



Newsbrief

Increasing incidental catches of the rare Coelacanth: Time to act

Various stakeholders met in Tanga recently to discuss how to protect the coelacanth populations in Tanzania, particularly around Tanga region where most of the coelacanths have been caught so far. A Marine protected area has been proposed to preserve these deep-water fishes, one of the world's rarest.

The planning workshop for the proposed Coelacanth Marine Protected Area in Tanga was held in Tanga from 13th to 15th June, 2007. The aim of the workshop was to determine the best course of action to protect the coelacanths in Tanzania. The rapid and sustainable creation of a marine protected area in Tanga - with specific focus on conserving the endangered coelacanth was discussed

The Workshop was hosted by the Tanzania Marine Parks and Reserves Unit in partnership with the African Coelacanth Ecosystems Programme (ACEP), Census of Marine Life (CoML), Sustainable Sea Trust, Intergovernmental Oceanographic Commission of UNESCO and the World Heritage Centre. It attracted a wide range of stake holders from the Government of Tanzania, local communities, NGOs,

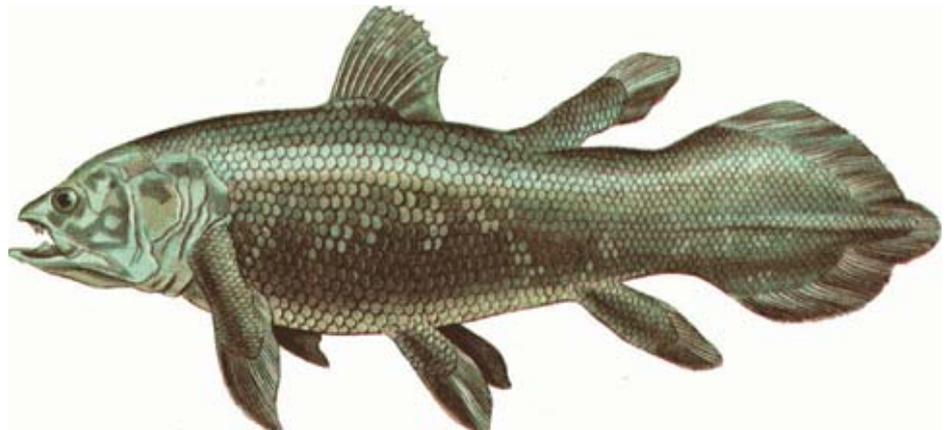


Illustration: arthursclipart.tripod.com/fishcol.btm

The coelacanth is one of the the world's rarest and most enigmatic deep-water fishes. During the last few years many have been caught in the Tanga region, in the North of Tanzania.

research institutions and international experts.

The first official recorded catch in Tanzania of the world's rarest and most enigmatic deep-water fishes, the coelacanth (*Latimeria chalumnae*), was made in September 2003. This stimulated considerable interest and was soon announced at the World Parks Congress. By September 2005, 25

coelacanths had been caught in Tanzania, 19 in a six month period. This is the greatest number of coelacanths caught in the shortest time anywhere in the world, suggesting that the species is under new considerable pressure in Tanzania and in critical need of protection. The vast majority of fish were caught offshore the Kigombe Village, Muheza District in Tanga.

On July 4th 2006, the President of Tanzania, His Excellency Jakaya Kikwete declared that immediate steps must be taken to protect the coelacanth species in Tanzania.

During the Workshop, WIOMSA was invited to present research initiatives of the western Indian Ocean that have relevance to this initiative. The presentation focused on key completed, on-going and proposed researches that provide the baseline information about Tanga's coastal and marine environment. This data would contribute to the successful implementation of the Tanga MPA. Prior to the Workshop in Tanga, the Science Planning Meeting was held in Dar es Salaam on 11th June to discuss the protocols, assign responsibilities as well as the budget and to prioritize proposed activities.

On closing the Workshop, His Worship the Mayor of Tanga recognized that the presence of the coelacanth in Tanga would attract global attention and with it tourism and research. He stressed, "It is therefore important to devise a mechanism to plough back into

the coastal environment and the local communities of Tanga the benefits gained from tourism, research and other related investments".

