
- Rocky and sandy areas;
- Marine and lacustrine beaches;
- Onshore and offshore outcrops of coral reefs;
- Continental shelf;
- Estuaries;
- Coastal mudflats;
- Coastal riverine and terrestrial wetlands;
- Delta's;
- Marshlands,
- Swamps; and
- lagoons.

In some places cashew nut and coconut farms extends to the shoreline. Beautiful sand beaches are common phenomenon. In some areas there exist estuary ecosystems which are very fragile.

2. THE INTERTIDAL AND NEAR SHORE WATERS

These are characterised by:
- Abundant mangroves
- Algal mats cover the rocky tidal flats
- A variety of sea-grass species which grow on the sandy intertidal and subtidal areas
- Fringing coral reefs which occur on the subtidal zone
- strong base rock and reef flat intertidal zone.
- Strong ocean current and waves impacting on the tidal zone (strong base rock and coral reefs act as wave breakers).

2.1 HYDROGRAPHICAL FEATURES

Rivers discharging in the ocean have important bearing to physical, chemical and biological processes which control biological productivity of Estuaries. Creeks, deposition of soft sediments and the supply of nutrients from land sources favour the growth of mangrove vegetation. Water mixing (seawater/freshwater) and mangrove vegetation creates a suitable environment for juvenile fish and crustaceans to shelter thereby increasing the survival of many species. The distribution and abundance of organisms are in most cases influenced by water depth, tides, currents, and substrate type, among other factors.

2.2 BAY AND ESTUARY ECOSYSTEMS

A variety of bottom substrates (the intertidal and shallow water sand, rock and mud) and vegetation types (such as mangroves, sea-grass beds, seaweed, coral reefs) may be found in some areas. These habitats may harbour different kinds of fauna and flora and also provide shelter, feeding, breeding spawning and nursery grounds to all sorts of resident and migratory marine organisms. Some of these provide food for human consumption, e.g., fish, crustaceans and molluscs. A variety of other species (normally harvested in these ecosystems for sale at local and international markets) include sea cucumbers (delicacy) and ornamental shells (for decoration purposes).

However, it should be noted that there is a complicated movement of water in the bay during low and high tide. This movement is believed to control the physical and biological productivity in the Bay. Therefore, careful environmental impact assessment needs to be carried out before the water movement patterns are interfered. In the absence of proper understanding on the ecosystem process and their driving force a precautionary principle (e.g. less/no interference) is recommended.

2.3 THE COASTAL RESOURCE BASE

Coastal resources of greatest importance include mangrove and associated fauna and flora; sea-grass beds and organisms therein; coral reef fish and other coral reef inhabitants; seaweed and other rare but ecologically or economically significant organisms such as turtles, dolphins, seahorse, whales and sharks.

2.3.1 Intertidal resources

A variety of fauna and flora are found on muddy, rocky and sandy intertidal areas. Mangrove and associated resources and the rocky shore resources are abundant in many areas (these are normally harvested for home consumption (food) and or for marketing). Most of intertidal areas are extensively gleaned for octopus, gastropods, bivalves, crustaceans and other invertebrates.

2.3.2 Mangroves and associated resources

According to Semesi, et al. (1994), the mangrove species found in most areas include: Rhizophora mucronata, Bruguiera gymnorhiza, Ceriops tagal, Sonneratia alba, Avicenia marina, Xylocarpus granatum, Heritiera littoralis and Xylocarpus molluccensis (Table 1). The mangrove cover differs from place to place. There are places where over exploitation has occurred and where the exploitation is not fully developed because of poor transport and communication. For the status of mangroves in the area to be developed one should consult the GMP of the Marine Park or Reserve in question.

Mangrove habitat is an important for a wide range of marine organisms as breeding sites, nursery and feeding grounds particularly for commercial fish and crustaceans. Many coral reef fish species and prawns depend on mangrove areas as nursery grounds. Mangrove vegetation protects beaches against erosion and acts as a buffer zone for protecting near-shore marine ecosystems from land-based pollutants. They also trap sediments and recycle nutrients.

