

# PWANI YETU

## **The Newsletter of the Tanzania Coastal Management Partnership**

*Issue #2 - November 1998*

### **“Tanzania committed to good coastal governance,” Lowassa**

The Tanzania government is urgently striving to put into place an effective policy framework and implementation mechanisms that will help Tanzania achieve good coastal governance through the principles of Integrated Coastal Management (ICM).

This was said by the Minister of State in the Vice President’s Office, Hon. Edward Lowassa while officiating the opening of a Policy Meeting on Integrated Coastal Management in Tanzania held at Whitesands Hotel on 29 November.

Chaired by the Permanent Secretary in the Vice President’s Office, Mr. Peter Ngumbullu the one-day meeting was attended by directors, commissioners and heads of key government sectors and institutions involved in coastal and marine management. The meeting had the following objectives;

- \* To describe the complexities of coastal ecosystems and the challenges for managing them;
- \* To review the statements describing critical coastal management issues;
- \* To recommend key actions that move from issue identification to adoption of an ICM program.

Affirmatively underlining the government’s commitment to effective coastal governance, the Minister called upon the meeting to come up clearly with the critical coastal management issues and a mechanism for implementing ICM programs with the priority sequencing that provide for sound investments, management and sustainable use of coastal areas and natural resources while at the same time addressing concerns of poverty eradication and well being of coastal communities.

“We have been leading the Eastern African Region on ICM issues and now, with our new focus at the national level through the Tanzania Coastal Management Partnership (TCMP), we are considered leader in the field of coastal management probably for the entire continent,” Mr.Lowassa said adding: “we should not be complacent but move quickly and boldly towards effective policy”.

Emphasizing that the government was committed towards achieving the TCMP targeted results which include formulation of a meaningful national ICM policy that is effectively applied to coastal problems, the minister called on the participants to deliberate keenly on

critical issues identified by the TCMP and come up with concrete proposals that will assist and guide the ICM policy formulation process.

The Director General of the National Environment Management Council (NEMC), Dr. Magnus Ngoile on behalf of the TCMP partners, informed the minister that the TCMP Interagency Working Groups and specialized teams, (that draw representatives from key government, public and private institutions) in consultation with ongoing local ICM programs had identified pertinent coastal management issues which were to be reviewed by the policy meeting. Identification of issues, that a national ICM policy should address, according to Dr.Ngoile, is the first step in the ICM process.

The meeting successfully deliberated on the TCMP's coastal issue profile to be addressed in the policy formulation and made valuable inputs and recommendations to guide the TCMP way forward in the ICM policy formulation process.

### **Directors, Commissioners endorse and set pace for ICM Policy Process**

On November 29, 1998 Directors, Commissioners and heads of key government institutions involved in coastal and marine management endorsed and set pace for the process of formulating a national Integrated Coastal Management (ICM) Policy in Tanzania.

The top government officers invested with the important role of spearheading the national development machinery endorsed the ICM policy process at a policy meeting on integrated coastal management in Tanzania hosted by the Vice President's Office.

The meeting was opened by the Minister of State in the Vice President's Office, Hon. Edward Lowassa who underlined the government's commitment to good coastal governance through ICM principles.

During the one day meeting, the government executives led by the Principle Secretary in the Vice President's Office Mr.Peter Ngumbullu, reviewed and scrutinized pertinent critical coastal issues identified by the TCMP Working Groups. They made valuable comments and inputs that provide for a clearer description, emphasis and clarity on complexities of the issues and their cross-sectoral nature.

The endorsement of the process was made after group discussions, which focused on the following issue areas:

- \* Maintaining and improving coastal village well-being and livelihood;
- \* Shorefront planning and management of Tanzania's emerging coast-related economic opportunities including tourism, mariculture, industry, oil and gas-exploration;
- \* Shorefront erosion resulting from extraction of coastal resources;
- \* Managing of geographic areas of concern;

- \* Supporting local initiatives and decision making for inter-sectoral development;
- \* Information availability and use in decision making; and
- \* Lack of human and institutional capacity.

Apart from specific comments to enrich issue statements, the meeting recommended for a more detailed issue description on gender issues, agriculture, small-scale and informal sector needs, public awareness and capacity building.

The government executives, whose departments and institutions are key stakeholders in coastal management outlined key actions to guide the process to move from issue identification to the adoption of an ICM policy. They however, directed that while the overall ICM policy is being formulated and adopted action should be taken on short-term measures on critical issues such as resource depletion.

