



**Annual Report 2006**



**WIOMSA would like to thank the following people for their contribution to the Annual Report.**

Ian Bryceson, Norwegian University of Life Sciences  
Joshua Cinner, James Cook University  
Jeremy Kiszka, Conseil Général de Mayotte  
Tim McClanahan, Wildlife Conservation Society  
Aviti Mmochi, University of Dar Es Salaam  
Collen Morel, Seychelles Fishing Authority  
Selina Stead, Newcastle University  
Gladys Okemwa, KMFRI  
Fishing group "Fire" in Mgao and  
fishing group "Boys" in Mkubiro, Mtwara

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Anna-Karin Johansson, WIOMSA  
"Fisherman from fishing group  
'Fire' in the water to drive the fish  
towards the net."

# Content

<b>Editorial</b> .....	5
<b>Marine Science for Management – MASMA</b>	
Coral bleaching events affect both fishes and people.....	6
Commissioned Competitive Research - new feature of MASMA.....	8
<b>Sustainable coastal communities and ecosystems – SUCCESS</b>	
Fish farming SUCCESS, created Tanzania’s first milkfish millionaire.....	10
<b>Marine Research Grants – MARG</b>	
Exporting Kenya’s coral reef fish for use in marine aquariums worldwide.....	11
Marine Research Grants continue to attract many upcoming scientists.....	12
<b>Capacity building</b>	
Villagers at Dolphin Workshop give recommendations for the future.....	14
Gillnets and trawl fishing threaten dolphins and turtles.....	15
Building research capacity and partnerships - a core activity.....	16
Eight new Country Coordinators elected .....	17
<b>Communication and networking</b>	
WIOMSA - Active in communicating and networking.....	18
New publications and material produced by WIOMSA 2006.....	19
An important milestone - WIOMSA acquires office building.....	20
Dr Nyawira Muthiga remains at the helm.....	21
Resource mobilization for long term sustainability.....	22
<b>WIOMSA’s Vision and Organisation</b> .....	23
<b>Financial statement</b> .....	24
<b>Contacts</b> .....	25



# Editorial

This Annual Report contains an array of stories that describe some of many advances that have been supported by WIOMSA in 2006.

The year 2006 will be remembered for many things, but the purchasing of the two-storey building currently accommodating the Secretariat, stands out as one of the major accomplishments. This acquisition, offers the WIOMSA many benefits including generating extra income from rentals and contributes to future financial stability. After completion of the Strategic Plan, 2006 was dedicated to develop a Resource Mobilization Strategy to identified ways to raise funds to support the implementation of the Plan.

For a membership organization like WIOMSA, adhering to democratic ideals is essential. The Board elected the three top leaders in 2006. I was elected as the President for a second term. At the same time, Dr Mitrasen Bhikajee and Prof Ron Johnson were elected Vice-President and Treasurer. I believe that the three of us together with the other members of the Board form an excellent team that will steer WIOMSA to higher levels. In addition, new Country Coordinators were elected. I was very impressed by how competitive these elections were in some countries. It's an indication of the keen interest and active participation of the members.

MASMA inaugurated a new "Commissioned" Competitive research grant programme. It was initiated to address some of the limitations of the "Open" Competitive research grant programme, especially the need to target emerging issues and encourage proposals in areas that receive little attention amongst the priority research themes. Based on the number and the quality of proposals that were submitted, it is evident that this initiative was well received by scientists in the region. The Commissioned Competitive research grants also allow the MASMA programme committee to ensure that the research needs in the region are being adequately addressed.

Those of you who regularly visit the WIOMSA website may have observed that the design as well as the content improved significantly. The upgrading will continue in 2007 focusing on

translating the information into French. This is in accordance with our plans to make the website the main source of information for WIOMSA members and partners.

A number of research studies were completed in 2006 yielding some interesting results, for example two studies funded through the MARG programme on antimalarial and other bioactive compounds from marine species around Zanzibar and an assessment of the aquarium fish trade in Kenya. A MASMA-funded project on the effects of coral bleaching on coral reef fish and the socio-economic consequences on its second year of implementation has already produced interesting results which have been published in peer reviewed journals.

I hope you will enjoy reading this report. If you have any comments on articles or suggestions on how to improve it, please feel free to let us know.

Nyawira Muthiga  
President



*Photo: Tim McClanahan*

# Coral bleaching events affect both fish and people

**Coral bleaching remains a concern in the Western Indian Ocean.**

**“Particularly the corals around the Seychelles have suffered seriously since the bleaching event of 1998 and subsequent events” says Dr Tim McClanahan, one of the scientists involved in the MASMA project that investigates coral bleaching.**

In Kenya and the Seychelles various kinds of fish dependent on corals for food and habitat have been affected. In contrast, Tanzania and Mauritius in the southern Indian Ocean display lesser change in both corals and various species of fish.

The project also analyzed fish landing data in Kenya to understand the relationships between bleaching and fishing. Other factors than coral bleaching seem to influence the fishery:

“The data indicate that the management aspects of the fishery override the effects of bleaching,

which mostly affects ornamental species, but there may also be delayed effects that are not evident for many years” says Dr McClanahan.

The MASMA project “Effects of Coral Bleaching on Coral Reef Fish, Fisheries and Ecosystem Services in the Western Indian Ocean” aims to evaluate the effects of coral bleaching on the coral reef communities, fish, and fisheries before and after the large coral bleaching event of 1998. Research on ecological as well as social and economic factors are carried out in Kenya, Tanzania, Reunion, Mauritius, Seychelles, Maldives and Chagos. Some of the results from this research project have been published in at least seven scientific papers.

The socio economic part of the project explores how coral bleaching and other ecological changes are affecting peoples’ lives in coastal communities. The main question is “Can ecological changes influence peoples awareness of coastal resources and their decision-making”?

Part of the research was conducted via interviews in 10 coastal communities in Mauritius and the Seychelles, which are situated close to Marine Protected Areas (MPAs). Most locals were aware of a decline in the number of fish in the sea:

“In Mauritius respondents attributed this to pollution from lime factories, sugar cane farming and over fishing by using seine nets. In the Seychelles people mentioned that climate change and fish behavior also play a role,” says Dr Selina Stead, who leads the socio economic component of the project.