The Workshop concluded with the following resolutions:

- There is need to conserve the habitats where the coelacanth live off the coast of Tanga
- Baseline studies should be conducted to determine the marine biodiversity of some selected representative areas
- Awareness programmes should be set up to sensitize the local communities regarding the coelacanth and its habitat
- Involvement of the local communities and all stakeholders at various levels should be encouraged
- There is need for a long term monitoring and evaluation programme in the Tanga area

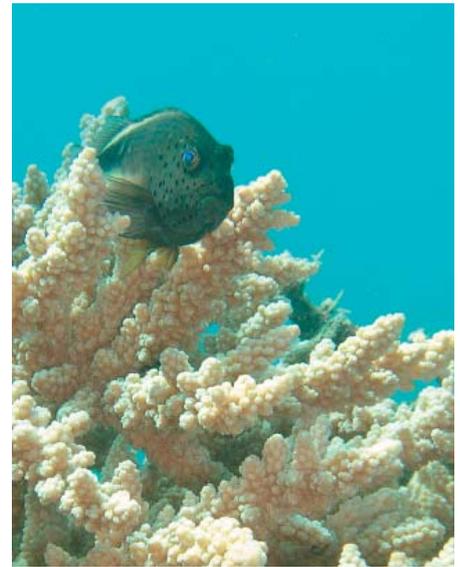


Photo: Tim McClanahan

Corals resistant to warm water are likely to emerge

The 1998 El Niño Southern Oscillation (ENSO) produced the warmest warm-water anomaly in over 100 years and led to large-scale bleaching and mortality of corals.

A scientific study of 91 sites in the Indian Ocean found that the central and northern Indian Ocean sites lost the prevalence of branching and encrusting species that were widespread before 1998. These sites are now sparsely populated by corals resistant to warm water or that benefit from disturbance.

A swath of sites from southern Kenya to Mauritius still maintain the classic composition of reef species and may be a refuge where corals can survive a warming climate. Large variation in coral susceptibility to warm water and probabilities of extinction were found and suggests those coral taxa and communities likely to emerge as the climate warms further.

Read the full article in "Feature Article for Marine Ecology Progress Series": www.int-res.com/abstracts/meps/v337/



Stake holders from the Government, local communities, NGOs, research institutions and international experts participated in the Coelacanth workshop in Tanga. Photo: Melckzedek Osore

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 here 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



Photo: Anna-Karin Johansson

A view of the Neptune Hotel pool.



President of Zanzibar, His Excellency A.A. Karume and Mr A. Merali, the chairman of the Neptune Group of Hotels touring the hotel during the opening.

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 Scientific 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 client's 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 services, oil and gas in our region and indeed all business big and small will all come on board with us."

To show their support for WIOMSA's work and activities, Neptune Hotels, in addition to their membership, have offered a special discount rate for their conference and accommodations facilities to all WIOMSA member institutions, associates and individual members. We hope that our membership will take advantage of this opportunity. Should you wish to book, please call or email the Neptune Hotel group in Kenya or Zanzibar directly.

New Marine Research Center in Mozambique

The new Center which is located in Pemba, was inaugurated on May 1st and is intended to become a centre of excellence for marine and coastal management.

The Government of Mozambique's record in promoting research on sustainable development of coastal and marine environment is impressive in the Western Indian Ocean region. Over a period of three years two academic and research institutions have been established. There are the School of Marine and Coastal Sciences of the University of Eduardo Mondlane in Quelimane opened in 2005 and a new Research Centre for the Marine and Coastal Environment (CEPAM) in May 2007.

CEPAM, which was formally inaugurated by His Excellence the President of Mozambique, is located 10 km south of Pemba town, which is the capital of the Cabo Delgado Province.



His Excellency Luciano de Castro, the Minister for Coordination of Environmental Affairs (left) during the opening of the Research Center. Photo: Julius Francis



The new marine centre in Pemba will address research needs on sustainable management of coastal and marine ecosystems.

CEPAM, which will cater for resident researchers as well as visiting scientists, comprises state of the art facilities including library, auditorium, laboratories, and lecture rooms. Museum and aquarium are also allocated spaces. It has also catering and accommodation facilities for accommodating comfortably up to 40 people. The construction of CEPAM was financed by the World Bank/GEF Project for Coastal and Marine Biodiversity Management in Mozambique.

The Centre was established to address research needs on sustainable management of coastal and marine ecosystems, with the objectives of both protecting the environment and alleviating poverty for coastal communities. While its primary focus will be issues of priority for Mozambique, the Centre will also be involved in regional research initiatives as well as facilitating addressing issues of regional importance.

The Centre is well located not only closer to important facilities including international airport and hotels, but also to ecosystems that may be of interest to study. These include coral reefs, mangroves, seagrass beds and dunes. The waters off the Centre are used by the local fishers for fishing activities of different types, which offer many opportunities of studying their interactions with resources found in the area.

CEPAM welcomes researchers from within Mozambique, the WIO region and outside to apply to conduct research in Cabo Delgado waters from the Centre.

For more details please visit their website: www.cepam.org.mz.

