

Annual Report 2007



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Editorial

2007 has been both a productive and exciting year for WIOMSA with a number of milestones achieved. The year marked the start of the Third Phase of Sida/SAREC support to WIOMSA, which runs from April 2007 to December 2010. This Phase is characterized by substantial increase in the amount of funds provided by Sida/SAREC to support the competitive research grant program. This is a clear demonstration of the Sida/SAREC's confidence in WIOMSA, a quality that the Association cherishes and will continue to work hard to maintain.

During the year, the major activity undertaken by the Association was the Fifth WIOMSA Scientific Symposium, which was held in Durban, South Africa in October 2007. The Symposium was attended by about 400 scientists, practitioners and policy makers from 30 countries from within and outside the Western Indian Ocean region. A total of 180 oral papers and 190 posters were presented during the Symposium. In terms of number of presentations and number of participants attended this was the largest Symposium ever to be organized by the Association. The quality of presentations and posters was comparable to international scientific symposium.

WIOMSA also announced the first winners of the Honorary and Fellow membership awards. Prof Olof Linden, one of the founding members of WIOMSA became the first recipient of the most prestigious WIOMSA's award, the Honorary Membership. He was conferred this award in recognition of his exemplary, outstanding and distinguished contribution towards the development of coastal and marine science in the Western Indian Ocean. Four distinguished scientists were also awarded WIOMSA's Fellow Membership. These were: Profs Mats Bjork and Yunus Mgaya as well as Drs Tim McClanahan and David Obura.

2007 will be remembered as the year when the Western Indian Ocean Journal of Marine Science (WIOJMS), following successful evaluation made, its entry into the Institute for Scientific Information (ISI) database. This is a major achievement for the relatively young Journal given that even some well established journals do not appear in the ISI list. The inclusion of WIOJMS in the ISI database will raise the profile and visibility of the journal we therefore hope that this will attract prominent scientists to

publish in the WIOJMS. Publishing in ISI registered journals is an important evaluation criteria for some funding agencies within and outside the WIO region. WIOMSA also launched its first magazine, 'the WIOMSA Magazine-People and the Environment' that aims at providing a platform for information sharing, education and open dialogue on issues of priority to the region.

This was also the year WIOMSA launched the membership subscription program as one component of the Resource Mobilization Strategy developed in 2006. The new membership system is hosted at the WIOMSA website and members' response has been encouraging judging from the fees that have been paid within a few months of the launch. Paying members will receive a number of benefits such as copies of all WIOMSA publications and full access to the WIOMSA website.

These milestones are described in detail in the report. Furthermore, this annual report also includes highlights of results from some of the research that MASMA and MARG grantees have conducted. All these achievements would not have been possible without the tremendous support that WIOMSA has received from its members, donors and partners and we are truly grateful for it.

We wish you a pleasant reading and thanks for your support.

Nyawira Muthiga
President

Photo: WIOMSA



High Scientific Quality at the 5th WIOMSA Symposium

The 5th WIOMSA Scientific Symposium held in South Africa, was a success – competitions, awards and special events added splendour to the Symposium that scored high marks from the 400 participants for its scientific quality, presentations and organization.

The 5th WIOMSA Scientific Symposium which was held in Durban, South Africa from the 22nd to the 26th October 2007, attracted about 400 scientists, practitioners and policy makers from over 30 countries within and outside the Western Indian Ocean (WIO) region. The Symposium theme was: 'Advances in Marine Science in Eastern Africa Science, Policy and Management: Pressures and responses in the Western Indian Ocean'.

Many new features

The Symposium has become a recognized premier event in the WIO region and is constantly developing and progressing. The 5th WIOMSA Symposium will be remembered as being the setting for 'a number of firsts' in exciting new features; the number of presentations on social-economic issues and governance processes reached an all-time-high at the Durban conference. Two competitions were also organized, one for the best student poster and the other for the best photograph depicting the WIO region and its people. The Symposium also served as a launch for the book "Guide Pratique: Poissons de l'ocean Indien et de la mer rouge" (A Practical Guide:

Fishes of the Indian Ocean and the Red Sea). The inauguration of the WIOMSA Honorary and Fellow Memberships awards was held here and finally, there was an increase in the number of side events including one which aimed at improving the collaboration with West Africa.

Happy participants

Apart from the increased number of participants and papers presented, the Symposium was distinguished by the improved scientific quality as reflected from the participants' comments. 98 % of the participants found the scientific content to be good or excellent. The standard of presentations was satisfactory to 83 % of the participants while 98 % of the participants were happy with the overall organization of the Symposium.

Deputy Minister recommended radio

The Symposium was officially opened by South Africa's Deputy Minister for Environmental Affairs and Tourism, Honourable Rejoice Mabudhafasi. In her opening speech, the Honourable Minister reiterated the commitment of the Government of South Africa to keep the ocean clean by improving marine and coastal research. She noted with satisfaction that representatives from West Africa were also invited to participate and to share experiences from the Atlantic Ocean. Hon Mabudhafasi urged the delegates to be practical in promoting marine science by penetrating into the remote areas of Eastern Africa, away from the ocean to encourage the youth of Africa to take up marine science as a career. "WIOMSA needs to devise a strategy to reach out for the youth in the remote rural areas in order to achieve the theme of this Symposium. The Government of South Africa is committed to this approach", Hon Deputy Minister stated, "One way of doing this is by using the local radio stations as a medium of outreach".

Photo: WIOMSA



South Africa's Deputy Minister for Environmental Affairs and Tourism, Honourable Rejoice Mabudhafasi opened the 5th WIOMSA Symposium in Durban, South Africa.