The prominent mangrove organisms found in most marine ecosystems include the finfish, shellfish, crustaceans and molluscs. Large proportions of the commercial finfish species the Bay use the mangroves as a juvenile nursery area. The fish species occurring in the mangrove include sardines (Sardinella, Thryssa), catfish (Arius spp), milkfish (Chanos chanos), goatfish (Upeneus bensasi and Upeneus taniopterus), etc. Crustaceans in the area include the mangrove crab Scylla serrata, the swimming crab Portunus pelagucus, Thalamita spp., and Uca spp. Other crustaceans include prawns Penaeus monodon, P. Indicus, P. Semisulcatus, P. Canaliculatus and Metapenaeus monocerus. The mangroves are also inhabited by bivalves such as Oysters Crassostrea spp., and mussels A nadara antiquonta.

Some of the negative effects of mangrove deforestation, which are being experienced in some of the coastal areas, include coastal erosion, excessive sediment and nutrient loading, increased water turbidity, etc. Excessive sedimentation smoothers organisms and changes the quality of coastal habitats. Eutrophication changes the species composition of organisms in favour of algal assemblages, which in turn compete with corals and other animals. Increased turbidity lowers light penetration and hence reduces the effective area for photosynthesis possibly resulting in reduction in total primary productivity of marine ecosystems.

Those developments with minimal interference with, or those that enhance the mangrove habitat will be considered favourably.

2.3.3 Rocky intertidal resources

A variety of macroalgae can be found in different areas with variation in density and distribution. However, the frequently changing environmental conditions (e.g., salinity and sedimentation) seem to affect the species diversity and thus need to be observed carefully. Dominating algae include Caulerpa and Halimeda genera (Guard et al., 1997).

Unfortunately, most naturally occurring seaweed species in Tanzania are of no known commercial value. A relatively small amount of seaweed is used as bait in the basket trap fishery. Ecologically, however, seaweed forms the basis of many food webs and is consequently vital to life in the rocky shores.

Cephalopods, shelled molluscs and crustaceans constitute the harvestable resources on the rocky intertidal areas. There exist a variety of Octopus species such as Octopus vulgaris, and Octopus macropus. Shelled molluscs (Bivalves and Gastropods) form the bulk of the harvested animals on rocky intertidal zones.

Most of the intertidal areas are extensively gleaned for octopus, gastropods, bivalves and other invertebrates.

2.3.4 Sea-grass beds and associated resources

Sea-grass grows well in coastal lagoons and estuaries where the substrate is sandy and water movement is limited. Sea-grasses are found on the sandy subtidal zones.

Although abundant, sea-grasses are of no known commercial value, they play an important ecological role, e.g. they support a large numbers of fish. Sea-grasses act as nursery grounds for fish and crustaceans (especially shrimps), as a food source and shelter for many organisms, and in recycling of nutrients (Richmond, 1997). Due to their high productivity, sea-grass build up large carbon reserves, which are utilised in the tropics by herbivores such as turtles, birds and marine mammals.

2.4 CORALS AND CORAL REEF RESOURCES

Coral reefs are complex tropical shallow water ecosystems with high biological diversity and productivity. Hard or stony corals, animals that build a solid calcareous skeleton around their polyps form the framework of tropical coral reefs. In addition to corals, there are many other organisms that help to build and strengthen coral reefs, of which, red algae are of greatest importance (Wood, 1983).

There are ecologically distinct coral reef zones depending on the exposure to strong currents and oceanic waves. Reef resource exploitation is dependent on the currents. Health coral reefs are found where the strength of oceanic waves and currents is generally high making the environment 'unfriendly' to local fishermen.

Reefs are the home to a very wide variety of animal and plant species. The dominant coral assemblages include genera such as Acropora, Porites, Favia, Favites, Montipora, Echinopora, etc. There are also many species of sponge (Porifera). Fish families closely associated with coral communities include Chaetodontidae (butterflyfishes), Pomacentridae (damselfishes), Labridae (Wrasses), Scaridae (parrotfishes) and Pomacanthidae (angelfishes). Important commercial fish families associated with reefs include Lethrinidae (emperors), Lutjanidae (snappers), Carangidae (trevallies & jacks), Serranidae (groupers), Siganidae (rabbitfishes) and Hemulidae (swetlips & grunts). Other prominent faunal groups include crustacea (such as crabs, lobsters and shrimps), mollusca (such as clams, oysters, and other shellfish, octopus, squid and nudibranchs), echinodermata (such as sea urchins, sea cucumbers, starfish, brittlestars and featherstars).