The TCMP Core Working Group and Special Teams are currently working on policy elements to be reviewed by the sectoral heads who will eventually guide the drafting of the coastal policy.

## **The Essence of Integrated Coastal Management – ICM**

Many coastal countries including Tanzania are increasingly striving to put into practice the principles of Integrated Coastal Management (ICM) as a way to balance development with the health of marine and coastal environments. This is seen as a focused move towards sustainable development of the increasingly pressured resources and their delicate environment.

Integrated coastal management as explained by Lynne Zeitlin Hale, Associate Director, Coastal Resources Center of the University of Rhode Island while presenting a paper at a Policy Meeting on ICM in Tanzania, is viewed as a potentially useful tool for addressing difficult coastal issues related to human development and the related environment.

According to Hale, the term ‘coastal management’ came into common use in the 1970s after the U.S. Coastal Zone Management Act was passed in 1972. The Act recognized that the misuse and overuse of coastlines and estuaries required a fresh approach to planning and management.

Since then, the concept has evolved as it has been applied to an expanding diversity of situations in many countries. By 1993 about 150 coastal management initiatives were underway in 57 nations. Now the number is much higher.

Over the last decade coastal management has been recognized in many environmental treaties and regional agreements, including Agenda 21 of the United Nations Conference on Environment and Development (UNCED), which calls for all nations with coastlines to adopt integrated coastal management (ICM) by the year 2000.

In the Eastern Africa region, the Nairobi Convention recognizes ICM as the best tool to achieving sustainable use of coastal and marine resources.

ICM, according to the United Nations Group of Experts on Scientific Analysis on Marine Pollution (GESAMP) is defined as: *A continuous and dynamic process that unites government and the community, science and management, sectoral and public interest in preparing and implementing an integrated plan for the protection and development of coastal systems and resources.*

GESAMP states the goal for ICM as to improve the quality of life of human communities, which depend on coastal resources while maintaining the biological diversity and productivity of coastal ecosystems.

Different from other practiced resource management programs, according to Hale, ICM programs consider a coastal geographic unit or ecosystem with the people of the place to create a 'vision for its future,' then motivate and catalyze action among stakeholders—those with an interest in the area or resources, to achieve that future. In an ICM process, the area's renewable and non-renewable resources are managed in an integrated, proactive way to maximize benefits from multiple sectors and reduce impacts of one sector on another.

In order for ICM to succeed, it has to be established and implemented on the systematic step by step progression, starting with identification and assessment of issues; program preparations; formal adoption; implementation; and evaluation. After evaluation the cycle begins all over again with issue identification and assessment to ensure sustainable program development and achievement of targeted results.

According to Hale, the essence of the ICM cycle is that it provides for learning by doing which, enables coastal management practitioners to discover what approaches will and will not work within a nation and or in an area's unique context. This process allows each nation to 'invent' its own coastal program.

## **Africa all out for ICM**

As oceans and coastal areas world-wide are increasingly becoming strained by human activity, African coastal states are striving to implement Integrated Coastal Management as a means to put in place effective sustainable coastal resource base governance. This was clearly demonstrated at the recent Pan African Conference on Sustainable Integrated Coastal Management (PACSICOM) held in Maputo.

Held during the United Nations proclaimed International Year of the Ocean (IYO), the Maputo conference was part of the PACSICOM process, which consists of a series of Pan-African partnership conferences, aimed at enhancing the protection, management and development of Africa's marine and coastal environment from the margins to the

center stage of decision policy making in the region. Convened as part of the region-wide efforts to give greater impetus to the management of coastal areas of Africa, it brought together delegates from all over Africa as well as from international agencies, NGOs and from bilateral/financial institutions.

African states endeavor to implement ICM started in December, 1985 at the African Ministerial Conference on Environment (AMCEN) held in Cairo. The Cairo conference was a nucleus of regional efforts that resulted in the 1993 regional ministerial meeting held in Arusha where the ministers considered and endorsed a resolution that recognized ICM as the best tool to address the multiplicity of issues involved in the coastal zone.

