

Proceedings of the

2013 EAF-NANSEN PROJECT FORUM

Dar es Salaam, United Republic of Tanzania, 8–10 October 2013



**Food and Agriculture
Organization of the
United Nations**

THE EAF-NANSEN PROJECT

FAO started the implementation of the project "Strengthening the Knowledge Base for and Implementing an Ecosystem Approach to Marine Fisheries in Developing Countries (EAF-Nansen GCP/INT/003/NOR)" in December 2006 with funding from the Norwegian Agency for Development Cooperation (Norad). The EAF-Nansen project is a follow-up to earlier projects/programmes in a partnership involving FAO, Norad and the Institute of Marine Research (IMR), Bergen, Norway on assessment and management of marine fishery resources in developing countries. The project works in partnership with governments and also Global Environment Facility (GEF)-supported Large Marine Ecosystem (LME) projects and other projects that have the potential to contribute to some components of the EAF-Nansen project.

The EAF-Nansen project offers an opportunity to coastal countries in sub-Saharan Africa, working in partnership with the project, to receive technical support from FAO for the development of national and regional frameworks for the implementation of Ecosystem Approach to Fisheries management and to acquire additional knowledge on their marine ecosystems for their use in planning and monitoring. The project contributes to building the capacity of national fisheries management administrations in ecological risk assessment methods to identify critical management issues and in the preparation, operationalization and tracking the progress of implementation of fisheries management plans consistent with the ecosystem approach to fisheries.

STRENGTHENING THE KNOWLEDGE BASE FOR AND
IMPLEMENTING AN ECOSYSTEM APPROACH TO
MARINE FISHERIES IN DEVELOPING COUNTRIES
(EAF-NANSEN GCP/INT/003/NOR)

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PREPARATION OF THIS DOCUMENT

This is the final report of the Third Forum of the EAF-Nansen project “Strengthening the Knowledge Base for and Implementing an Ecosystem Approach to Marine Fisheries in Developing Countries (EAF-Nansen GCP/INT/003/NOR)” held in Dar es Salaam, Tanzania, 8–10 October 2013 under the theme: Implementation of the ecosystem approach to fisheries – progress made in Africa. The EAF-Nansen Project is grateful to all participants and presenters for their valuable inputs.

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ABSTRACT

The third EAF-Nansen Project Forum was held at the White Sands Hotel in Dar es Salaam, United Republic of Tanzania from 8 to 10 October 2013 under the theme: Implementation of the ecosystem approach to fisheries – progress made in Africa. It was attended by 85 participants from 28 African countries, representatives of regional fisheries bodies and partners.

The EAF-Nansen Project Forum provides an opportunity for progress reporting, dissemination of experiences, identification of best practices and discussion of strategies pertaining to the project. The Forum also provides the means for partners to exchange views regarding the past activities and on proposals for future collaborative work.

Presentations at the Forum included a keynote address, country experiences on the contribution of the EAF-Nansen Project to fisheries management in Africa and of R/V *Dr Fridtjof Nansen* surveys to the management of marine resources in Africa, the development of the second phase of the EAF-Nansen Project, marine environmental concerns and Norway's experience in developing the oil and gas industry. A new DVD on the work of the vessel was screened.

A special session of the Forum was dedicated to discussing the framework and scope of the new phase of the Project. The work of the Task Force comprising experts from Africa and Europe constituted to formulate a new science programme was presented for discussions in working groups. Important discussions were held on the new science, management and capacity development components of the programme.

The Forum concluded with a panel discussion on topical issues raised during the three days. Key among these was the views of panellists on how to create links and strengthen networking in the new phase. Also discussed were the need for a stronger link between the two central pillars of management capacity development and the use of the Nansen survey data in the management of the fisheries.

CONTENTS

1.	INTRODUCTION	1
1.1	Opening and background	1
1.2	EAF-Nansen Project and objectives of the Forum.....	2
2.	EAF – GLOBAL PROGRESS	3
2.1	Keynote presentation.....	3
2.2	Comments and discussion on keynote presentation	4
3.	EAF-NANSEN PROJECT AND FISHERIES MANAGEMENT IN AFRICA	4
3.1	Overview	4
3.2	Towards a new fisheries management regime	5
3.3	Contribution of Nansen surveys.....	12
3.4	Assessment of the survey data, usage and outcomes	13
4.	SECOND PHASE OF EAF-NANSEN PROJECT	16
4.1	Overview and development of second phase.....	16
4.2	New research vessel	17
4.3	Components of second phase	17
5.	PRESENTATIONS BY PARTNERS	20
5.1	Overview	20
5.2	Nairobi Convention/UNEP	20
5.3	IOC/UNESCO	21
5.4	KCDP.....	22
5.5	PREFACE	22
5.6	UNIDO	23
5.7	WARFP-SL.....	23
6.	PANEL DISCUSSIONS AND RECOMMENDATIONS	23
7.	CLOSING	25
 APPENDIXES		
1.	List of participants	26
2.	Programme for the Forum.....	32
3.	Opening remarks by Hon. Benedict N. Ole Nangoro	35

1. INTRODUCTION

1.1 Opening and background

The Third Forum¹ of the EAF-Nansen Project was held at the White Sands Hotel, Dar es Salaam in the United Republic of Tanzania from 8 to 10 October 2013 under the theme “Implementation of the ecosystem approach to fisheries – progress in Africa”. The three-day Forum brought together 85 participants from 28 African countries and representatives of partner projects, the Norwegian Ministry of Foreign Affairs, the Norwegian Agency for Development Cooperation (Norad), the Norwegian Institute of Marine Research (IMR) and FAO. The list of participants is shown in Appendix 1.

The Agenda (Appendix 2) was made up of presentations on the progress made in Africa with a focus on results, an overview of the surveys carried out in Phase 1 and a presentation and discussions on the second phase of the Project.

The Forum was opened by Dr Benedict Ole Nangoro, Deputy Minister of Livestock and Fisheries Development of Tanzania who welcomed all participants and expressed gratitude on behalf of all the countries that are participating in the EAF-Nansen Project for the contribution that all had made to the sustainability of fisheries resources in Africa.

The Minister added that EAF as a concept and management model builds on the intrinsic link between environment and development and listed publications and scholars that contributed to the understanding of how closely environment and development are linked. It was on the basis of these scholars and publications that the UNCED Rio Conference in 1992 synthesised Agenda 21 and various related conventions, frameworks and declarations.

He highlighted the implementation status of the EAF-Nansen Project in Tanzania since the formation of the National Task Group (NTG) and events leading to the official inauguration in July 2010. He singled out the preparation, approval and adoption of the management plan for the artisanal fishery for small and medium pelagic species as the main outcome of Phase I. Dr Ole Nangoro noted with satisfaction the introduction of EAF in Tanzania’s Fisheries Sector Development Programme (FSDP) and the Tanzania Agriculture and Food Security Investment Plan (TAFSIP).

The full text of the Minister’s statement is shown in Appendix 3.

Mr Kwame Koranteng, the Project Coordinator lauded the achievements attained by Tanzania and informed participants that the country was the first to have its fisheries management plan approved.

Mr Koranteng gave a brief background of the EAF-Nansen Project. He listed some of the achievements of the Norwegian scientist, Dr Fridtjof Nansen whose name the Project and its research vessel bear and described him as a champion in many disciplines – an astute scientist, an explorer, a humanitarian and a diplomat.

Mr Soren Dalsgaard, the Acting FAO Representative in Dar es Salaam, stated in his opening remarks that the EAF-Nansen project is by far the largest project in the Fisheries and Aquaculture Department of FAO. He pointed out that during the 25th session of the FAO Committee on Fisheries (COFI) in 2003 many developing countries expressed their concern that attempts to operationalise the Ecosystem Approach to Fisheries (EAF) were invariably hindered by lack of sufficient relevant data and information. Furthermore, the perceived increased costs and difficulty in incorporating ecosystem considerations in fishery management would contribute to a broadening of the gap between the developing and the developed countries. The developing countries, therefore, appealed to the international community for technical assistance.

¹ The first and second Forums were held in Rome, Italy (2008) and Accra, Ghana (2011).

Partly in response to this appeal Norad pledged support for the continuation of the project through a second phase with the construction of a new research vessel. The new project is expected to build on and strengthen efforts supporting developing countries to implement EAF, and expanded the scope to include the crucial issues of climate change and pollution.

From the Norwegian Embassy in Dar es Salaam, Minister Councillor Ms Lise Stensrud, recalled that the first time she saw the R/V *Dr Fridtjof Nansen* was 28 years ago when it set off for a survey in Mozambique. The country was experiencing war, famine and drought yet due to the strong cooperation among the partners the survey was successfully executed. Twenty years later she again witnessed the vessel set sail in Angola to undertake a cruise that involved researchers from many developing nations in Africa. Recently, research on board the vessel has explored wider environments transcending fisheries assessment and research and providing support to countries to prepare environmental baselines in respect of oil and gas prospecting. She noted that hopefully the vessel will be able to do such work in Tanzanian waters in the future.

She hailed the partners for maintaining this cooperation among themselves and using it as an important tool to sustain collaborative research. She urged the participants to use every opportunity to create a strong African network of mutual benefit.

1.2 The EAF-Nansen Project and objectives of the Forum

The EAF-Nansen Coordinator, Mr Koranteng, presented the Project and objectives of the 2013 Forum. He highlighted the history of the Nansen Programme since its inception with the surveys that started in 1975. He informed the Forum that the goals of the Programme have evolved over time in response to the changing needs in the developing world. He recalled that the initial focus was on exploration of fisheries resources for development, and resource evaluation/assessments and monitoring. Towards the mid-1990s, the emphasis shifted to capacity building in fisheries research and management.

It was noted that following the World Summit on Sustainable Development (WSSD) recommendation on the application of an ecosystem approach in the management of fisheries by the year 2010 and the FAO Committee on Fisheries endorsement of EAF as a practical implementation of the FAO's Code of Conduct for Responsible Fisheries (CCRF) many developing countries expressed the need for capacity development to be able to comply with the above initiatives. As a result, the old Nansen Programme was expanded to become the EAF-Nansen Project with increased focus on capacity development for fisheries management using the EAF framework.

The immediate objectives of the Project were to build the capacity of the staff in the fisheries research institutions and management administrations in the participating countries to operationalise EAF implementation and to provide beneficiaries with additional knowledge on their ecosystems and on EAF principles for their use in planning and monitoring.

