

Launching the NATIONAL INTEGRATED COASTAL ENVIRONMENT MANAGEMENT STRATEGY



Vision for a Thriving Coastal Future



CRP
CENTRAL RESEARCH CENTER
University of Rhode Island

Tanzania Coastal Management Partnership

Launching of Wednesday 16, 2003 NATIONAL ICM STRATEGY

The process to National ICM Strategy

The National Integrated Coastal Environment Management Strategy is the result of an open, transparent and participatory process that extended over four years.

It reflects the collective views and interests of a broad range of stakeholders who live and work along the coast. It is also built on a solid foundation of scientific and technical knowledge. Over thirty technical reports—on topics as diverse as natural science, law, economics, human capacity—were prepared by some of our leading national experts and used as important background information.

The Strategy development process began in early 1998 with the formation of a twenty member intersectoral working group (including private sector) to capture the issues a coastal management initiative needed to

address. The group began by collecting, reviewing and synthesizing available information from sources within and outside the country. The working group then spent several months visiting each coastal district talking to people from both government and the communities.

The group presented its findings to a meeting of directors and commissioners from the relevant government agencies in October 1998. With the directors' endorsement, the working group then returned to the districts and villages to develop a vision, principles and strategies for addressing these issues. These were presented and confirmed at a second meeting of directors in May 1999.

After this meeting a draft Green Paper - Options for a National Integrated Coastal Management Policy was produced. The draft was reviewed at a three-day retreat that brought together participants of three working groups of

the Tanzania Coastal Management and representatives of five ongoing local ICM initiatives. With their input, the Green Paper, which included options for Policy implementation mechanisms, was finalised.

The Green Paper was presented to Members of Parliament representing coastal constituencies, Regional Administrative Secretaries, District Commissioners, District Executive Directors, District Functional Officers and Directors of National Sectoral Agencies at a two day meeting in late November, 1999. This group reviewed the entire Green Paper, considered the options presented for policy implementation, and reached a consensus on recommended implementation mechanisms and structures. Their recommendations were incorporated in the National Integrated Coastal Management Policy White Paper that was widely distributed for comments.

The comments received were incorporated into the draft policy paper that was widely circulated for review and further comments. The draft policy was later submitted to the Government, which made a further review. With further consideration of effective implementation of ICM activities, it was favourably decided to go for a National ICM Strategy that provides a framework under the National Environment Policy. The Strategy will work to link sectors at all levels and create partnerships among them towards sustainable use and development of the coastal environment and its associated resources.



Sectoral Directors and Commissioners reviewing documents at one of the ICM processing meetings

ACTIONS FOR EFFECTIVE ICM IMPLEMENTATION

The implementation of the National Integrated Coastal Environment Management Strategy is structured to enable measurable results of intended actions. It provides opportunity to implementers and stakeholders to participate fully in all steps of implementation - from issue identification, action program preparation, implementation and evaluation of actions, aiming at achieving the following inputs:

1. Supporting environmental planning and integrated management of coastal resources and activities at the local level and provide mechanisms to harmonise national interests with local needs
2. Promoting integrated, sustainable and environmentally friendly approaches to the development of major economic uses of the coastal resources to optimise benefits
3. Conserving and restoring critical habitats and areas of high biodiversity while ensuring that coastal people continue to benefit from the sustainable use of the resources
4. Establishing an integrated planning and management mechanism for coastal areas of high economic interest and/or with substantial environmental vulnerability to natural hazards
5. Developing and using an effective coastal ecosystem research, monitoring and assessment system that will allow available scientific and technical information to inform ICM decisions
6. Providing meaningful opportunities for stakeholder involvement in the coastal development process and the implementation of coastal management policies
7. Building both human and institutional capacity for inter-disciplinary and inter-sectoral management of coastal environment.

ICM: The Global experience

By Lynne Zeitlin Hale

As long as people have lived adjacent to the seashore and used coastal and marine resources, there has been some form of coastal management, even if by default.

Traditional societies that depended on coastal resources often had elaborate management systems that sustained the people and resources for generations, although they were not always consciously planned or intended as management regimes (Ruddle and Johannes 1983, 1989).

In the nineteenth and twentieth centuries as populations increased, technologies changed and governments extended their reach over resources, the responsibility for management moved increasingly away from resource users to governments. For coastal and marine areas this typically meant either neglect which resulted in a de facto open access regime or sectoral management of individual resources like fisheries, or activities like transport, that too often resulted in degradation of resources, lost opportunities and intense user conflicts.

It is due to this situation that led to the practicing of Integrated Coastal Management (ICM) now viewed as a potentially useful tool for addressing these

difficult issues. A recent United Nations report states the goal of coastal management 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.

The report defines coastal management as ...a continuous and dynamic process that unites government and the community, science and management, sectoral and public interests in preparing and implementing an integrated plan for the protection and development of coastal ecosystems and resources.

Different from other coastal programs, Integrated Coastal Management (ICM) programs often 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.

Successful coastal management programs follow the following main principles:

- Local and national ownership of the program that entails government endorsement and active involvement; broad stakeholder participation through enhanced public dialogue; and sustained support from national NGOs and the donor community
- Stakeholder participation in all levels and phases of the program so that people who have a stake in the outcome of the management effort, are given a voice in management decisions. The mechanisms by which the public is involved, however, must be tailored to the culture and traditions of the place
- A Strategic Focus: No single program, even an integrated one, can solve all the problems of the coastal environment. Deciding which issues to address, and where and when to address them will be among the most crucial decisions that a program makes.
- Integration: The integration in coastal

management is what distinguishes the endeavor from traditional sectoral programs. The forms of integration required by coastal management are several, including integration among governance levels; integrating good science with good governance; and integration among sectors, institutions and disciplines.

As Tanzania continues to work to develop its coastal resources and to address its increasingly urgent coastal management problems, it is hoped that the hard-won experience from across the globe is helpful. But perhaps the most important lesson from this global experience is that there is no formula for successful coastal management. Specific management solutions are invented nation by nation, and place by place. It is only through learning by doing that coastal management practitioners will discover what approaches will and will not work within a nation and locality's unique context.



Lynne Hale who contributed immensely in the ICM Strategy process

EDITORIAL TEAM

Gratian Luhikula
Joe Nakajumo
Tuma Abdallah
Muhingo Rweyemamu
Pudenciana Temba

Statement by Hon Arcado Ntagazwa (MP), the Minister of State (Environment) Vice President's Office

Tanzania is fortunately a coastal state. Our coast is a unique part of the environment endowed with scenic, diverse and rich resources. This strip of land and water supports a diversity of important natural systems, including coral reefs, beaches, estuaries, sea-grass beds and extensive mangrove stands. All these are important natural heritages, which are essentially life support of the people.

Stretching 800 km from Tanga in the north to Mtwara in the south, the coast is of critical importance to the national development and livelihoods of the coastal communities. It is of immense strategic importance to many social and economic sectors, such as shipping, fishing, tourism, trade, agriculture, settlements and industrial development. Coastal tourism, mariculture development and natural gas exploration, which are just beginning, are potential activities in national economic development and, over time, will contribute to gradual improvement of the quality of life of the coastal communities and Tanzanians in general.

The coast is however, a distinctive system in which a range of considerations - biophysical, economic, social and institutional - must be woven into the management system which realises benefits without causing negative impacts to the coastal rich but fragile environment.

This is the challenge now facing Tanzania. We need effective mechanisms to guide us in harnessing and managing the coastal resources in an equitable and sustainable manner. We essentially need a dynamic tool to direct the future of the coastal and marine development so that

balance between development and conservation of coastal and marine resources is achieved.

The mechanism and tool that can guarantee us a sound future is the National Integrated Coastal Environment Management Strategy, which has just been put in place. The Strategy will work to enhance and achieve sustainable development through a well coordinated and integrated approach that unites the government with the community, science, management and sectoral interests, at both national and local level.

Why we have chosen ICM? Tanzania, like many other coastal countries, has opted for ICM for many good reasons. ICM works to catalyse cross-sectoral planning and action, fill gaps in addressing complex, multi-sectoral issues that cause resource use and management conflicts. It serves as a neutral facilitator to resolve coastal issues by providing coordination and feedback mechanisms among agencies, decision-makers and implementing authorities at all levels.

It is the government's anticipation that through effective implementation of the National Coastal Environment Management Strategy, Tanzania will not only overcome complex management issues which are pertinent to unsustainable resource use, but will harness and manage coastal resources in an equitable and sustainable manner. This way the people of today and those of the future generations will live to benefit the coastal resources.

The essence of this National Integrated Coastal Management

Strategy is that it provides a framework under the National Environmental Policy that links sectors at district levels, and creates partnerships among them towards sustainable coastal development. Although sectoral policies for many coastal resources are in place, the coastal people, especially the rural communities, are still poor. They need a practicable mechanism that will guide them to overcome poverty while they maintain the continuous productivity of the natural resources.

It is the Government's anticipation and intention to effectively use the principles of ICM to improve the decision making process for sustainable development by providing clarification and guidance on coastal resource use and allocation at both the national and local level. This will be achieved through the ICM framework and process that links different sectors and that harmonises sectoral decisions on environmentally sound management of coastal resources.

Through proper implementation of the ICM Strategy, the Government is confident that coastal communities will get the opportunity to improve their well being and livelihoods. The Strategy will guide them in environmental planning and integrated management of coastal resources and activities. It will further guide the government and communities in developing and managing major economic uses of the resources with focused strategies to optimise benefits.

The Strategy will also complement our efforts in conservation of critical and important habitats, and the management of coastal areas of high



Hon. Arcado Ntagazwa

economic interests and, or with substantial environmental vulnerability to natural hazards. To this effect, scientific research, monitoring and assessment system will be effectively used in informing coastal management decisions.

The adoption of the National ICM Strategy is hence a wise and good decision. It is the Government's hope that the Strategy will live to our expectations by creating a "vision for the coastal future". A future where the coastal 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 to another. A future of thriving coastal settlements where people who rely on the coast and its abundant resources for their food and livelihood are actively working to protect and sustain the resources. ◀

Statement by Dr. Magnus Ngoile, Director General NEMC



Dr. Magnus Ngoile,

One of the authors of world environmental literature, Henry David Thoreau once asked a very authoritative question: "What good is a house if you don't have a decent planet to put it on? It is perhaps from this common sense, people in Rufiji delta in the year 2000, had to reject the giant prawn project that was seen as a saviour to their life and their coming generations.

Before approving any proceeding of the project, the Rufiji people demanded an assurance of the environmental impact from the project in their delta. Unfortunately, the investor had no convincing advance. The people therefore decided not to have a 'house', than having it without a proper foundation.

Blessed the people in Rufiji because there are many others around the world, who do not have a chance to practice their

survival rights. They therefore have to succumb to these types of projects knowingly or unknowingly, willingly or not, later to find that the harm caused by the projects on their environment is detrimental to their lives.

A good example of these kinds of projects, is the Akosombo Dam in Ghana that was built on the Volta River between 1950 and 1960. Apart from getting nothing from this giant electric generating dam, more than 100,000 surrounding people are suffering from river blindness and 70,000 among them have been rendered totally sightless since the completion of the dam that attracted insects carrying the viruses. Other 80,000 people have been permanently disabled as a result of schistosomiasis, a parasitic water-borne disease carried by two species of snail that are now the commonest molluscs in the Volta reservoir.

Environmental problem is the agenda of the world. The problem goes simultaneously with the expanding world population coupled with globalisation. Factors associated with environmental problems include land degradation, water and air pollution and depletion of natural resources. Each of these environmental problems poses a growing threat to the physical, economic and social well being of all people.

Unprotected environment is as good as nothing and it is at this juncture, the Tanzanian government deserves a pet on the back for taking steps to come out with strategies to protect the environment especially of the coast.

The National ICM Strategy will contribute greatly in Tanzania's

development. It will engage in a dynamic process that seeks to unite the government and the community, science and management, sectoral and public interests in implementing an integrated program for the protection and development of coastal ecosystem and resources. Apart from environmental safeguarding, the Strategy will work to improve the well being and livelihoods of all beneficiaries of coastal resources.

It is an open secret that although five mainland coastal regions namely Dar es Salaam, Tanga, Coast, Lindi and Mtwara contribute about one third of the national Gross Domestic Production, its people are very poor. The National Account of Tanzania assumes that people in the coast have less than 100,000 shillings per capita GDP at current prices.

The aim of the ICM Strategy is to change the current trend of economic activities. Under the ICM Strategy, people will be empowered to conduct more than one economic activities so that if one income generating project fails, the family still has other sources of food and income.

The mainstay of ICM is to check and balance if not to stop the negatives of the present situation taking into consideration that the pressures on the coast are increasing and resource depletion is already alarming. Environmental problems of the coast range from complex to minor. The complex phenomenon is such as unruly fishing using trawlers, coral mining for building material, and unsustainable industrial development.