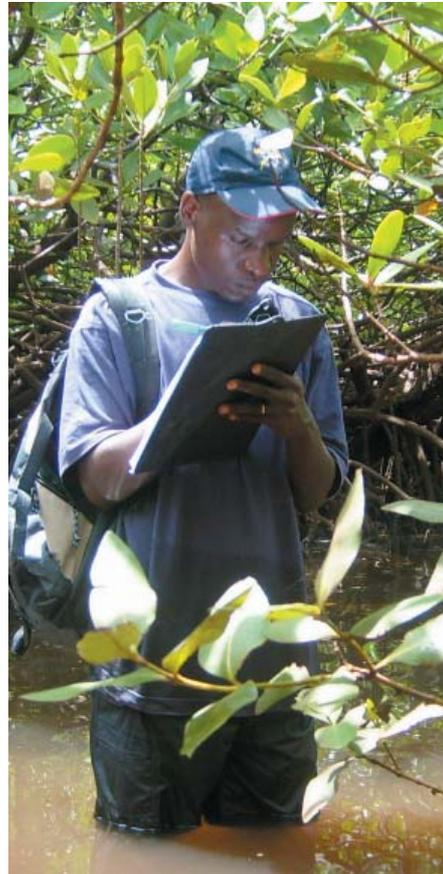
WIO Scientist from KMFRI scoops International Science Prize

Dr Jared Bosire has won this year's Royal Academy of Overseas Sciences Prize under the Natural and Medical Sciences category for his work on the "Ecological recovery of reforested mangrove forests in Kenya".

Dr Bosire is the Coordinator in-charge of Marine Ecology and Environment (MEEP) Program at the Kenya Marine and Fisheries Research Institute (KMFRI) in Mombasa. He has been monitoring the return of ecosystem functions in reforested mangroves for the last 10 years.

While mangroves like upland forests have the inherent capacity for self-restocking through natural regeneration, overexploitation may hinder the ecosystem's ability to regenerate. Reforestation thus becomes a useful tool of restoring such degraded mangrove sites. Dr Bosire has been working with a team of colleagues at KMFRI and scientists from Sweden, Belgium and the United Kingdom to determine whether such replanted mangroves can grow to function as natural mangroves providing inherent ecosystem goods and services.

Results from this multidisciplinary work indicate that mangrove overexploitation compromises ecosystem functioning and subsequently provision of goods and services. Reforestation has supported return of some of these functions and recommendations have been given on how to manage the stands. One recommendation is thinning, whereby you remove some plants from an area. This enhances the structure, regeneration and reproductive potential of the stands. Another recommendation is to use multi species stands to enhance ecosystem resilience to future environmental perturbations.



Jared Bosire during field work in a reforested mangrove site.

Most of the results from this research have been published in international journals. The research was conducted through a scholarship obtained from the Free University of Brussels in Belgium, and research grants provided by WIOMSA and the International Foundation for Science (IFS).

About the prize:

The Royal Academy of Overseas Sciences of Belgium awards an annual prize in three categories i.e. Moral and Political Sciences, Natural and Medical Sciences, and Applied Sciences to stimulate high-quality scientific research regarding problems inherent to overseas regions. The Prize will be presented on 18th October 2007 during the opening session of the Academy in Brussels, Belgium.



Photo: Blue Ventures, www.blueventures.org

Madagascan village wins the UNDP Equator Prize

The village of Andavadoaka, located in the southern part of Madagascar, was honoured the Equator Prize on the 27 May 2007.

The prize is an international recognition of extraordinary work to diminish poverty through the conservation and sustainable use of biodiversity. The remote community of Andavadoaka, has been acknowledged for its work in partnership with Madagascar's Institut Halieutique et des Sciences Marines (IHSM), UK-based NGO Blue Ventures Conservation and the Wildlife Conservation Society (WCS), for developing community-run marine protected areas.

"Over recent years, Blue Ventures Conservation has worked closely with the village of Andavadoaka in protecting some of Madagascar's most critical and threatened marine areas," said Dr. Iary Berthine Ravaoarimanana, Madagascar's ambassador in London. "This unique partnership is working to ensure that Madagascar's incredible marine resources remain healthy and productive for generations to come."

The Equator Prize serves to further advance the understanding within the global community of the vital link between healthy, biologically diverse environments and the creation of sustainable livelihoods. Andavadoaka has been selected from a group of 25 finalists, chosen from more than 300 nominations from 70 different countries. For more information, please visit: www.EquatorInitiative.org

WIOMSA paid Membership will start shortly

Though the WIOMSA Constitution includes a provision for the payment of membership fees, WIOMSA, since its establishment, has been providing all its services and products to its membership free of charge. This is about to change very soon as the WIOMSA Board of Trustees has approved a membership fee structure following a membership survey conducted from December 2006 to January 2007.