Mr Koranteng defined the purpose of EAF including the principles of reconciling short time gains and long term sustainability and elucidated on the key components of the Project. He gave the objective of the Project Forum noting in particular that the 2013 Forum is significant because it comes after the completion of Phase I of the project and within the transition period when a new phase is being prepared. He noted that the theme for the Forum which highlights progress made in Africa on the implementation of EAF was appropriately chosen in line with the project objectives and also to explore possibilities for new partnerships to address emerging challenges in fisheries management, namely climate change and pollution in the marine environment.

Participants were shown a short DVD focusing on the work done by the R/V *Dr Fridtjof Nansen* in developing countries, the types and amount of data collected and how these contribute to the management of fisheries in those countries.

The DVD concluded with some of the challenges that the next phase of the project will have to deal with including providing knowledge to address the effects of climate change on marine resources and the impact on future generations.

2. EAF – GLOBAL PROGRESS

2.1 Keynote presentation

The keynote presentation of the Forum was entitled “Global Progress in the Implementation of the Ecosystem Approach to Fisheries” and was given by Ms Gabriella Bianchi of the FAO Marine and Inland Fisheries Branch. The session was chaired by Mr Hashali Hamukuaya, the Executive Secretary of the Benguela Current Commission (BCC).

Ms Bianchi started her presentation by explaining that the ecosystem approach to fisheries is a process that strives to balance diverse societal objectives. The process takes into account the knowledge and uncertainties about biotic, abiotic and human components of ecosystems and their interactions and applies an integrated approach to fisheries within ecologically meaningful boundaries.

The presentation demonstrated the importance of fish as a source of food and livelihood and how fisheries are among the main drivers of change of the marine environment and the challenges facing capture fisheries as: threats from poor management/governance, illegal, unreported and unregulated (IUU) fishing, climate change, habitat degradation, conflicting use of resources and increasing growth in world population/food insecurity. She showed the complexity of fisheries and how it is intrinsically linked with a myriad of factors creating a complex system that can only be effectively addressed through the EAF framework.

Ms Bianchi demonstrated that the EAF framework leads to improvement in fisheries governance because it is participatory, comprehensive, encourages the use of best available knowledge, promotes adaptive management and evolves from existing institutions and practices. EAF can be implemented in two ways. The first way is the piecemeal implementation, which is practiced in Europe and North America where conventional fisheries management is expanded to include elements of EAF. The second way on the other hand is the holistic implementation which explicitly considers the social, economic and ecological objectives and related trade-offs and leads to the establishment of a regular management process.

She presented case studies and pilot projects of EAF/EAA (Ecosystem Approach to Fisheries and to Aquaculture) that have been implemented in Latin America, Asia, the Pacific and the Caribbean regions. She mentioned that the key role of the EAF-Nansen Project in African countries is to support the implementation of EAF. The project is achieving this through assisting participating countries in Africa to develop national and regional frameworks for EAF, and to acquire additional knowledge on their marine ecosystems for use in planning and monitoring.

The presentation highlighted some of the achievements attained mainly in the preparation of management plans for the fisheries of Benin, Cameroon, Comoros, Côte d’Ivoire, Gabon, Ghana, Kenya, Liberia, Madagascar, Mauritius, Mozambique, Nigeria, Seychelles, Sierra Leone, Tanzania, and Togo.

Ms Bianchi explained that relevant complimentary capacity building is attained through participating in EAF courses organised by the EAF-Nansen project in collaboration with universities in Africa (so far in Ghana, Morocco and South Africa) and also at the University of Wageningen, in the Netherlands.

In concluding her presentation, Ms Bianchi listed some of the emerging difficulties that countries experience in implementing EAF and Ecosystem Based Fisheries Management (EBFM). These include the following:

1. It is difficult to assess the extent to which countries have actually started implementing EAF and EBFM;
2. Implementation can only be incremental and adaptive. However, broadening the scope of fisheries management will also require a process of re-prioritization, particularly in relation to resource use in management and research;
3. FAO and other institutions, can only provide guidance, the actual application of EAF is the responsibility of the main actors on the ground taking responsibility for the needed changes;
4. Implementing EAF means realizing the principles of sustainable development. Reconciling short-term economic and social gains with long-term sustainability will still represent a major challenge.

2.2 Comments and discussion on keynote presentation

After the presentation, a participant sought clarification on the difference between EAF and EBFM. He was informed that from the FAO perspective, the EAF priority is in management whereas the EBFM is considered mainly as a conservation approach. However, the common factor in both is the ecosystem. The only fundamental difference is in prioritising either management or conservation.

Regarding the piecemeal versus the holistic approach, a participant from Mauritius informed the Forum that her country has developed the fisheries management plan that is awaiting implementation. She enquired which approach would be most appropriate. She was advised to compare the two approaches critically before choosing the more appropriate option to adopt.

Another participant remarked that designing of management plans is not the challenge but its implementation. Ms Bianchi quoted so many diverse drivers in the EAF approach which make the system very complex. She noted that many countries in Africa are facing challenges implementing EAF because their capacity in terms of personnel and infrastructure is very limited.

Ms Doris Mutta from UNEP sought clarification regarding application of an integrated assessment using species other than fish. She wished to know how much viable information has already been assessed in other species. She was informed that the framework can be applied in any fishery either directly or indirectly e.g. on coral reefs and not only on fish.

A participant from Morocco enquired what kind of support is extended to countries striving to apply EAF. She sought to know the contribution of the project in this regard and the support it provides to countries applying the ecosystem approach. What is the contribution of this project in relation to some industries that tend to unscrupulously export products from Africa?

She was informed that this is an area where FAO has initiated linkage with the Marine Stewardship Council (MSC). Therefore, by implementing EAF the certification process becomes easier to monitor and manage. The MSC framework is fully compatible with EAF. FAO can support a country to improve their management system but it is the responsibility of the country to arrange for certification.

A participant from Mozambique agreed that the process that Ms Bianchi presented is indeed complex but she had simplified it well enough to be understood and appreciated. He noted that when a management plan for a fishery in his country was being prepared, similar complexities were experienced. He pointed out that the participatory approach is the most difficult, which in turn leads to difficulty in the implementation. Participants agreed that a major challenge is the different levels of understanding and the language of communication.

Mr Koranteng informed the participants that the New Partnership for Africa's Development (NEPAD) is working with Kenya in a programme towards certification of the country's lobster fishery. He noted that the critical steps in the process which involves the Fishery Improvement Programme (FIP) are consistent with the EAF planning process.

In concluding the discussion, Ms Bianchi urged the participants to recognise that embracing EAF is not solely the implementation of a management plan but rather management planning is only one part of EAF implementation.

3. EAF-NANSEN PROJECT AND FISHERIES MANAGEMENT IN AFRICA

3.1 Overview

The first technical session on the contribution of the EAF-Nansen Project towards fisheries management in Africa included presentations on the management planning process and examples of results obtained in EAF-related country projects in Africa. The session concluded with highlights on the next steps in the implementation of the fisheries management plans prepared by the NTGs, institutional arrangements and tracking of EAF implementation in Africa.

The second session on the contribution of the Nansen surveys to the knowledge base for EAF

implementation and management of marine resources in Africa was made up of three presentations on the assessment of data collected, usage and outcome as well as the policy on Nansen data.

3.2 Towards a new fisheries management regime

This session was chaired by Mr Hashali Hamukuaya and comprised presentation on the contribution of the EAF-Nansen Project towards a new fisheries management regime in Africa, implemented through country projects. A general overview and historical perspective of the Nansen Programme from 1975 to date was given by Mr Koranteng. He traced the genesis of the EAF-Nansen Project following recommendations of the WSSD and explained how the goals of the Project have evolved over time.

Ms Gabriella Bianchi gave a presentation on the EAF management planning process and led the discussions thereafter. This was followed by presentations on examples of case studies in Africa by some of the EAF-Nansen Project National Focal Points. The presentations and results of related discussions are summarized below.

Industrial shrimp fisheries in Central Africa – Mr Salvador Ngoande (Cameroon)

Mr Ngoande, the EAF-Nansen Project Focal Point for Cameroon presented the status of management planning for the industrial shrimp fishery in Central Gulf of Guinea. The countries involved are Cameroon, Gabon and Nigeria. The main results emerging from the process are as follows:

- A management plan was developed for each of the three countries;
- Capacity building was enhanced for fisheries managers, researchers and other stakeholders through training courses and meetings;
- Links were established between the countries and two regional fisheries bodies – Fishery Committee for West Central Gulf of Guinea (FCWC) and the Regional Fisheries Committee for the Gulf of Guinea (COREP);
- Needs assessment was conducted for the implementation of the management plans.

He said that all these have created awareness on fisheries management. This is expected to lead to improved management of the industrial shrimp fisheries in the sub-region.

Mr Ngoande mentioned the lessons learnt and highlighted the fact that the EAF country projects have significantly contributed to the sound management of fisheries of the Gulf of Guinea. He also pointed out that various issues had been identified and listed the major ones as follows:

- Fish production has dropped and this needs to be addressed;
- There is a need to update the biological and ecological knowledge on resources for targeted species;
- For the non-targeted species, there is a high level of bycatch and insufficient data for decision making;
- Too many fishing boats were operating in the region, so there is need to manage the fishing effort;
- In Cameroon the capital necessary for purchasing fishing boats is scarce;
- Existing conflicts between artisanal and industrial fisheries lead to loss of gears, equipment and reduction in catch especially for the artisanal fishers;
- Poorly developed fisheries sector is caused by lack of compliance with the law, poor MCS arrangements and insufficient policy documents;
- There is need to reinforce research especially for shrimp fishery;
- Armed robbery and piracy are still rampant in the Gulf of Guinea area.

Mr Ngoande also mentioned that in order to guarantee success in the future, it is necessary to take the following steps: approval of the management plans by the relevant national authorities, official launch of the plans in collaboration with FAO and the Regional Fisheries Bodies and the immediate implementation of the plans with support from FAO, COREP, FCWC and other partners.

Banks Fisheries of Mauritius – Mr D Degambur (Mauritius)

Mr Degambur of the Ministry of Fisheries, Mauritius presented the status of the Saya de Malha Bank and Nazareth Bank fisheries. He provided information on the maximum sustainable yield (MSY), the depths where the most common catches occur, the fishing method and the fishing season. He tabulated the production of the Banks fishery from 1977 against the number of fishing vessels and explained that the production reduced considerably from 5 291 tons in 1995 to 1 281 in 2012 mainly due to a reduction in the number of vessels.