Certainly we are happy that industrialisation brings fortune including employment, new ways of life and international interaction. However, we

have to be concerned with the cons of these new technologies from the industrial countries.

These countries for example, consume more energy and natural resources than the developing world. As the result, the environmental problems of the developed countries are due to industrialisation, over-consumption of natural resources and the demand for increasing quantities of goods and services.

On the other side, the environmental problems of the less developed world are largely due to poverty and priority for economic survival over environmental concerns. This implies that in a near future, the land of the developing world, would be the target for the developed countries, since our actions towards the land, have less impact compared to that of the developed world.

It is high time to commend the ICM through which, we will ably observe the pros and cons of coastal industrialisation. When the country is opening doors for foreign investment along our coast, the ICM is concerned with the quality of investment than its quantity.

It is from this end, the strategy includes the provision of Environmental Impact Assessment (EIA). In the past, this requirement for investment was not taken seriously. EIA is an important management tool for improving the long-term viability of projects and the related environment.

Through the National ICM Strategy, we will avoid mistakes that are expensive in both environmental and economical aspects. And through ICM, we have all chances of improving the well being of the people. ◀

Community involvement in ICM planning

There is no arguing that the recently adopted National Integrated Coastal Environment Management Strategy (ICM Strategy), is billed as a saviour to coastal people who rely on the sea and its abundant but fragile resources for their food and livelihood. The ICM Strategy is working to protect and sustain the coastal resources for the better living of coastal communities.

There is also no arguing that ICM envisions the development of new coastal economic opportunities that will sustainably contribute to both local and national development. It envisions a future of strong partnership between government and all segments of the Tanzania society, including resource users, the private sector, academic and research institutions and others, working together to turn this vision into reality.

The government's move to put in place the National ICM Strategy is hence perceived as a wise approach in addressing issues pertaining coastal environment development. In its essence, the Strategy provides a framework under the National Environment Policy that links sectors at local level, and creates partnerships, which work towards sustainable management and use of coastal resources.

To this effect, critical to the success of ICM is the support of the planning and integrated management of coastal resources and activities at the local level and to provide mechanisms to harmonise national interests and local needs. This will not only work to enhance sustainable development of the fragile coastal environment, but it will also improve the well being and livelihoods of all beneficiaries of coastal resources.

In addressing local ICM action planning, the Strategy guide district level ICM processes in the overall district environmental planning. This entails the developing, approving and implementing

actions aimed at maintaining and improving resource base for sustainable development.

ICM action planing, according to Lewis Nzali who co-ordinates the group of experts who prepared the ICM Strategy, is a way to address key issues and find solutions to specific problems that have been selected through an issue identification and prioritization process.

"An ICM action plan focuses on solving priority issues through specific actions that are targeted at the causes or effects of the underlying problems. Hence, action plans provide guidance on activities to reach clear and achievable goals. In terms of participation, action plans aim to empower those affected by the specific issues and those involved in planning and implementing the actions," Nzali elaborates.

Action planning is closely related to co-management. Co-management is a method of sharing responsibility and authority between the government and

communities to manage coastal resources. There is a hierarchy of co-management approaches from those in which government merely consults the resource users before a policy or regulation is introduced, to those in which users design, implement and enforce laws and regulations with advice and assistance from the government.

"By introducing co-management of coastal resources, through action planning, local communities become empowered to identify their own opportunities and obstacles. They propose intervention measures, and together with district staff, develop and implement plans to address identified obstacles by using available resources."

According to Nzali, local action planning and implementation is the best yard-stick in measuring the effectiveness of the ICM Strategy. Apart from providing a mechanism for strengthening and empowering districts to be responsible and accountable to their local communities,

action planning also contributes to the Local Government Reform Program (LGRP). The LGRP aims to transfer the responsibility of managing local affairs including the management of natural resources from central government to local government authorities.

Emphasising that effective implementation of the ICM Strategy will be through local action planning, Nzali says local action planning works to:

- Empower those involved to plan and implement actions themselves
- Implement a limited number of specific actions to address well defined local problems
- Monitor the impacts of the actions taken
- Continuously review of progress and effectiveness – if necessary leading to adaptation

The engine for the action planning process is the intersectoral working group composed of experts from different disciplines and sectors including members from the private sector, communities and NGOs/CBOs.

"The group undertakes the planning, implementation and monitoring responsibilities of activities with close involvement of communities in a particular area. Treading on the ICM principles, the group identifies and assesses issues to be addressed before taking desirable intervention," Nzali elaborates.

Responding to a question on the effectiveness of local action planning in tested districts, Nzali explains that the districts of Pangani and Bagamoyo are beginning to benefit from the fruits of the ICM Action planning. "The districts are now addressing a number of issues which have been affecting sustainable resource use. It is anticipated that as they continue to implement specified actions, they will gradually find solutions for existing unsustainable activities." ◀



The success of ICM in Tanga is the result of community participation in both planning and implementation. In this picture residents of Kipumbwi seen planning their future ICM actions.

Coastal Tourism for Improved National Economy

Tanzania is fortunate to be a coastal state. With its whole eastern frontier stretching over 800 km along the western Indian Ocean, Tanzania boasts a vast disposition of coastal natural and cultural heritage, which if well tapped could make a significant contribution to the national economy. Apart from its diverse and valuable ecosystem, the country's coastal environment also contains an array of historic and scenic sites including the expansive and virgin beaches as well as world heritage sites not forgetting the unique Swahili culture and lifestyle of the coastal people. The coastal area is also endowed by enchanting wildlife reserves and game sanctuaries.

The challenge facing Tanzania is how to develop coastal tourism that benefits the nation and the coastal communities while maintaining the integrity of natural and cultural values of the coast. Equally challenging in coastal tourism

development is the linkage of different sectoral interests and harmonizing sectoral decisions about coastal resource use and management.

But now, as Idefonce Masekesa of the Coastal Tourism Working Group under the Tanzania Coastal Management Partnership (TCMP), says Tanzania is all out to brave the challenges and develop sustainable coastal tourism. "The government's aim is developing coastal tourism that is sustainable in all aspects. The concern is not pursuing for only equitable coastal tourism, but tourism that is environmentally, socially and culturally sensitive and which is in harmony with other sectoral development aspirations."

Being one of the leading economic sectors in the country, tourism contributes some 13 percent (mostly coming from wildlife safaris in the northern game parks) to the annual Gross Domestic Product (GDP) and provides direct employment to over 150,000 people.

Steps on the right direction include the

development of the National Integrated Tourism Master Plan, which is aimed at guiding both public and private sectors in further developing the tourism industry. The Master Plan recognises a number of coastal areas as having great potential for new tourism development.

As for the current position of its implementation, old beach hotels are being rehabilitated, new hotels are being constructed and plots are continuously being allocated for tourism development along the entire coast from Tanga to Mtwara.

The outlook for the future looks fairly bright, particularly for the coastal areas that can offer a diverse array of attractions. Coastal areas with the highest potential for new tourism development include the Kilwa district, Saadani that is soon becoming a National Park, Pangani, Bagamoyo, Mtwara, where Mnazi Bya Marine Park was recently established and Mafia Island.

According to coastal tourism experts working with TCMP, who have published the coastal tourism situation analysis, the development of coastal tourism is one of the major components of the National Integrated Coastal Environment Management Strategy that seeks to enhance environmental planning and management of key economic opportunities.

"It is the government's hope and anticipation, that through ICM principles Tanzania will be able to address the opportunities and constraints surrounding coastal tourism development, since the perspectives of all stakeholders along the coast will be valued and incorporated into the process," explains Masekesa.

The new integrated coastal tourism development approach, according to Masekesa, will in all aspects work in aspiration to the ongoing economic and governance reforms at national and local level. These reforms aiming at enhancing economic development, include the Local Government Reform Programme, the new Land Act, the Integrated Tourism Master Plan, the Marine Parks and Reserves Act, the

Poverty Eradication Strategy and the National ICM Strategy.

As the first step in this move towards sustainable coastal tourism development, the coastal tourism working group, apart from preparing a comprehensive coastal tourism situation analysis that captures issues pertinent to sustainable coastal tourism, has also published Guidelines for Responsible Coastal Tourism Development in Tanzania. The documents provide both technical and procedural guidance to tourism planners and potential investors in coastal tourism facilities.

But before the coastal tourism potential can be utilised, much work needs to be done. Fortunately, however, several initiatives are already underway to prepare for tourism development including the much-needed improvement of the Dar es salaam-Mingoyo road, the rehabilitation of the historical monuments in Kilwa Kisiwani and Bagamoyo, the upgrading of Saadani to a National Park and the establishment of the Mnazi Bay-Ruvuma Estuary Marine Park.

Through the National Integrated Coastal Environment Management Strategy, coastal tourism management plans are being prepared for priority areas. The purpose of developing the tourism management plans is to ensure that all aspects related to the sustainable development of tourism in a particular area are integrated into one comprehensive plan. As tourism is affected by many sectors, and in turn, can impact many other sectors, it is important that all relevant stakeholders are working towards a common goal – the sustainable development of tourism.

The tourism management plans are designed to be tools for organizing information from a variety of sources; planning for future tourism and other development that is appropriate to the local context; developing mechanisms to increase the involvement of local communities in tourism activities; and managing the mature industry once developed. ◀



Historical Mikindani Boma which has been recently turned into a tourist hotel

The essence of the ICM Strategy



Dr. Magnus Ngoile,



Mr. Jeremiah Daffa

Q Now that we are launching ICM Strategy, would you please tell us what it is all about?

A Before explaining what ICM is, let me give its brief history. The government through TCMP and in collaboration with international partners had conducted a study to know how Tanzania is to benefit more from the coastal resources. It came up prominently that there was a need to have in place a mechanism that will guide effective coastal management that brings benefits and reduces negative impacts.

It is out of this that in December 2002 that the government approved the National Integrated Coastal Environment Management Strategy, which we are launching.

ICM is globally viewed as a potentially useful tool for addressing difficult coastal management issues through uniting all stakeholders in implementing management actions, which ensure benefits and work to reduce negative impacts.

It should be realised that people who live adjacent to the seashore and use coastal and marine resources, have their ways of coastal management that supports the living of those people. But as populations are increasing, and technologies changing rapidly, the coast and associated resources are increasingly affected by human activities. This situation led us to the establishment and implementation of ICM that is recognised world wide as an essential tool in sustainable management of the coastal areas. It is envisaged that through ICM we will achieve sustainable use and management of the resources in the meanwhile enabling communities to get better benefits from the resources.

Q Who funded the ICM initiatives and who will support its implementation?

A Various international development partners are funding ICM. The Strategy development process itself has been funded by the US Government through USAID and the Coastal Resources Center of the University of Rhode Island. The US Government will continue to support the implementation before the government takes full responsibility. But there have been further support of the ICM initiatives in the country.

For example the ICUN through the Dutch government is funding ICM initiatives in Tanga. In the southern regions of Mtwara and Lindi the Finnish government is supporting RIPS and the GEF/UNDP is funding the Mnazi Bay Ruvuma Estuary Marine Park. In Mafia the Mafia Island Marine Park is funded by

Tanzania is committed in sustainable development of its coastal environment and associated delicate resources. It is on this commitment that the government has adopted a National Integrated Coastal Environment Management Strategy (ICM). The main objective of the Strategy is to improve the quality of life of coastal communities through wise use and management of coastal resources. In a special interview, the Director General of NEMC Dr. Magnus Ngoile, and TCMP Support Unit leader, Mr. Jeremiah Daffa explain on the essence of the ICM Strategy.

WWF, the British Government and the government of Norway. In Kilwa, we are being assisted by the American fund known as PEW in the initiatives to establish a marine park. Further assistance comes from the Japanese and French governments who are jointly assisting in the rehabilitation of Kilwa ruins. All these are already on going projects and the major aim of the Strategy is to expand these projects and add new ones, because we want them to be sustainable.

The prime objective of the Strategy is to ensure that we develop and improve the coastal environment through wise use of the available resources. The advantage of the ICM principles is that it involves the communities in addressing issues. For example, in Tanga region we had a serious problem of dynamite fishing. It reached a point that there were no fish at all in the Tanga coastal waters. It was out of this that war against dynamite fishing was launched in the area. This war was championed by the coastal communities themselves.

Q Is Zanzibar part of ICM Strategy?

A Zanzibar is not covered by the Strategy for two reasons. One, because issues being dealt with by the Strategy are not union issues. But more important is that Zanzibar is quite advanced in the promotion of sustainable use of coastal resources. They have their own Strategy that is already in implementation.

Q Which areas in the country will this Strategy be implemented?