Photo: WIOMSA

Mr. Oskar Henriksson, second from the right, won WIOMSA's first Photo Competition during the Symposium. The winning photograph is found on the cover of this report and is called "Mama Samaki".

WIOMSA well in line with Sida/SAREC

The representative of Sida/SAREC, Dr. Claes Kjellström, also addressed the participants and identified the major areas targeted for future Sida support in Africa: Natural resources management and bioproduction, natural disasters and renewable energy, with the overarching goal of effects of climate change on poverty alleviation. The Executive Secretary of WIOMSA, Dr. Julius Francis, pointed out that these new areas are well in line not only with WIOMSA's core work and activities but also with the theme of the Symposium, not least of which is the newly introduced theme on social dynamics in resource management and governance

The 5th WIOMSA Scientific Symposium was jointly organized by WIOMSA and South Africa's Oceanographic Research Institution (ORI). WIOMSA Scientific Symposia are held every two years in one of the WIOMSA member countries. Previous symposia have been held in Kenya, (1997), Tanzania (2001), Mozambique (2003) and Mauritius (2005).

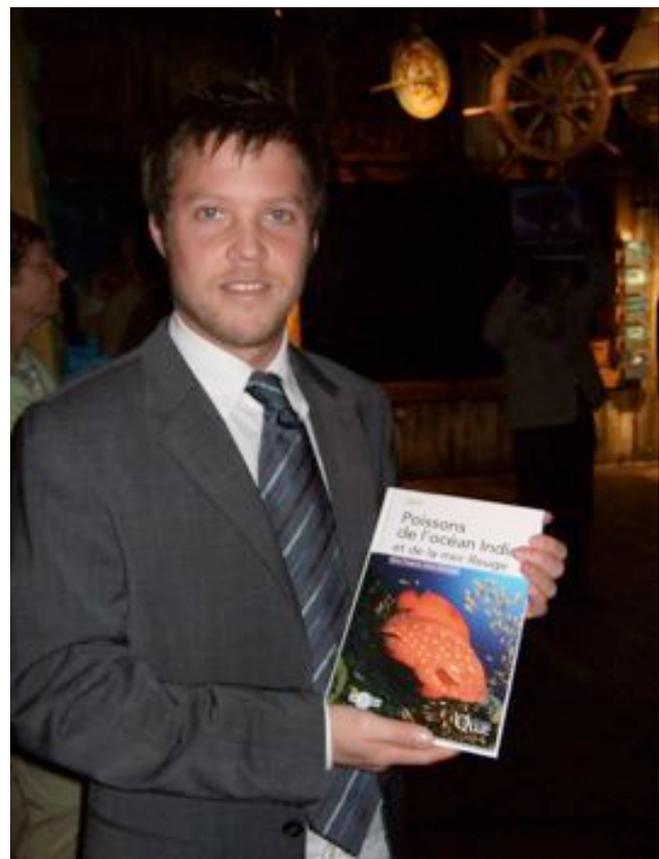


Photo: WIOMSA

*Mr. Niklas Olson scooped the prize for the best overall poster and won a copy of the new book *Guide Pratique: Poissons de l'océan Indien et de la mer rouge* (A Practical Guide: Fishes of the Indian Ocean and the Red Sea)*

WIOMSA confers first Honorary Membership Award to Prof Lindén

WIOMSA conferred its first Honorary Membership to Professor Olof Lindén from Sweden during the 5th WIOMSA Scientific Symposium.

The Honorary Membership Award is the highest award WIOMSA confers. Prof Olof Lindén was given the award in recognition of his exemplary, outstanding and distinguished contribution towards the development of coastal and marine science in the Western Indian Ocean.

During the last 20 years, Prof Lindén has focused on the issues related to Integrated Coastal Zone Management (ICZM), mainly in tropical developing countries, as well as on the topic of climate change and its impacts on the coastal environment in the Indian Ocean. He was a driving force behind the establishment of the Sida/SAREC's regional marine research and capacity building program in East Africa in 1989. This program was the precursor of a number of initiatives that have contributed to the

Professor Olof Lindén



increasing profile and visibility of marine science in the management of coastal and marine resources currently being observed in the region.

Prof Lindén was born in 1949 in Sweden and holds the Nippon Chair in Marine Environment at World Maritime University. He also holds an Adjunct Professorship in Coastal Resources Management at the University of Kalmar in Sweden.

Professor Lindén comments on his award:

"To be awarded WIOMSA's first Honorary Membership came as a great and pleasant surprise. I am honoured by the gesture but wish to point out that a number of other people were involved in the development of marine science in the early 1990's, friends who deserve the recognition as well. I regard the award to me as a gesture of appreciation to this group of people, which consisted of Adelaida Semesi, Magnus Ngoile, Ezekiel Okemwa, Ron Jonstone, Domingos Gove and in particular Anders Granlund who stimulated the discussion greatly and furthermore was instrumental in securing funding for the activities. It is great to see WIOMSA grow and the membership increase. This was our vision in 1990-91 when we started to discuss the idea of creating an organization for marine scientists in the region. Besides good luck in the future, the only advice I wish to give to the WIOMSA community is to say that, in order to be relevant, ensure that young scientists are recruited not only as members but also to leading posts on boards and in committees."

Four Scientists Awarded WIOMSA's Fellow Membership

They may be worlds apart when it comes to nationality, background and areas of specialization, but they have one characteristic in common: through their research work in the WIO region, they have acquired international and regional recognition.