Mr Degambur also presented the fisheries management plan for the shallow water démersale fishery of the two banks. The overall objective of the plan is to revive the fishery in order to increase production, and improve governance to ensure sustainability of the fishery. The Plan has three management objectives with distinct operational strategies aimed at i) increasing production up to the total allowable catch (TAC), ii) improving governance of the fishery and iii) ensuring sustainability of the fisheries on the two banks.

In conclusion, Mr Degambur highlighted the chronology of activities in the preparation of the fisheries management plan.

A participant wished to know which other factors were considered crucial in the preparation of the management plans and whose absence would have rendered the whole process ineffective. Mr Degambur responded that all the key factors were included and that is why the management plan developed was not only suitable for the unique fisheries on the banks but also aimed to address the issue of dwindling stocks and their sustainability – considering that the fishery production had dropped from about 5 300 tonnes to just under 1 300 tonnes.

A participant enquired whether the size of juvenile fish was taken into consideration in the preparation of the management plan. Mr Degambur responded that the fishery is managed through a quota system. He added that since this fishery is underutilised, the decrease in size has not been experienced yet.

Mr Koranteng observed that the amount of time taken to prepare a management plan will always depend on the availability of the required information. He recalled that although Mauritius was one of the last countries in the region to start its country project, it had the necessary data and information that has led to the development of the plan.

Small and medium pelagic fisheries of Kenya and Tanzania – Ms Mwaka Barabara (Kenya) and Ms Fatma Sobo (Tanzania)

Ms Sobo presented the EAF country project in Kenya and Tanzania. She highlighted the background information leading to the development of the small and medium pelagic fishery management plan in Tanzania, the key statutes regulating fisheries, parent ministries responsible for fisheries, and the partners at the national and regional levels. Ms Sobo tabulated the major milestones of the EAF-Nansen country projects since their inception in both countries, the costs and sources of funding. She also highlighted the lessons learnt, outcome of stakeholder awareness creation and the status of capacity building for both fisheries management staff and stakeholders. The presentation underscored the importance of the artisanal pelagic fisheries management plan and how it aims to achieve the following:

- Ensure sustainability of the fishery;
- Increase socio-economic benefits for the fishers such as employment;
- Strengthen co-management aspects in the management of the fishery; and
- Sustain exploitation of the small and medium pelagic fish in the offshore areas.

Ms Sobo recalled that various challenges were experienced during the preparation phase which are bound to emerge again during implementation especially in the following areas:

- Managers may not fully understand the implementation procedures;
- Inadequate funds for implementation;

- Political constraints exist that need to be addressed; and
- Weak management structure of the responsible agency.

Linefish fishery of Mozambique – Ms Ascensao Pinto (Mozambique)

Ms Pinto highlighted documents prepared regarding the linefish fishery of Mozambique, the current status of the country's plan and the perspective for its implementation. Mozambique established a project coordinating group including national partners such as the Fisheries Administration, the Fisheries Research Institute (IIP) and other stakeholders.

She presented the current status of key documents including the addendum to the management plan for the Sofala Bank shallow water shrimp fisheries, the revised ERA report and draft of the linefish fishery management plan. She also touched on management measures that have recently been put in place including allocation of quotas for the industrial fishing fleet and limiting the number of boats for the southern zone of the coast. The main benefits obtained from FAO and the EAF-Nansen Project since 2007 were also enumerated and these included the R/V *Dr Fridtjof Nansen* surveys undertaken through IIP and in collaboration with Agulhas and Somali Currents Large Marine Ecosystem (ASCLME) project and the South West Indian Ocean Fisheries Project (SWIOFP) as well as training courses.

In concluding her presentation, Ms Pinto made the following observations:

- The major challenge is to link/combine the existing physical and biological data sets;
- She proposed to involve the universities to train students/staff in fisheries institutions utilizing results of the surveys and analyzing the available unprocessed samples;
- She advocated setting-up regional discussion groups across Africa to share knowledge.

Demersal fishery of Madagascar and Comoros – Ms Samueline Ranaivoson (Madagascar)

Ms Ranaivoson, the EAF-Nansen Project Focal Point of Madagascar presented some of the results from activities supported by the Project in the improvement of the management of demersal fisheries in Madagascar and Comoros.

Ms Ranaivoson stated that contribution of various partners in the preparation of the demersal fisheries management plan was crucial and valuable lessons were learnt during the process. She mentioned that from the formulation of concepts to resolution of problems up to the implementation of the plan, the approach used was participatory and involved many partners. She emphasized that it was important to plan and prepare well in order to ensure a sound financial base to support implementation of the management plan. It is crucial to involve both the national government and all relevant local administrations as much as possible in the process. This way, possible conflicts between various stakeholders would be minimised or avoided.

Ms Ranaivoson said she had learnt that to ensure durability of any implementation process, it is necessary to define responsibilities and roles prior to agreeing on the tasks by specific persons and institutions. She said that a well-developed management plan will not only serve as a model document for managing similar fisheries resources in the region but also encourage implementation of EAF.

Beach Seine fishery in the western Gulf of Guinea – Mr Alain Kodjo (Côte d'Ivoire)

Mr Kodjo presented the management plan of the beach seine fisheries of Côte d'Ivoire and Togo. He presented the management and operational objectives as well as the proposed activities in the two countries. The activities presented were geared towards achieving the following objectives in both countries:

- Restoration of the biomass of overexploited areas;
- Protection of the biodiversity of the coastal marine ecosystem;
- Improvement of the management of the beach seine fishery;

- Enhancement of the livelihood of the communities dependent on the beach seine fishery and related activities.

Mr Kodjo said that the implementation process to achieve the above objectives will consist of the following actions:

- Finalised plan to be presented to the Cabinet of the Ministry responsible for fisheries before the end of December 2013;
- Strengthening of the management team in charge of planning and allocating budgeting line as from 2014;
- Organization of a workshop to launch the plan and to initiate the implementation with partners;
- Elaboration of a communication strategy to support the implementation and to promote partnership.

Some of the measures prescribed in the plans are to:

- Increase the mesh size in the bag of the beach seine net from 10 mm to 20 mm;
- Control access to the beach;
- Constitute and/or strengthen the committees responsible for the management of beach seines at the local level;
- Develop a system of participatory data collection;
- Promote partnership among various groups;
- Institute seasonal closure of estuaries where beach seining is practiced;
- Create an MPA in Togo; and
- Enforce protection and rescue of threatened species.

It was noted that the beach seine fishery management plan will contribute significantly in providing a lasting solution to problems related to the management of the coastal fishery. The implementation of the management plan will be for a period of five years.

Small pelagic fisheries of Northwest Africa – Mr Birane Sambe (CCLME project, Dakar)

Mr Sambe, Coordinator of the CCLME Project, presented a paper on the small pelagic fisheries of Northwest Africa. He informed the participants that the goal of the Project is to reverse the degradation of the CCLME caused by over-fishing, habitat modification and changes in water quality through adopting the ecosystem approach.

He pointed out that the initiative conforms to the common criteria that apply to all GEF-funded demonstration projects. The criteria ensure that all projects must:

- Demonstrate a way of addressing a problem or issue effectively;
- Be innovative – they cannot simply replicate proven approaches;
- Be replicable elsewhere in the region or other parts of the world.

In addition to the above criteria, demonstration projects must:

- Integrate capacity building, experience sharing and training;
- Maximise the use of national and regional expertise;
- Have realistic objectives and be cost effective.

Mr Sambe cited five demonstration projects in Northwest Africa that contribute to the maintenance of the CCLME and its healthy functioning capable of providing goods and services upon which human populations depend. The presentation showed that from the regional context:

- Small pelagic fish are the most abundant and extensively shared fish stocks in the CCLME region;
- The most commercially important pelagic species are the sardines (*Sardina pilchardus*), the sardinella (*Sardinella aurita* and *Sardinella maderensis*), the horse mackerel (*Trachurus trecae*, *Trachurus trachurus* and *Caranx rhonchus*), chub-mackerel (*Scomber japonicus*), the bonga (*Ethmalosa fimbriata*) and anchovy (*Engraulis encrasicolus*);

- These resources provide important contributions to the socio-economic development and food security of the sub-region;
- The shared nature of the resources, the multiplicity of “users” and the variability of the stocks constitute major challenges to the management of the small pelagic fisheries.

All four countries participating in the project (Morocco, Mauritania, Senegal and Gambia) identified declining or vulnerable small pelagic resources as a priority transboundary issue in their national consultations. The principal areas of intervention to reduce this decline were identified as:

- Monitoring, assessment, data collection and management;
- Sustainable management of the resources;
- Implementation of regional agreements and plans;
- Capacity building; and
- Public awareness and stakeholders’ participation.

Mr Sambe listed many outcomes expected from the project including the following:

- Improved collective knowledge of small pelagic resources, their ecosystem and interactions with the changing climate;
- Contribution in the formulation of regional policies on the sustainable management of small pelagics in North West Africa;
- Elaboration of, and agreement on, at least one management plan for one or more shared small pelagic stocks;
- Evaluation of the costs and benefits of the cooperative transboundary ecosystem approach as a basis for replication on other stocks elsewhere.

Mr Sambe showed activities carried out under the three components of the project from 2012–2013 in the various countries. He said the next steps will be as follows:

- To review relevant documents in particular outputs of recent workshops such as the reports of the “Scientific Working Group on small pelagics of Northwest Africa” and the “Strategic Orientation for Sustainable Exploitation and Cooperative Management of the shared Small Pelagic fishery of Northwest Africa”;
- Based on the above mentioned workshop outputs and working with the EAF Task Group, assistance will be provided to finalize the risk assessment report outlining among others the methodology, scope, main issues and risks associated with the sustainable management of this fishery;
- Work with the EAF Task Group to develop a draft regional management plan and prepare a draft log-frame;
- Present the reports at a regional workshop to be organized by the CCLME Project;
- Review national fisheries management plans and advice on alignment with the EAF framework and principles.

Small-scale fisheries sector plan of Liberia and Sierra Leone – Mr Sheku Sei (Sierra Leone)

Mr Sei of the Ministry of Fisheries and Marine Resources of Sierra Leone made a presentation on the small scale fishery sector management plans of Liberia and Sierra Leone. He informed participants that the main fisheries sub-sectors of the region are industrial (trawlers) and artisanal (small-scale). He pointed out that the marine small scale fishery sectors of Liberia and Sierra Leone contribute over 80 percent of total fish landings that provide animal protein need for the population of four to six million people. He said that the fisheries GDP contributions are put at 10 percent and 3.5 percent to the national economies of Sierra Leone and Liberia respectively.

