

WIOMSA HOLD ITS 5TH SYMPOSIUM

The Fifth Scientific Symposium of the Western Indian Ocean Marine Science Association (WIOMSA) was held in Durban, South Africa in October, 2007.

The function was jointly organized by WIOMSA and South Africa's Oceanographic Research Institution (ORI).

The chief guest, South Africa's Deputy Minister for Tourism and Environmental Affairs, Ms. Rejoice Mabudhafasi, reiterated the commitment of the Government of South Africa to keep the ocean clean by improving marine and coastal research.

Ms. Mabudhafasi urged the delegates to be practical in promoting marine science by penetrating into the remote areas of 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 to 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. One way of doing this is by using the local radio stations as a medium of outreach," she urged.

During the same event, five outstanding research scientists

marine science in the Western Indian Ocean (WIO) region.



About 400 participants from more than 30 nations attended the Symposium

The Fellow Membership Award was conferred on Prof. Mats Bjork (Stockholm University, Sweden), Dr. Tim R. McClanahan (Wildlife Conservation Society, Kenya), Prof. Yunus D. Mgaya (University of Dar es Salaam, Tanzania) and Dr. David Obura (Coral Reef Degradation in the Indian Ocean Project, Kenya).

The Honorary Membership Award was conferred on Prof. Olof S. Linden (World Maritime University, Sweden).

received WIOMSA's highest awards the Fellow Membership and Honorary Membership. The awards were

conferred on them in recognition of their exemplary contribution towards the development of coastal and

The President of WIOMSA, Dr. Nyawira Muthiga, highlighted some of the major achievements of the Association over the past two years which included the implementation of WIOMSA's Resource Mobilization Strategy and the continued SIDA-SAREC Support for WIOMSA in 2007-2010.



Dr. Julius Francis WIOMSA Executive Secretary

She also disclosed the acquisition of the WIOMSA building in Zanzibar to house the Association's offices and the recognition of WIOMSA's scientific journal by the International Science Institute.

For more information visit:- <http://www.africanoceans.net>

MoU COULD SAVE MONK SEALS

The endangered Mediterranean Monk Seal could get a reprieve following the signing of a new Memorandum of Understanding (MoU) between two North African and two European countries straddling the species habitat. The MoU for the protection of the Eastern Atlantic Populations of the Mediterranean



Mediterranean Monk Seal

Monk Seal was concluded under the auspices of the Convention on Migratory Species (CMS).

The Islamic Republic of Mauritania, Morocco, Portugal and Spain signed the agreement on the sidelines of the CMS meeting on Western African Talks on Cetaceans and their Habitats (WATCH) held in Adeje, Spain from 16th -20th October 2007. The agreement will be open for signature to all the Atlantic range states. The Mediterranean Monk Seal is among the most endangered marine mammals in the world and is listed on the Appendices of the Convention.

It is estimated that only 500 Mediterranean Monk seals remain in the wild. Appendix I Listing commits member states to ban seal hunting and capture and to conserve its habitat to counteract factors impeding migration.

This includes surveying other threat factors as well as preventing disturbance to the species. Natural phenomena and human activities have significantly reduced them especially through entanglement and mortality in fishing gears.

Over fishing, hunting and human persecution, pollution, as well as natural factors such as toxic phytoplankton are also major threats. The World Conservation Union (IUCN) has classified the species as critically endangered.

There are two breeding colonies of Mediterranean Monk seals in the Eastern Atlantic; one on the Desertas Islands (Madeira) and the other on the Cabo Blanco Peninsula (Morocco-Mauritania).

The Action Plan for the Conservation of the Eastern Atlantic Monk Seal which was approved at the Eighth Meeting of the Conference of the Parties to CMS, held in Nairobi, Kenya in November 2005 lays down the procedures to implement coordinated actions.

It provides a means to combine programs from different states, local and



Distribution of the Mediterranean Monk seal

international private organizations into efficient, coordinated efforts which should lead to the recovery of the depleted population of the species.