Addressing the current state of Africa's seas coast, the Maputo Conference recognized key issues pertinent to coastal and marine degradation which were frustrating development of coastal communities. In the wake of these issues, the conference resolved and committed African countries, and called upon UN agencies as well as development cooperate partners, to urgently help African states in addressing the following three fundamental concerns:

- \* Introduction of an innovative process to design a comprehensive strategy for sustainable integrated development of the coastal environment of the African continent including the cultural and social dimensions of development and taking into account the inter-face process between the physical environment, the cultural heritage and people;
- \* Regular review of the state of Africa's marine and coastal environment as well as the performance of intergovernmental agreements including programs; and
- \* Improvements of efficiency of institutions responsible for management of coastal and marine environment along four axis, namely: better coordination; by making them more cross-sectoral; by involvement of relevant stakeholders; and, by providing appropriate national funding arrangement.

## **REPORTS FROM THE FIELD**

### ***WANDODEMA, AN ENVIRONMENT FRIENDLY FISHING GEAR***

*By Anna Kashiya of GreenCOM*

In an effort to contribute to the sustainability of the marine environment, the Mafia district department of fisheries is striving to make fishing traps that greatly increases efficiency in fishing while caring for the environment. One of such traps is the *Wandodema*, a unique net trap modeled out of two traditional fishing gears, *Wando* and *Dema*.

*Wandodema* is made from wooded strips lashed together to form a hexagon-shaped basket. In each corner of the basket is a cone-shaped trap fitted with rings that support the shape. The size of the shape, design and mesh may vary depending on requirements. The trap also has marker buoys that are made of bamboo and sinkers made of containers filled

with sand. Such a trap is used to catch fish of pelagic species, such as tuna, mackerels and barracuda without touching the corals or seaweeds.

Explaining on the *wandodema* operation, fisheries officer Godfrey Mokoki said the net trap has so many advantages to a fisherman. Apart from being easy to use and by only a few people, the *wandodema* trapped fish remain alive all the while allowing the fisherman to haul the catch he requires for the market on that particular day.

According to Mokoki who trained in fishing gear production in China, the other advantage of *wandodema* that can be used as passive as well as active gear is that endangered species such as sea turtles may be released unharmed if found trapped.

“The only disadvantage of the gear is that it is easily stolen where there are unfaithful fisherfolks and that the cost of it is rather high as are all other fishing nets.”

The fisheries officer explains further that the problem is not the price but the reluctance of bigger fishermen who hesitate to use the locally made *wandodema* in favor of the imported gear though destructive on environment

The five meters deep net that was on display at the fisheries department was estimated at shillings five million, but according to Mokoki, the high yields compensate for the costs at a very short time.

Apart from the *wandodema*, the Mafia fisheries department has also invented other fishing gears, which are equally environmentally friendly. These include the stick held lift net- *kipe*, the octopus pot and prawn fishing nets.

The production technology of these unique fishing gears, which are highly recommended by the Mafia Island Marine Park, is supposed to be passed over to the local fisher community only that funds are not forthcoming. According to Anthony Melele, the marine park assistant warden, arrangements are underway to seek for revolving funds that will enable the local community to buy and use the nets at the same time training local people in making the gears.

“The aim is to encourage the use of the environmentally friendly fishing gear in the marine park area which includes ten villages,” explains Melele.

## **SEAWEED FARMING**

### **A potential economic opportunity**

*By Flower Msuya of Institute of Marine Science, Zanzibar*

The history of seaweeds in Tanzania dates back to the 1930s when people harvested seaweeds from the Zanzibar Islands. The seaweeds were sold to businessmen who exported them to Europe.

In the 1950s, about 400 tones (dry weight) of the red seaweed - *Euchema*, were harvested from the Zanzibar wild stock and exported. However, the seaweed trade collapsed in the 1970s because the crop contained a large amount of admixture. This consequently pushed the Zanzibar crop from international markets.

Commercial farming of seaweed did not start until in the late 1980s. The farming was based on studies and experiments carried out by Professor Mshigeni in the 1970. However, due to the lack of funds, it was not until in 1989 when commercial production was achieved through private entrepreneurs. The earliest known commercial seaweed production was at Paje and Jambian villages on the east coast of Unguja.

By 1992, seaweed farming had spread to Pemba and Mafia Islands, before it moved to the mainland coast in 1995.

Seaweed farming is now seen as a potential economic opportunity to the coastal communities. Encouraged as an alternative source of income for the coastal fisher folk, it contributes in reducing pressure on natural marine sources, particularly the fishery and coral reefs.