It was shown that high fishing pressure is experienced mainly on six key species, which are either overexploited (OE) or fully exploited (FE) namely: *Pseudotolithus elongatus* (Bobo Croaker) OE, *Pseudotolithus spp* (Other Croakers) FE, *Arius spp* (Sea Catfish) FE, Sparidae (Dentex and Sea Breams) OE, *Sardinella aurita* (Round Herring) FE, *Sardinella maderensis* (Flat Herring) OE.

Mr Sei mentioned that large quantities of juvenile fish are illegally exported by fishers from Sierra Leone to Guinea, while juvenile sharks and rays are exported to Ghana. Coastal communities in Sierra

Leone and Liberia are also affected by coastal erosion due to the effects of climate change. He cited the following priority issues that have been identified for small scale fishery management in Liberia and Sierra Leone:

- Access to the fisheries in both countries is open, with no effective limits on entry, except through licensing;
- Coastal resources are under intense fishing pressure by both mechanized trawling and small-scale fisheries operators using illegal fishing gears in the inshore waters where fish breed;
- Inadequate fisheries management systems, limited knowledge of sector potential and weak governance resulting in excessive incidence of IUU fishing.

To address emerging challenges, Mr Sei said that a management plan has been developed for the small-scale fisheries sector with the following objectives:

- Rebuild the declining fish stocks by ensuring their exploitation is within biologically acceptable levels;
- Reduce illegal fishing and replace open access fishery with a system of fishing rights through establishment of co-managed MPAs that will graduate into territorial use-rights in fisheries (TURFs);
- Manage the fishery with responsibilities shared among the fisheries administration and other stakeholders taking into account the human, social and economic aspects of the fishery in line with EAF.

He presented the priority issues in the two countries and an elaborate logical framework proposed for the management action. The logframe contained the main issues (objectives), the management strategies and the outcome indicators. Mr Sei also listed 14 key lessons learnt and the steps for the way forward in the management planning process.

Institutional arrangement for EAF implementation (the case of BCC) – Mr Hashali Hamukuaya

Mr Hamukuaya, the Executive Secretary of the Benguela Current Commission (BCC) made a presentation on the BCC/EAF-Nansen Project on institutional arrangements for EAF implementation in the BCC area. He noted that the overall objective of the Project is to provide information and advice to countries on institutional needs to meet the requirements of EAF management.

He said that pillars of best practice exist that need to be in place to ensure success in implementing EAF namely: institutional structure, enabling legislation, policies and plans; coordinating and linkage mechanisms; and compliance mechanisms. In the presentation, Mr Hamukuaya demonstrated how the three BCC countries (Angola, Namibia and South Africa) can share a productive ecosystem through 1) a specific unit for fisheries management, 2) addressing the need for management training, 3) establishment of management advisory committees, 4) reviewing of relevant legislation, 5) establishment of a fisheries management authority (FMA) and taking into consideration the role of BCC.

Tracking EAF implementation in Africa – Mr Kwame Koranteng (FAO)

Mr Koranteng made a presentation titled: *Setting reliable baselines to track EAF implementation in Africa*. In the presentation, he informed participants that fisheries management is moving towards an ecosystem approach where not only is the whole ecosystem taken into account but also the social and economic wellbeing of the fisher communities as well as governments' ability to ensure sustainability of fisheries are considered. He said that the successful implementation of EAF must lead to reduction of ecosystem impacts, rebuilding of depleted stocks and assured livelihoods of fisher communities.

To assess the implementation of EAF, a tracking tool has been developed by FAO and partners (mainly WWF-South Africa) that uses the ecological risk assessment (ERA) methodology to review progress against ten management objectives. The objectives are framed around the generic component trees underlying the EAF framework (Fig. 1).

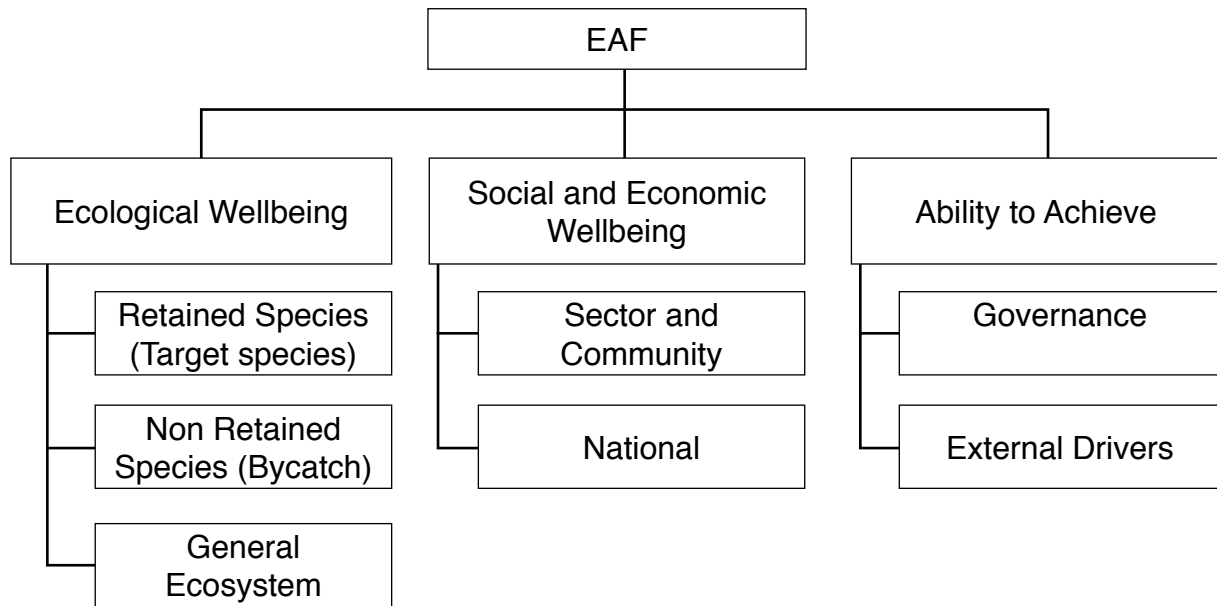


Figure 1: A generic component tree for issue identification under the EAF framework

The EAF objectives are:

1. The managing authority has a good understanding of the ecosystem impacts of fisheries;
2. Ecosystem impacts of fisheries are considered in management advice;
3. The social wellbeing of dependent fishing communities is accounted for in management;
4. The economic wellbeing of the industry is maintained;
5. The managing authority has transparent and participatory management structures that ensure good communication and information sharing locally and regionally;
6. Management plans incorporate EAF;
7. Compliance with regulations and outcomes;
8. Sufficient capacity, skills, equipment and funding to support the implementation of EAF;
9. Good data procedures exist to support EAF implementation;
10. External impacts of fisheries are addressed (e.g. the effect of other sectors, other industries, climate change, etc).

Mr Koranteng presented examples of analyses to assess the status of implementation of EAF in relation to the ten objectives. He showed the percent achievement for Tanzania, Kenya Sierra Leone and Cameroon using selected fisheries. Mr Koranteng made a number of observations on the results of the analyses, in particular the effect of the background of the people (stakeholders) that undertake the assessment. He informed the Forum that the tracking tool provides a platform for stakeholders to grapple with the complexity of implementing EAF, allows for improved stakeholder communication and understanding of EAF issues and the sharing of information among multiple stakeholder groups. Furthermore, the tool provides a comprehensive way to structure a review, facilitate communication, track progress, communication, simplify a complex issue, and build a common understanding by the stakeholders.

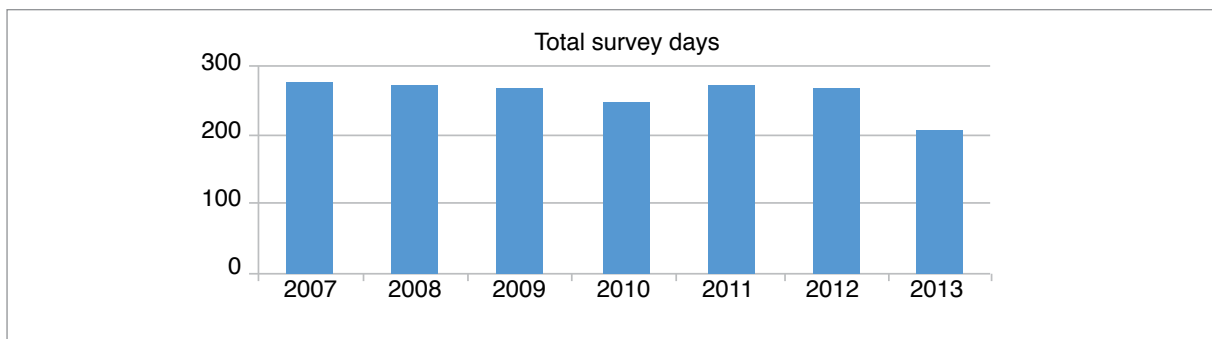
Mr Koranteng also noted that although the tracking tool simulates EAF implementation, especially with stakeholder input and support, he cautioned that EAF implementation is a process that begins with planning through implementation and monitoring and that each phase is important and must be participatory and transparent.

3.3 Contribution of Nansen Surveys

Mr Asmund Bjordal of IMR Norway moderated the session on the *Contribution of the Nansen surveys to the knowledge base for EAF implementation and management of marine resources in Africa*. Mr Tore Strømme, Research Coordinator of the EAF-Nansen Project, presented an overview of surveys carried out in Phase I. It was followed by five presentations on the assessment of the data collected, usage and outcomes. The presentations highlighted the data that is contributed for the assessments carried out in working groups organized by FAO/RFBs and also in the TDA/SAP processes of the LME projects. Also covered were environmental surveys carried out in support of the oil and gas industry in Africa. The last two presentations were on the NansClim project and the Nansen Data Policy.

Overview of surveys carried out in Phase I – Tore Strømme (IMR)

In his first presentation, Mr Strømme gave an overview and breakdown of the R/V *Dr Fridtjof Nansen* surveys carried out during the first and transition phases of the EAF-Nansen Project from 2007 to 2013. The total survey days for each year of the Project is shown below.