The first four WIOMSA Fellow Membership Awards, conferred during the 5th WIOMSA Scientific Symposium, went to Dr. Tim R. McClanahan (Kenya), Dr. David Obura (Kenya), Prof. Mats Björk (Sweden) and Prof Yunus Mgaya (Tanzania) for their extensive efforts in conducting research in the region that have greatly contributed to the understanding of various critical processes in coastal and marine ecosystems.

Dr. McClanahan has focused his research on describing the status of coral reefs and the role

of different management approaches on their ecology and biodiversity. Dr. Obura's research has aimed at assessing coral stress; bleaching, climate change impacts, adaptive capacity and human ecology under environmental change. Prof. Björk is regionally and internationally renowned for his research on eco-physiological processes in seaweeds and sea grasses while Prof. Mgaya's research has focused mainly on coral reef fisheries, biology and management of invertebrate fisheries as well as aquaculture of different species.

According to the Selection Committee, the four awardees have transcended their individual areas of specialization to address the implications and applicability of research on development of institutional and regulatory framework for management of coastal and marine resources.

From left, Dr. David Obura, Dr. Charles Lugomela representing Prof. Yunus Mgaya, Dr. Tim McClanahan and Prof. Mats Björk, extreme right, are the first researchers to receive the WIOMSA Fellow Membership Awards for their work in the WIO region.

Photo: WIOMSA



Marine Science for Management (MASMA) Grants

In 2007 no Call was made to invite interested researchers to submit proposals under the Open Competitive category. Instead WIOMSA conducted a regional stakeholders Planning Meeting and invited a wide range of partners to evaluate the current status of MASMA and propose new changes that would improve the programme.

the Call for Commissioned Research was announced and four research topics proposed. More than 10 planning meeting/workshops and training courses/workshops were also conducted with full or partial financial support from WIOMSA. The workshops and training courses yielded various products and also enhanced the capacity of scientists in the region.

Although WIOMSA did not announce a Call for new proposals in the open competitive research category,

Planning meetings and training courses/workshops supported in 2007
MASMA Planning Workshop, February 21 – 23, 2007, Mombasa, Kenya
Planning Workshop for Proposed Coelacanth Marine Protected Area in Tanga, Tanzania, June 13 – 15, 2007, Tanga, Tanzania
Technical Meeting to Strategize on Producing a book about the Fisheries of western Indian Ocean, November 23 – 24, 2007, Dar es Salaam, Tanzania
Seabirds as Bioindicators in the Western Indian Ocean - Final Project Workshop , December 13 – 15, 2007, Mahe, Seychelles
Regional Workshop on Initiative of a Certification Program for Marine Protected Area Professionals, February, 19 – 20, 2007, Mombasa, Kenya
Social and Ecological Responses to Reef Ecosystem Change in the Western Indian Ocean, April 30 - May 11, 2007, Mombasa, Kenya
Bid writing workshop for the WIO Region, Mombasa, April, 16 – 20, 2007, Mombasa, Kenya
Remote Sensing and GIS Training Workshop for Mapping and Characterization of Coral Reef Habitats and the Associated Threats, September, 10 – 21, 2007, Zanzibar, Tanzania
UNESCO/IOC Team Building workshop for the Western Indian Ocean Region, October 28 – November 1, 2007, Durban, South Africa
MASMA Course on Scientific Methodology in Marine Ecology – A practical approach using tropical intertidal habitats December 2 – 17, 2007, Pemba, Mozambique

WIO Journal of Marine Science added to ISI database

WIOMSA's Western Indian Ocean Journal of Marine Science has been evaluated and added to the Institute for Scientific Information (ISI) database.

"This is a major achievement for our young Journal bearing in mind that some of the well known and well established journals do not appear in the ISI list", says Dr Julius Francis, Executive Secretary of WIOMSA.

The inclusion of the Western Indian Ocean Journal of Marine Science (WIOJMS) in the ISI database will raise the profile and visibility of the journal and therefore attract prominent scientists to publish in it. Publishing in ISI registered journals is one of the main requirements for some of the funding agencies in the Western Indian Ocean region. ISI's editorial staff review about 2,000 new journal titles annually, but only 10-12% of the journal evaluated are selected.



Photo: Gugu Calvo-Ugarteburu

Overfishing could lead to Collapse of Fish Spawning Aggregations in the Seychelles

There is a need for the protection of reef fish spawning aggregations (FSAs) in the Seychelles Islands. A recently completed MASMA-study shows that spawning aggregations are vulnerable to overfishing.

Interviews with fishers in Seychelles established that the reef fish spawning aggregations (FSAs) are well-known to artisanal fishermen in the area since the FSAs there have been fished since the 1940s. However, some of the aggregations may have disappeared due to overfishing, and some, especially the serranid aggregations, are heavily fished through trap fishery.

The researchers are therefore proposing the protection of the serranid aggregations. The study showed that serranid aggregations are of low socioeconomic importance to the fisheries; which could be an advantage when management for protecting them is set up.

The pressure on siganid aggregations is also increasing. In their book *Investigating the importance of Reef Fish Spawning Aggregations for the Sustainable Management of Artisanal Fisheries Resources in Seychelles*, the researchers write, "Although there is no evidence for the collapse of siganid FSAs due to fishing, stresses to coastal

ecosystems are increasing and there is a need to improve management of the trap fishery and other coastal resource uses." Siganid aggregations were found to be of greater importance to the small boat trap fishery, but the researchers also found a degree of resilience in those aggregations.

The findings and recommendations are the result of three years of multidisciplinary research aimed at determining the importance of spawning aggregations for artisanal fisheries management.

"Investigating the importance of Reef Fish Spawning Aggregations for the Sustainable Management of Artisanal Fisheries Resources in Seychelles" is a joint publication by WIOMSA and the Seychelles Fishing Authority.