*Two individuals of the coral species Pocillopora verrucosa responding very differently to warm water. One is fully bleached while the other has its normal coloration. This variability may be the basis for selection that may allow for resilience to the warmer climate predicted by climate change. Photo: Tim McClanahan*



*A participant in the MASMA project interviewing fishermen in Vuma, Kenya. Photo: Joshua Cinner*

In both countries, fishermen and non-fishermen were well aware of the regulations related to Marine Protected Areas. In Mauritius there are conflicts between registered and amateur fishers. A common opinion was that non-registered fishers should operate under the same regulations as registered fishers.

In both countries non-compliance with MPA rules was evident. People thought that rule breaking is necessary to earn a living doing fishing. Confusion over MPA boundaries also contributes to non-compliance. Also changing weather conditions make offshore fishing sites more dangerous and the protected areas often offer safer fishing as they are located closer to the shore.

"Despite these comments, most people were in favor of marine protected areas. In the Seychelles, communities located further away considered closed areas as having a management role in enhancing fish numbers" says Dr Stead.

#### **About MASMA**

The research programme Marine Science for Management (MASMA) was established in 2001 to support sustainable development of marine and coastal resources in the Western Indian Ocean, through applied scientific research.



*Photo: Ian Bryceson*

## Commissioned Competitive Research – new feature of MASMA

**WIOMSA has in 2006 introduced Commissioned Competitive Research as a new part of the MASMA programme. This provides an opportunity for WIOMSA and national or regional institutions to influence the focus of supported projects towards addressing issues of immediate concern.**

### **Commissioned Competitive Research**

The scientists who receive this grant, are commissioned to do research on a predetermined topic. During 2006, the Programme Committee identified four different research topics as especially urgent to announce a Call. The topics were:

1. Identification of the constraints to environmentally sound aquaculture development in the Western Indian Ocean region.
2. What are the critical factors that ensure coastal and marine ecotourism activities in the WIO provide environmental and socio-economic benefits?
3. Effectiveness of community-based organizations (CBOs) in marine and coastal management.

4. 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.

18 proposals were received. One proposal in research topic 2 and two proposals in topic 3 were funded. The titles and categories of all successful MASMA applications that were funded in 2006 are presented in Table 1.

### **Open Competitive Grant received 45 applications**

For the Open Competitive grant, the choice of research topic is up to the researcher. WIOMSA received 45 applications from over 10 different countries. These applications included letters of intent to conduct new MASMA research (25), resubmitted full MASMA proposals (3), applications to conduct training courses and workshops (10) and proposals to publish scientific material (7).

Figure 1. shows the fate of these applications after evaluation by the MASMA Programme committee and external reviewers. Four of the new applications were invited to develop full project proposals. One of the three re-submitted proposals was funded and two training courses/workshops were also funded. One of the applications for supporting publication was successful (Table 1.).

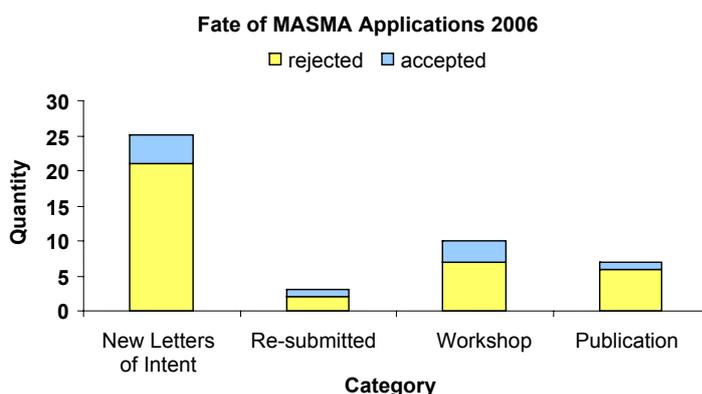


Figure 1. Open competitive MASMA Applications 2006.

Table 1. MASMA Projects that were funded to begin implementation in 2006.

Category of MASMA	Titles of projects funded in 2006
<b>Open competitive grants:</b>	
New MASMA research	<p>Preparing for climate change through the assessment of biodiversity and management preferences across a scale of environmental variation in the Western Indian Ocean</p> <p>Developing management practices for ecosystem resilience: functional group analysis of the degraded Grand Recif of Toliara, Madagascar</p> <p>Genetic connectivity and its implications for the design and management of marine protected areas in the East African ecoregion</p> <p>Increased sea urchin herbivory in coastal areas of the WIO region - Identification of causes and impacts for effective management</p>
Resubmitted proposal	The problem of shoreline changes, its socio-economic impacts and mitigation options in Eastern Africa
Training course/workshop	<p>Incidental catch of non-targeted marine species: problems &amp; mitigation measures</p> <p>Training workshops for Socio-economics monitoring in the Western Indian Ocean (SocMon WIO)</p>
<b>Commissioned competitive research:</b>	<p>Critical factors ensuring coastal and marine ecotourism activities in the Western Indian Ocean providing environmental and socio-economic benefits</p> <p>The effectiveness of community-based organizations in managing coastal resources in the Western Indian Ocean</p> <p>The relationship between community-based organizations and effective management of coastal and marine resources in the WIO region</p>

# Fish farming SUCCESS, created Tanzania's first milkfish millionaire

**In December 2006 Mr John Mushi in Bagamoyo harvested a ton of milkfish from his pond.**

**"The fish were sold at about 2400 Tanzanian shillings/kg and the incomes were in total 2.3 million Tanzanian shillings" says Dr Aviti Mmochi, field coordinator of the SUCCESS mariculture project.**

This successful harvest made Mr Mushi the first milkfish millionaire in Tanzania. His company Regent Enterprises started to construct the 1 ha pond in November 2005. Fingerlings from the sea were stocked into the pond in May 2006. To protect the fingerlings, wooden stakes with fliers tied on them were put into the pond to scare away birds, especially ducks. Despite these efforts, only 60 % of the fingerlings survived and became adults. Even though the mortality was high, Mr Mushi could harvest as much as one ton of fish from the pond.