For more information visit:-
<http://www.africanoceans.net>

EDITORIAL

The decision by WIOMSA to present prestigious awards to research scientists who have excelled in their various fields is a positive move that many other programmes and organizations should emulate.

Too often we work quietly in our various difficult fields of specialization unnoticed like the biblical lantern under a bushel basket.

In every corner of Africa, landmark discoveries on issues that directly affect the livelihood of the African are being made daily without the pioneers getting any incentives.

Too many social and natural scientists are burning the midnight oil daily to make breakthroughs that will propel many African nations from their backwardness to standards of living that are both human and sustainable.

We join WIOMSA in congratulating Prof. Mats Bjork, Dr. Tim R. McClanahan, Prof. Yunus D. Mgaya, Dr. David Obura and Prof. Olof S. Linden for their achievements.

As we close the year, we wish all our contributors and readers a Merry Christmas and a Happy New Year.

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For further information on the stories carried in this issue please visit:-

<http://www.africanoceans.net>

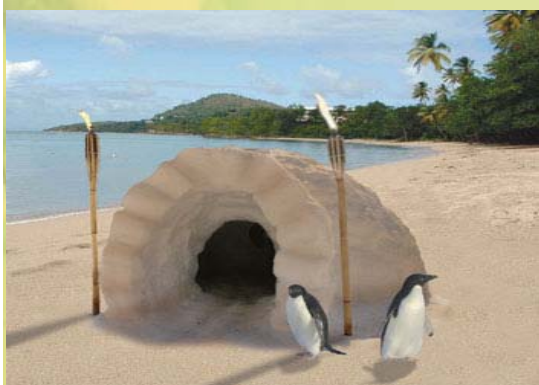
<http://www.nepadcosmar.org>



COMBATTING GLOBAL WARMING?

As the global warming crisis looms larger, scientists are toying with ever more radical ideas to seek solutions.

One of the latest in a series of dramatic proposals is the concept of fertilizing oceans with showers of iron to boost the development of marine plants known as phytoplankton. Several times over the past century, scientists and environmental engineers have proposed spreading slurries of dissolved iron into the oceans in order to "fertilize" the



As a product of global warming, a few exotic penguins loiter around a tropical Inuit sand igloo.

waters and promote vast blooms of marine plants which drive ocean productivity.

Phytoplanktons consume carbon dioxide as they grow, and this growth can be stimulated in certain ocean basins by the addition of iron, a necessary micronutrient.

Though common on land, dissolved iron is often rare in the ocean.

Some researchers and commercial interests have recently proposed to provide that missing nutrient on a large scale in order to create artificial blooms.

Theory holds that if you make such blooms large enough, you could remove excess carbon dioxide from earth's atmosphere and carry it down into the deep ocean as organic matter sinks, thereby reducing the impact of greenhouse gases and global warming.

On 26 - 27 September 2007, scientists at the Woods Hole Oceanographic Institution (WHOI) in the USA hosted an international, interdisciplinary conference on the proposed "iron fertilization" of the ocean as a means to combat rising concentrations of greenhouse gases in the atmosphere.

"There are many critical questions that require both better scientific understanding and an improved legal, economic, and political framework before iron fertilization can be considered either effective or appropriate," said Ken Buesseler, a senior scientist in WHOI's Marine Chemistry and Geochemistry Department.

"The time is right to bring scientists, policymakers, and commercial interests together to inform each other and the public," he added.

Scientists took a serious interest in the idea in the late 1980s after oceanographer John Martin famously told colleagues; *"Give me half a tanker of iron and I'll give you the next ice age"*.

Iron fertilization has since been tested in at least a dozen experiments around the world. The results have varied, but in general, iron fertilizers have been shown to promote plant growth in surface waters.

However, many researchers remain skeptical about whether the process removes carbon dioxide from the atmosphere for the long term or just for a fleeting time.

Ecological impacts from long-term, large-scale fertilization are also a concern.