A The Strategy will cover all districts along the coast from Tanga to Mtwara. We deliberately picked to focus at districts because of the decentralization policy that places much responsibility on districts and also because district authorities work closely with the communities.

However, apart from dealing with coastal districts, we believe communities' economic activities in other regions can have effect on coast ecosystem. For example, the unequal distribution and use of water at Ruaha River, in Usangu water catchment area, cause negative impact on the Rufiji Delta. So although we are dealing with coastal areas, we cannot ignore other areas though far away from the coast, which are linked to coastal resources.

Q Which resources fall under this Strategy?

A For many people coastal resources refer to fish resource. But coastal resources are so many, some of which people cannot think of quickly. For example major transport means for

most coastal communities is water. Therefore, ships are one of the most important coastal resources.

There is tourism. We all know that coastal tourism has many aspects that may impact the coastal environment. For example it involves construction of hotels, scuba diving and other activities which may in one way or another have impact on the coastal eco-system.

Minerals are other coastal resources. We must have heard about Songosongo gas, and we are told that by 2005, this gas will have been connected to Dar es Salaam. Besides Songosongo we have another gas resource at Mnazi Bay that is said to be even more in abundance than that of Songosongo. Unfortunately, Mozambicans have no problem with power supply; otherwise we would have produced power at Mtwara and sell it to them. These are just a few coastal resources, but there are many more including mangroves and other resources.

Q How will the Strategy protect fragile coastal and marine resources?

A It is true that most of the coastal areas are fragile and sensitive. The Strategy is fully equipped to protect these areas. For the most vulnerable areas, they will be placed under conservation and no investments will be allowed in those areas. For other areas, there will be transparent procedures in investing or using them and coastal communities, particularly those living within or around the areas in question will be given access to inspect and monitor development activities to see if there is any violation of its use.

However, we have prepared investment guidelines particularly in mariculture development and coastal tourism. We wouldn't like to repeat investment problems like what we experienced on the tag of war of the Rufiji Delta prawn farming. When the Rufiji project was being introduced, we did not have the

current Environmental Impact Assessment tools. We hope and believe that we will get maximum cooperation from the intending investors and the local community. We realise that there is no activity that can be conducted within the coastal environment without having negative impacts on the coastal delicate environment. Our efforts cannot do away with all negative impacts, but we will reduce them through effective use of the ICM. Among the efforts is the preparation of various guidelines to guide sustainable development activities.

Q There has been a big problem of un co-ordinated scientific research on coastal areas. How are you going to address this problem?

A It is true there is such a problem. There are many institutions doing research, but there is no coordination of effective use of research results. But after establishing ICM, we have put a research unit that will deal and co-ordinate all coastal researches. This is because we realise the importance of scientific information in coastal management. Last year we launched the State of the Coast Report and this year we will do the same. This report is based on findings of researches conducted on various coastal resources. All these and other efforts will be co-ordinated by our experts and the problem will have been solved.

Q What will the Strategy look like?

A The Strategy will have Introductory part which will talk of the importance of coastal areas and why is it accorded so much importance as engine to development.

The Strategy will also address coastal issues, its people and the resources. There are seven Strategies within this Strategy addressing poverty, science, the fragile environment, capacity building and economic empowerment. ◀



Coastal Management experts on field during the processing of the ICM Strategy

Mariculture potentials in alleviating coastal poverty

The Tanzania coast is endowed with rich resources. But the coastal people, who form 25% of the national population, are very poor.

They are poor because their daily livelihoods depend on small scale and unreliable fisheries and small-scale 'hand-hoe' agriculture.

These people mainly lead a 'hand to mouth' life, the small catches from the sea enabling them to feed their families and to make little savings which hardly meet costs for their children's education and clothing. This situation does not compare with the abundant resources of the coastal environment. It is neither rational to the many economic opportunities available in coastal areas.

One of the many economic opportunities, which may potentially help coastal communities to move out from poverty strains, is the development of sustainable mariculture.

According to coastal environment experts, who for over four years have been undertaking a process under the Tanzania Coastal Management Partnership to develop guidelines for mariculture development, the Tanzania coast has many potentially suitable sites for mariculture development, if care is taken not to reduce the ecological or economic value of critical habitats.

"Tanzania's coastal systems with rich and high biodiversity, and relatively unspoilt environment, has great potential for mariculture industry if it is properly managed and developed. Despite the fact that mariculture development requires sound management arrangements to avoid environment degradation, coastal communities have an opportunity to

undertake sustainable mariculture industry that may potentially help them to pull out of poverty strains," explains Fatuma Sobo, coordinator of the group of experts that prepared the mariculture documents.

The Mariculture Guidelines, which have been approved and endorsed by the Fisheries Division, is one of the tools for the implementation of the National Integrated Coastal Environment Management Strategy. The mariculture development guidelines achieve the intent of the proposed ICM Strategy's component of promoting integrated and

field requiring close intersectoral co-ordination and cross-sectoral policy development. From an environmental management perspective, it exemplifies some of the more complex challenges, since it is often conducted where terrestrial and aquatic habitats meet, and is closely linked to other socio-economic activities and issues," Sobo elaborates adding that the guidelines will help in addressing all basic cross-sectoral issues relevant to economic development and environment.

The mariculture guidelines and investor's guide have come at a right

"It is our hope that the Mariculture Guidelines will be of great value not only to the government and its institutions, but also to mariculture investors and coastal communities in general. They will be an effective tool in ensuring that mariculture activities are sustainable and contributing to national and community development. The guidelines will further contribute to transparent and participatory assessment of mariculture projects. The aim is to promote mariculture that is in harmony with other activities, local needs, and the protection of sensitive environment," Sobo explains

According to Sobo, the current approval procedure for mariculture projects is fragmented between institutions, contains gaps that may lead to environmentally damaging projects and is cumbersome for the investors. "The guidelines establish a modified project review procedure that is efficient, safeguards the environment and coastal population, while encouraging investment in mariculture. The aim is to have mariculture projects which are friendly to the environment, meanwhile benefiting the communities and the nation."

After putting in place the guidelines, there are all hopes that mariculture activities will improve in both quality and quantity. This follows the approval and endorsement of the guidelines, by institutions with stake in mariculture development. The institutions, including the Division of Fisheries, NEMC, Tanzania Investment Center, Division of Wildlife, Division of Forestry, Tanzania Harbours Authority, Division of Water and several others, see the guidelines as the road map for reviewing and approving equitable and sustainable mariculture projects in Tanzania. ◀



Seaweed farming is increasingly becoming an economic activity for coastal communities

sustainable approaches to the development of major economic uses of the coast to optimise benefits and minimise negative impacts.

In elaborating on mariculture development challenges the guidelines explain that mariculture is a complex industry that typifies many of the economic activities, and which, if care is not effectively taken, may lead to many environmental and economic problems.

"From a governance perspective, mariculture represents a multi-disciplinary

opportunity, when local and foreign investors are focusing their efforts in mariculture investments. Already there are several mariculture projects in progress and or in planning stages.

Sea weed farming is currently the most popular mariculture activity that is progressively being undertaken by local communities in the country. In 1990 there were 2000 seaweed farmers who produced 808 tones of dry seaweed. But in 1995 the number of seaweed farmers shot to 20,000 people who produced 6,452 tones.

Effective use of science to sustain coastal resource base

Mr. Zuberi Ally lives in Mtwara town, and depends on fishing in the Indian Ocean coast to support his five children, his wife and three children of his brother who died five years ago.

Three of his children and two of his brother are still in primary school. He has to deploy all the techniques he can to ensure that he catches enough fish to be able to get enough money to pay for the school fees and cater for the big family.

At times, he says, he has to use dynamite in fishing and small mesh nets, to be able to get something....."to go home empty handed is the greatest crime I could commit. Life will not go," he soberly says.

Ally is one of thousands of Tanzanians who live in the coastal area and whose lives entirely depend on the coastal marine resources. He is one of the thousands of coastal people who, in their desperation for survival, deplete the fragile coastal environment.

Ally, like many other coastal dwellers confesses that he is aware that using dynamite and small mesh nets is breaking the law apart from degrading the environment. However, he says, if given alternative means to support his family and lead a decent life, he would instantly do away with destructive fishing practices.

Ally's actions and attitude underlines the significance and essence of the National Integrated Coastal Environment Management Strategy that has been adopted. The Strategy will not only work to address issues of irrational and unsustainable use of coastal resources, but will provide guidance and build

partnerships which will work to develop and sustain important ecological habitats.

It is on the basis of this that the ICM Strategy will focus on science for management that enhances the conservation and restoration of critical habitats and areas of high biodiversity while ensuring that coastal people continue to benefit from the sustainable use of the resources.

"Along the coast there are areas that require intensive proactive planning and management because of their unique ecological importance and economic value, or because of intense user conflicts. These include geographical areas where major economic facilities and infrastructures are located - such as ports and industries; and areas with critical coastal habitats including mangroves, sea-grass, watersheds, wetlands and coral reefs. Mechanisms are needed to initiate proactive planning and management so as to avoid potential user conflicts and destruction," explains Dr. Gasper Mahika, the secretariat of the Science and Technical Working Group (STWG) under the Tanzania Coastal Management Partnership (TCMP)

He said effective management of coastal resource base on which national economy and community development depend, requires scientific knowledge, Mahika says currently many management mistakes in marine and coastal development activities are made due to several reasons. He names the reasons, among others, as lack of good scientific information in management decisions; lack of scientific information

access and data sharing amongst coastal practitioners; ineffectively and uncoordinated coastal monitoring and assessment efforts; and insufficient scientific knowledge of coastal trends amongst coastal practitioners.

Elaborating further, Dr. Mahika says that science help characterise problems over time and help in the establishment of optimal management priorities. Science also provides a link between causes and specific environmental problems. It further provides opportunity to understand ecological systems in order to develop policy options and legitimize management decisions, apart from being an important tool in monitoring existing conditions of ecosystems in order to evaluate the effectiveness of policies and attainment of planned objectives.

He names ways to enhance science in coastal management as to improve mechanisms for interaction between scientists, coastal policy makers, resource

users and indigenous people; to employ integrated and adaptive approaches in policy making and implementation; to deploy resources to support the foregoing objectives; and to locate field stations along the coast which provide for both scientific research and extension services.

To this effect, the ICM Strategy provides for the establishment of the Science and Technical Working Group (STWG) in the Strategy implementation institutional framework.

"Key components of the STWG mandate include promotion of information access and data sharing employing a range of communication and dissemination strategies. The group will also provide advice and guidance related to scientific questions, studies and investigations, data management, and sampling and monitoring efforts that are necessary to improve the scientific foundation for coastal management," Dr. Mahika elaborates. ◀



Coastal management experts at a research session. Scientific research is important in coastal management.

Ushirikishwaji wananchi katika ICM

Ni jambo lisilo na shaka kwamba Mkakati wa Taifa wa Hifadhi Kamilifu ya Mazingira ya Pwani ni mkombozi wa wakazi wa pwani ambao hutegemea bahari na rasilimali zake kwa chakula na maisha. Mkakati wa ICM unakusudia kuhifadhi na kulinda mazingira na rasilimali za pwani kwa ajili ya kuboresha maisha ya wakazi wa pwani.

Pia ni jambo lisilo na shaka kwamba ICM inalenga kuendeleza fursa za kiuchumi ambazo zitachangia kikamilifu katika maendeleo ya taifa. Katika matarajio yake, Mkakati wa ICM unalenga kuwepo ushirikiano kamilifu kati ya serikali na wadau wote katika jumuiya ya Watanzania, wakiwemo watumiaji rasilimali, sekta binafsi, wanasayansi, tasisi za utafiti na tasisi nyingine, zikifanya juhudi za kupata mafanikio.

Hivyo, hatua ya serikali ya kuandaa na kuweka Mkakati wa ICM, ni hatua ya busara. Ni utaratibu mzuri chini ya Sera ya Taifa ya Mazingira, unaoziunganisha sekta mbalimbali na kuweka mshikamano wa kuyatumia mazingira ya pwani kwa uendeleu.

Na kwa misingi hiyo Mkakati wa ICM unabainisha umuhimu wa pekee wa kusaidia juhudi za kupanga utekelezaji wa shughuli za pwani katika ngazi ya wilaya na vijijini. Hii siyo tu inalenga kusaidia katika uendeleu wa mazingira ya pwani, bali pia kuboresha maisha ya watu ambao hutegemea rasilimali za pwani kwa kipato na chakula.

Kwa kutumia Mkakati wa ICM wananchi katika ngazi ya wilaya na vijiji wataweza kutekeleza shughuli mbalimbali za maendeleo na usimamizi wa mazingira. Hii ni pamoja na

kubainisha masuala, kubuni mikakati ya kuyashughulikia na kutekeleza mikakati hiyo kwa lengo la kupata maendeleo endelevu na ustawishaji endelevu wa vyanzo vya rasilimali.