Studies of the Institute of Marine Science of 1992 and 1995 revealed that successfully managed seaweed farms of an ordinary plot of 50 ropes may generate product worthy Tsh.13,000/= per every two to three weeks harvest. Most farmers have more than one plot in Zanzibar and Pemba. An average gross income for a seaweed farmer is about US\$ 1,000 per year.

This is a considerable better income compared to the minimum wage in Tanzania which is Tsh.30,000/= per month (US\$ 600 gross salary per year). The seaweed farmer is also better off than an ordinary artisan fisherman whose gross income is estimated at US \$ 565 per year.

While women on Zanzibar Island and on the Tanzania mainland dominate seaweed farming, both men and women are actively engaged in the farming on Pemba Island. Some other people share their time for fishing and seaweed farming.

Successfully seaweed farming, however, requires proper preparations and skills. The prime issues to be considered in planning a seaweed farm include:

- \* Willingness of the people.

- \* Availability of initial raw material and seeds.
- \* Availability of markets for the produced seaweeds. Normally a farmer requires selling the product as soon as it is harvested and dried.
- \* Proper choice of the intertidal area to set the farm: the type of substratum, whether sandy, clay or rocky depend on the farming technique. The technique of using wooden pegs, for example, needs a sandy bottom.
- \* Good location of the farm sites with respect to rivers, industries, surface runoffs etc. Any source of pollution or excessive freshwater intrusion will affect the seaweeds. There should be good water exchange with maximum flushing in an area where the seaweed is farmed.
- \* Prospective farmers should be trained in all steps of the farming process. The training is best done through experimental farms, which also help to assess the growth rates of the intended seaweed species.

## **Hotel Development in Bagamoyo raises environmental concern**

*By Baraka Kalangahe*

As tourism investors embark on intensive hotel development on the docile beaches of Bagamoyo, the somber historical township north of Dar es Salaam certainly heads for tourism glory. However, the glory may not live long to benefit the future generations as, the developments are not in harmony with environment sustainability.

According to observations made, the increasingly clearing of mangroves and the direct discharge of sewage into the sea by some hotel units is bound to cause unrepairable environmental damages.

Already some remarkable beach erosion is beginning to show at older hotels. Unregulated activities being demonstrated in the early stages of tourism development leave no doubt that the alluring beaches may be strained to even worse erosion dimensions.

Bagamoyo is itself a tourist gem. Its enchanting historical relics blend well with docile beaches. The beaches stretch from Kaole in the south to Ras Nunge in Bagamoyo town, progressing to Ras Winde, Kitame and to Saadani Game Reserve renown for its tropical wild game. The tepid shoreline waters embrace colorful coral gardens and fringing coral reefs around Mwamba Kuni, Manyema and Bolibo, which offer ideal settings for sea sports.

Ras Nunge is characterized by extensive mangrove growth on the shoreline. Adjacent to Nunge are barrier reefs locally known as Mjune and Saju, which serve as buffer against strong wave action.

Unfortunately, parts of the mangrove stands, estimated at 10ha have been cleared to provide beachfront access to a hotel. Though, from face value, the clearing of mangroves

may be seen to be of good cause, the environmental impact in this resourceful area may be devastating.

Hotels development in Bagamoyo, according to experts, should be guided by proper Environmental Impact Assessments (EIA) to make the best use of available tourism opportunities with a focus on long and short term strategies to ensure the development is environmentally sustainable.

Unfortunately, the application of the EIA process is not yet emphasized in Tanzania. Worse still there is no policy and institutional framework specifically addressing inter-sectoral coastal management issues.

Without either of these two important tools, Bagamoyo (and perhaps all of Tanzania), faces a future with large scale, unsustainable development that draws upon and pollutes resources critical to local livelihood.

### **KIGOMBE VILLAGE FIGHTING BEACH EROSION**

Kigombe village residents are in a fight against beach erosion. With some houses on the verge of being falling into the sea, it is a frantic fight as was witnessed by the TCMP Working Group, which toured Tanga recently.

Situated in the Tanga southern coast, Kigombe is a typical example of areas critically depleted by decades of unchecked dynamite fishing and mangrove clearing. The recent *Elnino* rains, according to the village chairman have worsened the village's situation.

Endowed with a long stretch of a beach now devastated by coastal erosion, and boasting of the barrier reefs of Majivike, Upangu and Kitanga, Kigombe village is now collaborating with the Tanga Coastal Zone Conservation and Development Program and the Mangrove Management Project in a campaign to repair the eroded beach.