*For more information visit:-
<http://www.africanoceans.net>*

MAURITIUS SCIENTISTS WARN TOURISM INDUSTRY

Scientists in Mauritius are alarmed at the stress on the islands remaining corals by rising numbers of tourists. They say the island's ambitious tourism targets are not sustainable and will lead to ecological destruction.

Facing the threats of trade liberalization to its sugar and textile sectors, Mauritius has boosted tourism with a target of two million tourists per year from an anticipated 900,000 in 2007.

"Too many tourists will bring it to an unsustainable level," scientist Mr. Vassen Kauppaymuthoo was quoted recently by international media.

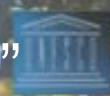
Mauritius has miles and miles of sandy beaches, tropical waters and turquoise lagoons protected by coral. However agriculture, fishing, and other human activity have been stressing the reefs for hundreds of years.

Marine scientists fear the combination of warmer seas and mushrooming human activity will place even more stress on the island's few remaining pockets of quality coral. Anchor damage, snorkelers, divers, water-skiers, pollution, and hotel waste water all play their part.

"Human and tourist development around the island are now becoming more of a threat to the coral," Kauppaymuthoo added. "It is because of the quantity of hotels and the amount and volume of effluents discharged."

Mr. Kauppaymuthoo said he had participated in an official study, which concluded in 1998 that, even with proper management, Mauritius could not sustainably handle more than 750,000 tourists per year without destroying the marine environment.

*For more information visit:-
<http://www.africanoceans.net>*



MOZAMBIQUE IN MAJOR FISHERIES SURVEY

The Government of Mozambique has embarked on a landmark survey of all the fisheries resources that exist in its 2,700 kilometre coastline.

"We have always argued that fishing should be based on knowledge," he said, "and so ever since 1975 we have been carrying out studies in this area."

This is the second such study since the country's independence in 1975, but this time the research will attempt to estimate the effect of global warming on fishery resources.



Mr. Cadmiel Muthemba, Minister of Fisheries and Mr. Thorbjørn Gaustadsæther, Norwegian Ambassador

According to a source in the Mozambican Ministry of Fisheries, the survey will recommend measures to be taken to ensure sustainability of these resources.

Mr. Muthemba said that information from the first overall survey made possible the Fisheries Master Plan which is currently in force.

The study is being undertaken by the Norwegian research vessel, the Dr. Fridtjof Nansen, which arrived in Maputo recently, for the commemorations of 30 years of fisheries cooperation between Norway and Mozambique.

For his part, the Norwegian ambassador, Mr. Thorbjørn Gaustadsæther, said that this type of research, combined with management, training and education measures, was an important component in the fight against illegal fishing.



The Norwegian research vessel Fridtjof Nansen

Speaking on the arrival of the vessel, Fisheries Minister Mr. Cadmiel Muthemba stressed the importance of the study, which he hoped would contribute to improving the living conditions of Mozambican communities living in coastal areas.

"Illegal fishing represents an annual loss of almost nine billion US dollars across the globe", he said. "In Mozambique, this annual loss reaches around 40 million US dollars".

Mr. Gaustadsæther argued it was crucial that the Mozambican authorities should work to ensure sustainable management of marine resources.

The research will last for 90 days, and will involve technical staff from Norway, Mozambique and other Southern African countries.

*For more information visit:-
<http://www.africanoceans.net>*

UPCOMING EVENTS

Aquatic Resources of Kenya II (ARK II) Past, Present and Opportunities for Future Development, 27 - 29 May 2008, KWS Training College, Naivasha, Kenya

The 12th Annual Offshore West Africa (OWA) Conference & Exhibition, International Conference Centre, 29-31 January 2008, Abuja, Nigeria.

Geospatial Sciences for Sustainable Development in Africa - Global Dialogue on Emerging Science and Technology (GDEST) 2008, 17-19 March 2008, Cape Town, South Africa.

RAMSAR'S 36th Standing Committee Meeting, 25 - 29 February 2008, Gland, Switzerland.

International Conference on Integrated Water Resources Management: Lessons from Implementation in Developing countries and the Second Africa Regional Meeting of the National committees of UNESCO'S International Hydrological Programme, 10 - 12 March 2008, Cape Town, South Africa.