With the purpose of seeking opinions and ideas on the introduction of a paid membership fee program for its members, WIOMSA conducted, through email, a membership survey. The survey form contained 16 questions focusing mainly on: the amount and the procedures for payment of membership fees; whether the Association should also seek donations from members and non-members; whether there should be any differentiation between members and non-members on accessibility to different WIOMSA product and services.

A total of 173 forms were received representing about 14% of the current membership of about 1200. While this was clearly a rather low response, a detailed analysis of the responses revealed that those responding were a good representative sample of the majority of the membership as they came from different countries, age groups and different professional and academic background.

What did the members say?

The survey showed that a majority of our members were in support of the introduction of the membership fee as well as paying for other WIOMSA products and services. The main highlights from the survey were:

The majority of the respondents, 78 %, were of the opinion that a membership fee should be introduced. More than half of the respondents indi-

cated that they would pay for Symposium registration fees and for subscription to the Western Indian Ocean Journal of Marine Science.

On membership fees for different membership categories, on average the majority of respondents proposed students be charged US\$ 20; Individual members US\$ 50 and US\$ 250 for Institutional members.

Half of the respondents wanted the membership fee to be paid biennially and 40 % wanted to pay it in cash in local currency to their respective country coordinators. Other preferred to pay by direct bank to bank deposit or credit card.

More than half of the respondents recommended that accessibility to some of the Association services and products be restricted to fee paying members. Services and products recommended included: MARG and MASMA grants, subsidized WIO Journal subscription, free copies of other WIOMSA publications, subsidized Symposium registrations fees and full access to the WIOMSA website.

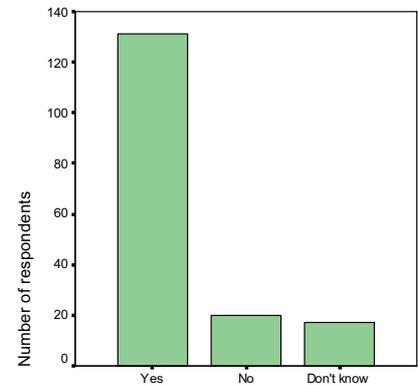
Majority of the respondents also recommended that WIOMSA should encourage its members and non-members to donate funds to the Association.

Board decisions

The WIOMSA Board of Trustees, in its Seventeenth Meeting held in Mombasa, Kenya in February 2007, discussed the membership survey report and made a number of key decisions in relation to the introduction of the membership fee:

Membership fee would be introduced effective 2007 and its structure would be as follows:

- Individual members - US\$ 50
- Institutional members - US\$ 500
- Associate members - US\$ 250
- Students should not be charged a



On the question "Do you think members should pay for their WIOMSA membership?" a majority of the respondents, 78 % think that members should pay for their membership in WIOMSA.

membership fee

- Due to foreign currency control in some countries in the region, members would be allowed to pay in local currencies to their respective country coordinators. Others, particularly Associate members, could pay by credit cards or through bank transfer.
- The membership fee would be paid biennially.
- Some of the services and products such as MARG and MASMA grants, subsidized WIO Journal subscription, free copies of WIOMSA publications, and subsidized Symposium registrations fees would be limited to members.

Set up of the membership system

On securing the approval of the Board, the Secretariat has gone ahead and developed a very comprehensive online-based membership system for paying members. In the paid members' only area, members will enjoy a whole host of services including updating their profiles, accessibility to different databases and all printed articles of the Western Indian Ocean Journal of Marine Science, as well as be able to

add directly their publications into the database of peer-reviewed articles.

The new WIOMSA paid membership program also includes the creation of a sub category, under institutional membership, of a corporate membership program based on the notion that the private sector should be encouraged to become members of Wiomsa and help support our programs and services.

The new membership system allows the Country Coordinators to manage members from their respective countries through an on-line module that allows addition of new members, receiving and issuing of receipts to paying members. They can also directly post information about important events and news from their respective country in the WIOMSA website.

This new membership system will be launched in September 2007 and thereafter a formal notification will be circulated to all members requesting them to start paying their membership fee. Payment of membership fees is one of the important ways in which members can take ownership of their Association. Ownership is assured when members not only benefit from the products and services provided but also contribute financial resources

WIOMSA would like to thank all of the members who participated in the Membership Survey. Your responses were very valuable and we are very grateful for you taking the time to fill in the circulated forms.