He also listed the types of surveys carried out and the total number of days used for each type of survey in the period under consideration as follows:

- Regional stock monitoring
- National stock monitoring
- Regional ecosystem surveys
- National ecosystem surveys
- Recruitment studies
- Process studies
- National stock inventories
- Inter-calibration
- Fish development
- Environment monitoring

In a second presentation, Mr Strømme focussed on the stock dynamics of the deep water hake stocks in Southwest Africa between Cape Agulhas in South Africa and the Cunene river between Namibia and Angola derived from the coordinated transboundary surveys carried out from 2003 to 2012. He noted that if a resource is transboundary, national surveys are incomplete as fish move in and out of the national 'container'; a movement that might vary interannually with the size composition of the stock, environment conditions and availability of food. Consequently, transboundary surveys are necessary to better understand the migration cycle of the species and in particular how much time (in the lifecycle and in the annual feeding migration) the resource spends in each country.

Mr Strømme highlighted the importance of coordinating surveys when monitoring shared resources and the need to standardize sampling methods and sampling gear when more than one vessel is used to carry out the surveys. In his conclusion, Mr Strømme noted that:

- The regional stock of deep water hake has been expanding since 2003;
- The component of larger fish biomass is increasing, which indicates that the stock is improving and is in a healthy state;
- The time series shows interannual changes in the national share of the stock but the driving force is not yet well understood.

Comments and discussion

In the discussions that followed the presentations, a participant enquired whether surveys carried out only once a year were enough to validate the conclusion. She was informed that additional data would be required to give more detailed information about the distribution and abundance of the fish stocks and that seasonal surveys would also provide a clearer picture of the situation. It was noted, however, that these surveys are very expensive.

A participant enquired whether there has been any reaction or response from either of the two governments (Namibia and South Africa) on the results of the analyses, in particular regarding the distribution of the juvenile fishes. He was informed that one of the tasks of the BCC is to give recommendations to the national authorities. The team does not interact directly with the national authorities but the information they provide is appreciated by all the countries, even though the study is still in the initial stages and not yet fully implementable.

3.4 Assessment of the survey data, usage and outcomes

Contribution to FAO/RFB WGs – Ms Merete Tandstad (FAO)

On behalf of Ms Tandstad of the FAO Marine and Inland Fisheries Branch, Mr Pedro Barros of the same Branch made a presentation on the contribution of the Nansen surveys to FAO/RFB Working Groups (WG). He commenced by presenting how data and information from surveys and other sources are used to provide advice for the Committee for Eastern Central Atlantic Fisheries (CECAF) and the structure and relationships between the Scientific Sub-Committee (SSC) and the WGs under it.

It was noted that the overall objective of the WGs is “*to assess the state of the fishery resources and make recommendations on fisheries management and exploitation options aimed at ensuring optimal and sustainable use of the resources for the benefit of coastal countries*”. Excerpts of the reports of recent WGs were then presented. Special emphasis was placed on the contribution of the data obtained from the R/V *Dr Fridtjof Nansen* to the assessments carried out by the WGs.

Mr Barros concluded that the deliberations of the WGs show that:

- Survey data are actively used for assessment at the regional and also national level (e.g. in Mauritania);
- Scientific advice and decision making are based on the survey data collected;
- In some of the countries (e.g. Angola) survey results are main basis of fisheries management recommendations made by the research institute (INIP);
- Regional recommendations, even though they provide useful guidance for management decisions in many countries, are not always specific enough for national level uptake;
- Further support is required to translate knowledge into operational management and for subsequent use in decision making.

Comments and discussion

After the presentation, a participant noted that the horse mackerel fishery is the highest valued commercial species in the region and enquired whether there any plans by FAO to assist the CCLME project to survey the deeper zone in order to establish the status of that resource. Mr Barros replied that this is an issue for the entire region, which is linked with the rest of Africa. In order to increase the chances of attracting funding for this purpose, it is wise to consider the possibility of conducting a fully-

fledged survey not just series of monitoring campaigns. The participants from the region were strongly advised to work towards exploring this possibility.

Another participant informed the Forum that surveys conducted in the past had recommended that small pelagic fishes in inshore waters should not be exploited. He indicated that this is a management issue that needs to be addressed. The participant noted that from the presentation it is clear that the R/V *Dr Fridtjof Nansen* is able to ply shallow waters to assess the resources there. The participant was informed that the R/V *Dr Fridtjof Nansen* does not trawl in shallow waters (i.e. less than 20m depth). Nevertheless, good information may be obtained from other sources, e.g. from small coastal vessels.

Ecosystem surveys in the Canary Current area – Birane Sambe (CCLME)

Mr Sambe, the Regional Coordinator of CCLME made his second presentation on the ecosystem surveys conducted in the Canary Current. He said that the objectives of the surveys were twofold: 1) to collect data on all major drivers of the CCLME in order to establish a baseline and 2) to acquire additional knowledge in the context of the transboundary diagnostic analysis (TDA). This research partnership was supported by relevant institutions in all the seven countries of the region namely; Guinea, Guinea Bissau, Gambia, Senegal, Mauritania, Morocco and Cabo Verde, in collaboration with counterparts from Norway, Spain, and others.

He explained that the expected results from the survey are not only to provide the traditional information on abundance, distribution and biodiversity of various marine organisms but also to enhance the capacity of students and young scientists from CCLME to carry out related research.

Mr Sambe presented the data sampling techniques of the water column and the benthic zone for the entire CCLME area together with results from wind measurements, meteorology, hydrography, acoustics and plankton surveys. He also talked about observations on seabirds and cetaceans. He showed distribution maps for various species and indicated the values of biomass that have been calculated for some. He presented additional results from visual observations of seabirds and cetaceans and informed the participants that the data will be used both for the traditional calculation of abundance and recruitment of species as well as in new contemporary approaches to determine biodiversity, to better understand the effects of climate, biodiversity hotspots, and research on pollution among others.

Comments and discussion

Following the presentation, a participant enquired why only a small part (~2 percent) of the survey covered the pelagic system when the region is dominated by pelagic species. He was informed that since the surveys carried out are ecosystem surveys all components need to be studied. It was noted that this notwithstanding, important information about pelagic stocks had been collected during the surveys. One acoustic survey was limited to the southern part of the CCLME region and another was on the reproduction of *Sardinella*. The participants were informed that a regional partnership has been established to start analyses of samples collected during the ecosystem surveys.

Environmental surveys in support of the oil and gas industry in Africa – Mr Bjørn Serigstad (IMR)

Mr Serigstad of CDCF/IMR presented information obtained from experience in the oil and gas industry of Norway and highlighted how the knowledge could benefit Africa as exploration for these resources progresses around the continent. He mentioned that fisheries represented the most important industry in Norway before and during the advent of oil exploration 40 years ago. A few years later, due to the fast growing oil industry, the commodity became the most important economic entity – the scenario is becoming similar in many developing countries. However, we often overlook the fact that whereas petroleum is both a diminishing and non-renewable commodity, fisheries is a renewable resource with potential for further development and increased production in the future.

Oil Industry and fisheries – the Norwegian experience worth emulating

Mr Serigstad showed the map of the Norwegian Sea indicating the various fisheries protection zones and location of the EEZ for the riparian countries. The map also showed the location of petroleum provinces on the Norwegian continental shelf and the infrastructure for transportation of natural gas. He said that in the case of Norway, the ecosystem based integrated management planning took into consideration the cumulative economical and environmental effects of sustainable use of fish and other natural resources to safeguard the environment. The map highlighted particular vulnerable areas of important fish stocks such as cod, haddock, herring and capelin.

Mr Serigstad described how to manage risk of acute oil pollution from sea transport. He showed how developing nations can benefit from the improved modern knowledge in screening of hazardous chemicals in sediments, the water column and living marine organisms for the proper management of fisheries. He demonstrated how baseline knowledge can be enhanced using information obtained from the images of the seabed, coral reef, geological mapping and distribution of seabirds.

“From the Norwegian experience, the co-existence of the oil industry, fishery and other uses of the sea is possible”, said Mr Serigstad. The major challenges for developing countries include factors such as inadequate technical equipment, challenges in the preparation of samples, limitation in capacity. Furthermore, even where appropriate legislation and regulations exist, the systems for auditing, control and enforcement are often not fully implemented. For example, monitoring of discharges from oil and gas production offshore requires standard sampling designs oriented in four directions and typical samples usually analysed are total organic material, grain size distribution, hydrocarbons (THC/PAH), heavy metals and the soft bottom macro fauna.

Mr Serigstad presented examples from the Ghana environmental monitoring programme conducted in collaboration with various local authorities. He also showed the video grab that transmits live video pictures from great depths in the ocean.

Outcome of the NansClim project – Mr Larry Hutchings

Mr Hutchings of South Africa presented the outcome of the Norad-funded NansClim project that looks at climate effects on biodiversity, abundance and distribution of marine organisms. He said that NansClim aims to identify and describe possible trends in ocean climate and the corresponding changes in marine biodiversity and fisheries in the Benguela Current Large Marine Ecosystem (BCLME). The project has been running since 2009 and is a collaboration between Norway and the three countries bordering the BCLME – Angola, Namibia and South Africa.

Mr Hutchings mentioned that the research conducted by NansClim is guided by the following five key objectives:

- To identify ecosystem changes as a result of climate variability;
- To document changes in the distribution and abundance of species and communities;
- To identify potentially useful species as indicators of change;
- To identify sensitive areas or hotspots of change; and
- To document changes in productivity related to climate variability.

Emerging results indicate that the oceanography across much of the South Western region of Africa has been changing since around 1990. Data shows that the Angolan subtropical waters and the northern Benguela have been warming since the early 1990s. The observed regional warming coincides with a Southward shift of the centre of the South Atlantic High Pressure cell in summer by two degrees latitude.

He presented graphical time-space plot of chlorophyll-a, which showed latitudinal variations. From a long-term perspective, there was no clear response in chlorophyll-a at the sea surface to changes with oceanographic drivers such as wind, upwelling and SST. However, there was indication of marked, localized inter-annual changes in chlorophyll-a concentration and primary production in all sub-systems of the Benguela. For example in the Lüderitz Upwelling Cell and Orange River Cone (LUCORC) area there appears to be increasing concentrations of chlorophyll-a since 2003 possibly linked to decreasing wind induced turbulence.