International Conference on Groundwater and Climate in Africa, 25 - 28 June 2008, Kampala, Uganda.

Capacity-Building Workshop on Implementing NBSAPs and Mainstreaming Biodiversity for Southern and Eastern Africa, 4 - 8 February 2008, South Africa.

Congress of the Phycological Society of Southern Africa, 15th - 18th January 2008, Rocky Bay (KwaZulu-Natal), South Africa.

Sixth meeting of the Open-ended CBD Working Group on Access and Benefit-sharing (ABS WG-6), 21 - 25 January 2008, Geneva, Switzerland.



NIGERIA TO SEA-FARERS AID

The Nigerian government has launched the first Seafarers Identification Document (SID) centre in Africa.

The centre was commissioned in October 2007 in Lagos to provide Nigerian seafarers with offshore facilities when they are outside their areas of operations and hopefully reduce their long work periods at sea without international identification.

The centre was commissioned by the Minister of State for Water Transportation, Prince John Okechukwu Emeka who stressed that the days of harassment of Nigerian seafarers by immigration officials would end with the centers operations.

Prince Emeka disclosed that the government would strive to create

employment opportunities for Nigerian seafarers through strict implementation of the cabotage law.



*Minister of State for Water Transportation,
Prince John Okechukwu Emeka*

He said that the federal government aimed at using both the SID and the cabotage law to replicate what the Filipinos had done with their maritime industry.

He however said that despite the two instruments, the absence of subsidies to offer training for seafarers hampered the efforts to increase employment for their sailors.

Nigeria, he noted, had the capacity to be amongst the world players in marinetime business if these issues were addressed.

The Minister of Labour, Dr. Hassan Lawal, said the country is in the forefront of the ratification of the SID convention in the world but said that unless government created the enabling environment for employment of the country's seafarers, the moves would be of no value.

*For more information visit:-
<http://www.africanoceans.net>*

GUINEA-BISSAU DRAWS CONTINGENCY PLAN TO AVOID MARINE POLLUTION

The government of Guinea Bissau is drawing up new legislation to ensure marine pollution preparedness and response ahead of planned oil exploration in its coastal waters.

As foreign oil companies line up to explore Guinea-Bissau's potentially oil-rich waters, the government is trying to build capacity to avoid the grave environmental catastrophes suffered by her neighbours in the past.

Most of the potential reservoirs are close to internationally-renowned nature reserves which has conservationists worried.

The Guinean-Bissau government has teamed up with civil society, the global environmentalist group the World Conservation Union (IUCN) and foreign aid agencies to be better

prepared for the upcoming large-scale offshore oil exploration.

The National Oil Committee recently brought these groups into dialogue with the Bissau parliament to discuss positive and negative environmental experiences in other countries.

"There is no oil exploration without pollution, but it is possible to reduce this pollution to a level compatible with other activities", the IUCN's Clive Wicks told parliament in an address.

Risks, he noted were not limited to exploration and exploitation, but also strongly connected to the transportation of oil.

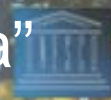
Guinea-Bissau so far has not signed any conventions of the International Maritime Organisation (IMO), which aim at preventing pollution and

secures international assistance in the case of an accident.

Guinea-Bissau is already known to have oil resources at sea, located a few kilometers off its coasts.

Oil companies plan to operate in the immediate vicinity of the Bijagos Archipelago, classified by the UN as a biosphere reserve. The shallow waters of Guinea-Bissau are renown by ecologists to be among the most important hatching grounds in the West African region. These shallow waters and the 700 kilometer mangrove coastline are considered fragile environments that would suffer immensely from future oil spills.

*For more information visit:-
<http://www.africanoceans.net>*



Regional Programmes UPDATES

WIO-LAB SUPPORTS EASTERN AFRICAN PROJECTS

The WIO-Lab program has launched several demonstration projects within the East African region to propagate sustainable management and rehabilitation of critically degraded coastal and marine ecosystems.