The marketing of the fish was done very strategically. Mr Mushi, the farmer, harvested only a fourth of the fish stock at a time and stored the fish in a deep freezer. He picked samples and visited restaurants in Dar Es Salaam who after having seen the fish, pla-

*Up to 0.5 kg milkfish were harvested at Changwabela in December, 2006.*



ced their orders. The market was good, any amount of fish Mr Mushi harvested could be sold in one day. The customers liked the taste and even after the farmed fish were finished, they kept calling him for more.

The pond has a potential to produce more fish, but it was difficult to catch enough fingerlings to put in.

"The way we are looking at it now is that the only limit for Mr Mushi to have a good production of milkfish, is fingerling availability" says Dr Mmochi from the SUCCESS project. The scientists are now studying sources and seasonalities of fingerlings to overcome the last hurdle in the milkfish farming demonstration pond. The project also wants to do research on fry collection. Fry, when available, are plentiful and easy to collect, as they are passive compared to actively swimming fingerlings.

"For other areas where fingerlings seem to be available through-out the year, like Mkuranga and Tanga, the experiences from the demonstration site at Bagamoyo is enough for somebody to start up full scale milkfish farming" says Dr Mmochi.

This is a dream comes true not only to Mr Mushi but to all participants in the project. From 1996 WIOMSA and the Institute of Marine Sciences at University of Dar Es Salaam have been involved in a number of efforts to initiate milkfish mariculture in Tanzania. In 2005 together with several partners, they started a project for "Sustainable coastal communities and ecosystems (SUCCESS)". They began to develop the first commercial milkfish farming in Tanzania with ponds in Mkuranga and Bagamoyo. Judging from the number of people from other districts who already are trying to copy the demonstration, milkfish farming is becoming more and more popular.



In 2005 WIOMSA, Coastal Resources Center, Institute of Marine Science and other partners, started a project "Sustainable coastal communities and ecosystems (SUCCESS)" with funding from USAID. This project is built on the MASMA-funded "Development of Integrated Pond Culture of Fin-fish, Shellfish and Seaweed in Zanzibar 2001-2003".

# Exporting Kenya's coral reef fish for use in marine aquariums worldwide

**Today, Kenya ranks among the top countries within the Western Indian Ocean region that export coral reef fish for the marine aquarium trade, according to a study funded by the MARG Programme. Despite being established in the mid 1970's, the industry has received limited attention by way of research and monitoring.**

"Exported aquarium fishes from Kenya are taken from the wild and the key sites for collecting at the coast are Shimoni and Nyali. For the first time we know that approximately 192 fish species are harvested," says Ms Gladys Moragwa, leader of the MARG baseline study entitled: "Exploitation of Coral Reef Fishes for the Marine Aquarium Trade in Kenya".



*Clownfishes in a Durban aquarium.*

Results revealed differences in fish density, species richness and habitat characteristics between fished and non-fished protected sites. The study showed that fished sites have an overall lower density and abundance of target fish species and more algae.

## **Baseline research necessary for management**

Collecting aquarium fish for export is increasingly gaining popularity in Kenya. Over time, there have been increased concerns about the environmental

impacts of the activities resulting in resource use conflicts. Efforts to improve the management of the fishery have however lagged behind due to the lack of baseline research information.

## **Harvesting for export**

Among the key concerns about the fishery has been the potential of over-harvesting the target species, hence resulting in changes in population dynamics and destruction of coral reef habitats. According to the study 70% of the aquarium fish harvested belong to 4 families - damselfish, wrasses, surgeonfish and gobies. Approximately 84% of the shipments from Kenya are destined for markets in U.K, USA, South Africa, Hong Kong and Germany

"Our study shows that we need to strengthen monitoring, to improve current regulatory mechanisms, and to promote strong stakeholder involvement in the management of the fishery," advised Ms Moragwa.

## **Augment fisher's incomes**

The study shows that aquarium fish collectors landed 24 to 33 fish/man/day and the average income earned by the aquarium fishermen ranged from a maximum of KShs 10,533 (US\$ 148) to a minimum of KShs 2,800 (US\$ 39) per month. The minimum earnings are especially attributed to the part time aquarium fishers who also engage themselves in other artisanal fishing activities.

The study "Exploitation of coral reef fishes for the marine aquarium trade in Kenya - a preliminary assessment", was conducted through financial support from WIOMSA's Marine Research Grant (MARG I) 2005-2006 Programme. The aim was to provide baseline quantitative information on the current status and dynamics of the ornamental fishery in Kenya.



Photo: Melckzedek Osore

# Marine Research Grants continue to attract many upcoming scientists

**MARG supports research projects addressing issues of local and in some cases national importance in the Western Indian Ocean region.**

In 2006, the programme attracted an all time high number of applicants, totaling 92. This was a substantial increase compared to 57 the year before. MARG is performing up to its expectation by providing an excellent service to scientists in the region.

It is the pioneering research grant scheme of its kind the Western Indian Ocean providing a flexible mechanism for scientists to transform their ideas into viable research projects.

Figure 2. shows the number of successful applications and categories of MARG that were awarded to scientists from various countries of the region during 2006. All the countries in the region (except Somalia) succeeded in obtaining at least one approved MARG. The titles and categories of all successful MARG applications that were funded are presented in Table 2.

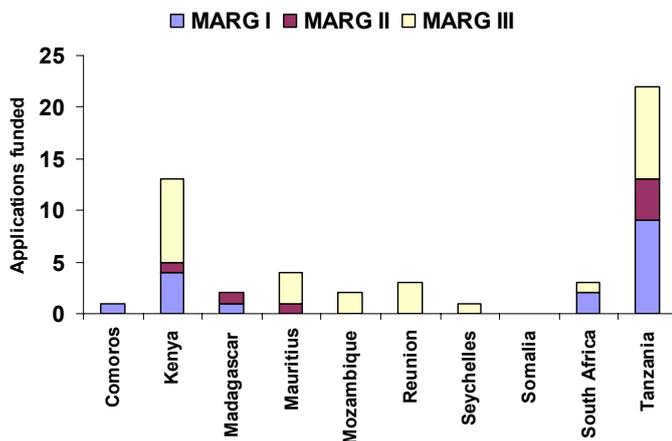


Figure 2. Categories of MARG grants obtained by applicants from countries in the Western Indian Ocean region.