The presentation showed that the most obvious change in the Southern Benguela ecosystem over the past two decades has been the distributional shift of anchovy and sardine (and rock lobster) from the West Coast to the Agulhas Bank in the late 1990s/early 2000s. While this shift is not believed to be as far-reaching or as likely to be irreversible as that in the Northern Benguela, its causal factors are poorly understood but may be at least partly environment driven. However, temperature changes are unlikely to be the cause as shown in one of the studies which demonstrated that anchovy and sardine (particularly sardine) are not physiologically tightly confined to a given range of temperature and can spawn over a wide range of temperatures.

In conclusion, Mr Hutchings recalled the potential implications of the study for ecosystems based management within BCLME and provided recommendations for future surveys. The NansClim Project has also showed the existing gaps in knowledge some of which are already being addressed by on-going national, bilateral or international research projects and programmes.

Development of GIS tools to support EAF management – Mr Pedro Barros (FAO)

Mr Barros of the FAO Marine and Inland Fisheries Branch presented an approach for the development of GIS tools to support EAF management – the EAF toolbox. He informed the participants that usually fisher conflict only erupts if they are fishing the same species at the same time in the same place. He said the use of GIS tools for EAF is most essential because it takes into account the following important attributes:

- Fisheries occur in a spatial context;
- Fisheries management (and mismanagement) depends on spatial elements;
- EAF principles require management in meaningful ecological boundaries; and
- Fishing and conflicts depend on co-occurrence of the resources and its users.

GIS tools for managing EAF tasks

Mr Barros noted that GIS uses in EAF would be most useful for i) presentation of information in maps with different perspectives, ii) combination of products using different information sources, iii) capture data from stakeholders, iv) analysis of potential for conflicts and issue identification (overlaps/disjoint distribution). He demonstrated how GIS has numerous advantages over paper maps such as flexibility, has many different views, can compare information based on geographical position, makes recording and storage easier, has analytical capacity and can transform words into maps.

Mr Barros presented the main elements of GIS tools for EAF planning and the four main steps that link GIS tools (the how), tasks (the what) and products to the EAF processes. He also provided detailed information on the training requirement for managers and technical staff and gave some information about a training course on the subject that has been developed by FAO.

4. SECOND PHASE OF THE EAF-NANSEN PROJECT

4.1 Overview and development of second phase

The session on the development of the second phase of the EAF-Nansen Project had brief presentations on the new research vessel, there were presentations on the four components of the project and working group discussions.

Representatives of partner projects also made presentations highlighting possible areas of collaboration with the EAF-Nansen project, especially in its next phase. Each presentation was followed by an interlude of discussion comprising of questions/responses, remarks, observations and comments by participants.

The session was moderated by Mr Aubrey Harris of the FAO Office in Harare, Zimbabwe, Ms Catherine Martens of MFA in Norway and the Coordinator of the EAF-Nansen Project, Mr Kwame Koranteng. The session was in three parts comprising of Working Group discussions and reporting back, presentations by invited partners and a panel discussion.

Ms Gabriella Bianchi made a presentation on the development of the second phase of the EAF-Nansen project. She mentioned how the Nansen Programme objectives have evolved over the years from exploratory work through resource monitoring to the current ecosystem approach. Even though the drivers may have remained the same over the years, they are bound to have a major impact as the marine ecosystem undergoes marked change. One contributory factor to this is pollution via land-based sources and from eutrophication caused by pesticides. A more recent development is pollution from oil exploration in Africa, which is bound to become one of the main drivers. She said that despite the oceans receiving much attention on matters of its health in the Rio+20 Conference, its sustainability remains elusive. To address this, there is a strong move to make drastic improvement through human capacity building and governance.

Ms Bianchi noted that the future of the Nansen Programme lies in broadening the current objectives to help developing nations meet the demands of the changing environment more effectively. In line with that, she said that the potential stakeholders must therefore transcend an individual nation to the region and eventually the entire globe. To succeed in this, the Forum aims to seek the opinion of partners and other stakeholders on components that have been proposed for the next phase of the Project. She made brief presentations on the four components comprising i) the Science Programme, ii) Capacity Building, iii) Policy and Management, and iv) Public awareness raising and resource mobilization.

4.2 New research vessel

Mr Åsmund Bjordal of IMR Norway presented information on the new research vessel, its development and proposed capability. He provided the statistics of the existing vessel which was built in 1993. It is 56.8 m and 12.5 m wide and has engine power of 1980 kW. It has only three laboratories and no auditorium. He presented background information from 2011 when upgrading of the vessel was proposed, through 2012 when the Norwegian Parliament approved the construction of a new vessel to the design of the new vessel and model testing in 2013.

Mr Bjordal said that the new vessel will be 74.1 m long and 17.4 m wide and will have an engine power of 4.5 MW. It will have five laboratories for a variety of research ranging from oceanography, plankton, demersal/pelagic trawling, bottom coring, grabbing, photo lab and climate and mammal/seabird observatory. It will have a large auditorium and space to accommodate three 20 ft containers.

4.3 Components of second phase

Four Groups were constituted to discuss the four key components of the next phase of the EAF-Nansen project. Highlights of the reports presented at the plenary by the group leaders are given below.

Climate change and fisheries – Mr Tore Stromme, Ms Gabriella Bianchi and Mr Larry Hutchings

The group on climate change and fisheries resolved that the two main objectives for future Nansen surveys are resource mapping and ecosystem surveys in both the upwelling and non-upwelling regions of Africa. They proposed regular acoustic surveys every year in the upwelling regions, regular acoustic and demersal trawl surveys in the Gulf of Guinea and regular acoustic surveys in the Western Indian Ocean. Biomass estimates of the main stocks would be made. The group also proposed to map the distribution of small pelagic fish resources in the area surveyed.

The group proposed one baseline ecosystem survey in the upwelling and other regions and regular surveys thereafter. The ecosystem surveys will be for: i) collecting and sampling of benthic invertebrates, ii) study on the biology of fish species of interest (including their diet, length measurement, age, reproduction, growth, etc.), iii) scientific observations of marine mammals and seabirds, and iv) sampling of the environment, stock identification, and collection and sampling of eggs, larvae and plankton (phytoplankton and zooplankton).

The group proposed the establishment of two working groups, one for planning the surveys and the other for analysing the data. They made the following two key recommendations:

- Managers and scientist from all the regions to meet and finalize the project document for the new phase of the EAF-Nansen Project, and
- To conduct regular and consistent standardized surveys for a minimum of 10–20 years in order to demonstrate impacts.

Marine Environment – Mr Bjorn Serigstad

The WG on marine environment discussed the sources of marine pollution and activities to be included in the new phase of the Project. Pollution issues raised were as regards the status of the environment and possible effects on fish recruitment, biodiversity and food security. The group proposed sampling of sediments, important fish stocks, plankton and the water column. For baseline studies, the type of material that should be analysed includes hydrocarbons, heavy metals, pesticides, chlorinated/bromated compounds and the benthic biodiversity.

The group advised that a suitable monitoring strategy should be established with sampling every 3–5 years and all sources of pollution included.

Further, the group discussed problems related to oil and gas drilling, heavy metals from oil spills or drilling fluids, the sources and disposal of ballast water, indiscriminate waste disposal by fishermen, the actions and analyses involved in mapping polluted areas using GIS, issues of bycatch and the effect of discards on the marine environment, sea transport of minerals, land reclamation and sand mining around the coasts and disaster caused by fishermen destroying oil pipelines. Nigeria was proposed for a case study.

The group recommended the following actions:

- Capacity building should include hands-on training using GIS tools e.g. ArcGIS;
- EAF-Nansen Project to provide GIS tools for countries after training;
- Support bycatch monitoring programmes in artisanal and industrial fisheries; and
- Establish a framework of environmental issues affecting the marine environment.

The group recommended regular beach cleaning accompanied by sensitization of the fishing communities.

Comments and discussion

Ms Bianchi commended the Group for the comprehensive report with broad discussion. She noted that much of the information can also fit well in the other three WGs. She commented that worth looking for in the next phase is the type of research the project could adopt.

Policy and management – Mr Aubrey Harris and Ms Maria Ascensão Pinto

The group on Policy and Management addressed the issues related to the needs of fishers with a view to ensuring sustainability of their livelihood. The WG recognized the strong linkages that exist between climate change and fisheries management. Though an appreciable amount of data for climate change exists, there is a clear gap in terms of analyses of the same for management purposes. Fishers should be involved in all the fisheries management processes to ensure that they understand the purpose and gain the appropriate knowledge on management as well as the environment and the EAF concept.

The group recommended that fisheries personnel should be involved in the process in order to ensure that communication materials eventually reach the policy level. To achieve this, it is essential to work with sub-regional and regional organizations and to develop pilot/demonstration projects in countries in order to effectively document the results. The group advocated for management plans that address the needs of the fishing communities. They recommended that countries should establish mechanisms/systems to support effective implementation of the management plans developed.

The group strongly encouraged sharing of the data collected with the relevant sub-regional and regional organizations. While recommending the establishment of partnerships with relevant sub-regional and regional organizations, the group stressed the need to develop management plans for non-coastal fisheries using the data from the Nansen surveys. The use of the sub-regional and regional organizations to coordinate and create momentum in the implementation of the management plans involving different countries was also recommended.

The need to create and support effective WGs (as successfully undertaken in East Africa) to discuss the data and information collected during the surveys and to make comparisons was recommended. The group pointed out that often data and information produced are not well understood by the user. The need to transform the information from scientific knowledge into policies should be emphasised.

The group agreed on the need to set up an environment working group with expertise in oceanography, meteorology and related fields, to support the resources and management working groups. This will create a link between the environment scientists and the fisheries scientists. The group also noted that importance of social and economic elements in management, recalling this as one of the pillars of the EAF framework.

There is need to support the resources WGs to prepare scientific papers. Of importance also is to have a clear objective of the cruises to be undertaken with clear purpose for the management of the anticipated data and information.

Comments and discussion

Mr Larry Hutchinson emphasized that the science plan must come from management – so that the challenges of the manager can be solved scientifically. Therefore, scientists should be thinking ahead of their results by 5–10 years in order to be more effective. Another participant reiterated the need to involve fishing community in management. She remarked that the community is in direct contact with the resources so they should be fully involved in its management. This will encourage ownership and stimulate the community to conserve their own resources. Therefore, sensitising the fishing community appropriately about management of the resources is very critical. Mr Makogola of the State Department

of Fisheries, Kenya concurred and pointed out how crucial it is for the data to be conveyed appropriately in a manner that is well understood by the managers of the resources.