Among other things the projects show communities how to manage waste water before it enters the ecosystems like the mangrove forests and sea-grass beds that buffer the coastlines and the ocean.

In Kenya, the project is working with the Coast Development Authority (CDA), National Environment Management Authority (NEMA) and Kenya Marine and Fisheries Research Institute (KMFRI) to demonstrate how waste water from one of the largest State Penitentiaries in Kenya - Shimo la Tewa Prison, can be treated through the application of constructed wetland systems.

A similar project is being implemented in Pemba, Zanzibar in collaboration with the Department of Environment, Zanzibar.

In South Africa, the project is working with Rhodes University and the Department of Environmental Affairs and Tourism (DEAT) to promote the application of Integrated Algal Ponding System (IAPS) technology for the polishing of treated effluent from conventional sewage treatment systems. Advantages of this technology are its low cost, ease of operation and the production of algal biomass as a by-product, which is of commercial value as a fertilizer and a protein rich animal feed.

In Tanzania, the project is working with the University of Dar es Salaam and the National Environment

Management Council (NEMC) to promote the use of vetiver grass for controlling river bank erosion and leachate flow at a former dumpsite in Dar es Salaam.

Further south, the project is working with the Ministry for Coordination of Environmental Affairs in Mozambique



Constructed wetland immediately after the completion of construction and after full growth of vegetation (Courtesy of Dr. Kayombo, UDSM, Tanzania)

(MICOA) and GTA, a local NGO, to promote the enhancement of the productivity and functional integrity of mangrove ecosystems through effective resource use practices in Lumbo, Nampula.

In Madagascar, the WIO-Lab project is working with the Parc National Madagascar - Association Nationale pour la Gestion des Aires Protégées (PNM-ANGAP) and the Ministry of Environment to promote ecotourism and sustainable use of marine resources in a marine protected area in Toliara. Similarly a project for Integrated Coastal Zone Management practices is being implemented at Itsamia within Mohéli marine protected area in the Comoros. Both projects are introducing a community-based management approach aimed at limiting pressures from land-based activities while generating direct benefits to the community through ecotourism activities.

It is intended that the lessons learnt through the implementation of demonstration projects in various

parts of the WIO Region, would eventually be disseminated all over the WIO Region and give birth to similar projects throughout the region.

The Western Indian Ocean (WIO) is renowned for the attractiveness of its coastal zones, high marine biodiversity, and rich marine and coastal resources.

These coastal and marine resources are also the backbone of the livelihood of millions of people who live along the coast. In some countries, the coastal resources also support a significant component of the national economy.

Despite the fact the region is relatively healthy as compared to other oceans of the world, in the recent past, early signs of environmental degradation as well as a decline in natural resources and biodiversity have become obvious.

This is attributed to the rapidly growing population as well as increasing impacts from land-based activities such as industrial, urban, and agricultural activities.

There are also dangers associated with climate change as demonstrated by the recent massive bleaching of the corals.

For more information visit:-
<http://www.africanoceans.net>

“Coasts and Oceans: Hope for Africa”



A STINK IN NAMIBIA !

Three sewerage pump stations being built on the beach between Swakopmund and Walvis Bay are raising more than a stench.

Environmentalists, the Walvis Bay Municipality and developers are at odds over the location they have been built.

Environmental authorities, including certain NGOs, as well as the Ministries of Environment and Tourism and Fisheries and Marine Resources, say the pump stations are inside the buffer distance of 100 metres from the high-water mark.

In fact, one of the pump stations, which has already been completed, is within 50 metres of the high-water mark.

According to sources in the Ministry of Fisheries and Marine Resources, a letter of objection from the Ministry's Permanent Secretary was sent to the Walvis Bay Municipality recently.

Apart from the question of why infrastructure is being built inside the buffer zone, there are also major concerns over the consequences of such pump stations for people buying property in the new developments between Long Beach and Bird Island, as well the negative impact on the offshore environment.