**MARG-I grants are awarded to individual scientists to carry out well-defined research activities in their countries.** During 2006 a total of 43 MARG I applications were submitted by scientists working in various research and academic institutions. This was a marked increase compared to 26 MARG I the year before. Out of all the MARG I applications received in 2006, 17 projects were approved. These included a project on the use of marine resources in Eastern Cape, South Africa for the development of a management plan for the proposed Marine Protected Area and another one on monitoring the population of dugongs in Comores.

**MARG-II grants are awarded to individual scientists for the purpose of sharing or gaining technical experience as well as data processing and manuscript.** A total of 11 MARG II applications were received in 2006 out of which 6 were approved.

The scientists obtained funding to conduct collaborative research, ranging from learning more about using remote sensing to determine the movement patterns of octopus to innovative techniques for extracting malarial compounds from invertebrates and conducting experiments on the geometry and morphometry of crab species.

**MARG-III grants are given for travel support to individual scientists to attend scientific meetings, giving them opportunities to present their work and learn from others.** Some 35 applications were submitted in 2006 and among these 27 received funding. The successful applicants participated in symposia and workshops worldwide where they presented their research finding on various topics, for example turtle ecology, mangroves as fish habitats, seaweed cultivation and socio-economic impacts of climate change.

*Table 2. MARG I projects completed and Final Technical Reports submitted.*

MARG I Project Title	Investigators
Reproductive Biology of the White spotted Rabbit fish, <i>Siganus sutor</i> (Pisces: Siganiidae) from basket trap fishery in Dar Es Salaam marine reserve systems, Tanzania	Albogast Kamukuru
Implication of coastal processes for the management of the Shanzu-Bamburi coastal zone, Mombasa, Kenya	Pamela Abuodha
Harvesting and sustainability of marine fisheries in Malindi-Ungwana Bay, northern Kenya coast	Jacob Ochiewo
Improved traditional fish processing methods by smoking and solar drying in Tana River and south coast areas of Kenya	Peter Michael Odote-Odote
The effect of cultivation duration, seasonality and nutrient concentration on the growth rate and biomass yield of the seaweeds <i>Kappaphycus alvarezii</i> and <i>Eucheuma denticulatum</i> in Zanzibar, Tanzania	Flower Ezekiel Msuya and Dotto Salum
Coral reef fish diversity inventory around Unguja Island: The effect of marine conservation initiatives	Mohd Nur Mohd
Search for antimalarial and other bioactive compounds from Zanzibar marine sponges and tunicates	Sadri A. Said
A preliminary survey of the structure and dynamics of the coastal migrant fisheries in Kenya	Bernerd Fulanda & Cosmas N. Munga
Ligocellulolytic enzymes from basidiomycetous fungi isolated from Tanzania's coastal and marine environment	Godliving Y. Mtui
Exploitation of coral reef fishes for the marine aquarium trade in Kenya: A preliminary assessment	Gladys Okemwa

# Villagers at Dolphin Workshop give recommendations for the future

In September WIOMSA sponsored a workshop on “Sustainable Dolphin Tourism in East Africa”. The workshop was held in Menai Bay, Zanzibar and it was the final activity for the MASMA project on sustainable dolphin tourism in East Africa.

The workshop was organized by a research team comprising experts from Mozambique, South Africa, Sweden and Zanzibar. One of the purposes of the workshop was to communicate the results of the research to the local community. About 60 participants attended the workshop, most of them from the local villages around the Bay. Led by their Village Heads (Shehas), they included boat operators, hoteliers, fishers, farmers, traders and other members of the community from Kizimkazi, Menai and its environments.



Photo: Jeremy Kiszka

## Sharing research results

The research team highlighted the historical background of dolphin tourism in Mozambique, South Africa and Zanzibar. Several reports were also presented on the distribution, abundance, population structure and behavior of dolphins in Ponta d'Ouro, Mozambique and Menai Bay, Zanzibar.

## Local people gave their views

The climax of the workshop was when the local people were invited to talk about their perception of dolphin tourism, its socioeconomics and its sustainable management in Menai Bay. The villagers had many views on the research and monitoring, the information and education needs and the sustainability and management of dolphin tourism. They raised only few points about the social, gender and socioeconomic aspects of this specific branch of tourism and about how the dolphin tourism industry itself can promote sustainability, conservation and research.

## List of recommendation

From the discussions in Kizimkazi, a list of recommendations was drawn. A total of 25 recommendations were listed, some of them were:

”Promote involvement of the local community in the research e.g. by training the boat operators, captains, tour guides etc on dolphin biology and ecology.”

”Add value to dolphin tourism to retain the tourists longer in the village by introducing additional activities and services e.g. day care centre for children, a dolphin information centre etc.”

”Kizimkazi Dolphin Tour Operators Association (KIDOTOA) should be empowered to ensure that recommendations from the research are implemented.”

”Menai Bay Management plan should now be compiled incorporating the findings of the completed dolphin tourism research.”

”Women should be empowered to fully participate in dolphin tourism activities.”

Participatory final workshop on “Sustainable Dolphin Tourism in East Africa” 4-6 September was held in Kizimkazi, Zanzibar. The workshop was the final activity for the MASMA project on sustainable dolphin tourism in East Africa.



# Gillnets and trawl fishing threaten dolphins and turtles

*Photo: Jeremy Kiszka*

**Coastal gillnet fishery poses a serious threat to turtles, dugongs, whales and dolphins in the Western Indian Ocean region. Also during bottom trawling for prawns and fish, many marine turtles are accidentally caught.**

Gillnet fishing and trawling are responsible for high by-catch of marine mammals and turtles. This was pointed out during a workshop funded by WIOMSA in Mayotte on incidental catch of non-targeted marine species in the Western Indian Ocean region.

Trawling also causes severe damages to flora and fauna on sea bottoms close to the shores. These areas provide feeding grounds for both turtles and dugongs along the East African coast. Dugongs, which are currently endangered, are further severely threatened from gillnetting and disturbances in their home environment.