2.5 OTHER MARINE LIVING RESOURCES

2.5.1 Seahorses

For example Hippocampus histrix, the thorny seahorse, and Hippocampus kuda, the spotted seahorse may be found. Small quantities of seahorse are harvested and sold as souveniers to tourists.

The status of seahorses Hippocampus spp. in Tanzania is unknown with a complete lack of basic information on population size, abundance, species diversity and their ecological requirements. Since seahorses Hippocampus sp inhabit the shallow sheltered sea-grass, algae beds, mangroves and coral reefs ecosystems, which are fragile and threatened by human disturbance, they are vulnerable and in need of conservation.

2.5.2 Whales

Whales are believed to frequent the coast of Tanzania especially during July-August. Whaling is not a common practice in Tanzania and thus should never be entertained.

2.5.3 Sharks & rays (elasmobranchs)

Various species of sharks and rays are present in coastal waters, although shark catches have

declined steeply in the past 20 years.

2.5.4 Turtles

Five species of sea turtles occur in the coastal waters throughout Tanzania.

2.5.5 Dolphins

Dolphins are common in coastal areas.

2.5.6 Land animals and birds

There exist fruit bats, a variety of bird species, which utilise parks and reserves as breeding, nursery site and migratory sites. There exist small animals.

2.7 Non-living resources

2.7.1 Salt mining

Salt mining is a common undertaking along the coast. This activity exerts pressure on the mangroves (with its ecological consequence) since it involves clear cutting of mangrove forests for salt pans.

2.7.2 Lime production

Lime production is also common along the coast. This activity uses live coral blocks which are being mined at significant quantities because it produces better quality lime and does not require as much firewood. Lime making is an environmental problem as it results in destruction of coral reef ecosystems and coastal forests.

2.7.3 Petroleum Exploration and Gas field project

There is an extensive petroleum and gas exploration along the coast. There are already proved reserves of gas at one of the parks Mnazi Bay. Gas extraction poses a future threat to the coastal and marine environment in the proposed marine park.

It should be mentioned that most of these activities may result into cumulative environmental impacts and thus a through assessment is required to ensure that do not happen.

3.0 RESOURCE UTILISATION PATTERNS

Multiple activities and practices of utilisation of coastal and marine resources co-exist along the coast. Fishing is the major activity conducted by the local community. Other activities include collection and trade in ornamental shells and sea cucumbers, cutting of mangroves for various purposes, collection of coral blocks for lime making, salt making, algal farming etc. These activities together with agriculture are the main sources of livelihood.

The seafood obtained through fishing provides most of the protein needed by coastal communities. Although the seafood or the landed catch is composed of mainly finfish, other marine animals such as octopus, edible molluscs, prawns, lobsters, crabs, contribute substantially to the total catch.

This subsection provides important information worth considering during socio-economic impacts assessment of the project.

3.1 FISHERIES

There are a substantial number of fishermen, living within and outside the parks or reserves,

harvesting or collecting resources. Their number and the size of catch, in a given marine park or reserve, depend on the tidal cycles of the area. Catch composition differs depending on the substrate characteristics (mud, rock, etc.) and height from sea level. More catch is usually obtained during spring low tide when the lowest parts of the intertidal can be reached. Some of the intertidal zones are either overexploited or have less holding capacity of resources.

Major fishing grounds for fishermen using fishing vessels are found either on or adjacent to coral reefs, on sea-grass beds or in the channel banks. The fishing ground in different parks and reserves is determined by the distribution of the target resource, vessel and fishing gear type. The concentration of fishing is normally found in areas with mild waves. More than 90% of the fish catch is harvested in the protected and universally accessible environments.

The fishing fleet is composed of mainly dugout canoes (mitumbwi and dhows (madau). Paddles and sails are the sole means of vessel propulsion. A combination of traditional and modern fishing techniques are employed to catch various fish species. These techniques include, fixed traps (Uzio or wando), shark nets (jarife), Gill nets (nyavu), beach seine net (kokoro or juya), open water seine nets (Kavogo ya kusini or zulumati), hand lines or hook and line (Mshipi), basket traps (madema), cast nets, long line. Other techniques include light fishing (karabai), mosquito nets (kutanda), spear fishing (kuchokoa). Hand line (hooks and line) is the most common fishing technique followed by gillnets.