Upangaji wa shughuli za ICM katika ngazi ya wilaya na vijiji, kufuatana na Lewis Nzali ambaye ni mratibu wa kikundi cha wataalamu waliotengeneza Mkakati wa ICM, ni njia bora ya kuweza kuyatanzua matatizo ya usimamizi na ya mazingira yanayobainishwa.

"Manufaa ya utaratibu huu ni kwamba masuala mbalimbali huweza kutatuliwa kwa ushirikishwaji wa wadau wote ambao wanahusika katika kupanga na kutekeleza majukumu mbalimbali", anaeleza Nzali.

Kufuatana na Nzali, utaratibu huu husaidia kugawana majukumu na mamlaka katika usimamizi wa maliasili za pwani. "Utaratibu huu huwapa

mamlaka na sauti wananchi katika kubainisha fursa na matatizo, na hatimaye kupanga hatua na mikakati ya kutatua matatizo yanayojitokeza kwa kushirikiana na maafisa wa halmashauri za wilaya. Hivyo, upangaji na utekelezaji shughuli za ICM wilayani na vijijini ni kipimo kizuri cha mafanikio ya ICM".

Licha ya kutoa fursa na njia muafaka za kuziimarisha halmashauri za wilaya ili ziwajibike kwa wananchi, upangaji wa shughuli za ICM pia huchangia katika utekelezaji wa Programu ya Urekebishaji Serikali za Mitaat ambayo inalenga kuzipa halmashauri za wilaya madaraka ya kusimamia shughuli za maendeleo, ukiwemo usimamizi wa maliasili.

Akisisitiza kwamba mafanikio ya utekelezaji wa Mkakati wa ICM utatokana na upangaji mzuri wa shughuli za ICM katika ngazi ya wilaya

na vijijini, Nzali anataja manufaa ya utaratibu huu kuwa ni pamoja na:

- Kuwapa mamlaka na sauti wote wanaohusika katika kupanga na kutekeleza mipango iliyokusudiwa
- Utekelezaji wa hatua zinazolenga tatizo lililochunguzwa na kuchambuliwa kwa makini
- Ufuatiliaji wa matokeo ya hatua zilizochukuliwa
- Upimaji wa mara kwa mara maendeleo kutokana na hatua zilizochukuliwa - na kama kuna ulazima kuweka programu maalumu ya utekelezaji na ufuatiliaji

Chombo kikuu cha kufanikisha upangaji wa shughuli za ICM ni kikundi kinachoundwa na wataalamu kutoka katika sekta mbalimbali na taasisi zikiwemo sekta ya binafsi, wananchi na mashirika yasiyo ya kiserikali.

"Kikundi hiki hubeba jukumu la kupanga, kutekeleza na kufuatilia shughuli kwa kuwahusisha kwa karibu wananchi katika eneo linalohusika. Kwa kufuata misingi ya ICM, kikundi hubainisha na kuyapima masuala yanayohitaji kushughulikiwa kabla ya hatua kuchukuliwa," anafafanua Nzali.

Akijibu swali kuhusiana na ufanisi wa upangaji kwa kutumia misingi ya ICM, Nzali anaeleza kwamba wilaya za Pangani na Bagamoyo zinaanza kupata matunda ya utaratibu huu. "Wilaya zote mbili hivi sasa zinayatatua masuala kadhaa yanayohusiana na matumizi yasiyoendeleu ya rasilimali za pwani. Inatarajiwa kwamba kadri wilaya hizo zinavyoendelea kuyakabili masuala mbalimbali, taratibu zitafanywa kuweza kupata ufumbuzi wa matatizo na vitendo visivyokuwa endelevu." 🐼



Mafanikio ya usimamizi wa mazingira ya pwani mkoani Tanga yanatokana na ushirikishwaji wa wananchi. Ktaka picha hii wananchi wa Kipumbwi wakipanga mipango ya utekelezaji.

Utalii wa pwani muhimu kwa maendeleo

Tanzania imebahatika kuwa na pwani nzuri inayovutia na ambayo ina fursa nyingi za utalii. Utalii wa pwani ukiendelezwa kikamilifu ni chanzo kimojawapo cha kukuza uchumi wa taifa.

Lakini pamoja na mandhali yake ya kuvutia, pwani ya Tanzania haijaendelezwa kiasi cha kutosha na kuifanya iwe ni kuvutio kikuu cha watalii. Karibu pwani yote ya urefu wa kilomita 800 kutoka Tanga hadi Mtwara, imejaa vivutio mbalimbali ambavyo kama vingeneendelezwa vingekuwa ni chanzo kikubwa cha fedha za kigeni ambazo zingeingizwa na watalii.

Vivutio hivyo ni pamoja na fuko murua, magofu ya kale na majengo mengine ya kihistoria, bila kusahau utamaduni wa wakazi wa pwani. Pia katika maeneo ya pwani kuna maeneo ya hifadhi ya wanyama pori, ambayo yana mvuto wa pekee kwa wageni.

Changamoto inayoiakabili Tanzania ni kuboresha sekta ya utalii wa pwani ambao utaliletea faida taifa lakini ambao hauna madhara kwa mazingira na utamaduni wa wakazi wa pwani. Changamoto nyingine ni kuzingatia kwamba utalii hauziathiri sekta nyingine.

"Nia ya serikali ni kuwa na utalii ulio endelevu katika hali zote. Kusudio siyo utalii unaoleta mapato mengi tu, bali utalii usiodhuru ustawi wa mazingira, usiokiuka maadili ya tamaduni za wakazi wa pwani, na ambao hausababishi madhara au migongano katika shughuli za sekta nyingine", anaeleza Ildefonce Masekesa, mratibu wa kikundi cha wataalamu wa masuala ya utalii chini ya Tanzania Coastal Management Partnership (TCMP)

Ukiwa miongoni mwa sekta muhimu za uchumi nchini, utalii huchangia asilimia 13%

(hasa kutokana na utalii katika mbuga za wanyama zilizopo kasikazini), katika pato la taifa, na hutoa ajira kwa zaidi ya watu 150,000.

Lakini kutokana na utajiri mkubwa wa rasilimali na maliasili nchini, utalii bado haujatumiwa vizuri ili uchange zaidi pato la taifa. Na ni kwa kutambua hilo, kwamba serikali inafanya juhudi kuimarisha utalii wa pwani ili ulete manufaa bora zaidi kwa serikali na wananchi.

Hatua mbalimbali zimeanza kuchukuliwa. Mojawapo ni utayarishaji wa Mpango wa Taifa wa Utalii, ambao unatoa mwongozo kwa wawekezaji wa nje na ndani. Mpango huo unabainisha maeneo yanayofaa kwa uwekezaji katika utalii wa pwani.

Utekelezaji wa mpango huo tayari umeanza kuzaa matunda. Hoteli za ufukoni zimeanza kukarabatiwa na maeneo ya ujenzi wa hoteli mpya yamenza kugawiwa kwa wawekezaji. Hali inaanza kuleta matumaini hasa katika maeneo yenye mvuto wa pekee. Maeneo hayo ni pamoja na wilaya ya Kilwa, Hifadhi ya Saadani, Pangani, Bagamoyo, Mtwara - ambako imeanzishwa Hifadhi ya Bahari ya Mnazi Bay, na Hifadhi ya Bahari ya Mafia.

Tayari wataalamu wa masuala ya utalii wamefanya utafiti yakinifu, na kuchapisha Mwongozo wa Kuendeleza Utalii wa Pwani. Utalii wa pwani ni mojawapo wa nyanja inayolengwa kuboreshwa katika utekelezaji wa Mkakati wa ICM.

"Ni matumaini ya serikali kwamba kupitia kanuni za ICM, Tanzania itaweza kuimarisha shughuli za utalii. Mkakati huo wa ICM unaelekeza uendelezaji wa utalii wa pwani unaozingatia ustawi wa mazingira, na unaotoa kipaombele kwa maslahi ya wadau wote," anafafanua Masekesa.

Katika utaratibu unaokusudiwa, kufuatana na Masekesa, uendelezaji wa utalii wa pwani

utaendana na juhudi za taifa za kukuza uchumi zikiwemo Programu ya Kurekebisha Serikali za Mitaat, sheria mpya ya ardhi, Mpango wa Taifa wa Utalii, sheria ya Hifadhi za Bahari, Mkakati wa Kuodoa Umasikini na Mkakati wa Taifa wa ICM.

Hatua za kuimarisha na kuboresha utalii wa pwani zimeanza kuchukuliwa. Hatua hizo ni pamoja na kuchambua na kuchapisha masuala yanayohusiana na utalii endelevu wa pwani na kutoa mwongozo wa serikali katika uendeshaji utalii endelevu wa pwani. Mwongozo wa Utalii Endelevu wa Pwani unalenga kuwasaidia na kuwaelekeza wawekezaji katika kufuata maadili na njia endelevu za kuendesha shughuli za utalii wa pwani.

Hata hivyo, bado kuna kazi kubwa, hasa katika kuboresha miundombinu ikiwemo ya mawasiliano na barabara, ili kuifanya utalii wa pwani ushamiri na kuleta manufaa yanayostahili. Matumaini kidogo yaliyopo ni hatua zinazochukuliwa sasa zikiwemo za ukarabati wa barabara ya Dar es Salaam - Mingoyo, ukarabati wa magofu ya Kilwa na Bagamoyo, na uanzishaji wa Hifadhi ya Taifa ya Saadani na Hifadhi ya Bahari ya Mnazi Bay.

Hatua zaidi zinatarajiwa kutokana na utekelezaji Mkakati wa ICM ambao katika utekelezaji wake mipango ya usimamizi wa utalii katika maeneo muhimu itatayarishwa. Mpaka sasa umetayarishwa na kuchapishwa Mwongozo wa Kuendeleza Utalii wa Pwani ambao umeridhiwa na Ofisi ya Makamu wa Rais na Wizara ya Maliasili na Utalii. Madhumuni ya mwongozo huo ni kuhakikisha kwamba uendeshaji wa utalii wa pwani unazingatia uendeleu wa maeneo husika na watu waliomo katika maeneo hayo. Hii ni kutokana na ukweli kwamba shughuli za utalii zinaweza kuziathiri sekta nyingine na hata wenyeji wa maeneo husika. 🐼



Boma la Mikindani ambalo limekarabatiwa na kunakshiwa kwa matumizi ya hoteli ya kitalii

Manufaa ya Mkakati wa ICM



Dk. Magnus Ngoile,



Bw. Jeremiah Daffa

Swali: Tunajua kwamba tumo katika uzinduzi wa Mkakati wa Taifa wa ICM. Mnaweza kutueleza kwa kifupi ICM ni nini?

Jibu: ICM ni kifupisho cha maneno ya Kiingereza; Integrated Coastal Management ambayo tafsiri yake katika Kiswahili ni Usimamizi Kamilifu wa Mazingira ya Pwani.

Usemi usimamizi kamilifu unatokana na maadili ya usimamizi huu ambao unazingatia ushirikishwaji wa wahusika wote katika kupanga na kutekeleza mipango ya usimamizi na utumiaji rasilimali na mazingira ya pwani kwa uwiano na uendeleu.

Ni vizuri ieleweke kwamba jamii za asili zinazoishi pwani, tangu awali zilikuwa na miundo yake ya maisha iliyotilia maanani utumiaji bora wa rasilimali na mazingira yake. Miundo hiyo iliwezesha matumizi endelevu kwa kiasi fulani. Lakini teknolojia ilivyozidi kukua kumekuwapo na mabadiliko makubwa. Na kwa bahati mbaya, mabadiliko hayo, mengi yake yamekuwa ya kuleta uharibifu zaidi katika mazingira.

Hali hii ndiyo iliyopelekea kuanzishwa kwa ICM ambayo sasa inatambuliwa na Umoja wa Mataifa kama chombo ambacho kikitumiwa vizuri kinaweza kuboresha mazingira ya pwani wakati huohuo watu ambao wanategemea rasilimali za pwani, wakipata fursa za kiuchumi na hivyo kuboresha maisha.

Swali: Nani wamefadhili uandaaji wa Mkakati huu na utekelezaji wake utafadhiliwa na nani?

Jibu: Uandaaji wa Mkakati wa ICM umewezeshwa kifedha na kitaalam na serikali ya Marekani kupitia USAID na Chuo Kikuu cha kisiwa cha Rhode. Serikali ya Marekani itaendelea kutoa msaada katika hatua za awali za utekelezaji Mkakati huo, kabla serikali hajachukua jukumu zima la uwezesaji.