During the workshop participants suggested that an assessment of the abundance, quality and distribution of major dugong feeding grounds should be done using satellite images and aerial photographs combined with consultations with fishers. A rapid regional assessment of gillnet fisheries was also considered a high priority activity to assess the level of threat from this fishery on non-targeted marine species.

The participants of the workshop proposed the formation of a by-catch Working Group under the World Bank/GEF funded South-West Indian Ocean Fishery Project (SWIOFP) to advise the project and the region at large on issues related to by-catch.

The workshop "Incidental catch of non-targeted marine species in the Western Indian Ocean: Problems and mitigation measures" was held 13-15 November 2006, in Mayotte, Reunion and attended by 23 participants from 10 countries. It was hosted by Centre de Recherche sur les Ecosystèmes Anthropisés and supported by WIOMSA through a MASMA grant.

Some of the aims of the workshop were to bring together relevant marine mammal and turtle scientists, conservationists and managers in the region to exchange information about threat from fisheries, discuss issues related to by-catch and data collection and analysis techniques.

# Building research capacity and partnerships - a core activity

**Capacity building is core to most if not all activities of WIOMSA. It is a cross cutting activity as it is a focus of all the programmatic areas of the Association as well as the components of the MASMA programme.**

Different approaches are used for building and strengthening capacity in the region. Competitive research grants are aiming at building the capacity of the experts in the region to develop fundable proposals and manage multi-disciplinary and multi-countries projects. While the organizations of training courses and workshops are also contributing to building scientific research capacity, they have also provided a forum for identification of priority research areas as well as laying a foundation for initiation of partnerships amongst participants and institutions involved.

*Photo: Anna-Karin Jobansson*



In 2006, several training courses and workshops were organized. One important was the workshop on “Fishing Communities and Sustainable Development in Eastern and Southern Africa: The Role of Small-scale Fisheries,” which held from 14 - 17 March, 2006 in Dar es Salaam, Tanzania.

The India-based International Collective in Support of Fish workers (ICSF) organized the workshop in collaboration with WIOMSA and the Masifundise Development Trust of South Africa. The Workshop was rather unique as it brought together fishers, researchers, NGOs, traditional leaders (comprising one Chief from Malawi and another one from Zambia), fisheries departments and intergovernmental organizations, such as the Food and Agriculture Organization of the United Nations (FAO), to take stock of inland and marine fisheries issues in the Eastern and Southern region from a small-scale fisheries perspective. Fifty three 53 participants attended and came from landlocked countries such as Malawi, Zambia and Uganda, which have significant lake fisheries. Also small island developing States (SIDS) such as Mauritius and Seychelles, which have significant tuna fisheries were represented, as well as coastal states from Somalia to South Africa.

**Two key recommendations came out from the workshop:**

1. Deliberate efforts should be made to raise the visibility of the small-scale fishery sector.
2. Fishers in Eastern and Southern Africa should be facilitated in forming their associations with the intention of increasing effectiveness of their representation in decision-making processes affecting their lives.

This workshop was important to WIOMSA in many ways. It helped to establish contacts with national NGOs and to understand their priorities as well as their needs. These national NGOs are relevant to WIOMSA's activities as they provide an important link between the Association and coastal communities.

*Some of WIOMSA's country coordinators. From the right: Dr Jacqueline Uku, Ms Colleen Morel, Dr Matthieu Le Corre, Dr Remi Ratsimbazafy representing Madagascar coordinator Dr Man Wai Rabenevana, Mr Hacime Abdérémane, Dr Charles Lugomela, Dr Adriano Macia and Dr Narriman Jiddawi. Photo: Melckzedeck Osore*



## New eight Country Coordinators elected

**Members of WIOMSA in each country have elected their Country Coordinators for the next three years to act as important links between the country and the WIOMSA Secretariat.**

The elections of WIOMSA's Country Coordinators were held between November 2005 and April 2006. It is the second time elections have taken place in all countries since the establishment of the Association 12 years ago, with the exception of South Africa, which held its first election this time. Kenya, Madagascar, Mauritius, Mozambique, Seychelles, South Africa, Tanzania mainland and Zanzibar all got new Coordinators. Only in Comoros and Reunion the incumbent were re-elected.

Colleen Morel, new country coordinator from the Seychelles, has been a member of WIOMSA for five years. She sees many challenges for the coming three-year period:

"My first challenge is to increase the membership base which is small and has been stagnant for a while now. This will also help with advocacy for the Association"

Being a social scientist Ms Morel wants to bring on board members of a more wide-ranging background to join the Association comprising mostly marine scientists.

"I hope to bring all members together periodically to share experiences, discuss projects being implemented, success stories, and to bring them up to date with new developments happening in the region and WIOMSA in particular".

### High expectations

There are high expectations on the elected Coordinators. Besides being outstanding experts on their own right, they belong to a number of national networks. These networks provide appropriate vehicles for reaching out to new potential members as well as disseminating information about WIOMSA and its activities within their countries.

### WIOMSA Country Coordinators:

Comoros, Mr Hachime Abderemane  
 Kenya, Dr Jacqueline Uku  
 Madagascar, Dr Manwai Rabenevanana  
 Mauritius, Dr Chandani Appadoo  
 Mozambique, Dr Adriano Macia  
 Reunion, Dr Mathieu Le Corre  
 Seychelles, Ms Colleen Morel  
 South Africa, Prof Michael Schleyer  
 Tanzania mainland, Dr Charles Lugomela  
 Zanzibar, Dr Narriman Jiddawi

# WIOMSA – Active in communicating and networking

**In 2006, in line with the Association Strategic Plan, communication and networking continued to be the core activities of WIOMSA. The Association continued with its efforts to improve the quality of its main tools of communication and information dissemination as well as building its networks.**

## **Development of the website**

During 2006, WIOMSA focused on upgrading the website [www.wiomsa.org](http://www.wiomsa.org) and adding new features. Though the upgraded version had retained the same layout as before, better opportunities to develop more interactive functions in the future are provided. It will also be possible to disseminate information in the other two common official languages in the region - French and Portuguese later on. The operations of the website has also been improved in order to provide a faster and more reliable access for all users.