Authors: Jan Robinson, Michel Marguerite, Rondolph Payet, Marlene Isidore.



Photo: Nils Kautsky

Applications for Marine Research Grants steadily increasing

The number of applications for the Marine Research Grants (MARG) has grown by almost 20 % compared to last year. Both the quality and quantity of the applications have also increased – this year 70 % of the applications were granted covering six research themes, compared to only 50% covering four themes last year.

MARG supports research projects addressing issues of local and national importance in the Western Indian Ocean (WIO) region. MARG has become a very popular grant scheme of choice for many research scientists and practitioners as well as for graduate and postgraduate students in WIO.

In 2007 the total number of MARG applicants was 112 out of which 82 were awarded grants

Under the MARG Programme, three categories of funding are provided. MARG I is awarded to individual scientists to carry out well-defined research activities in their countries/institutions. The initial duration of MARG I is one year, renewable for a maximum of one term; and the maximum amount awarded is USD 6,000. MARG II is awarded for the purpose of sharing or gaining technical experience as well as data processing and manuscript write-up within WIO and where necessary outside the region. The duration of MARG II is three months and the maximum awarded is USD 6,000. MARG III is the travel support awarded to individual scientists to attend scientific meetings and conferences, giving them opportunities to present their work and learn from others. The maximum award is USD 3,000.

amounting to US\$ 267,311. This is a substantial increase compared to the previous year when 92 scientists applied and 48 were awarded grants amounting to US\$ 167,037. Table 1 shows the various categories of MARG applied for, and awarded during 2007.

Scientists from all the countries in the WIO region (except Somalia, which submitted none) applied for and obtained grants from at least one category of MARG.

Results achieved in the project on mangrove biodiversity and recovery at Gazi Bay, Kenya was fundamental in the MSc thesis by Bernard Kirui defended at Napier University in Edinburgh, UK. Manuscript based on results from the project on

cultivation of seaweeds by Flower Msuya is in preparation for publication in a peer-reviewed journal. Models developed by Ruth Lugwisha in the project on wastewater management are bound to contribute in the management policies of this resource in Tanzania as well as to provide background data and information for the investigator's envisaged PhD research. The titles and categories of all completed MARG I projects are presented in Table 1.

Table 1. MARG I projects completed and Final Technical Reports submitted.

MARG I Project Title	Investigators
Microbial and nutrient pollution of coastal bathing waters in Dar-es-Salaam	Thomas J. Lyimo
Wastewater management institutional performance, compliance and enforcement in Tanzania	Ruth H. J. Lugwisha
Biodiversity and recovery of ecosystem functions in replanted Mangroves at Gazi Bay, Kenya	Bernard K.Y. Kirui
Inventaire des Chondrichthyes commerciaux de Madagascar	Setra Andrianamaitra Simon Harding
Effect of mangrove deforestation on mangrove mud crab fishery	Esther Nazi Fondo
Effect of cultivation duration, seasonality, nutrients, air temperature and rainfall on carrageenan properties and substrata studies of the seaweeds <i>Kappaphycus alvarezii</i> and <i>Eucheuma denticulatum</i> in Zanzibar, Tanzania	Flower Msuya Dotto Salum
Baseline survey of the marine resources and resource use within the Bird Island MPA and surrounding areas for the development of Management Plan for the proposed Greater Addo MPA, Eastern Cape, South Africa	Russel Chalmers Warwick Sauer

No-take zones would protect linefish in South Africa



Photo: Per-Olav Moksnes

A baseline survey of the marine resources round the Eastern Cape proposes the establishment of no-take zones to protect and rebuild South Africa's linefish stocks.

The preliminary results indicate that the proposed Greater Addo Marine Protected Area (MPA) has key habitats for the protection of threatened species, which are currently poorly represented within existing MPAs. Declaration of these areas as no-take zones will especially contribute towards the protection and rebuilding of linefish stocks along the South African coastline. These stocks are currently threatened.

Planning together

It is evident from the baseline work that the small artisanal and subsistence coastal fishery is an important component to be considered in the planning of the MPA. More detailed investigations into this sector are required in order to develop a strategy, which is acceptable to both parties before the proclamation of no-take zones within the broader MPA. This will reduce conflict at a later stage.

Evaluation of movement and migration

An assessment of the movement and migration of certain species for which there is currently limited data is required. Although species such as Silver kob and Santer are encountered within the proposed MPA in high numbers, the level of protection they will receive is dependent on the amount of time they are present within the different areas of the MPA. Future research needs to investigate the movement of species such as these, between reefs within the proposed MPA, reefs within Algoa Bay and on a larger bioregional scale.

This is an ongoing project with an additional two years of data collection to be completed which will contribute to the establishment of a rigorous management plan based on sound scientific data.

The study "Baseline survey of the marine resources and resource use within the Bird Island MPA and surrounding areas for the development of Management Plan for the proposed Greater Addo MPA, Eastern Cape, South Africa" was conducted through financial support from WIOMSA's Marine Research Grant (MARG I) 2007. Further information can be obtained from the investigators, Mr Russell Chalmers (E-mail: r.chalmers@itsnet.co.za) and Prof. Warwick Sauer (E-mail: w.sauer@ru.ac.za) of the Department of Ichthyology and Fisheries Science, Rhodes University, P.O. Box 94, Grahamstown 6140, South Africa. A copy of the report is also available on the WIOMSA website.



Photo: Per-Olav Moksnes

Inventory of Shark Species of Madagascar

16 shark species destined for commercial use in Madagascar, new inventory shows.

Documentation of an inventory of the shark species in Madagascar has enhanced the knowledge of the commercial species in the Madagascar waters. Photographs of the commercial species are presented, including information on their species distribution and the developmental stage of the captured individuals.