Capacity development – Mr Pedro Barros and Mr Asmund Bjordal

Presenting on behalf of the Capacity Development group, Mr Barros stated that in order to be effective, capacity development has to take place at all levels, i.e. the individual, the organization and in the enabling environment. The group noted that any planned capacity development activities must be based on what has already been achieved. A review of needs and existing capacity is necessary in order to identify gaps and take the appropriate measures to fill them.

The target groups identified for capacity development were the fisheries scientists, fisheries managers, observers, MCS officials and the representatives of fisher organizations. Mr Barros reported that the group discussed the main themes for training the various categories of persons including the training approaches in both the long term and short term and the need to make use of existing tools of distance/virtual learning. The group recognized that training should always be long term and aiming at transferring scientific knowledge into management policies.

Networking through a mentoring programme that included the exchange of views between managers and scientists was hailed as a success. The group recognized the importance of focusing on short and intensive training for managers who cannot afford to be away for a long period. Training must also include both junior and senior staff and both local and overseas institutions should be used for training.

Proposed themes for training:

Managers

- Principles and concepts of fisheries management
- Negotiation/ meeting management skills
- Communication skills
- Bridging science and management – How to request, read and interpret scientific advice

Scientists

- Bridging science and management – How to provide scientific advice
- Survey planning and data analysis
- Planning fisheries data collection and analysis of these
- Fish stock and fisheries assessments
- Oceanography
- Fisheries monitoring systems
- Statistical analysis of data
- Writing of scientific reports and papers

Fishers

- Sustainable fishing
- Basic concepts of fisheries management
- Co-management
- Community organization

Comments and discussion

Mr Kennedy Shikami, KCDP Manager responsible for the component on sustainable management of fisheries resources urged participants to create opportunities for managers and scientists to meet regularly. This deliberate effort will ensure that knowledge generated by scientists is utilised more effectively by managers. Ms Doris Mutta of UNEP said that emphasis should also be directed towards building capacity on the development of the oil and gas industry as well as opening up opportunities to bring together fishers and experts on environmental issues.

5. PRESENTATIONS BY PARTNERS

5.1 Overview

All partners participating in the Forum were invited to make brief presentations about their organizations and how their activities link to the objectives of the Nansen Programme currently or in anticipation for the next phase. Partners invited to participate in this year's Forum were the Benguela Current Commission (BCC), the Nairobi Convention (NC) (UNEP), the Intergovernmental Oceanographic Commission of the United Nations Education Scientific and Cultural Organization (IOC-UNESCO), the Kenya Coastal Development Project (KCDP), the Project on Enhancing Prediction of Tropical Atlantic Climate and its Impact (PREFACE), West African Regional Fisheries Programme in Sierra Leone (WARFP-SL), Canary Current Large Marine Ecosystem (CCLME), and the United Nations Industrial Development Organization (UNIDO).

5.2 Nairobi Convention/UNEP

Ms Doris Mutta from UNEP defined the mandate and protocols of the Nairobi Convention (NC) for the protection, management and development of the marine and coastal environment of the western Indian Ocean region. She said that the NC area extends from Somalia to the Republic of South Africa covering ten states, five of which are island states in the Western Indian Ocean. The NC area has a 15 000 km coastline; extensive continental shelf with diverse ecosystems including coral reefs, mangroves, seagrass, coastal forests, and other significant features. The estimated population of the area is 178 million people. She mentioned that the NC has been ratified by all the ten contracting parties hence gaining political commitment from them.

Ms Mutta then listed the main pressures and threats to the region covered by the NC as including physical alteration and destruction of habitats, pollution from land-based sources, effects of climate variability, fisheries and oil and gas. She also outlined the Convention's work programme for 2013–2017 and the UNEP Africa Marine and Coastal Programme 2011–2014. The objectives of the latter are:

1. To conserve and sustainably use marine and coastal ecosystems for improved livelihoods and enhanced application of integrated adaptive ecosystem-based management approaches;
2. To provide decision-makers with web-based information on the value of marine & coastal ecosystems services including socio-economic assessments;
3. To facilitate countries to ratify and implement NC protocols;
4. To integrate EBM approaches including resilience building, vulnerability reduction and adaptation to climate change; and
5. To improve environmental governance for sustainable management of marine & coastal ecosystems at regional and national levels;

Regarding collaboration with EAF-Nansen, Ms Mutta singled out the emerging opportunities in oil and gas exploration as possible areas. She said collaboration in this perspective has already been identified through the follows interventions:

- Development of regional guidelines addressing transboundary environmental impacts of oil and gas exploration and production, for consideration at the next NC Conference of Parties.
- Collection and sharing of information and best practices on the management of environmental impacts of oil and gas exploration and production particularly on transboundary resources
- Implementation of strategic environmental assessments for oil and gas exploration and production in the marine and coastal environment. Additionally, to collaborate where transboundary assessments are needed.

Comments and discussion

Mr Koranteng enquired further about the planned activities of UNEP and NC and how they are linked collaboratively to the next phase of the Nansen Program. Ms Mutta responded that oil and gas exploration is given priority in the collaboration because it has potential to provide many opportunities for developing nations to grow and develop their economies responsibly. Ms Gabriella Bianchi commented that the regional seas programme of UNEP is strongly supported by FAO. As interactions among countries continue to grow, the regional fisheries bodies need to be stimulated through initiatives such as the Nansen Programme to collaborate more closely with the regional seas programmes.

5.3 IOC/UNESCO

Mr Mika Odido presented the activities of IOC/UNESCO in Africa and highlighted the existing collaboration with FAO and potential avenues for collaboration with the EAF-Nansen in its new phase. He began by stating that UNESCO was established in 1945, soon after WWII with the mission of “Building Peace in the Minds of Men and Women”. The Intergovernmental Oceanographic Commission of UNESCO focuses on the “*..promotion of international cooperation and coordination of programmes in research, services and capacity building, in order to learn more about the nature and resources of the ocean and coastal areas; and to apply that knowledge for the improvement of management, sustainable development, the protection of the marine environment, and the decision-making processes of its Member States*”. Mr Odido highlighted the key achievements of IOC UNESCO with respect to Africa as follows:

- Establishment of a sea level network in Africa;
- Implementation of a project on adaptation to climate and coastal change in West Africa;
- Enhancing dialogue between oceanographers and meteorologists in order to improve climate prediction through incorporation of ocean data;
- Development of the African Register of Marine Species (AfReMaS);
- Implementation of marine mammal surveys in CCLME region since 2011;
- Development of atlases of the coastal and marine areas of Africa and initiating coastal modelling projects;
- Improving access to ocean data and information and development of skills for collection, analysis and interpretation of the data – this included development of ocean databases, literature catalogues and repositories, as well as directories of experts and institutions;
- Training on a wide range of topics, through fellowships for long term study at MSc/Phd level, as well as continuous professional development through short workshops and attachments/internships.

Mr Odido noted that IOC/UNESCO has worked closely with FAO and other organizations, including UNEP, WIOMSA, ICPAC and the African LME projects.

Mr Odido highlighted the following potential areas for IOC/UNESCO collaboration with FAO and the EAF-Nansen Project:

- Capacity development (surveys of capacities available for marine and coastal research in the region, Ocean Teacher Academy programme, UNESCO Chairs in Marine Sciences, ship board training, etc);
- Ocean observations (identification of core parameters and transects, linkages to coastal observation systems);
- Data management activities e.g. processing, analyzing, interpreting and archiving, including marine biodiversity under the auspices of Ocean Biodiversity System (OBIS).

IOC has three regional sub commissions (IOCAFRICA for Africa and the Adjacent Island States, IOCARIBE – for the Caribbean, and IOC-WESTPAC for the Western Pacific ocean) which can partner with the EAF-Nansen Project in the respective regions.

Mr Odido drew the attention of the meeting to the on-going plans to celebrate the 50th Anniversary of the International Indian Ocean Expedition which took place from 1960–1965. To mark this occasion, IOC and SCOR are planning the second International Indian Ocean Expedition (IIOE-2) to take place from 2015 to 2020, with a major conference on the Indian Ocean scheduled for November 2015 to be hosted by the National Institute of Oceanography (NIO) in Goa, India. The second planning meeting for IIOE-2 will be held from 20–21 November 2013 in Qingdao, China. The countries of the Western Indian Ocean did not participate actively in the first International Indian Ocean Expedition due to lack of the necessary research vessels and experts. Though the situation has improved since then, there is still need for the countries of the region to work together with partners to ensure that they participate effectively in IIOE-2. The EAF-Nansen Project provides the opportunity for this.

5.4 KCDP

Ms Jacqueline Uku, the Project Coordinator of the KCDP presented the background of the Project from its initiation in 2005 to the preparation phase in 2008 and the eventual launch in 2011. KCDP is a World Bank funded project whose overall objective is to improve the management effectiveness and enhance revenue generation of Kenya’s coastal and marine resources. Its areas of intervention are implemented

through four components namely: sustainable management of fisheries resources, sound management of other natural resources, support for alternative livelihoods and provision of grants known as *Hazina ya Maendeleo ya Pwani* to enable the coastal communities to implement self driven development projects.

Ms Uku highlighted the opportunities for collaboration with EAF-Nansen in the next phase as:

- Support for capacity building of students within national institutions e.g. by providing opportunities to participate in research cruises on board research vessels;
- Facilitation of student exchange within African – East/West exchanges; and
- Support for establishment of a Reference Centre for exchange of research data by working with the Framework for data depository developed by SWIOFP, which was based at the Kenya Marine and Fisheries Research Institute (KMFRI).

Comments and discussion

Mr Koranteng commended KCDP on its approach in identifying alternative livelihood for the coastal communities including providing training opportunities. He enquired how KCDP intends to bring in the socio-economic aspects of fishing as well as addressing the issue of gender parity. In response to the comment, Ms Uku stated that among other interventions, KCDP insists that at least 37 percent of participation in all areas of the project must demonstrably involve women.

5.5 PREFACE

Mr Marek Ostroeski explained about the EU funded Project on Enhancing Prediction of tropical Atlantic Climate and its Impact (PREFACE) that would commence in December 2013 and bring together 27 partners, ten of them from Africa. PREFACE seeks to investigate climatic changes of socio-economic importance on the Atlantic coast of Africa over the last 50 years. Climate change on tropical Atlantic ecosystems affects the functional diversity, regime shift and fishermen vulnerability in Africa. This Project recognises that without improvement of models, climate prediction in the tropical Atlantic will remain poor.