Briefing the TCMP Working Group, the chairman said the campaign involves planting of mangroves, monitoring of destructive fishing practices and conservation of the barrier reefs.

According to the chairman, the reefs of Upangu and Kitanga have been restricted from use for five years to allow them time to regenerate. This restriction is in place because the reefs were found to have been critically damaged by dynamite explosives. The reefs have been restricted on the strength of the village by-laws approved by the district authorities.

The recent heavy rains unfortunately disrupted the mangrove planting exercise that took off vigorously. However, arrangements were being made to replant new mangrove trees with the guidance of the Mangrove Management Project.

Other community integrated activities being undertaken by the Kigombe village under the guidance of the Tanga Coastal Zone Conservation and Development Programme include seaweed-farming, tree planting and fishing through environmentally friendly methods. The village with 3,000 people is famous for lobster fishing in the adjacent barrier reefs.

### **Mbweni women spearhead marine environmental protection**

Starting in August this year, women residents of Mbweni village some 45km north of Dar es Salaam have been involved in replanting mangroves in a severely degraded part of their coastline.

The mangrove replanting exercise is being coordinated by Marine Action Conservation Tanzania (MACT) in association with AGENDA. It is part of a project funded by the African Development Foundation (ADF) with the purpose to involve the local community in conservation and restoration activities in Mbweni and Kunduchi.

Supervised by Dr. Greg Wagner, Senior Lecturer at the University of Dar es Salaam, in cooperation with Flora Akwilapo, a post graduate student and Richard Massinde, a technician both from the Department of Zoology and Marine Biology the mangrove replanting effort has triggered the Mbweni women in forming an environmental group-the *Kikundi cha Mazingira na Wanawake*.

According to Dr. Wagner, the mangrove replanting is carried out with discussions and on-site training on the importance of mangroves and on other environmental issues. The on-site training is aimed to promote learning by doing.

A total of 28 women are participating in the replanting of mangroves and 2,247 seedlings have so far been transplanted. The transplanted species include *Rhizophora mucronata* known as *mikoko* in Kiswahili and *Avicennia marina* (*mchu*).

### **Transplantation of corals at Mbudya Island**

In an African Development Foundation (ADF) funded project, local fishermen of the Kunduchi Fishing Village are actively transplanting corals at Mbudya Island offshore Dar es Salaam which has been devastated by dynamite fishing.

Coordinated by the Marine Action Conservation (MACT) and AGENDA the coral transplanting started in July this year. Some 345 coral fragments in 69 plates have been transplanted on the southwest side of the island and 220 fragments in 44 plates on the northwest side of the island. The transplanted species, which are reported to be in healthy condition, are *Acropora spp.*, *Galaxea spp.*, *Porites spp.*, and *Montipora spp.*

According to Dr. Greg Wagner who is coordinating the coral restoration project along with Nsajigwa Mbiye, a postgraduate student at the University of Dar es Salaam, the

activity involves collecting fragments from healthy colonies and cementing them into plates which are put in dynamite-blasted sites.

The transplanting is done during low spring tides by snorkeling to a depth of 2-5 meters. A sail-driven *mashua* (small dhow) is used for the work.

➤ **ICM EVENTS**

- Cooperation for the Development and Marine Environment in Sub-Sahara Africa- Cape Town Conference (30 November-4 December 1998). Contact: Advisory Committee on Protection of the Sea (ACOPS )
- Inaugural International Tropical Marine Ecosystems Management Symposium- Australia 23-26 November 1998. Contact: E-mail: [julie@harveyevents.com.au](mailto:julie@harveyevents.com.au).
- FRAME- Consultative Meeting Maputo 2-4 December, 1998. Contact: FRAME Team Leader, E-mail: [frame@irgld.com](mailto:frame@irgld.com)

## **APOLOGY**

Due to the preparations for the Policy Meeting on Integrated Coastal Management in Tanzania this second issue of *Pwani Yetu* was not produced on schedule. The *Pwani Yetu* Editorial Team wishes to apologize to all readers and contributors for the late release.

In the meanwhile, we take the opportunity to thank our readers who have contributed in this issue. We also wish to acknowledge for the information on coastal management provided by field- based programs and local government institutions. As this encourages us in our cherished goal- *enhancing information sharing between coastal management practitioners, leaders and the community*, it is our great hope that more of our readers will contribute more to *Pwani Yetu*.