Members will be receiving their new membership ID and password by E-mail shortly and we would appreciate if you could log on into the members only area and update your profile and explore the services available to you. A report of the membership survey will be available soon on:

www.wiomsa.org

5th WIOMSA Symposium attracts many participants

“Science, Policy and Management - pressures and responses in the Western Indian Ocean region” is the Symposium theme and the venue will be in Durban, South Africa from 22nd to 26th October 2007.

The main purpose of the Symposium is to bring together practitioners, academics, researchers and students, to share knowledge, experience and solutions to the challenges faced in our coastal and marine environment.

The Symposium has received a very enthusiastic response and it is anticipated that at least 350 participants from more than 20 countries will attend. A total of 188 abstracts have been accepted for oral presentation with a further 150 for posters. There will be participants from all countries in the western Indian Ocean region with delegates also expected from Europe, America, Asia and Australia.

Keynote presentations

Six keynote presentations by prominent scientists will be delivered during the symposium as follows:

- The role of marine protected areas, especially marine reserves, in fisheries management, Kirsten Grorud-Colvert
- Coastal marine protected areas in Brazil: No take and sustainable use reserves - Antonio Carlos, Sant'Ana Diegues
- The land-sea interface mangrove systems responses to human impacts. A monitoring and modeling activity in the EU-founded PUMPSEA project - M.R. Flindt
- The greater Agulhas Current system; new knowledge and fresh challenges - J. R. E. Lutjeharms
- Status and future of Indian Ocean coral reefs - T.R. McClanahan



Photo: Bernadine Everett

- Reality and practicality of ICM in the Developing Country: Is the approach still valid? - Stephen Olsen

Special sessions

Friday, 26 October 2007 has been set aside for projects and organizations to organize special sessions. They will provide the opportunity for participating projects and organizations to share information about their activities. Participants will be able to ask questions and provide comments. Some programmes/projects and organizations that have confirmed to participate in the special sessions are:

- The Second Informal WIO International Waters Forum, by WIO-LaB Project
- An overview of marine conservation planning in South Africa, by Mandy Lombard and Jean Harris
- African Coelacanth Ecosystem Programme (ACEP) and Census of Marine Life (CoML), by Anthony Ribbink and Charles Griffiths
- Capacity Development in the Western Indian Ocean Region: What have we achieved and where do we go from here? by IOC-UNESCO

Read more about the WIOMSA Symposium at: www.wiomsa.org



National Coastal and Marine Forum inaugurated in Tanzania

The first Tanzania coastal and marine forum was held in Dar es Salaam from 1st to 4th June 2007.

More than eighty stakeholders and representatives from various national government institutions as well as the private sector, civil society organizations, coastal management programmes and local communities attended the Forum.

The general theme for the forum was: "Sharing Knowledge and Experiences for Sustainable Economic Growth and Poverty Alleviation." This was an appropriate theme, which recognises that the Government of Tanzania is committed to establishing better and more effective policies for managing the coastal and marine environment in order to improve the quality of life of the people, sustain the national economies and maintain the productivity and diversity of these valuable ecosystems for the future.

During the Forum, stakeholders presented about 40 scientific papers and posters highlighting important research findings, recommended practices and proven management experiences. Topics of discussion ranged from the maintenance of healthy, attractive marine ecosystems to social, cultural and economic aspects of marine resource use and development. Several papers that were presented during the Forum provided much information on the marine ecosystems on subjects such as coral monitoring, impacts of fishing activities on reefs, importance of mangroves to livelihoods and mariculture. All these aimed to provide an understanding of what determines the marine ecosystem's vulnerability and resilience. Key stress factors were also discussed - these are derived from human activities, climate change and



A participant of the Pearl farming project in Fumba, Zanzibar exhibiting and selling their jewellery during the Forum. Photo: Anna-Karin Johansson

prevailing policies and management structures.

On Closing, the Forum proposed several recommendations. These will be compiled and presented in the planned "State of the Coast" report, a biennial publication that provides a panoramic view of the coast of Tanzania and its people as well as the conditions, trends and threats that the coastal and marine resources are subjected to. Further recommendations highlighted at the close of the Forum aimed at

ensuring the proper management of Tanzania's coastal and marine resources and also at providing information which can be used to influence marine policies. To ensure a wider and focused dissemination, it was recommended that some selected papers should be peer reviewed and published in special issues of journals or compiled as Proceedings of the Forum.

Dr Nariman Jiddawi, a member of the Organizing Committee believes that the Forum achieved its expectation: She said, "The Forum attained its aim of sharing experiences and exchanging information amongst marine and coastal stakeholders in Tanzania".