## **New additional format for Newsbrief**

In addition to the pdf-version, WIOMSA in June 2006 started producing an HTML version of the WIOMSA Newsbrief. That is an e-mail with a news letter layout with links to other sources on the internet for those who want more information. The HTML-format does not need any attachments and therefore reduces the risk of spreading computer viruses. It is also easier to receive and download for members with slow internet connection.

## **Analysis of research capacity**

In 2006, WIOMSA and UNEP in collaboration with national research and academic institutions in the region under the framework of the Forum of heads of Academic and Research Institutions (FARI) conducted an in-depth institutional analysis of a number of institutions with the view of identifying their strengths, weaknesses and gaps in research capacity. Information about these institutions will be posted in the WIOMSA website.

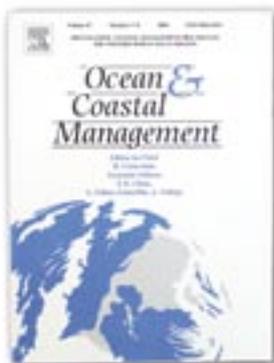
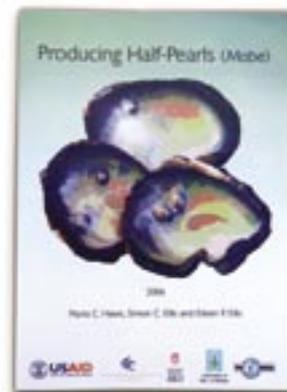


*Photo: Anna-Karin Johansson*

# New publications and material produced by WIOMSA 2006

## Manual on pearl production

WIOMSA in collaboration with partners in the program "Sustainable Coastal Communities and Ecosystems (SUCCESS)" has produced a manual on low-cost and environmental friendly half-pearl production for coastal communities. The manual provides practical guidance on how to select suitable farm sites, obtain adequate pearl oysters, implant nucleus into the pearl oyster, process the half-pearl and make jewellery. It is also available at the WIOMSA website: [www.wiomsa.org](http://www.wiomsa.org)

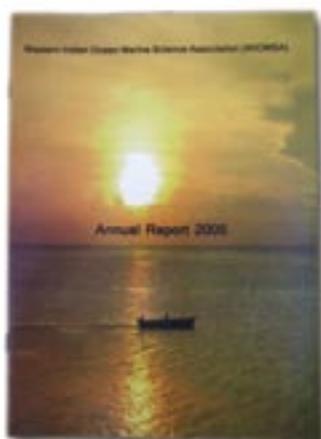


## Special issue of Ocean & Coastal Management

In 2006, WIOMSA in collaboration with the Coastal Resource Center of the University of Rhode Island coordinated the production of a Special Issue of the Ocean & Coastal Management (Volume 49 Number 11). This is a second Special Issue of the same journal produced by WIOMSA, the first one was produced in 2004.

## WIO Journal of Marine Science

In 2006, two issues of the Western Indian Ocean Journal of Marine Science were produced. These were Volumes 5(1 & 2). The papers in these Issues are also posted at the WIOMSA website, [www.wiomsa.org](http://www.wiomsa.org)



## The 2005 Annual Report

WIOMSA produced its first Annual Report in a colourful and easy to read format for wide circulation in 2006. The report provided the highlights of 2005 in WIOMSA's research, capacity building and communication and extension programmatic areas. The report is also available at WIOMSA's website: [www.wiomsa.org](http://www.wiomsa.org)

# An important milestone - WIOMSA acquires office building

**In September 2006, WIOMSA purchased the building that has been accommodating the secretariat since 2000. This followed an offer by the owner of the building to sell it to the Association.**

The two storey building, with Arabic architecture, is located within the Stone Town about 100 meters from the seashore and 300 meters from the Institute of Marine Science (IMS). It was constructed in 1993 and has modern office design with up to date facilities. The ground floor which is currently rented out is divided into two self-contained units. WIOMSA is currently accommodated on the first floor which has four office rooms, a kitchen, two store rooms, three toilets/showers and a conference room. The second floor has the same facilities.

The decision to acquire the property is very strategic as the premises offer several potential benefits. The building would be used for generating extra revenue from rentals. It could also be considered as in-kind contribution by WIOMSA, when applying for funding. In case the Association needs to seek funds from financial institutions it could be used as collateral to support its resource mobilization activities.



*Interior of WIOMSA Office as viewed from the entrance door. Photo: Anna-Karin Jobansson*

Three years ago WIOMSA aggressively started to implement strategies aiming at laying a foundation for ensuring long-term sustainability of the Association. It initially developed the first WIOMSA Strategic Plan in 2004, whose main objective was to guide the Association's work over the next 15 years. It was followed in 2006 by the development of the Resource Mobilization Strategy, whose aim is to ensure that in the short-term, WIOMSA has adequate resources to implement the proposed priority activities in the Strategic Plan as well as to achieve financial sustainability in the long-term.

The acquisition of the building was supported by funds from the WIOMSA's Trust Fund as well as a local bank loan. The Board of Trustees and Sida provided important support and guidance throughout the whole process. WIOMSA recognizes that the purchasing of the property is an important step towards long-term sustainability.



*WIOMSA building as viewed from the street outside. Photo: Anna-Karin Jobansson*

# Dr Nyawira Muthiga remains at the helm

**During the first meeting of the newly elected WIOMSA Board of Trustees, held in February 2006 in South Africa, Dr Nyawira Muthiga was re-elected as the President of WIOMSA.**

President Muthiga's re-election came a few months after she received the National Geographic Society's Global Award for Leadership in African Conservation. The Award recognized her efforts in conserving the coastal and marine environment of the WIO region.

In her acceptance remarks as President of WIOMSA, Dr Muthiga thanked the Board members for re-electing her, and in retrospect, the members for re-electing her to the Board. She vowed to continue working hard in cooperation with the rest of the Board whom she commended for their selfless commitment and dedication that has enabled the



*Dr Nyawira Muthiga, was re-elected as the President of WIOMSA by the Board of Trustees.*

*Photo: Melckzedeck Osore*

Association to continue to excel. Dr Mitrasen Bhikajee from Mauritius was appointed the first Vice President of WIOMSA – a newly created position. Prof Ron Johnstone from Australia was re-elected as Treasurer.