Hata hivyo mashirika na taasisi nyingine za kimataifa zimekuwa zikisaidia kitaaluma na kifedha juhudi za ICM nchini. Kwa mfano huko Tanga, tunasaidiwa na IUCN kupitia serikali ya Uholanzi. IUCN pia inatusaidia huko Rufiji katika Mradi wa Usimamizi wa Mazingira Rufiji (MUMARU). Mikoa ya Kusini yaani Mtwara na Lindi, tunasaidiwa na serikali ya Finland. Pia huko Mtwara katika mradi wa Hifadhi ya Bahari ya Mnazi Bay tunasaidiwa na GEF/UNDP. Huko Mafia, Hifadhi ya Bahari Mafia tunasaidiwa na WWF na serikali za Uingereza na Norway. Na huko Kilwa, tunasaidiwa na mfuko wa Kimarekani wa Pew unaolenga kuanzisha hifadhi. Bila kusahau serikali za Japan na Ufaransa kwa kushirikiana na UNESCO, ambazo zinasaidia ukarabati wa majengo ya kale ya Kilwa.

Azma ya mkakati huu, ni kuunganisha nguvu na mipango mingine endelevu ili kuhakikisha tunaendeleza na kuboresha mazingira ya pwani yetu kwa matumizi ya busara ya rasilimali ili kuongeza uzalishaji. Kwa mfano, kule Tanga kulikuwa na tatizo la uvuvi haramu wa kutumia baruti. Ilifika

Tanzania imedhamiria kuyasimamia na kuyaendeleza mazingira tekechu ya pwani na rasilimali zake. Katika kufanikisha dhamira hiyo, serikali imeamua kuweka na kutekeleza kwa makini Mkakati wa Taifa wa Hifadhi na Usimamizi Kamilifu wa Mazingira ya Pwani maarufu kama ICM. Lengo kuu la Mkakati huo ni kuboresha maisha ya wananchi, hasa wakazi wa pwani kutokana na matumizi sahihi ya mazingira ya pwani na rasilimali zake. Katika mahojiano maalum na waandishi wa habari, Mkurugenzi Mkuu wa Baraza la Taifa la Hifadhi na Usimamizi wa Mazingira (NEMC), Dk. Magnus Ngoile na Kiongozi wa Tanzania Coastal Management Partnership (TCMP), Jeremiah Daffa, wanabainisha kwanini Tanzania imechagua na kuamua kutumia misingi ya ICM katika kusimamia na kuendeleza mazingira ya pwani na rasilimali zake.

wakati Tanga walikuwa hawana kabisa samaki kutokana na uvuvi haramu. Baadaye ikaanzishwa vita ya kupambana na wavuvi haramu wa kutumia baruti.

Vita hii iliendeshwa kwa ushirikiano mkubwa na wananchi wenyewe na ilikwenda sambamba na kuwapatia wananchi nyavu mbadala. Badala ya kutumia nyavu zenye macho madogo, walipewa nyavu zenye macho makubwa ambazo hazivui samaki wadogo.

Swali: Je, Zanzibar iko chini ya Mkakati huu?

Jibu: Zanzibar haimo kwenye mkakati huu. Na sababu kubwa za kutokuwamo kwake ni mbili. Kwanza mambo yanayoshughulikiwa na mkakati huu, siyo mambo yanayoangukia katika masuala ya muungano.

Lakini sababu kubwa ya pili ni kwamba Zanzibar wenzetu walitutangulia. Tayari wanao mkakati wao ulioanza mapema.

Swali: Mkakati huu unatekekezwa katika maeneo yapi?

Jibu: Mkakati huu unatekelezwa katika wilaya zote za pwani kuanzia ya Tanga hadi Mtwara. Tulichukua wilaya kwa sababu kule kuna uongozi ulio karibu kabisa na wananchi na wala uongozi wake hauwezi kubadilika badilika na zinaweza kuwa na utendaji bora.

Lakini pia mbali ya kushughulikia wilaya za mikoa ya pwani, bado tunaamini kuwa shughuli za kijamii na kiuchumi zinazofanyika katika mikoa mingine, zinaweza kuwa na athari katika eneo la pwani. Nitatoa mfano, huko nyuma wakati watu wameanza kutumia kwa ufanisi maji ya Mto Ruaha katika bonde la Usangu, matumizi ya maji katika mto huo yalianza kuleta matatizo katika bonde la Rufiji.

Wakati maji yakiwa mengi, Rufiji humwaga maji yake kupitia mito (tributaries) tisa. Lakini wakati maji yakipungua, maji yanaingia kwa kupitia mito saba. Kwa hiyo kama matumizi ya Mto Ruaha yatakuwa mabaya, bila shaka na eneo la pwani litaathirika. Hivyo pamoja na kujishughulisha na mikoa ya pwani, macho yetu yanaangalia eneo pana kuliko hapa.

Swali: Je, ni raslimali gani zinashughulikiwa chini ya mkakati huu?

Jibu: Kwa watu wengi unapozungumzia raslimali za pwani, hudhani kwamba raslimali hizo ni samaki tu. Lakini rasilimali za pwani ni nyingi sana. Labda nianzie na ile ambayo siyo wengi wanaifikiria kuwa raslimali, ambayo ni usafiri wa meli na vyombo vya baharini. Kwa sasa, watu wengi wa pwani wanatumia usafiri wa majini kama usafiri wao mkubwa. Kwa hiyo meli ni mojawapo ya raslimali muhimu kwa usafiri wa majini.

Raslimali ya pili ni utalii. Wote tunajua kuwa utalii wa pwani unaambatana na mambo mengi. Unaambatana na ujenzi wa hoteli kubwa za kitalii. Utalii wa pwani unaambatana na uzamiaji baharini kwa lengo la kuyaona matumbawe ambayo yana mandhari ya kipekee.

Raslimali nyingine ni madini. Bila

shaka tunajua kuhusu suala la gesi ya Songosongo. Habari tunazopata ni kwamba hadi ifikapo mwaka 2005, gesi ya Songosongo itakuwa tayari imefika Dar es Salaam. Lakini pia kuna hazina nyingine ya gesi ambayo iko Mnazi Bay. Gesi iliyoko hapa ni nyingi kuliko ile ambayo iko Songosongo.

Kwa bahati mbaya watu wa Msumbiji hawana shida na umeme lakini wangukuwa na tatizo la umeme, tungeweza kutengeneza umeme huko huko Mtwara na kuwauzia watu wa Msumbiji. Hizo ni baadhi tu ya raslimali zilizoko pwani lakini kuna uvuvi, kuna miti ya mikoko na mambo mengine.

Swali: Mkakati huu umejiandaa vipi kulinda mazingira ya pwani ambayo ni tekechu?

Jibu: Ni kweli kwamba maeneo mengi ya pwani ni tekechu. Na misingi ya kuunda Mkakati wa ICM imetokana na kutambua kwamba pwani ni eneo la kipekee katika mazingira ya nchi na katika nyanja nzima ya uchumi na maendeleo. Na kutokana na hali hiyo, Mkakati huu umejianda vilivyo kuyalinda na kuyaendeleza mazingira ya pwani.

Katika utekelezaji wa Mkakati kutakuwepo na mipango na taratibu mahususi za kusimamia, kuhifadhi na hata ikibidi kurejesha hali ya asili ya mazingira ambayo yanakabiliwa na athari mbalimbali aidha za asili au zinazotokana na matumizi ya watu. Kwa mazingira ambayo ni tekechu zaidi yatahifadhiwa na hata ikibidi uwekezaji katika maeneo hayo unaweza kuzuiliwa ili kuepuka madhara makubwa zaidi katika mazingira hayo.

Kwa mazingira mengine, kutakuwa na utaratibu wa wazi usio na kificho wa kuwekeza na kusimamia shughuli mbalimbali. Wahusika wote wakiwemo wananchi wa eneo husika watazajua taratibu hizo na kila mtu atakuwa huru kuangalia kama maeneo hayo yanavurugwa au kuna kukiuka masharti.

Lakini pia, tumeandaa taratibu za uwekezaji na hasa katika ufugaji viumbebahari na utalii wa pwani. Hapo zamani kama tunavyokumbuka, tulipata matatizo ya uwekezaji katika mradi wa kamba kule Rufiji.

Wakati mradi huo unaanzishwa, utaratibu huu ulikuwa haujaanza. Sasa kuna utaratibu ambao umewekwa kwa ajili ya kulinda na/au kuelekeza matumizi endelevu ya maeneo tekechu. Tunatarajia kupata

ushirikiano wa wawekezaji katika suala hili ili tuwe na miradi endelevu na yenye kuleta manufaa zaidi kiuchumi na kimazingira.

Tunasema tutakuwa na kazi ya kupunguza madhara katika mazingira yetu. Hatusemi tutaondoa kabisa athari kwani hakuna mradi wowote unaoanzishwa hasa katika maeneo ya pwani ambao hauna athari kwa mazingira. Miradi yote ina athari kwa mazingira.

Swali: Kumekuwapo na utafiti mwingi unaofanywa kuhusu maeneo ya pwani. Lakini kwa bahati mbaya utafiti huu haujaratibiwa na matokeo yake ni kwamba baadhi ya tafiti zinarudiwa. Je, tatizo hili mmeliona? Na kama mmeliona linshughulikiwaje chini ya ICM?

Jibu: Tatizo hili ni kweli tumeliona. Na kweli zipo taasisi nyingi na kila taasisi ilikuwa ikifanya utafiti wake. Lakini baada ya kuanzishwa ICM, tutakuwa na kitengo cha wataalam kitakachoshughulikia suala la utafiti. Tunatambua umuhimu wa kutumia taarifa za kisayansi katika shughuli yoyote ya maendeleo.

Kama mnavyofahamu, mwishoni mwa mwaka juzi, Waziri Ntagazwa alizindua kitabu cha ripoti ya hali halisi ya pwani. Desemba mwaka huu, tunatarajia kutoa ripoti ya pili. Ripoti hizi zinazotengenezwa na watafiti wa hapa nchini zitatupa fursa ya kufuatilia hali ya mazingira na kutupa upeo wa kuchukuwa hatua zinazostahili.

Swali: Unaweza kutueleza sura halisi ya mkakati wenyewe?

Jibu: Katika kitabu cha mkakati tunachozindua leo, kuna Utangulizi: Sura hii ya utangulizi inazungumzia umuhimu wa pwani na kwa nini pwani inapewa nafasi kubwa kama kichocheo cha maendeleo ya nchi yetu.

Lakini pia kuna masuala ya pwani. Ndani ya mkakati huu tunaelezea hali ya mazingira yetu. Tunaangalia uharibifu wa mazingira. Kwa ujumla tunaangalia matatizo yaliyopo.

Mkakati huu unayo mikakati mingine ndani yake na jinsi ya kukabili masuala mbalimbali. Kuna mikakati saba inayohusiana na uondoaji umaskini, matumizi ya sayansi, uwezesaji na uhamasishaji wa wananchi katika matumizi sahihi ya rasilimali na mazingira ya pwani. ◀



Wataalam wa usimamizi wa mazingira ya pwani wakiwa katika ziara ya uchambuzi wa maswala mbalimbali wakati wa maandalizi ya Mkakati wa ICM

Ufugaji viumbebahari unapunguza umasikini

Pwani ya Tanzania ina utajiri mwingi wa maliasili. Lakini wakazi wake ambao ni asilimia 25 ya idadi ya watu nchini, wengi wao ni masikini. Ni masikini kwa sababu maisha yao ya kila siku yanategemea shughuli za uvuvi mdogomdogo na kwa kiasi fulani kilimo duni cha kutumia jembe la mkono.

Wananchi hao huendesha shughuli za uvuvi kwa ajili ya kupata chakula na kwa kiasi kidogo kwa ajili ya kuuza ili kupata fedha kidogo kwa ajili ya kukidhi mahitaji yao muhimu kama kulipa karo za shule za watoto wao, kununua nguo na kujipatia matibabu.

Hali hii hailingani na utajiri wa asili wa pwani. Na wala halingani na fursa mbalimbali za kiuchumi zilizopo katika maeneo ya pwani. Mojawapo wa fursa za kiuchumi ambayo inaweza kwa kiasi kikubwa kuwanasua wakazi wa pwani katika janga la umasikini linalowakabili ni ufugaji viumbe bahari.

Kufuatana na watalamu wa mazingira na ikolojia ya pwani na bahari ambao kwa zaidi ya miaka minne wamekuwa wakipembua masuala yanayohusiana na ufugaji viumbe bahari chini ya Tanzania Coastal Management Partnership, kuna maeneo mengi katika pwani ya Tanzania ambayo ni mazuri kwa shughuli za ufugaji viumbe bahari. La muhimu ni kuhakikisha shughuli za ufugaji viumbe bahari zinafanywa kwa uangalifu na kwa mipango madhubuti ili kuepuka athari za mazingira na za kiuchumi.