Some of the concerns include possible seepage of sewerage into the sea, which could pose a health

risk to residents and jeopardise fish farming planned for this area.

Sources told *The Namibian* that there were no objections to the plans at a stakeholder's meeting in July 2007, because it was suggested at that time that the stations would be built on the landward side of the road between Swakopmund and Walvis Bay.



Aerial view of Swakopmund one of the most premier beach resort in Namibia

Andre Burger of the Walvis Bay Municipality's Water, Waste and Environmental Management Department told *The Namibian* that there seems to be a misunderstanding regarding the buffer zones.

He specifically referred to an official "environmental clearance guideline" that was sent out in April 2005.

He said it specifically stated that there may be no development, such as residential, within 100 metres of the high-water mark.

He said another 50 metres was given for the erection or installation of services infrastructure - such as sewerage pump stations.

"These residential areas need proper sewerage systems, like any residential area. Obviously it has to be at the lowest point for catchments", he said, adding that the area has a sharp decline towards the ocean.

Burger said the sumps for catchments of raw materials are concrete capsules which are secure and would hardly be in danger of breaking and seeping sewerage.

From these sumps, sewage will be pumped to treatment plants on the landward side of the road. Some people feel that there should have been an Environmental Impact Assessment before any construction started, and that

the building should be stopped until the whole sewage system can be reviewed.

The Namibian contacted the Director of Environmental Affairs, Theofilus Nghitila, to ask if his department had given permission for the construction of the pump stations.

According to environmentalists, Enviro-Solutions at Swakopmund, which was asked to do an Environmental Impact Assessment on the project, advised the Municipality to explore alternative locations for the pump stations.

For more information visit:-
<http://www.africanoceans.net>

"Coast and Oceans: Hope for Africa"



MONSOON STUDY PROGRAMME LAUNCHED

The Regional Programme of Physical Oceanography in West Africa (PROPAAO) was launched in Cotonou, Benin in October 2007 to extend the ongoing study of the African Monsoon phenomena. The new study is a regional arm of the African Monsoon MultiDisciplinary Analysis (AMMA) which studies the processes in order to improve seasonal forecasting.

The workshop which brought together over 20 oceanographers from Benin, Cote d'Ivoire, France, Ghana, Nigeria and Togo. The program is funded by the French Ministry of Foreign Affairs for a period of 3 years (2007-2010), through the Priority Solidarity Fund.

The drought that occurred in West Africa at the end of the twentieth century and the phenomena of flooding under way in most countries in West Africa are the strongest observed climate signals of the changing trends.

Although the meteorological measurements are available, detailed explanations of these phenomena are not yet known.

West Africa is one of the regions of the world where populations and ecosystems are extremely vulnerable to climatic hazards. The program will provide access to the scientific

conducted from 2005 to 2007 from Cotonou as part of EGEE (Study of Climate and Ocean Circulation in the Gulf of Guinea).



Group photo of the workshop participants

community to an impressive number of measurements in all relevant climate disciplines, especially in meteorology, hydrology, atmospheric chemistry, oceanography.

Most of these were gathered during studies and research conducted in 2006, focusing on a phase of a three-year action (2005-2007) when oceanic measurement campaigns were conducted from research vessels.

Six oceanographic campaigns were

The workshop participants agreed to finalize its implementation, make an inventory of current studies and measurements already in place, define some scientific priorities, and to discuss the ways to establish close ties of cooperation with international and regional programs already underway.

The opening ceremony of the workshop was graced by Mr. Djiman Roger Centre de Recherches Halieutiques et Océanologiques du Bénin (CRHOB), Mr. Justin Ahanhanzo, (UNESCO/IOC) Mr. Bruno Bordage (IRD Benin) and Professor Mansourou Moudachirou representing Ministère de l'Enseignement Supérieur et de la Recherche Scientifique (MESRS).

For more information visit:-
<http://www.africanoceans.net>



From Editorial Board

*We wish our readers a happy
Xmass and prosperous New
year 2008!!*

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“Coasts and Oceans: Hope for Africa”