Apart from the scientific Forum, a public event was also hosted for two days by the National Museum. Some of the local, regional and international organizations based in Tanzania exhibited research products and services that they provide under various projects and programmes. Among the attractions in the exhibition were the handicrafts produced by the coastal communities working in partnership with WIOMSA's Programme on Sustainable Coastal Communities and Ecosystems (SUCCESS).

The first Tanzania Coastal and Marine Forum was a national event held as part of the World Environment Week celebrations. It was co-hosted by the National Environmental Management Council (NEMC) in collaboration with the Wildlife Fund for Nature (WWF), Tanzania, Coastal Management Partnership (TCMP), Marine and Coastal Environment Management Project (MACEMP) and WIOMSA

For further information about the forum please contact Dr Greg Wagner (gwagner@udsm.ac.tz) or Dr Nariman Jiddawi (jiddawi@ims.udsm.ac.tz)

Join the WIOMSA photo competition

Are you going to participate in the WIOMSA Symposium in Durban? We welcome all participants to take part in our marine and coastal photo competition.

There is a saying one photo says more than a thousand words". For the purpose of encouraging people to take photos of environment and people in the region and share them with others, WIOMSA is initiating a photo competition. We intend to make this an regular event. The photos can depict any kind of scene from marine and coastal environment in the region, both above and as well as under the ocean surface. They may also illustrate human activities, research and environmental impact and wildlife.

A selection of the submitted photos will form a photo exhibition which will be opened during the Symposium week in Durban. All delegates and invited guests will be able to vote for a winning photograph. An attractive price will be given to the winning photographers. Welcome to submit your best photos to WIOMSA!

Who can participate?

- Participants of the WIOMSA symposium in Durban 22-26 October 2007



How do I participate?

- Submit a maximum of three high resolution photographs taken in the Western Indian Ocean region to the Secretariat before **30 September 2007**

- Add a catchy title to each photo and a short caption which describes it. Kindly also write where and when it was taken

- Send your photos via E-mail to: anna-karin@wiomsa.org or post a CD to: WIOMSA, Att. Anna-Karin Johansson, P.O. Box 3298, Zanzibar, Tanzania

Rules and conditions:

- All submitted photos have to be taken in the WIO region and by the competitor
- Photos that have been used in publications or exhibitions should not be submitted
- Members of the WIOMSA Secretariat are not allowed to participate
- The Secretariat will make a first selection of which photos will be displayed in Durban
- The selection of winning photos will be guided by these criteria: Unique ness, message, artistry and technical quality
- Symposium participants will be involved in selecting the winning photos

Recent happenings:



Dr Jaqueline Uku (left), WIOMSA Country Coordinator for Kenya and Dr A. Kaudia, IUCN Regional Director during the IUCN Members and Partners Meeting in Nairobi, Kenya.



During a visit to Zanzibar, Senior reporter Rodgers Lubwango from "The Citizen" newspaper in Dar Es Salaam assesses the weight of a large fish in the kitchen of Neptun hotel.



Ms Anna-Karin Johansson met with Mr. Murtaza Tayabali (centre) and Mr. Steven Mtenga to discuss the development of a new membership and peer-reviewed articles datasets for WIOMSA.



“Fingerprinting the fish” - WIO Taxonomists gain new knowledge in DNA bar-coding

A hands-on training course on fish taxonomy using DNA bar-coding was conducted in Lucknow, India in April. The purpose of the training was to improve the participants' knowledge in bar-coding technique for effective use in identifying marine fish species.

The increasing global demand for fish has exerted much pressure on this resource, leading to the collapse of the fisheries industry in some parts of the world and, due to over-fishing; some of the species are threatened to the brink of extinction. Experts say that some of the threatened fish and other species notably from regions such as the Western Indian Ocean have not even been described yet. This is primarily due to the limited taxonomic expertise available in the region.

This problem of taxonomic impediment is recognized worldwide and it is not unique to WIO - the more fish taxonomists we train, the more the fish species that shall be described correctly and be saved from extinction. Unfortunately our region bears the brunt of it all because it is bordered by developing nations with limited resources. Churning new taxonomists every year is a daunting task, so, new innovative techniques have recently been proposed to augment taxonomy. One of them is the use of DNA bar-coding. DNA bar-coding (also often referred to as DNA fingerprinting) is a promising alternative to the decreasing human expertise in morphological taxonomy. Not only that but also, being uninfluenced by subjective interpretations, this technique can bring in the much-needed clarity in identification and description of new species.