Because of the multitude of different fishing grounds and techniques, the fish catch is composed of a mixture of different species. Children and women who normally fish within the mangrove and rocky tidal reef (intertidal zone) during low tides, catch crabs, mixed sub-adult or juvenile fish, and a variety of shelled mollusc. The fish catch include markerels (Indian markerel and fusiliers), rays, rabbit, parrot fish and sharks.

Other types of fisheries practised include collection of shells (makome), shark fins and sea cucumbers (majongoo bahari).

3.2 Other Coastal Activities

3.2.1 Agriculture

Agricultural production is non-mechanised with farmers still depending on the hand hoe. Major crops include cashewnut, cassava, rice, coconut, groundnuts, mbaazi, mchicha, and millet. The use of fertilisers and pesticides is minimal and unlikely to affect the coastal and marine environment.

Industrial and sewage pollution is likely to be found in some marine parks or reserves especially in areas where there are some industrial activities. This need to be assessed on case by case basis, since there is no uniform distribution of development projects.

APPENDIX 3

CHECKLIST OF ENVIRONMENTAL FACTORS TO BE CONSIDERED DURING EIA IN MARINE PARKS & RESERVES IN TANZANIA

(1) Pollution Effects

a) Air quality of the marine park, reserve or buffer zone

i) Will the action result in emissions into the atmosphere of toxic or hazardous substances or significant amounts of other pollutants?
ii) How and to what extent will the action affect the air quality?
iii) Will it contribute to a degradation of air quality?
iv) Will it cause changes in chemical and physical composition?

b) Fresh Water quality/quantity in the marine park, reserve or buffer zone

i) How and to what extent will the proposed action affect the availability, supply, use and quality of water?
ii) Will it affect waterways?
iii) Will the proposed action contribute to a significant depletion or degradation of ground or surface water?
iv) Will the action produce toxic or hazardous substances or solid waste into bodies of water?
v) Will the action significantly alter the temperature of a body of water?

c) Salt water quality in the marine park or reserve

i) Will the proposed action significantly increase sedimentation, which may in turn affect the clarity of waster, which might interfere with the aquatic life support system?
ii) Will the proposed action cause marine pollution or affect commercial fishery and shellfish sanitation?
iii) Will the proposed action affect the oceanographic attributes?
iv) Will the proposed action affect water currents, long shore drifts, beach processes which may in turn affect the ecological process maintenance of the area?

d) Noise quality of the marine park, reserve or buffer zone

i) Will the proposed action result in the creation of excessive noise, considering the proximity of the likely effects of the noise on humans or wildlife?
ii) Will the action result in kinds of noises and noise levels that will be disturbing or a nuisance in the immediate and overlying areas.

e) Solid waste within the marine park, reserve or buffer zone

i) How will the proposed action affect activities related to creation, management, and disposal of solid waste materials?
ii) What type of solid waste will be generated as a result of the action?

f) Radiation

i) Will the proposed action create heat, noise, energy waves, electrical or radioactive effects, physical vibrations, or other thermal, electrical, or microwave activity that will be disturbing or a nuisance or create interference in the immediate and outlying areas of the marine park, reserve or buffer zone?
ii) Will the proposed action create light that might affect the navigational senses of some aquatic fauna?

g) Hazardous substances within the marine park, reserve or buffer zone

Will the proposed action

i) create or generate any hazardous substances, materials or activities that are dangerous because of toxicity, flammability, or explosive tendencies or characteristics?

ii) create or generate substances that might result in contamination or deterioration of food, food sources, clothing, or other materials?

(2) Vegetation and marine life effects

Will the proposed action

i) result in significant destruction or unsustainable use of aquatic flora [e.g. coral reefs, sea-grass bed, mangrove etc.] aquatic fauna [birds, fish, turtles, crocodiles, dugong, whales etc], vegetation and other marine life in general?

ii) substantially alter the breeding places of the marine fauna?

iii) Disrupt migratory routes of the marine fauna?

iv) substantially alter the behaviour pattern of fish, mammals, amphibians, reptiles and insects?

v) significantly affect, beneficially or adversely, other forms of life or ecosystems of which they are a part?

vi) cause change in biological productivity, including fish and wildlife habitat and population losses, impacts on rare and endangered species, and changes in species diversity?

