

MARINE SCIENCE FOR MANAGEMENT (MASMA) PROGRAMME

COMMISSIONED RESEARCH: INVITATION TO SUBMIT A FULL PROPOSAL ON

“An analysis of coastal and marine ecosystem services in the WIO to identify specific beneficiaries, appropriate methods for undertaking economic valuations, and the role of marine protected areas in ensuring these services are sustainable”

The Western Indian Ocean Marine Science Association (WIOMSA) through the Marine Science for Management (MASMA) programme has launched the “Commissioned” research grant programme to support priority research that is innovative, catalytic, and that provides information that could be used for management purposes.

MASMA was established in the light of the predominantly narrowly focused natural science research currently taken place in the Western Indian Ocean (WIO) region, which is characterized by limited emphasis on interdisciplinary research and limited attention to the critical links between science and the larger societal issues in the region. Consequently, MASMA seeks to strengthen **applied and interdisciplinary** research on both the **natural and social science aspects** of coastal environmental issues for the purpose of advancing knowledge that is directly **relevant to society and resource management**.

Under the “Commissioned” research grant programme, proposals are invited from experts from within and outside the region.

BACKGROUND

Marine and coastal ecosystems provide many goods and services to humankind that justify their sustainable use and management, but these are often not fully understood by decision makers and stakeholders. Demonstrating to local communities, donors, governments and other stakeholders that coastal ecosystems and resources play key roles that underpin tourism, fisheries or other ecosystem goods and services can greatly facilitate management. In addition, putting an economic value on an ecosystem can help to show why its survival is important. It is also useful for obtaining funding from insurance companies for mitigation measures if resources are damaged through an accident, such as an oil spill or ship wreck.

Techniques for valuing ecosystem services are still relatively new and untested. Economic values can be calculated from the cost of the products (e.g. fish) and services (e.g. tourism) derived from an ecosystem, or from the cost of replacing a service (e.g. building seawalls where natural storm protection has been lost). However, it is not easy to calculate the economic benefits of ecosystem services such as their aesthetic and ethical values, or the service they provide through cycling nutrients.

Values calculated for one location or ecosystem cannot automatically be extrapolated to other situations. They vary according to:

- location – e.g. reefs in a country which is a major tourist destination will have a higher value in terms of diving and other reef-related activities than reefs in countries where tourism has not been developed;
- the length of time being considered and whether a prediction for the future is involved (e.g. all reefs are potentially of value for diving tourism but some may have no value at present);
- the ‘beneficiaries’ of the service, since some people will place a higher value on it than others; and
- the method used and the assumptions made.

Estimates of the ‘total’ economic value of an ecosystem thus vary considerably and the value of an ecosystem’s social benefits is often underestimated. Furthermore, very few studies to date have tracked changes in ecosystem value over time, or looked at the full range of use and ecological function at any one site. This means that it is not easy to use ecosystem valuations for policy making and investment decisions. The economic and social values of coastal and marine ecosystems have been quantified in only a handful of cases in the WIO. Methodologies for economic valuation have been outlined in an IUCN-EARO report as part of a plan to develop a regional training course that was never followed through. The UNDP/GEF Agulhas and Somali Current Large Marine Ecosystem Project includes an activity to carry out a valuation of nearshore and marine goods and services at the regional scale, but it is unlikely that this will look at the more detailed local level situation.

There is a particularly urgent need to demonstrate ecosystem goods and services, given the urgent targets for MPA establishment that have been set through the Convention on Biological Diversity. Valuations can help to demonstrate and quantify the benefits of an MPA in terms of raw materials, protection of natural and human systems, and maintenance of options for future economic production and growth, as well as the costs associated with the loss of these benefits through resource degradation. Such information will help to justify the creation and maintenance of an MPA, and the process of carrying out a valuation can help to integrate business and economic concerns into management, provide key information for the identification of potential financing mechanisms and economic incentives for management, and help to ensure that costs and benefits of an MPA are more equally shared.

The results of this research study will be of value to policy makers, NGOs and government bodies concerned with coastal resource management as well as to the many international and regional organisations operating in the WIO.

SCOPE OF WORK

It is recommended that the proposal be centred on the aspects mentioned below. The planned study should aim at developing new methods and concepts for ecosystem valuation which are more suitable with the realities of the WIO region. Furthermore the study should focus on the identification of the ecosystems goods and services as well as who benefits from them.