Specialized training on DNA bar-coding focusing on fish taxonomy was organized by the Indian Ocean Chap-

ter of the global program on Census for Marine Life (IO-CoML) with support from its partners and hosted by the National Bureau of Fish Genetics and Resources (NBFGR) at Lucknow, India. Among the 16 participants, four African marine scientists from institutions in the WIO region were invited - Dr Monica Mwale (South African Institute of Aquatic Biology), Dr John C. Mwita (Faculty of Aquatic Science and Technology of University of Dar es Salaam, Tanzania), Mr. James Mwaluma (Kenya Marine and Fisheries Research Institute) and Mr. Dalmis Oyugi (Kenya Wildlife Services Training Institute). The participation of the last three scientists was supported by WIOMSA through its Marine Research Grant (MARG III) Programme.

The overall aim of the training was to impart knowledge and new skills to the participants on the emerging technology of bar-coding as one of the



One of the many hands-on sessions in the lab.

critical tools in the taxonomy of marine life. Other aims were to introduce the participants to the new, global Barcode of Life Database (BOLD) and its application and relevance in contemporary marine biodiversity studies and finally to establish and strengthen the network of taxonomists working with marine life. All the participants submitted DNA



Many female taxonomists participated in the bar coding training course. Analyses in the laboratory were an important part.



Mr D. Oyugi, a representative from WIO gives closing remarks at the end of the training course.

samples from their respective regions for hands-on analyses during the course. The training also included lectures by world renowned molecular geneticists and cytologists from India, Canada and Australia. The practical sessions were facilitated by senior technicians from NBFGR. The process of DNA analysis included sample preparations and bar-coding, as well as computer analyses and interpretation of bar-coding results. Eventually all the participants presented their respective strategies on how they would apply their new skills and knowledge gained. Besides the mainstream training, the Canadian Coordinator of BOLD, Dr. Dirk Steinke invited all participants to upload taxonomic data onto the global database he is maintaining.

For the participants from WIO, their enhanced taxonomic capacity was

one of the key outcomes from this training. As Mr. Dalmas Oyugi from Kenya pointed out, "The training enormously strengthened my personal capacity in fish taxonomy. I believe that this new technique will enhance my knowledge in systematic and

augment to what I routinely use in classical taxonomy and phylogeny."

"Organizing such training programs and the emerging networks thereof are excellent ingredients to stimulate the growth of regional taxonomic capacity in this field of study," Mr. Oyugi concluded.

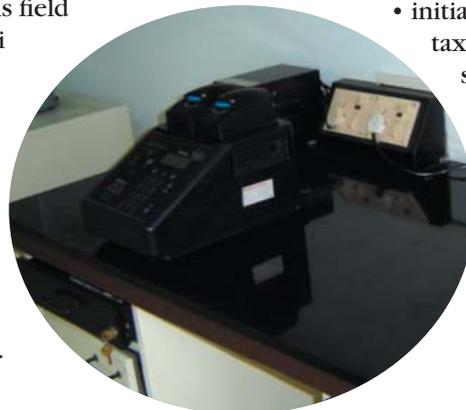
Way forward & recommendations

On completion of the training course, some recommendations were proposed for the way forward:

The International Training Course on DNA Bar-coding of Marine Life was held in Lucknow, India during April 16-21, 2007. It was organized by the Indian Ocean Census of marine Life (IO-CoML), with support from the Indian Center for Agricultural Research (ICAR), Aquatic Biodiversity Conservation Society (ABCS). It was hosted by the Indian National Bureau of Fish Genetics and Resources (NBFGR).

There is a need to:

- undertake regional taxonomic researches on as many marine taxa as possible from representative ecosystems in the different regions
- replicate training on DNA Barcoding in respective regions and where possible strengthen spill over from this first training course
- initiate taxonomic projects and upload them onto the Fish BOLD
 - initiate joint regional taxonomic groups to strengthen this field of research not only in Africa but also globally
 - keep the global network of Barcoding alive through constant communication



Example of the equipment used for analysing the samples.

WIO Journal of Marine Science , Volume 6(I) is out now

The articles in the journal:

i.) *A Ten-year Period of Daily Sea Surface Temperature at a Coastal Station in Reunion Island, Indian Ocean* (July 1993 April 2004):

Patterns of Variability and Biological Responses - C. François, F. Marsac, E. Tessier and C. Conand

ii) *Accumulation of Copper and Zinc and Their Effects on Growth and Maximum Quantum*