(3) Energy supply and natural resources effects

Will the proposed project …

i) require the use of non-renewable energy sources to be harvested from the local environment? Is this permitted and/or sustainable?

ii) require significant quantities of freshwater, relative to what is available? Is this likely to create conflict with other users of freshwater or to affect the stability of the local freshwater table?

iii) affect electric energy development, generation, transmission and use?

iv) affect renewable resource development, production, management, harvest,

v) transport and use?

vi) affect energy and natural resources conservation?

vii) What are the patterns of allocation, utilisation, and demand of energy

viii) consumption as the result of the action?

(4) Natural hazards and geologic effects of the marine park, reserve or buffer zone

i) Will the proposed action significantly affect soil quality?

ii) Will the proposed action increase (or decrease) the stability or instability of the soils and/or geology of the site?

iii) Will the proposed action affect the wetlands?

iv) Will the proposed action result in land subsidence?

v) Are the geologic or soils conditions of the site hazardous to building construction and human occupancy?

vi) Will the action increase the erosion or runoff potential of the site?

vii) Will the action increase the potential fire hazards of the site?

viii) Is the site subject to unusual terrain features such as the steep slopes, abutting, rock formation, or other conditions affecting construction, drainage, or liveability?

ix) Are there unusual risks from natural hazards such as geologic faults, flash floods, volcanic activity, mudslides, or from the presence of ponds or other hazardous terrain features.

(5) Land use and land management effects

a) Recreation

Will the proposed action have a significant effect on the park, reserve or buffer zone?

b) Historic, architectural, and archaeological preservation

Will the action have significant effect on areas of recognised archaeological value or properties listed on, or being considered as heritage sites?

c) Aesthetics of the marine park, reserve or buffer zone

i) Will the action affect areas of unique interest or beauty?

ii) Will the action alter the aesthetic qualities of the area?

d) Socio-economics of the marine park, reserve or buffer zone

Will the proposed action

i). Divide or disrupt existing land use?

ii). Affect the health of the communities?

iii). Result into increased influx of people to the marine park/

iv). Disrupt the social or cultural environment of the community?

v.) Result in the displacement of communities?

vi). Alter the economic base of the area?

vii). Increase traffic flow and congestion to the parks or reserves?

viii). Affect the population density and congestion?

ix). Affect neighbourhood character and cohesion?

x). Create displacement and relocation of homes, families, and business?

xi). Present new demands and requirements of public service?

xii). Affect the quality of life of the residents in the area?

xiii). Have a significant effect on revenues and costs to local governmental agencies?

xiv). Include population, commercial, industrial or general growth of the area?

APPENDIX 3

SITE SELECTION GUIDELINES

The following site selection criteria will assist both the developer and the relevant authorities in the selection of appropriate site for a particular activity within the marine parks and reserves. It is essential that ALL these criteria be addressed in the Preliminary Project Proposal (PPP) (submitted for screening) and/or Full Project Proposal (FPP).

1. SITE SELECTION GUIDELINES

1.1 Existence of a General Management Plan (GMP) and Environmental Impact Assessment (EIA)

No site for development activities shall be considered until there is an approved GMP and EIA.

1.2 Agreement with GMP and EIA

The proposed project concept must be in compliance with the zonation of the marine park or reserves and all limits of acceptable use determinations as defined by a GMP and EIA.

1.3 Impacts to Marine Fauna

The proposed activity should be located at an area where it will have minimum adverse impact on native marine parks or reserves fauna (refer to Annex 5 for special environmental characteristics and relevant chapter of the GMP in particular), either resident or migratory. This includes sites where there will be less disruption or pollution of breeding sites or shelter areas. The proposed activity will not be located where it will cause undue disturbance to aquatic fauna by visitors or employees or excessive susceptibility aquatic animal kill.

1.4 Impacts to Marine Flora and Vegetation

The proposed activity should be located where it will have minimum adverse impact on native marine park aquatic flora (refer to Annex 5 for special environmental characteristics, and to relevant chapter of the GMP in particular), or land vegetation (see grocery). The proposed activity should not be located where it will adversely impact the aquatic vegetation which are regarded to be of exceptional value for the marine parks or reserves ecosystems. The proposed activity shall locate where it will blend harmoniously with the natural beauty, landscape and surrounding of the marine park and reserve. The selected site should not be prone to erosion.