Data from artisanal and industrial fishers show which commercial sharks are usually preferred by traditional and artisanal fishers in fishing villages around Madagascar, and which ones are captured for industrial purpose.

The report indicates that 281 sharks belonging to 16 species were destined for commercial use. According to traditional fishers, the most commonly captured species belong to the Genus *Carcharhinus* and they include *Carcharhinus amblyrhynchos*, *C. leucas*, *C. limbatus*, *C. melanopterus* and *C. sorrah*. In terms of abundance, *L smithii* is the most dominant species reportedly captured by the traditional fishers.

Sphyrna lewini is also significant in all the villages. The average capture size is generally between 80 and 130 cm among the species studied.

The number of mature sharks was found to be most significant at Andavadoaka. *Prionace glauca* and *Isurus oxyrinchus* are the most commonly captured species.

The study "Inventory of commercial species of sharks in Madagascar (Inventaire des espèces commerciales de chondrichthyens de Madagascar)" was conducted through financial support from WIOMSA's Marine Research Grant (MARG I) 2004. Further information on this research can be obtained from the principle investigator, Mr. Setra Andriamanaitra Wildlife Conservation Society, BP 8500 Soavimbahoaka, Antananarivo 101, Madagascar (Email: wcsmad@wanadoo.mg or andriamanaitra@yahoo.com). A copy of the report is available in French on the WIOMSA website.



Photo: WIOMSA

Zanzibar's Minister for Women, Employment, Youth and Children, Honorable Asha Abdullah Juma, in green, admires jewellery produced by Zanzibar women. The pearls were sold for thousands of US-dollars at an auction in Zanzibar in February 2007.

Buttons turn into pearls in Zanzibar

Pearls grown by women in Zanzibar have been valued to USD 100 each due to their unique golden color. Pearl farming was introduced in Fumba, Zanzibar, in 2005 as an alternative to seaweed cultivation and turned out to be a real SUCCESS.

In November 2007, the second set of oysters from Fumba Bay in Zanzibar was opened with great anticipation. Inside the 25 oysters emerged 28 golden mabe pearls. Due to their unique golden color, the market value turned out to be more than 100 US dollars per pearl, to earning them 2,000 USD from 19 pearls, a sum that no one involved had envisaged. Five of the pearls three of which were made into jewellery in Rhode Island, USA were sold at an auction on the 9th of February 2008 at the Palace Museum in the Stone Town, Zanzibar earning the group an extra 1,600 USD.

"That is actually a bit more money than we had expected when we started this project, and certainly more than the women were expecting. I think that some of them had never imagined that they could actually gain much from this", says Dr. Aviti J. Mmochi of the Institute of Marine Sciences (IMS) who coordinates the activity.

Right harvest time essential

Plastic buttons are inserted into the oysters, which then produce the pearls around the button. The first nucleus for half pearl production was introduced into oysters caught in the wild. But from the beginning there were some difficulties figuring out how long the pearls would take to grow, as the local oysters (wing pearl oysters / *Pteria penguin*) are different from those that are more commonly

used other areas (black lip pearl oysters / *Pinctada margaritifera*). It is also essential to know when to open the oysters, as opening them too early will ruin the chances of getting good pearls.

“It has been a process of fine-tuning the methods. In 2006, three pearls in the first set of oysters were harvested, but only one of them was of good quality. We harvested them too soon. We then realized that pearls take longer time to grow in the oysters used here, the *Pteria penguin*, than in oysters used in projects elsewhere. Many of the oysters (75) also died before we could even harvest them due to carelessness as the group had not anticipated the huge profits from the venture.”, says Dr Mmochi.

Building house for the family

Fumba is a coastal village on Zanzibar’s West Coast. The pearls that were harvested there in November are the result of the hard work and effort trying to introduce functioning methods for growing half pearls as a way of generating income for the local community. Here, the women have cultivated seaweed for more than ten years, as well as collected bivalve and gastropods for sale. The women were trained on how to cultivate oysters and make jewellery from oyster shells and one of the women now earns more money than her husband, who works for the local government.

“This woman has been so successful with her products that she is now building a house for the family”, says Dr Mmochi.



Photo: WIOMSA

Dr. Aviti J. Mmochi and Dr. Narriman Jiddawi, coordinators of the Mabe pearl project, leading the pearl auction at the Palace Museum in Zanzibar.

Seeing how these women have benefitted, other husbands in the village are beginning to get increasingly positive about their wives engaging in the jewellery making.

“Another woman recently started producing really good pieces of jewellery. We asked what had happened. She said that her husband had started helping her, so now they are doing it together.”

Investing for increased production

The question now is how the income from the pearl farming and jewellery making will be divided among the participants in the project. The women have agreed to form a cooperative society to oversee production and expenditure, and invest the money from the activities to finance more pearl and jewellery production.

“So the biggest challenge now is for them to form a cooperative and agree on a constitution for this cooperative. They have already received, and will continue to receive, some training on running cooperatives including transparency, accountancy and bookkeeping. When we deem that they are ready to take over we will hand over the responsibility to them”, says Dr Mmochi.

The Mabe pearl project is a collaboration between WIOMSA, IMS and CRC (the Coastal Resources Center at the University of Rhode Island). It is part of the USAID-funded SUCCESS program. SUCCESS: Sustainable Coastal Communities and Ecosystems.

Certification of MPA-professionals - a unique initiative

In February, WIOMSA and the Coastal Resource Center of Rhode Island organized a workshop in Mombasa to discuss a process to develop an initiative of its kind - a Certification Program for professionals working in Marine Protected Areas (MPAs) in the Western Indian Ocean region (WIO-CAMPAS). The purpose of such a certification program is to bring the knowledge and skills of those working in, and in some cases managing, MPAs to a level of professional standards.