Yield of the Brown Macroalga Padina Gymnospora - F.A. Mamboya, H.B. Pratap, M. Mtolera and M. Björk

iii) *Reproductive Biology of Gerres Oyena (Pieces: Gerreide) along the Bagamoyo Coast, Tanzania* - H.A. Lamtane, H.B. Pratap and S.M.G. Ndaró

iv) *Regional Feeding Patterns of the Longnose Lancelfish (Alepisaurus Ferox Lowe, 1833) of the Western Indian Ocean* - E.V. Romanov and V.V. Zamorov

v) *A Preliminary Investigation Into the Use of Edible Fishery By-products as Sources of Nutrients for Fish and Livestock Feeds on Zanzibar, Tanzania* - J.M. Akil, M.J. Bryant and N.S. Jiddawi

vi) *The Effect of Stocking Density on the Performance of the Seaweed Ulva Reticulata as a*

Biofilter in Earthen Pond Channels, Zanzibar, Tanzania - F.E. Msuya

vii) *Distribution of Heavy Metals in the Coastal Marine Surficial Sediments in the Msasani Bay-Dar es Salaam Harbour Area* - A.N.N. Muzuka

viii) *The Dar es Salaam Seascape: A Case Study of an Environmental Management 'Hotspot'* - G.M. Wagner

Short Communication

ix) *Status of a Marginal Dugong (Dugong Dugong) Population in the Lagoon of Mayotte (Mozambique Channel), in the Western Indian Ocean* - J. Kiszka, C. Muir and A. Jamon

x) *Noctiluca Scintillans (Dinophyceae) in Central Coastal Waters of Tanzania: A New Phytoplankton Record for the Area* - C. Lugomela

Approved Marine Research Grants April-June 2007

IOC-UNESCO Bid Writing Workshop - Mombasa, Kenya, 16th to 20th April, 2007	
1	Sharveen Persand, MOI, Mauritius
2	Antonio M. Hoguane, UEM, Mozambique
3	Eulalia D. Mugabe, UEM, Mozambique
4	Riaz Aumeerruddy, SFA, Seychelles
5	Adriano Macia, UEM, Mozambique
6	Blandina Lugendo, FAST, Tanzania
7	Shigalla Mahongo, TAFIRI, Tanzania
Regional Consultative Workshop on the Preparation of Transboundary Diagnostic Analysis (TDA) and WIO-C Meeting - Nairobi, Kenya, 17th to 20th April, 2007	
8	Said Ahamada, AIDE, Comoros
9	Eric Blais, Shoals Rodrigues, Mauritius
10	Keswar B. Panray, EPCO, Mauritius
11	Veronica F. Dove, GTA, Mozambique
12	Said Mbwana, WCS, Tanzania
Workshop on Regional Perspective on MPA in WIO - Rodrigues, Mauritius, 9th to 14th May, 2007	
13	Haji M. H. Mahingika, MIMP, Tanzania
14	Innocent N. Wanyonyi, CORDIO, Kenya
15	Mohamed Omar S. M., KWS, Kenya
Programme on Sustainable Coastal Development, COAST-2007-A - Gotenborg, Sweden, 11th April to 16th May, 2007	
16	Sihaba Ramadhan Mwaitega, TAFIRI, Tanzania
17th SETAC Europe Annual Conference, Porto, Portugal, 20th to 24th May, 2007	
17	Haji Mwevura, SUZA, Zanzibar, Tanzania
5th International Conference on Marine Pollution and Ecotoxicology – Hong Kong	
18	Lydia Gespare, FAST, Tanzania

During the second quarter of this year, three MARG II projects and 18 MARG III projects were approved for implementation.

Approved MARG II Projects

MARG-II grants are awarded to individual scientists for the purpose of sharing or gaining technical experience as well as data processing and manuscript writing.

Approved MARG III Projects

MARG-III grants are awarded for travel support to individual scientists to attend scientific meetings and conferences, giving them opportunities to present their work and to learn from others outside the region.

Dates	MARG II Grantee	Project title and venue
May - June	Julius Phillip Okondo KMFRI, Kenya	The Effects of Domestic Sewage on the Diversity and Biomass of Mangrove Meio-faunal Community - Guia Marine Laboratory, University of Lisbon, Portugal
June - July	Elisha Jeno Mrabu KMFRI, Kenya	Mangrove Fauna – Pattern of Recruitment and Dispersal Mechanisms - Department of Animal Biology and Genetics of the University of Florence, Italy
June and July	Daudi Joachim Msangameno IMS, Tanzania	A Comparative Biodiversity Assessment of the Intertidal Benthic Faunal Communities of the Rocky Shores of Mtwara, Southern Tanzania - Guia Marine Laboratory, University of Lisbon, Portugal



WIOMSA Job opportunity: Capacity Development Coordinator

To be responsible for the implementation of the Professional Certification Programme for MPA Managers in WIO region. Read more under "News" on: www.wiomsa.org Deadline is 30 September 2007.



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