Watalamu hao ambao wameandaa na kuchapisha kitabu cha mwongozo wa ufugaji viumbe bahari kwa ajiri ya wawekezaji, wanabainisha kwamba kuna fursa kubwa kwa ufugaji viumbe bahari kwa uendeleu nchini Tanzania. Kiwango cha ufugaji viumbe bahari kinaweza kuwa katika miradi midogomidogo ya ngazi ya kifamilia au miradi mikubwa ya makampuni.

"Tanzania ina ikolojia nzuri ya pwani ambayo mazingira yake bado hayajaharibiwa, na ambayo yanaweza kutumiwa kufanya miradi ya ufugaji viumbe bahari. Pamoja na ukweli kwamba ufugaji

viumbe bahari unahitaji mipango madhubuti na uangalifu mkubwa ili kuepuka athari za mazingira, bado wananchi wa pwani wanaweza kufanya miradi ya ufugaji viumbe bahari kwa uendeleu na kuweza kupambana na umasikini," anaeleza Fatuma Sobo kiongozi wa kikundi cha watalamu kilichoandaa mwongozo huo.

Mwongozo wa ufugaji viumbe bahari ambao umeridhiwa na Idara ya Uvuvi katika Wizara ya Utalii na Maliasili, ni mojawapo wa nyenzo za kusaidia katika utekelezaji wa Mkakati wa Taifa wa Usimamizi Kamilifu wa Mazingira ya Pwani. Mojawapo wa malengo ya mkakati huo ni kuendeleza mbinu kamilifu na endeleu zinazofaa



Kilimo cha mwani sasa nishughuli ya familia nyingi katika maeneo ya pwani

kimazingira za maendeleo ya matumizi makubwa ya kiuchumi ya rasilimali za pwani ili kupata manufaa ya juu kabisa.

Ukibainisha changamoto katika miradi ya ufugaji viumbe bahari, mwongozo unaeleza kwamba ufugaji viumbe bahari unakabiliwa na matatizo mengi ambayo kama hayakuzingatiwa na kupewa kipaombele katika utekelezaji, yanaweza kuleta athari nyingi za kimazingira na kiuchumi.

"Kuanzia ngazi ya kiutawala, ufugaji viumbe bahari ni nyanja inayogusa sekta nyingi na hivyo kuhitaji ushirikiano mkubwa wa sekta

mbalimbali. Kwa upande wa mazingira ufugaji viumbe bahari unakabiliwa na changamoto ngumu, kwani hufanyika katika maeneo ambayo hukutanisha bahari na nchi kavu, na pia hugusa nyanja nyingine nyingi za kiuchumi," Sobo anafafanua na kuongeza kwamba mwongozo wa ufugaji viumbe bahari utasaidia kuyakabili masuala yote ya msingi yanayozigusa sekta mbalimbali za kiuchumi, mazingira na maendeleo.

Mwongozo wa ufugaji viumbe bahari umekuja wakati muafaka, wakati juhudi za watu wa nje na ndani zinaelekezwa katika ufugaji viumbe bahari. Mbali na mradi wa ufugaji kamba wilayani Rufiji ulioshindwa kuanza kutokana na kutokidhi

matakwa ya mazingira, kuna miradi kadhaa ya ufugaji wa kamba inayopangwa na wawekezaji.

Kilimo cha mwani ndicho kinazidi kushamiri nchini. Kilimo hicho kinachofanywa na wananchi wa kawaida kimeongezeka na kuna dalili kwamba kitazidi kuongezeka kadri muda unavyokwenda. Mwaka 1990 kulikuwa na wakulima 2000 ambao walizalisha tani 808 za mwani kavu. Lakini mwaka 1995 idadi ya wakulima iliongezeka hadi zaidi y 20,000, ambao walizalisha tani 6,452.

"Ni matumaini yetu kwamba mwongozo wa ufugaji viumbe bahari utakuwa wa manufaa siyo tu kwa serikali na taasisi zake, bali pia kwa

makapuni ya wawekezaji na wakazi wa pwani kwa ujumla. Kwani mwongozo huo ni chombo cha kuhakikisha shughuli zote za ufugaji viumbe bahari zinafanywa kwa uendeleu kwa manufaa ya taifa na maendeleo ya wananchi. Hii ni licha ya kutoa fursa ya kutathmini miradi ya ufugaji viumbe bahari kwa uwazi na ushirikishaji wahusika wote," Sobo anafafanua.

Kufuatana na Sobo, utaratibu uliokuwa unatumika kutathmini na kuruhusu miradi ya ufugaji viumbe bahari ulikuwa na mapungufu mengi ambayo yalitoa mwanya kwa uharibifu wa mazingira, licha ya kuleta khero kwa wawekezaji. "Mwongozo huu ambao serikali imeuridhia unatoa fursa ya kufanya tathmini kwa ufanisi na uwazi, na unalinda maslahi ya wakazi wa pwani wakati huo huo ukihamasisha uwekezaji katika nyanja ya ufugaji viumbe bahari. Nia ni kuwa na miradi inayozingatia ustawi wa mazingira wakati huohuo ikiwanufaisha wananchi na taifa kwa ujumla."

Baada ya kutoa mwongozo huo kuna dalili njema kwamba shughuli za ufugaji viumbe bahari zitaboreka na kuchangia maendeleo ya wananchi na taifa kwa ujumla. Hii, kufuatana na Sobo inatokana na taasisi mbalimbali ambazo ni wadau wakuu wa shughuli za ufugaji viumbe bahari kuridhika na mwongozo huo. Taasisi hizo ni pamoja na Idara ya Uvuvi, Baraza la Taifa la Hifadhi na Usimamizi wa Mazingira, Idara ya Wanyamapori, Kituo cha Uwekezaji (TIC), Idara ya Misitu, Mamlaka ya Bandari, Idara ya Maji na taasisi nyingine ambazo zimeeleza kuwa mwongozo unakidhi mahitaji na maslahi ya kitaifa.

Taasisi hizo ambazo zimekuwa zikikabiliwa na matatizo mengi katika masuala ya ufugaji viumbe bahari zimetoa wito kwa wawekezaji na mamlaka mbalimbali katika ngazi ya kitaifa na wilaya kutumia mwongozo huo katika kuidhinisha na kuanzisha miradi ya ufugaji viumbe bahari ambayo ina fursa nyingi za kukuza uchumi wa taifa na wananchi wa pwani. ◀

Umuhimu wa sayansi katika kulinda rasilimali za pwani

Zuberi Ally ni mkazi wa Mtwara mjini. Maisha yake yote yanategemea uvuvi katika mwambao wa Bahari ya Hindi. Ana mke na watoto wake watano pamoja na watoto watatu wa marehemu kaka yake aliyefariki miaka mitano iliyopita.

Watoto wake watatu pamoja na wawili wa kaka yake bado wanasoma katika shule za msingi na sekondari. Ili aweze kumudu maisha yake, analazimika kutumia ujuzi na ujanja wake wote ili kupata fedha kwa ajili ya matunzo ya familia yake ikiwa ni pamoja na gharama ya karo ya shule ya watoto hao.

Kwa wakati fulani, anakiri kwamba analazimika kutumia njia haramu za uvuvi kama vile kutumia baruti na nyavu za tundu ndogo ili aweze kupata chochote. "Kurudi nyumbani mikono mitupu ni sawa na uhalifu mwingine. Mtu mwenye familia hatakwepa kutenda uovu huo," anaeleza.

Ally, ni mmoja kati ya maelfu ya wananchi wa Tanzania ambao wanaishi maeneo ya pwani ambao maisha yao yote hutegemea rasilimali zipatikanazo pwani na ambao katika harakati za kutafuta maisha na maslahi huharibu mazingira tekechu ya pwani.

Ally, kama wakazi wengine wa pwani anakiri kwamba anatambua kwamba kuvua kwa kutumia baruti au nyavu zenye matundu madogo ni kuvunja sheria licha ya kuchafua mazingira. Hata hivyo, anasema yuko tayari kuachana na uvuvi haribifu huo akipata njia mbadala ya kupata kipato cha kuitunza familia yake.

Vitendo na mwenendo wa Ally vinadhihirisha umuhimu wa Mkakati wa Taifa wa Hifadhi na Usimamizi Kamilifu wa Mazingira ya Pwani. Mkakati huo siyo tu utawaongoza wananchi katika usimamizi na matumizi sahihi ya rasilimali za pwani, bali utajenga mshikamano wa kusimamia na kuendeleza ikolojia muhimu ya pwani.

Ni kwa misingi hiyo kwamba Mkakati wa ICM utatoa kipaombele kwa matumizi ya sayansi kuyasimamia na kuyaendeleza maeneo yenye umuhimu, wakati huo huo

ikihakikishwa wananchi wa pwani wanaendelea kwa matumizi endeleu ya rasilimali hizo.

"Katika pwani kuna maeneo yenye umuhimu wa kipekee wa kiuchumi na wa ikolojia ambayo yanahitaji mipango maalumu ya usimamizi ili kuepuka migongano katika matumizi. Maeneo hayo ni pamoja na maeneo yenye vitega uchumi na miundombinu muhimu - kama bandari na viwanda, maeneo chepechepe na maeneo yenye miamba ya matumbawe. Mipango inahitajika kuwezesha usimamizi kamilifu ili kuepuka migongano na uharibifu," anaeleza Dk. Gasper Mahika, mratibu wa kikundi cha wanasayansi chini ya Tanzania Coastal Management Partnership (TCMP)

Akibainisha umuhimu wa sayansi katika usimamizi wa rasilimali za pwani ambazo hutegemewa katika uchumi wa taifa, Mahika anasema katika hali ya sasa kunafanyika makosa mengi katika shughuli za maendeleo pwani kutokana na sababu kadhaa. Anazitaja sababu hizo miongoni mwa nyingine kuwa ni kukosekana kwa taarifa za kisayansi katika kufanya maamuzi ya usimamizi; kukosekana kwa taarifa za kisayansi na ubadilishanaji taarifa miongoni mwa wasimamizi wa pwani; kukosekana kwa utaratibu mzuri wa kuratibu juhudi zinazofanywa katika kufuatila na kupima hali ya pwani; na kukosekana kwa taaluma juu ya mwenendo wa pwani miongoni mwa watumiaji wa rasilimali za pwani.

"Usimamizi wa ikolojia ya bahari na pwani, ambayo mara nyingi huelemewa na shughuli na mahitaji ya watu, hauwezi kupata mafanikio ya maana ikiwa sayansi haitatumika katika kufanya maamuzi. Sayansi haina manufaa tu katika kuelewa jinsi ikolojia inavyofanya kazi, na kuweza kutambua kiwango cha madhara yatokanayo na matumizi mabaya ya watu, bali pia kutoa taarifa muhimu na kuongoza uandaaji na utekelezaji wa sheria," anaeleza na kuongeza:

Akieleza zaidi, Dr. Mahika anasema kwamba sayansi husaidia kupembua matatizo katika

ikolojia ili kuweka mikakati ya usimamizi. Sayansi pia husaidia kubainisha chanzo cha matatizo na madhara katika mazingira. Vilevile sayansi hutoa fursa ya kuelewa mifumoikolojia ili kuweza kuweka sera na mikakati ya kuongoza maamuzi ya usimamizi. Juu ya yote hayo sayansi, ni chombo kizuri cha kufuatilia mienendo ya ikolojia ili kutathmini mafanikio ya sera katika kufikia malengo yake.

"Manufaa na faida za kutumia sayansi katika usimamizi wa mazingira ya pwani ni kwamba sayansi huboresha usimamizi kutokana na utafiti na matumizi ya nyenzo za kisayansi kama ukadiriaji wa madhara katika mazingira kutokana na shughuli za kiuchumi, ufuatiliaji wa hali ya ikolojia na nyenzo nyingine," anasisitiza Dk. Mahika.

Anaongeza kwamba usimamizi wa mazingira ya pwani ambao hauzingatii sayansi, mara nyingi hupelekea kutokea madhara makubwa katika mazingira na upotevu wa manufaa ya kiuchumi na kiikolojia ya rasilimali za pwani na bahari.

"Hivyo ni kusudio la Mkakati wa ICM kutumia sayansi katika utekelezaji wa shughuli za maendeleo ili kuepuka kuathiri uzalishaji wa ikolojia ya pwani," Dk. Mahika anafafanua na kuongeza;



Utafti wa kisayansi ni muhimu katika usimamizi wa mazingira ya pwani. Wanasayansi wakionekana katika mijawapo wa shughuli za utafiti baharini.