# Resource mobilization for long term sustainability

*Photo: Anna-Karin Jobansson*

**The WIOMSA Board of Trustees set, as one of its priority for 2006, the development and implementation of a Resource Mobilisation Strategy.**

The focus of this strategy is on raising funds to ensure that WIOMSA is financially sustainable, and therefore able to contribute meaningfully in the long term to implementing its Strategic Plan.

WIOMSA has conducted a number of fund-raising activities that have generally been one-off initiatives to mainly support the organization of courses and workshops. Though successful, these efforts were undertaken in an ad hoc manner and not integrated within an overarching fund raising framework or strategy.

With funding from the Wilson Foundation through the Wildlife Conservation Society, WIOMSA recruited a consultant and a full time staff member as the Director of Resource Mobilization to develop and help implement such a Strategy. The process involved wide consultations with and seeking suggestions from our membership and our WIOMSA partners.

At the Secretariat, resource mobilization activities in late 2006 were primarily focused on developing and 'test driving' elements of the Plan within current available WIOMSA resources. These included the development of specific comprehensive corpo-

rate membership, media relations, communications, and paid WIOMSA membership strategic plans with short execution time lines and meetings with private companies, nongovernmental organizations, media and representatives from the public sector to gauge interest in potential support for WIOMSA.

Also negotiations of discount agreements for travel and hospitality services with Precision Air, Kenya Airways and Neptune Hotels were undertaken and successful concluded. These arrangements will mean considerable saving on WIOMSA's operational costs and can thus be viewed as reverse funding.

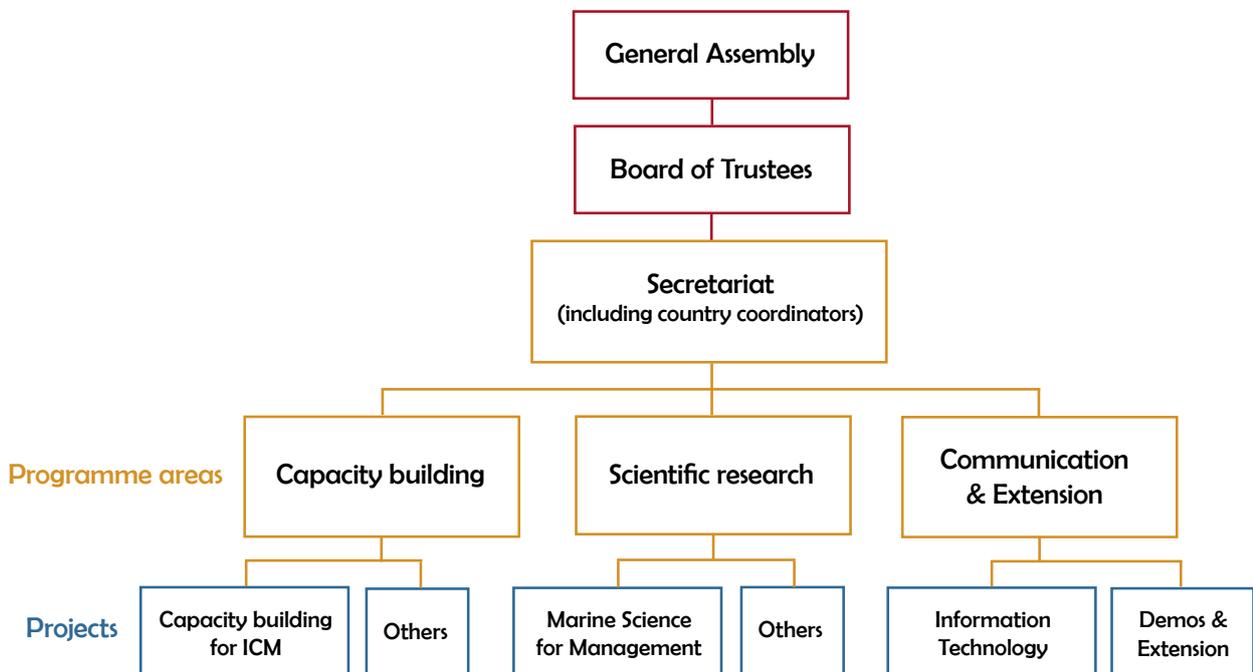
An additional Resource Mobilization activity included helping to direct to our current members, a survey of interest in a paid membership program, the preliminary results of which are very positive.

Successful implementation of the resource mobilization strategy through 2007 will be a challenge, especially in gaining major private sector support in the short term. It will be critical in this regard to generate awareness for WIOMSA's vision and activities to a wider public and to get WIOMSA's key message out that quality science, coupled with better governance of marine resources and the marine environment, leads directly to successful community and economic development and poverty reduction in the region.

# WIOMSA's Vision and Organisation

**WIOMSA's Vision:**

"By 2020, WIOMSA will be recognized widely as a leader in promoting the development of marine and coastal science professionals, advancing marine and coastal science, and promoting the conservation and sustainable development of coastal and marine environment."



# Financial statement

Western Indian Ocean Marine Science Association, Consolidated statement of receipt and payments for the period ended 31 December 2006		
	2006 (US\$)	2005 (US\$)
<b>Balance b/f</b>	1,162,087.31	714,501.90
Add Income received		
Other Income	351,963.09	311,334.99
Interest Income	3,384.34	3,144.94
Masma Income	826,022.55	1,137,229.50
<b>Total Amount Available</b>	<b>2,343,457.29</b>	<b>2,166,211.33</b>
<b>Less Payments</b>		
Masma Payments	847,282.98	819,507.83
Other Payments	638,442.01	189,416.19
<b>Total payments</b>	<b>1,485,724.99</b>	<b>1,008,924.02</b>
<b>Excess of receipt over payments</b>	<b>857,732.30</b>	<b>1,157,287.31</b>
Add back Amount transferred to capital	85,373	4,800.00
<b>Net excess of receipt over payments</b>	<b>943,105.76</b>	<b>1,162,087.31</b>