Managers of MPAs, representatives of authorities responsible for management of MPAs and conservation and intergovernmental organizations from six countries in the region attended the workshop "Initiation of a Professional Certification Program for Marine Protected Areas Professionals in the Western Indian Ocean Region" 19-20 February in Mombasa, Kenya. During the meeting the participants discussed how to initiate and make the proposed Certification Program operational. The participants also discussed entry requirements, program curriculum, the framework for the

certification program, and an implementation plan for proposed activities to move the certification program from the conceptual stage to having the program ready for individuals to apply.

One of the important outcomes was an implementation plan for the proposed activities to move the certification program from the conceptual stage to implementation. Some important strategic decisions were:

1. The Certification Programme should certify MPA professionals/practitioners, i.e., it will not be certifying MPA managers, as originally planned.
2. The minimum entry level to the programme will be a high school certificate/diploma with three years experience in a supervisory role within an MPA
3. WIO-COMPAS would work with MPA professionals who already meet a certain level of knowledge, skills, and performance standards within the following four core competency areas—legal and institutional framework, operations, communication and stakeholder's engagement and marine and coastal ecology.

Candidates to the Certification program should have already proven their ability to perform on the job as opposed to training courses, which teach skills but do not assess on the job application.

WIOMSA and CRC agreed to continue facilitating the process of developing this Certification Program until the Certification Program Board is in place.

Photo: Per-Olav Moksnes



The Certification Program for Managers of Marine Protected Areas (MPAs) is developed under the USAID-funded programme on 'Sustainable Coastal Communities and Ecosystems' (SUC-CESS), which WIOMSA and Coastal Resource Center (CRC) at the University of Rhode Island are implementing. The purpose of the program is to bring the knowledge and skills of those working in MPAs to a level of professional standards.



Photo: Per-Olav Moksnes

MASMA Training Course impresses Mozambican Cabinet Minister

Mozambique's Minister for Coordination of Environmental Affairs Mr. Luciano de Castro praised the organisation of the regional training course in Scientific Methodologies in Marine Ecology that was held in December in Pemba. He said that the course would be of benefit for coastal and marine scientists in the region.

The Minister together with the Permanent Secretary of the Provincial Government of Cabo Delgado honoured the course by officially opening it and attending the first session. The Honourable Minister emphasised the importance of the course and the opportunity availed to the participants to use the facilities of the newly inaugurated Center for Coastal and Marine Environmental Research (CEPAM) in Pemba for the benefit of coastal and marine sciences in the region. This was the first regional course to be held in this state-of-the-art Center since its establishment.

The course aimed to provide knowledge on scientific methods in marine ecology, focusing on research logical flow, basic sampling design and associated statistics, use of common statistical packages, reporting and scientific paper realization. The ultimate goal is to develop better knowledge and skills for scientific research planning and delivery of standard quality scientific results.

Theory sessions included an introduction to methodology, the natural environments and organisms used as models for the course, statistical tools and scientific output. Extensive computer sessions introduced and expanded knowledge

on datasheet and statistical packages routine operations.

During the field exercises the participants learned about sample size determination, effects of sampling unit size and stratified sampling in crab populations of mangroves of Pemba Bay, multifactorial approaches in distribution patterns of gastropod populations of Mecœfi Bay mangroves, and seagrass and sea urchin quantification using stratified transect methods in the tidal flats of Chuiba.

The participants also further developed their own specific projects, derived from the field exercises, and each produced a short PowerPoint presentation in a dedicated session simulating a scientific conference environment.

In the last module, the course aimed to provide specific assistance to participants by creating general and specific discussion around issues of their own interest, such as specific sampling or experimental problems, development of research protocols and treatment of datasets.

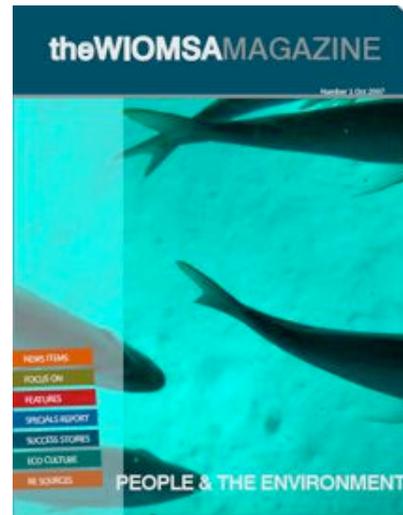
The regional advanced course 'Scientific Methodologies in Marine Ecology' was organised by WIOMSA in collaboration with universities in both Mozambique and Portugal and held in a newly inaugurated training centre in Pemba, north Mozambique from 2 to 17 December 2007.

New Magazine launched

In October 2007, WIOMSA launched a new quarterly magazine; "The WIOMSA Magazine – People and the Environment". The magazine is a result of a public-private partnership between WIOMSA and Z-G Design and will focus on marine and coastal environmental issues.

"We would like to expand WIOMSA's horizon and share our practical field information with a wider public", says Dr. Nyawira Muthiga, the President of WIOMSA.

The magazine will feature topical articles, a reader's discussion forum, current environmental news and profile sections that celebrate people and events that make a difference in the WIO region. The first issue explores innovative water and sewage projects in the region, examines the role of the



private sector in addressing environmental issues, articulates the need for a more carefully planned tourism industry and celebrates some significant successes of village communities in Zanzibar through the eyes of a group of Dar-es-Salaam based journalists.