- A assessment of the goods and services provided by coastal and marine ecosystems in the WIO, with specific identification of the beneficiaries
- Identify goods and services affected by various activities (including MPAs), and categorize them into ecological, cultural, social etc and discuss their importance and value. In addition, for the specific cases (like implementation of an MPA) analyse changes in revenue distribution among resource users.
- A critical analysis of methods used to value marine and coastal ecosystems, identifying their suitability for different requirements; this might involve a review of ecosystem valuations undertaken for the WIO, summarising the results and lessons learned
- Recommendation of methods potentially suitable for the needs of the WIO
- A detailed analysis of economic goods and services at selected locations and ecosystems, including MPAs, with an analysis of the lessons learned from the process. The selection of the locations and ecosystems will need to be undertaken with careful consideration of the time and resources available, recognition of work previously undertaken, and with a focus on sites for which adequate data are already available. A preliminary suggestion would be to look at two ecosystems (e.g. mangroves and coral reefs) both within and outside MPAs.
- Recommendations for consideration in policy development and decision-making processes as well as for further research

The study should take note of related research underway in the region, and compare methods and approaches as appropriate. It should be undertaken in collaboration with relevant institutions in the region involved in social science research, and should contribute to building their capacity for economic valuation and making recommendations for the application of the results in coastal resource management. Consideration should be given to holding a workshop to disseminate results and build partnerships.

ELIGIBILITY

Principal Investigators and members of their teams should meet the following criteria:

- a. Demonstrable credibility and capacity to conduct research on the selected topic.
- b. Educational background: The Principal Investigator should have attained an education level of at least MSc or MA degree in a discipline related to marine sciences¹.
- c. The grant is specific for individuals and/or research teams from the WIO region. However, individuals and/or research teams may involve scientists outside the region as appropriate, and cover their costs from the grant funds applied for. The involvement/participation of the scientists from outside the region may not exceed three man-months² annually.
- d. The Principal Investigator should be from the WIO region and be employed by an institution (governmental or non-governmental) in the region. The institution is expected to provide salaries, working space and basic research facilities.

¹ Marine science here includes both the social, cultural, economic and natural sciences

² One man-month is defined as the working days on a month, which are 20 days.

- e. Evidence of potential/existing collaboration with appropriate experts and institutions that are competent in the technical matters that the proposed project entails.

DURATION AND FUNDING

The maximum duration for activities supported under “Commissioned” research grant programme is two (2) years. The total funds request should not exceed US\$ 150,000. However, proposals for less than that amount are encouraged.

SUBMISSION DEADLINE

A full proposal based on the elaboration of the above-mentioned issues should be submitted by fax, email or ordinary mail by **31 July 2006**. The proposal should be prepared according to the format provided in Annex I.

The proposal and CVs of the members of the team should be submitted to:

Executive Secretary
Western Indian Ocean Marine Science Association (WIOMSA)
P O Box 3298 Zanzibar
TANZANIA
Tel: +255-24-2233472;
Fax: 255-24-2233852;
Email: secretary@wiomsa.org

For further information on the priority research themes, reviewing process and other relevant information please visit the WIOMSA website, www.wiomsa.org or contact the Executive Secretary at the above address.

ANNEX I: FORMAT FOR PROPOSALS TO BE SUBMITTED

All pages should be single-spaced, typewritten (computer or typewriter) in at least a 12-point font, and printed on A4 (210 mm x 297 mm OR 8.5" x 11") paper. The entire proposal should not exceed 25 pages, including illustrative materials like tables, figures, charts etc. Applicant(s) should note that all the necessary information for reviewing the proposals should be included in the 25 pages, with only the reference letters and CV(s) allowed as annexes. Each proposal must include the following items; applicants should carefully read and understand the specified guidelines on each item. Proposals failing to meet the provided guidelines will not be considered for review.

1. Title Page

This should be a separate (cover) page, with the title of the research proposal and name(s) and contacts (address, telephone, fax, e-mail) of the applicant(s). The title should identify the project, be as short as possible, and be sufficiently descriptive to reflect the nature of the proposed work. In case of more than one applicant, the principle investigator (or contact person) should be clearly indicated.