Western Indian Ocean Marine Science Association, Consolidated balance sheet as at 31 December 2006		
	2006 (US\$)	2005 (US\$)
<b>Assets</b>		
<b>Building</b>	303,267.90	
<b>Furniture</b>	5,000.00	
Cash and Bank	943,105.76	1,162,087.31
Advance Payments	57,518.54	8,870.60
<b>Sub-total</b>	<b>1,308,892.20</b>	<b>1,170,957.91</b>
Less Projects balances	1,028,713.63	1,084,783.47
<b>Total net Assets</b>	<b>280,178.57</b>	<b>86,174.44</b>
<b>Financed by</b>		
Capital Fund	192,195.89	
Trust Fund		86,174.44
Bank Loan	87,982.68	
<b>Total</b>	<b>280,178.57</b>	<b>86,174.44</b>

## Notes to the financial Statements for the year ended 31st December 2006.

### Principal Accounting Policies

#### 1. Basis of accounting

- i. Transactions are recorded on cash basis i.e. Income and expenditure are recognized when is received or paid respectively.
- ii. Financial statement is prepared on the historical cost basis of accounting and records are kept on historical cost.

#### 2. Depreciation

All purchases except purchase of fixed assets are expensed during the period of procurement.

#### 3. Foreign exchange translation

Transactions denominated in local currency are reported into the reporting currency at the rate of the transaction date and closing balances at the closing rate.

#### 4. Advance payments

Advance payments constitutes payment made in respect of projects that we receive funds on installments (but currently received installments are exhausted) and the running of those project are not blocked only because we have not received the next installment.

#### 5. Project balances

These are balances of funds left for those projects.

#### 6. Sources of funds

WIOMSA is mainly funded by Sida under the MASMA program. Other donors normally contribute or finance specific activities. The funding ends when the project or activity is completed. Other sources of funds include sale of WIOMSA products such as journals, registration fees from WIOMSA's Symposium and for the last year the Association managed to acquire a bank loan.

# Contacts

## Board of Trustees

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**Dr Nyawira Muthiga (President)**

Wildlife Conservation Society  
KENYA

**Dr Mitrasen Bhikajee (Vice President)**

Mauritius Oceanography Institute  
MAURITIUS

**Prof Ron Johnstone (Treasurer)**

University of Queensland  
AUSTRALIA

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SEYCHELLES

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MACEMP  
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World Bank

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Nature Seychelles  
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**Dr Julius Francis (Secretary)**

WIOMSA  
TANZANIA

**Lena Gipperth**

Law Department, Göteborg university  
SWEDEN

**Dr Vesa-Matti Loiske**

Coastal Management Research Centre (COMREC)  
Södertörns Högskola  
SWEDEN

**Prof Nils Kautsky**

Department of Systems Ecology  
Stockholm University  
SWEDEN

**Dr Gilbert David**

Institut de recherche pour le developement  
LA REUNION

**Dr Jean M Harris**

Ezemvelo Kwa Zulu Natal Wildlife  
SOUTH AFRICA

**Prof Ian Bryceson**

Norwegian University of Life Sciences  
NORWAY

## Secretariat

---

**Executive Secretary**

Julius Francis  
julius@wiomsa.org

**Research Coordinator**

Melckzedek Osore  
mosore@wiomsa.org

**Communication and Extension Coordinator**

Anna-Karin Johansson  
anna-karin@wiomsa.org

**Director Resources Mobilization**

Zaher Ahmed  
zaher@wiomsa.org

**Accountant**

Hamadi Hamadi  
hamadi@wiomsa.org

**Messenger**

Thabit Mohammed

## Country coordinators

---

### Comores

Mr. Hachime Abderemane  
Projet Biodiversite'  
Tel: +269 73 62 22  
E-mail: hachimea@snpt.km

### Kenya

Dr. Jacqueline Uku  
KMFRI  
Tel: +254 41 475151  
E-mail: juku@kmfri.co.ke

### Madagascar

Dr. ManWai Rabenevanana  
Institute Halieutique et des Sciences Marines  
Tel: +261 20 9444552  
E-mail: manwai@dts.mg

### Mauritius

Ms. Chandani Appadoo  
University of Mauritius  
Tel: +230 454 4041  
E-mail: chandani@uom.ac.mu

### Mozambique

Dr. Adriano Macia  
Universidade Eduardo Mondlane  
Tel: +258 21 430 744  
E-mail: adriano@zebra.uem.mz

### Reunion

Dr. Mathieu Le Corre  
ECOMAR, University de la Reunion  
Tel: +262 262 93-8686  
E-mail: mathieu.lecorre@univ-reunion.fr

### Seychelles

Ms. Colleen Morel  
Seychelles Fishing Authority  
Tel: +248 670 342  
E-mail: cmorel@sfa.sc

### South Africa

Prof. Michael Schleyer  
Oceanographic Research Institute  
Tel: +27 31 3288222  
E-mail: schleyer@ori.org.za

### Tanzania (mainland)

Dr. Charles Lugomela  
University of Dar es Salaam  
Tel: +255 748 230023  
E-mail: lugomela@uccmail.co.tz

### Zanzibar

Dr. Narriman Jiddawi  
Institute of Marine Sciences  
Tel: +255 24 2232128,  
E-mail: jiddawi@ims.udsm.ac.tz

## Editorial board - Western Indian Ocean Journal of marine science

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### Prof Alan Whittick (Editor-in-Chief)

Memorial University  
CANADA

### Prof Mats Bjork

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SWEDEN

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Edouardo Mondlane University  
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PORTUGAL



## **About WIOMSA**

WIOMSA - Western Indian Ocean Marine Science Association, promotes the educational, scientific and technological development of all aspects of marine sciences throughout the Western Indian Ocean region with a view toward sustaining the use and conservation of its marine resources.



WIOMSA  
Western Indian Ocean Marine Science Association  
Mizingani Street, House No. 13644/10  
P.O. Box 3298, Zanzibar, Tanzania  
Phone: +255 24 2233472  
Fax: +255 24 2233852  
E-mail: [secretary@wiomsa.org](mailto:secretary@wiomsa.org)  
Web: [www.wiomsa.org](http://www.wiomsa.org)