1.5 Impacts on Aquatic Substrate

The proposed activity should be located where it will have minimum adverse impact on native marine parks or reserves aquatic substrate (i.e. rock, stone, gravel, sand, shell, limestone, earth and geologic or submerged formation, including dead coral).

1.6 Avoidance of Resources and Areas of Special Concern

The proposed activity will not be located in or cause adverse impacts to: sensitive or critical habitats e.g. coral reefs, mangroves, sea-grass etc. (refer to Appendix 5 and specific section in the GMP on sensitive and critical habitats of the area in question); or areas of natural scenic, scientific, historical or other important value to the marine parks or reserves.

1.7 Impacts to Species of Special Concern (To be focussed after obtaining the special environmental characteristics)

The proposed activity will be immediately rejected if:

- it directly or indirectly has an adverse impact on any species of aquatic flora or fauna which are: threatened, endangered, or rare (listed in the IUCN [The World Conservation Union] Red DATA

Book or listed in the Convention of International Trade in Endangered Species of Wild Fauna and Flora).
- it directly or indirectly causes adverse impacts to any endemic or exceptional species, or any species of special concern.

1.8 Impacts to cultural, Socio-religious and Archaeological Sites

The proposed activity should be located where it will have minimum adverse impacts to archaeological sites, historical site, or sites of cultural or socio-religious significance, and community dwellings.

1.9 Impacts to Shoreline and Coastal Zone

Shoreline and coastal zones are particularly fragile areas. A development or activity in these sensitive environments will only be considered if no other alternatives exist and will only be permitted under the strictest development criteria and supervision. In any case the facility should not be located less than 60 m from the shoreline.

1.10 Impacts to Hydrology and Water Resources

The proposed activity should be located where it will have minimum adverse impact to hydrology and water resources. Under no circumstances will a development or activity be located where it degrade (contaminate) or substantially disrupt the water quality or quantity of the marine park or reserve. This includes all surface and subsurface water resources such as: aquifer recharge areas, watersheds, floodplains, rivers, streams, wetlands, other water bodies, groundwater aquifers or the water table. Verification of an adequate supply of potable water will be required prior to any development/lease approval.

1.11 Impacts to Topography

Building on steep slopes will be avoided as much as possible. The greater the slope, the greater is the difficulty, adverse impact to water body with its consequence ecological processes of the marine park or reserve. Construction on slopes of more than seven percent will only be considered if no other alternative sites exist.

Attention must also be paid to the location and patterns of surface water drainage. This includes the location of erosion channels, washes, rivers, streams, marshes, lakes, ponds, irrigation canals, swampy areas, and concave areas without positive drainage. The proposed activity will be located in an area, which minimises the need for interruption or obstruction of natural surface water drainage's.

The overall lay of the land including the extent, location and general configuration of rocks, ledges, outcrops, ridges, drainage lines, and other unique visual features are also important in site selection. Sites will be selected in which the proposed activity will blend easily and naturally with the surrounding topographical features.

1.12 Geotechnical / Soil Considerations

Geotechnical characteristics greatly affect the economics of development and therefore have an effect on the suitability of a site. Information of importance includes: depth to bedrock, elevation of water table, foundation bearing capacity, expansion or collapse potential of soils, location of fault lines, soils type, and percolation rate. This information has important implications for building form, foundation and structural design, erosion potential, drainage, and run –off. Only sites that are considered feasible for the construction of roads, trails, buildings, and septic systems will be considered.

1.13 Proximity to Marine Park or Reserve Boundary

The proposed activity located near or outside the marine park or reserve boundary will be

considered favourably for the following reasons:

i. Staff villages and services can be located outside the park thereby reducing the adverse impacts caused by increased levels of staff welfare such as the ability to create small gardens and village shops, commissaries, and places of worship.

ii. Such locations enable the adjacent community to benefit from the activities of the proposed project through the provision of food, supplies, and employment to sustain these development operational needs.

iii. It decreases adverse impacts on park resources and reduces the cost, time, length, and wear and tear of the access road required to haul development equipment and supplies.

1.14. Proximity to Utilities

Sites which are located close to existing utilities such as electricity, water supply etc. will be considered favourably as they will minimise the cost of supplying these utilities and adverse impacts caused by accessing distant utilities.