Kauli ya Waziri wa Nchi (Mazingira) Ofisi ya Makamu wa Rais, Mh. Arcado Ntagazwa (MB)

Tanzania imebahatika kuwa na bahari. Pwani yetu yenye mandhali ya kuvutia ni sehemu muhimu sana ya mazingira yenye rasilimali nyingi. Pwani na bahari yake ina mifumo mingi ya ikolojia-asili, yakiwemo matumbawe, fuko, milango ya mito, nyasi bahari na misitu ya miti ya mikoko. Vyote hivi ni urithi mkubwa, ambao ni mhimili wa maisha ya watu.

Kutoka Tanga hadi Mtwara, pwani yenye urefu wa zaidi ya kilomita 800 ina umuhimu wa pekee katika maendeleo ya taifa na maisha ya wakazi wa pwani. Ina fursa tele za kijamii na kiuchumi. Hizi ni pamoja na uchukuzi na usafirishaji kwa meli, uvuvi, utalii, biashara, kilimo, makazi ya watu na viwanda, achia mbali ufugaji viumbe bahari na uchimbaji wa gesi - nyanja za kiuchumi zinazoanza kushamiri. Fursa hizi za kiuchumi zina uwezo wa kuchangia kwa kiwango kikubwa katika kuboresha maisha ya wakazi wa pwani na Watanania kwa ujumla.

Pamoja na manufaa hayo muhimu, pwani ni mfumo wa kipekee ambamo mambo kadhaa yanapaswa kuzingatiwa kwa makini, yakiwemo yale yanayohusiana na bionuai, uchumi, jamii na taasisi, ambayo ni lazima yaainishwe katika mfumo wa usimamizi ambao unaleta manufaa bila kuleta madhara katika mazingira nyeti ya pwani.

Hii ndio changamoto inayoikabili Tanzania kuwa na utaratibu utakaotuongoza vyema kusimamia na kutumia rasilimali za pwani kwa uendeleu. Tunahitaji chombo ambacho kitatupa dira ya kufanikisha kuendeleza rasilimali za pwani na baharini ili tuweze kuainisha maendeleo

na hifadhi.

Utaratibu na chombo ambacho kitatuhakikishia mafanikio hayo ni Mkakati wa Taifa wa Hifadhi na Usimamizi Kamilifu wa Mazingira ya Pwani (ICM), ambao tunauzindua. Mkakati huo utatuongoza kupata maendeleo endelevu kutokana na ushirikiano baina ya serikali na wananchi, sayansi, na sekta mbalimbali katika ngazi ya taifa hadi vijijini tukizingatia misingi ya kuendesha mambo kisayansi.

Kwanini tumechagua ICM? Tanzania, kama zilivyofanya nchi nyingine nyingi zenye pwani, imechagua ICM kwa sababu nyingi nzuri. ICM ina sifa za pekee. Licha ya kusaidia katika kupanga vyema utekelezaji wa shughuli, hubainisha mapungufu katika kuyatatua masuala magumu ambayo husababisha migongano ya usimamizi na matumizi miongoni mwa sekta mbalimbali. ICM hutumika kama 'msuluhishi' wa masuala mbalimbali na 'kiungo' wa wadau, wakiwemo wafanya maamuzi, watekelezaji na watumiaji.

Ni matumaini ya Serikali kwamba Mkakati wa ICM ukitekelezwa vyema, Tanzania siyo tu itafanikiwa kuyakabili masuala magumu ya usimamizi yanayosababisha matumizi yasiyoendeleu, bali itaweza kusimamia rasilimali za pwani kwa uendeleu na kwa manufaa mazuri zaidi. Hii itasaidia watu waliopo leo na wa vizazi vijavyo kunufaika na rasilimali za pwani.

Mantiki ya Mkakati wa ICM ni kwamba unatekeleza Sera ya Taifa ya Mazingira ambayo inaunganisha sekta

zote katika ngazi ya wilaya na kuweka usimamizi wa pamoja katika kuleta maendeleo endelevu. Ingawa zipo sera za sekta mbalimbali za kuongoza matumizi na maendeleo ya rasilimali, wakazi wa pwani, hasa wale wa vijijini wanaendelea kuwa masikini. Watu hawa wanahitaji kuongozwa vyema ili waweze kujinasua katika janga la umasikini na wakati huohuo wao wenyewe wakiwa mashahidi wa kujibidisha kuyahifadhi mazingira kwa uzalishaji zaidi kwa manufaa yao.

Ni matarajio na kusudio la serikali kutumia kikamilifu nguzo za Mkakati wa ICM kuboresha jinsi ya kufikia mchakato na maamuzi yanayolenga maendeleo endelevu, kwa kutoa ufafanuzi na mwongozo wa matumizi pamoja na mgawanyo wa rasilimali katika ngazi ya taifa hadi vijijini. Hii itafikiwa kupitia muundo wa utekelezaji wa ICM ambao unaziunganisha sekta mbalimbali ili kuwepo maamuzi ya pamoja juu ya usimamizi wa rasilimali unaozingatia hifadhi ya mazingira, msingi wa rasilimali zote-resource base. Kutokana na utekelezaji mzuri wa ICM, serikali inaamini kwamba wananchi, hasa wanaoishi pwani watapata fursa ya kuboresha maisha yao.

Mkakati wa ICM pia utachangia katika juhudi za kuhifadhi viumbe muhimu na mazingira yake. Aidha, mkakati utasaidia katika usimamizi wa maeneo yenye umuhimu wa kiuchumi na maeneo yaliyo katika mazingira tekechu ambayo mara nyingi hukumbwa na masahibu yanayosababishwa na matukio ya asili. Kulifanikisha hili, utafiti wa kisayansi,



Mh. Arcado Ntagazwa

ufuatilaji na ukadiriaji wa mabadiliko utatumika kikamilifu ili kusaidia kufanya maamuzi ya usimamizi.

Hivyo, maamuzi ya kuweka Mkakati wa ICM ni maamuzi ya busara. Ni matumaini ya serikali kwamba Mkakati huu utatekelezwa kwa ufanisi ili uwe 'dira ya maisha bora' kwa wakazi wa pwani. Utakuwa mwenge wa kutuungazia katika maisha ya mbele, ambamo rasilimali za pwani zitasimamiwa kikamilifu ili kupata manufaa zaidi katika sekta mbalimbali na wakati huo huo tukiepuka athari sa sekta moja kuilemea nyingine.

Mkakati huu wa ICM ni njia muafaka itakayotufikisha kwenye maisha ya matumaini. Maisha yenye watu wenye uhakika na hali ya maisha yao na wenye makazi mazuri, ambao kwa pamoja wanashirikiana kulinda na kuendeleza maeneo ya pwani na rasilimali zake kwa manufaa yao wenyewe na kwa manufaa ya taifa letu kwa jumla. ➡

Kauli ya Mkurugenzi Mkuu wa NEMC, Dk. Magnus Ngoile



Dk. Magnus Ngoile,

Mwanamazingira mmoja, Henry David Thoreau aliwahi kuuliza swali lenye busara: "Kuna busara gani kuwa na nyumba nzuri ikiwa huna ardhi nzuri ya kuiweka?" Na huenda ni kwa busara kama hiyo, mwaka 2000 watu wa Rufiji walikataa mradi wa ufugaji kamba, ambao ulinadiwa kama mkombozi wa maisha ya watu wa Rufiji na vizazi vyao vijavyo.

Watu hao wa Rufiji walijua faida na manufaa ya mradi wa kamba. Lakini walihitaji wahahakikishiwe kwamba mradi huo usigeleta madhara katika mazingira ya bonde lao. Kwa bahati mbaya, mwekezaji hakuweza kutoa jibu la kuridhisha. Na hivyo wakazi wa Rufiji wakaamua kutokuwa na 'nyumba' kuliko kuwa na nyumba isiyoikuwa na msingi imara.

Msimamo huo wa watu wa Rufiji unastahili kupongezwa, kwani kuna watu wengi duniani ambao hawana uwezo na fursa ya kutetea haki zao. Hali hii hupelekea kufanyika kwa miradi ambayo matokeo yake ni kuchafua na kuharibu mazingira na hatimae kuyavuruga kabisa maisha ya watu.

Mfano mzuri ni mradi wa bwawa la Akosombo nchini Ghana lililojengwa katika mto wa Volta kati ya mwaka 1950 na 1960. Kikubwa kilichopatikana kutokana na mradi huo, ni watu zaidi ya 100,000 wanaoishi kandokando ya mto kupata maradhi ya macho, na zaidi ya watu 70,000 miongoni mwao kupofuka kabisa kutokan na virusi vilivyotokana na bwawa hilo. Watu wengine 80,000 wamepata vilema vya kudumu kutokana na maradhi yajulikanayo kama schistosomiasis ambayo yalisababishwa na aina ya konokono ambao walianza kuzaliana kwa wingi katika bwawa hilo.

Matatizo ya mazingira ni agenda kuu ya ulimwengu wa sasa. Tatizo la mazingira linaenda sambamba na kuongezeka kwa watu kwa kasi kubwa kunakoambatana na utandawazi. Masuala yanayoambatana na matatizo ya mazingira ni pamoja na uharibifu wa ardhi, uchafuzi wa hewa na maji na uharibifu wa maliasili. Kila tatizo linatishia uhai na maendeleo ya watu kiuchumi.

Mazingira yasiyotunzwa na kuhifadhiwa ni sawa na kutokuwepo. Na ndiyo maana napenda kutumia fursa hii kuishukuru na kuipongeza serikali kwa kuchukuwa hatua za makusudi za kuweka mikakati ya kuyahifadhi na kuyalinda mazingira,

hasa mazingira ya pwani.

Mkakati wa Taifa wa Usimamizi Kamilifu wa Mazingira ya Pwani utatoa mchango mkubwa katika maendeleo ya Tanzania. Utaiunganisha serikali na wananchi, sayansi na utawala, watu na sekta mbalimbali katika mpango wa kulinda na kuendeleza mazingira na rasilimali za pwani. Mbali na kuyalinda mazingira, mkakati huu pia utalenga kuboresha maisha ya watu.

Ni jambo lililo wazi kwamba mikoa iliyopo pwani, Dar es Salaam, Tanga, Pwani, Lindi na Mtwara huchangia theluthi moja ya pato la taifa, lakini wakazi wa mikoa hiyo ni masikini sana. Makadirio ya sasa ya wastani wa mapato wa wananchi wa mikoa ya pwani ni chini ya shilingi 100,000/- kwa mwaka.

Lengo la Mkakati wa ICM ni kubadili hali ya shughuli za kiuchumi. Nia ni kuwawezesha watu kufanya shughuli za kiuchumi zaidi ya moja, ili shughuli moja isipokwenda vyema, jamii au familia iwe na njia nyingine ya mapato na chakula.

Jukumu la ICM ni kuweka uwiano ili kuepuka madhara ya kiuchumi na mazingira ambayo baadhi yake yamekwisha anza kuharibiwa kutokana na vitendo mbalimbali, vikiwemo ukokotaji wa kamba, uchimbaji matumbawe kwa ajiri ya ujenzi, na uendeshaji wa viwanda usioendeleu.

Hakuna shaka kwamba viwanda huleta manufaa mengi yakiwemo ajira, maisha mapya na uhusiano wa kimataifa. Lakini inatubidi tuwe makini na teknolojia ambayo mara nyingi hutoka katika nchi zilizoendelea.

Nchi hizo zilizoendelea, kwa mfano

hutumia zaidi nishati na maliasili kuliko nchi zinazoendelea. Matokeo yake matatizo ya mazingira katika nchi zilizoendelea husababishwa na viwanda, matumizi makubwa ya maliasili na mahitaji makubwa ya vifaa na huduma.

Kwa upande mwingine, matatizo ya mazingira katika nchi zinazoendelea, husababishwa hasa na umasikini, ambapo kipaombele huwekwa katika kukimu maisha na si kuhifadhi mazingira. Na hii ndiyo sababu inayopelekea wawekezaji wa nchi zilizoendelea kupenda kuwekeza katika nchi zinazoendelea ambazo mazingira yake bado yamo katika hali nzuri.

Ndiyo maana nazipongeza juhudi za serikali katika kuweka utaratibu wa ICM, ambao utatupa fursa nyingi za kuyatumia mazingira ya pwani kwa uendeleu. ICM itatuongoza vyema, hasa wakati huu ambapo miradi ya maendeleo inaelekezwa katika maeneo ya pwani. ICM itatupa fursa ya kuchagua miradi, siyo kwa ukubwa wake, bali kwa ubora wake.

Na ni kwa sababu hiyo mkakati wa ICM unathamini matumizi ya Tathmini ya Athari katika Mazingira, ambayo hapo awali ilikuwa haipewi umuhimu unaostahili. Chombo hiki kikitumiwa vyema kitatusaidia kuboresha utekelezaji wa miradi bila kuathiri ustawi ubora wa mazingira ya pwani.