New Consortium makes Regional Cooperation easier

The new Consortium for Conservation of Coastal and Marine Ecosystems in Western Indian Ocean (WIO-C) aims to improve the collaboration between organizations that work with coastal and marine conservation programmes in the WIO region.

The new consortium was launched by WIOMSA and **eight other nature conservation organizations** at the Conference of Parties to the Nairobi and Abidjan Conventions. The conference was held in Johannesburg, South Africa, on 9th November, 2007.

There is a need for increased information sharing between marine and coastal organizations in the region. Information exchange functions relatively well at the national level, but not regionally. Information sharing will therefore be a priority area for the consortium and a main objective during the first phase.

A more long-term objective for the Consortium is to complement and facilitate the implementation of the Nairobi Convention work programme by

mainstreaming conservation efforts of NGOs and other agencies in the region.

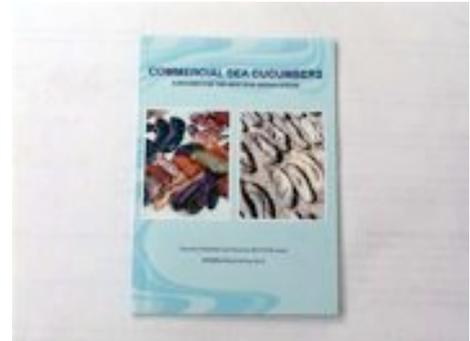
The founding members will lead the Consortium, but national and regional NGOs are welcome to join. There will also be a secretariat initially based at the WWF-EAME office in Dar es Salaam, Tanzania.

FOUNDING MEMBERS

WIOMSA, the World Conservation Union (IUCN), WWF East African Marine Ecoregion (WWF EAME), Coral Reef Degradation in the Indian Ocean (CORDIO), UN Environment Programme Nairobi Convention Secretariat (UNEP), the New Partnership for Africa's Development (NEPAD), UNESCO Intergovernmental Oceanographic Commission (IOC-UNESCO), the Wildlife Conservation Society (WCS), the Indian Ocean Commission (COI) and the East African Wildlife Society (EAWLS).

New Publications and Material produced by WIOMSA 2007

The latest WIOMSA book “Commercial Sea cucumbers: a review for the western Indian ocean” is on a study about sea cucumbers and its fishery in the Western Indian Ocean. It provides information for a better understanding of the sea cucumber fisheries and suggestions for its sustainable development and management in the WIO. The information therein is based on a MASMA research project approved for funding in October 2005: titled “Sea cucumbers, a poorly understood but important coastal resource: national and regional analyses to improve management”.



Guide Pratique: Poissons de l'océan Indien et de la mer rouge (A Practical Guide: Fishes of the Indian Ocean and the Red Sea) presents 850 fish species including underwater photographs.

Findings and recommendations regarding Fish Spawning Aggregations in the Seychelles are presented in this joint publication by WIOMSA and the Seychelles Fishing Authority. The book is a result of the MASMA-project “Investigating the importance of Reef Fish Spawning Aggregations for the Sustainable Management of Artisanal Fisheries Resources in Seychelles”



The 2006 Annual Report
WIOMSA produced its second Annual Report in a colourful and easy to read format for wide circulation. The report provides the highlights of WIOMSA's research in 2006, capacity building and communication and extension programmatic areas. The report is also available at WIOMSA's website: www.wiomsa.org



Photo: Per-Olav Moksnes

Members begin to pay membership fees

In September 2007 WIOMSA launched its paid membership drive where the paying members receive a range of quality services and products from the Association.

During the 13th Meeting of the WIOMSA Board of Trustees held in February 2004, the Board resolved to introduce membership fees starting from 2007. A membership survey was conducted soon after, which resulted in overwhelming support for the introduction of membership fees. The majority (78 %) of the respondents were of the opinion that a membership fee should be introduced.

Ownership to the members

Since its establishment, WIOMSA has provided all its services and products free of charge to its members. The introduction of membership fees is one important step for the members to take ownership of their Association. Ownership is assured when members not only benefit from the products and services provided, but also contribute financially.

Differentiated fees

The fee will be paid every second year. To streamline the payment process across the entire WIO region and beyond, it was decided that members would pay their dues in the local currencies to their respective country coordinator. It will also be possible to pay by credit cards or through

bank transfer. Some of the Association's services and products such as unrestricted access to downloadable datasets, application for research grants (MARG and MASMA), subsidized WIO Journal subscription, free copies of WIOMSA publications and subsidized registration fees to the Symposium will be exclusive to the members.

New system, new possibilities

The on-line membership system that has been developed by the WIOMSA Secretariat displays a variety of new functions; an extranet for members only exists which allows them to update their profiles, access various databases and all published articles from the Western Indian Ocean Journal of Marine Science. Members can also upload their own publications. The new system also comprises a corporate membership programme and the opportunity for Country Coordinators to manage information regarding their members and post announcements on the WIOMSA website.

MEMBERSHIP FEES

Student members	no fee
Individual members	USD 50
Associate members	USD 100
Institutional members	USD 500

The fees will be collected biennially



Photo: Per-Olav Moksnes

Neptune Hotels, WIOMSA's first Corporate member

Neptune Hotels, with its properties in Kenya and now in Zanzibar, Tanzania has joined WIOMSA as its first corporate member for the hospitality industry in the region.

"We are proud to be a corporate member of WIOMSA and support fully its mission. It is critical to our business as it is with others in the hospitality industry that the Western Indian Ocean remains a premier holiday destination for the long term. To ensure this, we all need to work together to understand, protect and maintain this marine environment," says Mr. Amin Merali, Chairman of the Neptune Group of Hotels.