2. Abstract

The abstract should not exceed 1 page. This is a very important part of the proposal, giving a summary of the entire work. It should present a precise description of the research being proposed, including objectives, methodology and expected results.

3. Background

In this section, the applicant(s) should give background information of the proposed research, which may include: i) current state of knowledge; ii) how the proposed work will impact on the theme in question; iii) justification of the proposed research (i.e., why conduct the research); iv) possible applications of the knowledge generated, expected institutional impact and other potential benefits of the project/workshop/training course.

4. Goals and Objectives

The applicant(s) should clearly state the main goal of the work, and give specific objectives to be achieved by conducting the proposed research. Furthermore, it should include a framework of analysis defining the conceptual framework, and theoretical frame of reference that will guide the research. Hypotheses, theories, and research tasks, etc. should be appropriately formulated.

5. Methodologies

In this section, the applicant needs to discuss how each of the proposed objectives will be achieved, and questions answered in the most rigorous way possible. This includes the materials and methodology; the timeframe for completion of the work; and the roles and responsibilities of each investigator.

6. Approvals

The applicant(s) should mention whether relevant national/local approvals and research permit have been sought or granted and by which agencies. The names and addresses of the agencies should also be given

7. Gender Considerations

State whether gender consideration constitute an important dimension of the project in defining the important relationships of the problem or in data collection. The applicant should show explicitly how the methodology will address gender issues.

8. Risk Analysis

Possible problems, difficulties, and/or factors that could prevent timely completion and/or implementation of the project/workshop/training course

9. In-Country Collaboration

The applicant(s) should identify and describe any collaborators and partners in-country who would be involved in the research and who could ensure the sustainability of the work and /or national/local stewardship as relevant. Other stakeholders should also be identified.

10. Results and Dissemination of Research Findings

Expected major outputs of the project/workshop/training course should be defined. The likely use of the results from the proposed activity, and beneficiaries of activity should be discussed. Furthermore, the means of communication of results to users and decision makers should be explained

11. Literature Cited

All literature materials cited in the text must be listed in this section.

12. Budget and Budget Justification

Annex IV should be completed as a summary of the budget. The budget to be included in the proposal should be clear, complete, and well explained such that the rationale for each figure is given in sufficient details and the roles and responsibilities of each investigator should be clearly defined. This will enable the reviewers to evaluate the relevant application of the funding requested.

13. Available Resources

It is important that the applicant provided information on financial and material support, for this proposal, from other sources. Applicant should specify the staff, facilities, equipment and supplies that will be available for the project, from the institution to which the applicant is affiliated. If relevant, specify the time schedule for research training involved in the project.

14. Curriculum Vitae

The CV for each investigator may not exceed two (4) pages. It should include peer-reviewed publications related to the subject of the proposed research.

REFEREE'S FORM TO SUPPORT APPLICATION FOR A RESEARCH GRANT

Applicants should give this form to a referee to be completed as part of the grant application. This form will be treated as confidential and should be sent directly to the secretariat by the referees. The form should be type-written (computer or type-writer)

Please provide us comments on the: Applicant's general character; academic record; prospects and ability to conduct the proposed research; relevance of the proposed research; the duration you have known the applicant and under what capacity; and any other relevant information. *Please attach additional sheet if the need arises.*

Name	Signature
Institution	Date
Address	Tel:
.....	Fax.....
.....	E-mail

BUDGET FORMAT

An example of the format in which budget items should be submitted is as follows:

Research title	Country	Project No (WIOMSA)
Responsible for the accounts	Institution	Budget period

Local currency

Local currency code	Exchange rate/SEK (on budget date):
	Exchange rate/USD (on budget date):

Bank		Account No.	
Bank address		Title of account and name	
Payment date preferred	1 st :	2 nd :	Final:
Amount in local currency/USD			

Planned Expenditure

Account No (WIOMSA)	Expenditure (titles of Accounts at WIOMSA)	Total	Proposed Payment Schedule		
			1 st Install-ment	2 nd Install-ment	Final Payment
Total					

Signature of Project leader
Place and date: Signature: Name (capitals)

NOTE: If duration of project is greater than one year, please attach additional information (as above) on the budget items for subsequent years.