Kupitia Mkakati wa ICM tutaepuka makosa ambayo yana gharama kubwa kiuchumi na kimazingira. Na kupitia ICM tuna fursa nyingi za kuboresha maisha ya wananchi. ➡

Maandalizi ya Mkakati wa Taifa wa ICM

Maandalizi ya Mkakati wa Hifadhi na Usimamizi Kamilifu wa Mazingira ya Pwani (ICM), yalifanywa kwa utaratibu uliokuwa wazi na wa ushirikishwaji uliochukua zaidi ya miaka minne. Maandalizi yalizingatia maoni ya sekta zote na wahusika wote katika shughuli za pwani na amabayo yalibainisha umuhimu wa kuwa na utaratibu na mipango bayana ya usimamizi wa mazingira ya pwani. Pia Mkakati wa ICM umejengwa kwa misingi ya kisayansi na teknolojia. Zaidi ya nyaraka thelathini za nyanja mbalimbali ikiwa ni pamoja na mambo ya kisayansi, sheria, uchumi, elimu na nyinginezo zimeandaliwa na wataalamu na kutumiwa kama vielelezo vya awali katika maandalizi ya Mkakati wa ICM.

Kazi ya kuandaa mkakati huu ilianza mwaka 1998 kwa kuunda kikundi cha wataalamu chenye wajumbe ishirini kutoka sekta mbalimbali (ikiwa ni pamoja na sekta binafsi), ili kubainisha

masuala yanayohusiana na hifadhi na usimamizi wa pwani ya Tanzania. Kikundi hiki kilianza kwa kukusanya, kuchambua na kusanisi taarifa iliyopo ya ndani na nje ya nchi. Baadaye, kikundi kilitumia miezi kadhaa kutembelea wilaya zote za pwani na kufanya mazungumzo na watumishi wa serikali pamoja na wananchi.

Masuala yaliyokusanywa yaliwasilishwa kwenye mkutano wa Wakurugenzi na Makamishena wa sekta mbalimbali mwezi Oktoba 1998, ambao uliridhia juhudi zilizokuwa zinafanywa. Baada ya hapo, kikundi kilirudi tena kwenye wilaya na vijiji kwenda kuandaa dira, kanuni na mikakati ya kushughulikia masuala hayo. Mapendekezo ya kikundi cha wataalamu yaliwasilishwa na kuthibitishwa kwenye mkutano wa Wakurugenzi wa Mei, 1999.

Baada ya mkutano huo kikundi kilitayarisha rasimu ya mapendekezo ya

Sera ya Taifa ya Usimamizi wa Maeneo ya Pwani, utekelezaji wake, mifumo ya utekelezaji na miundo ya usimamizi. Rasimu hiyo ilifanywa uhakiki Mwezi Septemba 1999 na vikundi vya wataalamu pamoja na wawakilishi wa programu tano za hifadhi na usimamizi wa pwani, katika mkutano wa siku tatu.

Waraka wa Mapendekezo ya utekelezaji sera na mifumo ya miundo ya usimamizi uliwasilishwa kwa mkutano wa kitaifa uliowajumuisha wabunge, wakuu wa wilaya, makatibu tawala wa mikoa, wkurugenzi wa halmahauri za wilaya, wakurugenzi na makamishena wa idara za serikali na wakuu wa taasisi za serikali katika mkutano wa siku mbili uliofanyika mwezi Novemba 1999. Mkutano huo ulipitia waraka huo na kuchagua mfumo wa utekelezaji na usimamizi wa sera ya ICM na kutoa maelekezo muhimu ya kuandaa rasimu ya awali ya sera.

Maelekezo na mapendekezo ya mkutano huu yalifanyiwa kazi na rasimu ya sera ya ICM kutayarishwa na kutawanywa kwa wadau ili kupata maoni zaidi kabla ya rasimu hiyo haijawasilishwa serikalini.

Serikali ilipitia kwa makini rasimu hiyo ya sera, na baadaye kushauri rasimu hiyo ibadilishwe katika muundo na mfumo wa mkakati unaolenga utekelezaji wa Sera ya Taifa ya Usimamizi wa Mazingira. Wataalamu waliyazingatia maelekezo hayo, na wakaandaa rasimu ya Mkakati wa ICM ambayo uliwasilishwa serikalini na kuridhiwa. Katika mantiki yake Mkakati wa ICM unaziunganisha sekta mbalimbali na kuweka ushirikiano kamilifu wa kutumia, kusimamia na kuendeleza mazingira ya pwani na rasilimali zake kwa uendeleu. 🐟

MAJUKUMU MAKUU YA ICM

Mkakati wa Taifa wa Hifadhi na Usimamizi Kamilifu wa Mazingira ya Pwani (ICM) umeundwa katika maumbile na mfumo unaotoa fursa za utekelezaji wa vitendo halisi ambavyo vinapimika. Hii ni kutokana na muundo wa utekelezaji wa mkakati huo unaotoa fursa kwa wadau wote kushiriki katika hatua zote za utekelezaji, kuanzia kubainisha masuala ya kushughulikia, kuchagua na kupanga hatua za kuchukua, kutekeleza hatua hizo na kupima mafanikio katika kufanikisha malengo na majukumu makuu yafuatayo:

1. Kusaidia upangaji wa kimazingira katika shughuli za usimamizi kamilifu wa rasilimali za pwani katika ngazi ya wilaya na kuweka wazi taratibu za kuwainisha maslahi ya taifa na manufaa ya wananchi
2. Kuendeleza mbinu kamilifu na endeleu zinazofaa kimazingira za maendeleo ya matumizi makubwa ya kiuchumi ya rasilimali za pwani ili kupata manufaa ya juu kabisa
3. Kuhifadhi na kurejesha hali ya asili ya mazingira tekechu na maeneo yaliyo na ukwasi mkubwa wa bioanuwai na wakati huohuo kuhakikisha kuwa wakazi wa pwani wanaendelea kunufaika na matumizi endeleu ya rasilimali
4. Kuanzisha utaratibu wa hifadhi na usimamizi kamilifu wa maeneo ya pwani yaliyo na manufaa makubwa ya kiuchumi na/au yaliyo na uwezekano mkubwa wa kupata majanga ya asili
5. Kuandaa na kutumia utafiti wa mifumoikolojia ya pwani, na mfumo wa tathmini na ufuatiliaji unaofaa kuwezesha taarifa iliyopo ya kisayansi na kiufundi kutumika katika utoaji maamuzi ya hifadhi na usimamizi kamilifu
6. Kutoa fursa zinazofaa za kuwahusisha wadau katika mchakato wa maendeleo ya pwani na utekelezaji wa sera za usimamizi wa maeneo ya pwani
7. Kujenga uwezo wa watu na taasisi ili kuwezesha ushiriki wa taaluma na sekta mbalimbali katika usimamizi wa mazingira ya pwani 🐟



Wakurugenzi wa sekta mbalimbali wakichambua maswala ya ICM katika mojawapo ya mikutano ya maandalizi ya Mkakati wa ICM

Uzoefu wa kimataifa katika utekelezaji wa ICM

Na Lynne Zeitlin Hale

Toka enzi na enzi, watu waishio ufukoni mwa bahari na kutumia rasilimali za bahari na pwani, wamekuwa na mfumo, aidhuru usiwe mzuri, wa kusimamia rasilimali za pwani. Mara nyingi wenyeji wa pwani, wamekuwa na taratibu zao zinazowasaidia kusimamia rasilimali hizo kwa manufaa ya watu kwa muda mrefu, ingawa mifumo hiyo haipangwi kwa malengo ya kuweka misingi ya kiutwala.

Mabadiliko makubwa ya usimamizi wa rasilimali za pwani yalianza katika karne za 19 na 20 kutokana na kuongezeka kwa watu na kuwepo mabadiliko makubwa ya tekelenojia. Majukumu ya usimamizi yalichukuliwa zaidi na serikali na hivyo katika nchi nyingi, watu wakawa na uhuru wa kutumia bahari wapendavyo. Hali hii ilipelekea uvurugaji wa mazingira na upotevu wa rasilimali licha ya kusababisha migongano katika matumizi.

Hali hii ndiyo iliyopelekea kuanzishwa kwa ICM ambayo sasa inatambuliwa na Umoja wa Mataifa kama chombo mahususi ambacho kinalenga kuboresha maisha ya watu ambao wanategemea rasilimali za pwani, wakati huohuo wakijibidisha kulinda na kuendeleza ikolojia ya pwani kwa uzalishaji zaidi.

Kufuatana na na tafsiri ya ICM ya Umoja wa Mataifa, ICM ni utaratibu endeleu unaoiunganisha serikali na wananchi, sayansi na utawala, sekta na umma katika kuandaa na kupanga mipango kamilifu ya kulinda na kuendeleza mazingira ya pwani na rasilimali zake.

Tofauti na mipango mingine ya usimamizi wa maeneo ya pwani, programu za ICM mara nyingi huzingatia eneo la pwani na watu wanaoishi katika eneo hilo ili kuwa na 'dira ya maisha bora', na kisha kuweka mikakati inayowahusisha wadau wote ili kupata maisha bora. Katika kutekeleza ICM, shughuli za maendeleo pwani husimamiwa kikamilifu ili kupata manufaa zaidi na wakati huohuo juhudi zikifanywa kuepuka athari za sekta moja kuelemea nyingine.

Misingi na nguzo muhimu za mafanikio ya ICM ni pamoja na kuwapa fursa wahusika wote 'kumiliki' programu ya ICM. Hii ni pamoja na serikali kuitambua programu ya ICM na kushiriki kikamilifu katika utekelezaji wa majukumu mbalimbali; ushiriki wa wadau wote; na upatikanaji wa

msaada endeleu kutoka kwa mashirika yasiyo ya kiserikali na taasisi za wafadhili.

Muhimu pia ni wadau kushiriki kikamilifu katika hatua zote za uanzishaji hadi utekelezaji wa programu ya ICM. Hii huwapa fursa wadau sauti na uwezo wa kufanya maamuzi kulingana na tamaduni na mila zao.

Nguzo nyingine ya mafanikio ya programu ya ICM ni kuwa na mikakati inayofanikisha kupata malengo yaliyokusudiwa. Hii



Lynne Hale ambaye alitoa mchango mkubwa katika maandalizi ya Mkakati wa ICM

inatokana na ukweli kwamba haiwezekani kuwa na programu, hata kama ni kamilifu vipi, ambayo inaweza kuyakabili na kuyatatua masuala yote yanayohusika na usimamizi wa mazingira ya pwani. Hivyo, ili kuwa na mikakati ya utekelezaji yenye malengo ni muhimu kuyapanga masuala kufuatana na uzito wa matatizo yake. Hii itatoa fursa ya kulikabili suala

baada jingine kwa mafanikio zaidi.

Sambamba na hilo, programu ya ICM husaidia kuweka utekelezaji ulio 'kamilifu', ambao husaidia kuweka uwiano baina ya ngazi za juu za utawala na ngazi za chini za wananchi. Hii hutoa fursa kwa vyombo vya juu vya serikali kuwajibika kwa kutoa miongozo na sera ambazo huwaongoza

wananchi katika kuleta mabadiliko.

Pia utekelezaji kamilifu husisha sekta mbalimbali, utaratibu ambao husaidia kutatua masuala magumu ya sekta moja kuelemea sekta nyingine kutokan na matumizi ya rasilimali na mazingira. Utaratibu huu pia huzingatia matumizi ya sayansi katika usimamizi, ili kuelewa vyanzo vya matatizo katika ikolojia na kupata ufumbuzi. Katika mantiki yake, ICM au hifadhi na usimamizi kamilifu ni utaratibu endeleu na siyo utaratibu wa kutatua tatizo kwa njia za zima moto na kuacha.

Na kutokana na uzoefu katika nchi nyingi, hakuna 'fomula' au jawabu moja katika usimamizi wa mazingira ya pwani. Kila taifa na kila eneo huwa na matatizo yake ambayo hutatuliwa kwa utaratibu wake. Ni kutokana na kujifunza kwa kutenda kwamba wasimamizi wa mazingira ya pwani wataweza kubainisha njia zipi zitaleta au hazitaleta mafanikio katika nchi au eneo linalokusudiwa. 🐟

TIMU YA UHARIRI

Gratian Luhikula
Joe Nakajumo
Tuma Abdallah
Muhingo Rweyemamu
Pudenciana Temba

U z i n d u z i w a M K A K A T I W A T A I F A W A H I F A D H I N A U S I M A M I Z I K A M I L I F U W A M A Z I N G I R A Y A P W A N I



Dira ya Maisha Bora Pwani



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