In a speech, at the recent opening of the Neptune Pwani Beach Resort & Spa by His Excellency, The President of Zanzibar and Chairman of the Revolutionary Council, the Hon. Amani Abeid Karume, Mr. Merali said: "Your Excellency, our commitment to preserve and protect the environment and the local ecosystems will be dynamic and strong... Educational and training programs on the importance of preserving and protecting the ecosystem for our employees will be undertaken."

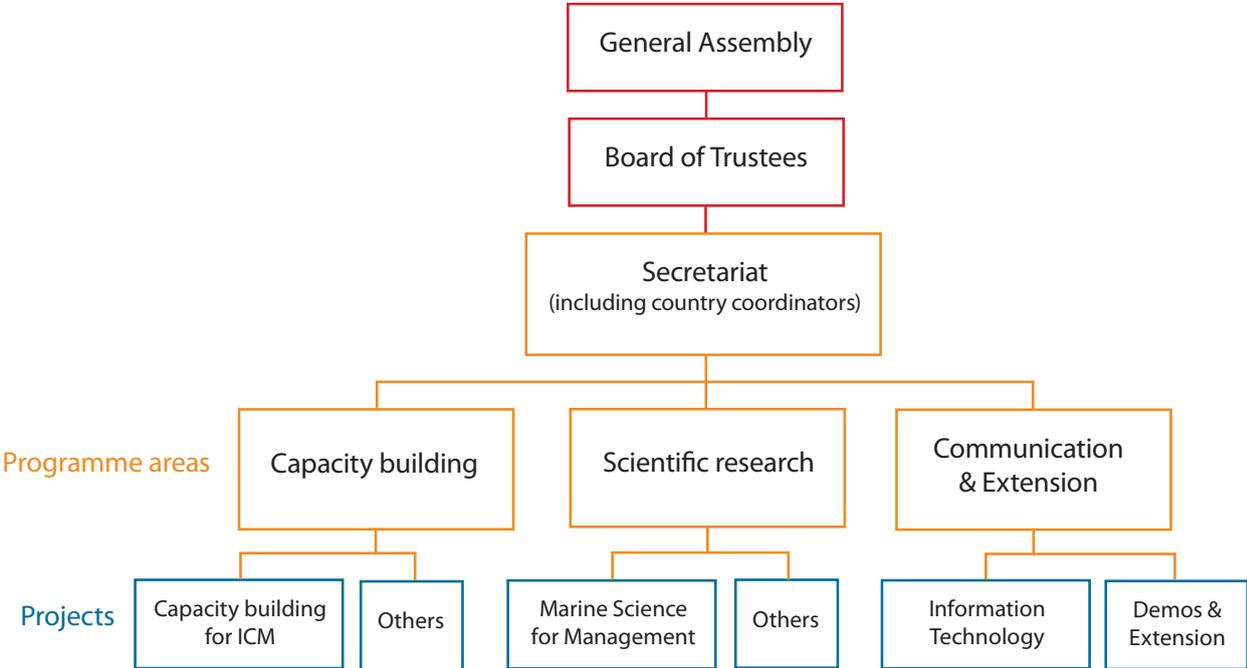
Mr. Merali added, "It is for these reasons that we have become a corporate member of WIOMSA, the Western Indian Ocean Marine Science Association based here in Zanzibar but operating across the region... With WIOMSA's help we will train all our staff on environmental issues and information that in turn will enhance our clients' holiday experience."

WIOMSA's recently launched corporate membership drive is based on the belief that the private sector in the region can support the important efforts to conserve coastal and marine environment. Protecting the environment and natural resources are in their own long term self interest.

On WIOMSA's part according to Dr. Muthiga, President of WIOMSA, "We are delighted that the Neptune Hotels, have decided to join us. In so doing they have shown leadership and it is our hope that other corporates in the hospitality industry as well as in other industries like banking, insurance, mobile telephone services, oil and gas in our region and indeed all business big and small will all come on board with us."

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 2007		
	2007 (US\$)	2006 (US\$)
Balance b/f	943,105.76	1,162,087.31
Add Income received		
Other Income	416,154.81	351,963.09
Interest Income	2,567.12	3,384.34
Masma Income	1,312,328.71	826,022.55
Total Amount Available	2,674,156.40	2,343,457.29
Less Payments		
Masma Payments	1,783,326.31	847,282.98
Other Payments	293,772.87	638,442.01
Total payments	2,077,099.18	1,485,724.99
Excess of receipt over payments	597,057.22	857,732.30
Add back Amount transferred to capital	7,768	85,373.00
Net excess of receipt over payments	604,825.22	943,105.76

Western Indian Ocean Marine Science Association, Consolidated balance sheet as at 31 December 2007		
	2007 (US\$)	2006 (US\$)
Assets		
Building	315,267.90	303,267.90
Furniture	5,000.00	5,000.00
Cash and Bank	604,824.22	943,105.76
Advance Payments	23,957.03	57,518.54
Sub-total	949,049.15	1,308,892.20
Less Projects balances	696,419.54	1,028,713.63
Total net Assets	252,629.61	280,178.57
Financed by		
Capital Fund	192,195.89	192,195.89
Trust Fund	8,503.00	
Bank Loan	51,930.72	87,982.68
Total	252,629.61	280,178.57

Notes to the financial Statements for the year ended 31st December 2007.

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 represents those projects whose initial installments received are not exhausted and the running of those project are not blocked only because we have not received the next installment, hence ended with debit balance as at 31st December.

5. Project balances

These are balances of funds left for those projects whose initial installments received are not exhausted hence ended with credit balance as at 31st December.

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 membership fees.

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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.



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