1.15. Ability to Increase Marine Park or Reserve Security

Some activities may create a permanent presence of personnel that may help to minimise/monitor illegal activities in the marine park or reserve. This is especially true in areas that may not be easily patrolled by marine park or reserve personnel and are known to have external problems. Sites which are located in areas that would increase marine park or reserve security will be considered favourably subject to meeting other site selection criteria.

1.16. Proximity of Development or Activity to other Visitor Use Areas

Sites, which do not impact, through operation or development, other visitor use areas or activities, will be considered favourably.

1.17. Site Land Use Control

The developer must be aware of any site encumbrances including surface or subsurface easements or rights, rights of way, and if close to the marine park or reserve boundary, the legal property description of the boundary location. These encumbrances may impact site suitability.

1.18. Site History

The developer must be aware of the site history, which may have bearing on the suitability of the site. This would include knowledge of hazardous dumping or landfills.

APPENDIX 1

PROPOSED CONTENTS OF THE LETTER OF INTENT

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF NATURAL RESOURCES AND TOURISM
THE BOARD OF TRUSTEES FOR MARINE PARKS AND RESERVES TANZANIA
MARINE PARKS AND RESERVES UNIT,
P.O. BOX 7565,
DAR ES SALAAM.
Date……

Please be advised that …… (Name of the Project Proponent) plans to submit an investment proposal within three months from the date of this letter. The following information is being submitted for your initial assessment and advice.

Project Title: ……..

Proposed Site: ……...

Approximate Capital Investment: …….

Project Summary (not exceeding 1 page): (The Project Proponent should provide enough information about the project to assist the Board to Assess its conformity to sound environmental management practices)

……

……

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Signed

APPENDIX 2

EIA REGISTRATION FORM
1.PROPONENT:

……..
Address for correspondence:
……
……

Contact Person: ……
Position: ……

Phone No. …… Fax: ……..

2. Proposed Undertaking/Development

Title of Proposal (general classification of undertaking
……..
Sector:……
Shareholders:……
……
…… Description of proposal (nature of undertaking, unit process, (flow diagram), raw materials, list of chemicals (source, types and quantities), storage facilities, waste/by-products (solid, liquid and gaseous)
……
……
……
Scope of proposal (size of labour force, equipment and machinery, installed/production capacity, product type, area covered facility/proposal, market)
……
……

PROPOSED SITE
Location (attach site plan/map)
……
Town/Village: ……..
District: ……..
Region: ……

Current zoning: ……
Distance to nearest residential and/or other facilities
……

Adjacent land uses (existing & proposed)
……
Site description
……
……
……

3. INFRASTRUCTURE AND UTILITIES
Structures (building and other facilities)
……

Land required

……

Water (Sources, quantity)

……

Power (type, source & quantity)

……

Road

……Other major utilities (e.g. sewerage etc.)

……

4. ENVIRONMENTAL IMPACTS

Potential environmental effects of proposed undertaking (both constructional and operational phase……

5. OTHER ENVIRONMENTAL ISSUES

Potential significant risks and hazards associated with the proposal (including occupational health and safety). State briefly relevant environmental studies already done and attach copies as appropriate

……

……

6. MITIGATION OF IMPACTS AND ENVIRONMENTAL ENHANCEMENT MEASURES

……

……

DECLARATION

I …….. hereby declare that the information provided on this form is true to the best of my knowledge and shall provide any additional information that shall come to my notice in the course of processing this application.

Signature…….. Date ……

THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF NATURAL RESOURCES AND TOURISM

BOARD OF TRUSTEES
MARINE PARKS AND RESERVES TANZANIA.

GET TO KNOW TANZANIA MAINLAND MARINE HERITAGE

The Marine Parks and Reserves Unit was established by the Act of the Parliament of the United Republic of Tanzania in 1994 to safeguard and sustainably manage the fabrics and integrity of marine resources in partnership with locals and the global fraternity

VISION

Marine Protected Areas in Tanzania become the joy and pride for all.

MISSION

To establish and manage Tanzania's Marine Protected Areas for sustainable use.

"Let us share the gift of nature together"

P.O. Box 7565 Dar es Salaam. Tel: 2150621 Fax: 2150420 E-mail: marineparks@marineparktz.com Web: www.marineparktz.com