PREFACE has five main objectives, which are geared towards:

1. Better understanding of the tropical Atlantic climate;
2. Improved simulation and prediction on seasonal and longer time scales;
3. Better quantification of climate change impacts in the region;
4. Improved understanding of the climate impacts on fisheries in the marine ecosystem and
5. Assessing the resilience of West African fishing communities to climate-driven ecosystem shifts.

Results will provide the first comprehensive assessment of the tropical Atlantic Ocean and marine ecosystems. The project will be implemented through 11 work packages (WPs) that are demarcated into four distinct component tasks (CTs).

5.6 UNIDO

Mr Christian Susan for the UNIDO presented the green industry policy of the organization and highlighted areas of synergies and potential for cooperation with the EAF-Nansen Project. UNIDO aims to promote and accelerate sustainable industrial development in developing countries and economies in transition through activities of poverty reduction and capacity building.

Mr Susan listed the following possible areas of collaboration between UNIDO and the EAF-Nansen Project:

- GCLME SAP implementation project;
- Proactive cooperation with up-stream offshore oil and gas industry;
- Establishment of environmental baselines for oil and gas industry;
- Contracts agreement with vessels that can be used for Nansen surveys in areas prohibited to enter for security reasons or in shallow water;
- Procurement of equipment and tax/duty free import in countries where they are needed for the surveys; and
- Training, capacity building and competence building for staff in the regional centres.

5.7 WARFP-SL

Mr Alpha Bangura, the Director of Fisheries of Sierra Leone, presented the WARFP-SL. The presentation highlighted the fisheries of Sierra Leone, the rationale for World Bank involvement, the development objectives of the WARFP-SL Project and the project components.

Mr Bangura highlighted some of the reasons why the fisheries sector is important in Sierra Leone. These included employment, fish is an affordable source of protein for many, and the sector's contribution to the GDP (~10 percent). He listed the key issues/problems of the fishery sector that include diminished revenue and social benefits, use of destructive gear, unregulated fishing by foreign vessels and limited capacity and funding.

WARFP-SL has three project components:

1. Good governance and sustainable management of the fisheries;
2. Reduction of illegal fishing; and
3. Ensuring an increased local value addition to fish products.

Comments and discussion

A participant enquired whether there is any visible impact in Sierra Leone yet from the Project. Mr Bangura affirmed that the appropriate EAF measures have been adopted and incorporated in management plans for the future. He said the project is targeting the community and working closely with them while involving them fully in all activities.

6. PANEL DISCUSSIONS AND RECOMMENDATIONS

The last item on the programme was a panel discussion involving three men and three women, selected from all the operational areas of the project and a representative of the Donor (Norad).

Panellists: Mr Hashali Hamukuaya (Namibia, BCC), Ms J. Uku (Kenya, KCDP), Mr Aubrey Harris (FAO/SWIOFC), Ms Najat El Monfaloti (Morocco, CECAF) and Ms Brit Fisknes (Norway, Norad)

The discussion was moderated by Mr Kwame Koranteng, Coordinator of the EAF-Nansen Project. The panellists were asked to provide their opinion on the following:

- i. Their take-home messages from the Forum;
- ii. Their expectation of Phase 2 of the EAF-Nansen Project;
- iii. Their views on how gender issues should be mainstreamed in the project activities;
- iv. How stronger links could be created in the new phase of the project between the two central pillars of capacity development for management and the R/V *Dr Fridtjof Nansen* surveys, in particular the use of the survey data in fisheries management.

Each panellist was given time to share his/her views on the four points after which some of the participants also contributed from the floor. A sample of the views of the panellists and participants are presented.

Take-home messages from the Forum

- Many partners have played crucial roles in the EAF-Nansen Project and its implementation in Africa. Their critical contributions must be acknowledged. These partners must also be encouraged to complete activities that they started in the last phase.
- Previously, fisheries management was a preserve of the Fisheries Departments in Africa, but this mentality has now drastically changed, nowadays the trend is shifting towards co-management whereby the fishers are encouraged to participate in the management and monitoring of the fisheries.
- Norwegian intervention for sustainable development of fisheries in Africa is highly commendable and consistent with the aspirations of NEPAD, the AU Commission and all related bodies.

- With the advent of Phase 2 of the EAF-Nansen Project, Africa is bound to make major strides in the right direction. Africa LME Caucus wishes to thank Norway as a worthwhile partner in this endeavour.
- Many experts have introduced new tools and techniques, especially in areas such as GIS, and then left without adequately training beneficiaries in how to use them. The end result is that potentially useful practices are abandoned.
- The time series of data from the surveys carried out by the R/V Dr Fridtjof Nansen and similar research vessels constitute a gold mine and an essential investment. This should be recognised and there is need in the second phase of the EAF-Nansen Project to prioritise activities that will better explore this gold mine. Furthermore, there is need for suitable indicators to be used to document this in the results based framework.
- Management of fisheries and marine resources for nutrition and livelihood has been and continues to be an area of importance for Norwegian support.

Expectation of Phase 2 of the EAF-Nansen Project

- In the advent of the upsurge of the oil and gas industry in developing maritime nations of Africa, the Norwegian experience is worthwhile emulating and Norwegian support will be most valuable.
- In fisheries development, the preparation of management plans is the easy part, the real challenge lies in the implementation. In the new phase of the Project, greater emphasis should be laid on assisting the countries to implement the management plans.

Views on how gender issues should be mainstreamed in the project activities

- The benefits entitled to women must be clarified and listed.
- A deliberate and most appropriate approach for recognizing the contribution of women in the project must be established.
- Deliberate mechanism for observing gender parity must be put in place.
- Deliberate effort must be made to ensure that more women are invited to participate in the project meetings.
- Women's groups should be invited to participate in the formulation of the new project document to guarantee their input in project activities.
- The ultimate gender ratio of participation should focus on the 50:50 proportions.

How stronger links could be created in the new phase of the project between the two central pillars of capacity development for management and the R/V *Dr Fridtjof Nansen* surveys

- There is need to build capacity both in the surveys on board the research vessel and also in the laboratory during the analyses of the samples.
- It is most appropriate to strengthen the capability of individual participating nations to conduct their own surveys.
- Investing in human resource in tandem with developing infrastructure is crucial to enable nations to process their own data effectively.
- Impact of the projects is usually long term and would require a period ranging from 15–20 years. Therefore, a more effective approach is to concentrate the effort on few countries and specific areas where implementation of EAF would have major impact.
- Collaborative approach between the institutions of research and management should be encouraged.
- As national research progresses, one or two “Champion Projects” should be identified in one or two regions to demonstrate the success of EAF and how the approach works.

At the end of the panel discussion, participants expressed their satisfaction with the outcome in particular the experience shared on the fishery management plans, the invaluable information received on the oil and gas sector and the input made in the preparation for Phase 2 of the EAF-Nansen Project.

7. CLOSING

The Forum was formally closed by Ms Fatma Sobo on behalf of the Director of Fisheries of Tanzania. In the closing remarks, the Director of Fisheries commended the participants for the hard work that has contributed to the achievements of the EAF-Nansen Project in its first phase. “The agreed four pillars proposed for Phase 2 will be crucial in the next steps of implementing sustainable fisheries management in Africa and it is my hope that Norad and other partners will continue providing the countries with the much needed support”, the Director said.

The Director commended FAO, Norad, IMR and all the other partners for their commitment and congratulated them for ensuring that all the plans were completed in time. He urged them to ensure that preparations for the commencement of Phase 2 remain on course.

Ms Brit Fisknes, a Senior Advisor of Norad also gave some closing remarks.

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**APPENDIX 2
PROGRAMME FOR THE FORUM**

Tuesday, 8 October 2013

8:00 – 9.00. **Registration**

9.00 – 10.00 **Official Opening of Forum**

Addresses by:

- FAO Representation, Dar es Salaam
- Norwegian Embassy, Dar es Salaam
- Ministry of Livestock and Fisheries Development

The EAF-Nansen project and the objectives of the Forum – Kwame Koranteng (FAO)

Launch of R/V *Dr Fridtjof Nansen* DVD

10.00 – 10.30 Coffee/Tea Break

10.30 – 11.30

Session 1: *Keynote Address: Global progress in the implementation of the Ecosystem Approach to Fisheries* – Gabriella Bianchi (FAO)
Moderator: Hashali Hamukuaya (BCC)

Session 2: *The contribution of the EAF-Nansen project towards a new fisheries management regime in Africa*
Moderator: Hashali Hamukuaya (BCC)

11:30 – 13.00 • General Overview – Kwame Koranteng (FAO)
Discussions
• The EAF Management Planning Process – Gabriella Bianchi (FAO)
• Examples of Results in Africa:
 • Industrial shrimp fisheries in Central Africa – Salvador Ngoande (Cameroon)
 • Banks Fisheries of Mauritius – D. Degambur (Mauritius)
 • Small and medium pelagic fisheries of Kenya and Tanzania – Mwaka Barabara (Kenya) and Fatma Sobo (Tanzania)

13.00 – 14.00 Lunch

Session 2: *The contribution of the EAF-Nansen project towards a new fisheries management regime in Africa (continued)*
Moderator: Hon Mohamed Halifa (Comoros)

14:00 – 15:30 • Linefish fishery of Mozambique – Ascensao Pinto
• Demersal fishery on Madagascar and Comoros – Samueline Ranaivoson (Madagascar)
• Beach Seine fishery in the western Gulf of Guinea – Alain Kodjo (Côte d'Ivoire) and K.M. Sedzro (Togo)
• Small pelagic fisheries of Northwest Africa – Birane Sambe (CCLME project, Dakar)
• Small-scale fisheries sector plan of Liberia and Sierra Leone – Sheku Sei (Sierra Leone)

15:30 – 16.00 Coffee/Tea Break

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- 16.00 – 17.00
- The next steps
 - Approval/endorsement and implementation of the plans
 - Institutional arrangement for EAF implementation (the case of BCC) – Hashali Hamukuaya
 - Tracking EAF implementation in Africa – Kwame Koranteng (FAO)

Wednesday, 9 October 2013

Session 3: ***Contribution of the Nansen surveys to the knowledge base for EAF implementation and management of marine resources in Africa***
Moderator: Asmund Bjordal (IMR)

- 8.30 – 10.30
- Overview of surveys carried out in Phase I – Tore Stromme (IMR)
 - Assessment of the data collected, usage and outcomes
 - i. Contribution to FAO/RFB WGs – Merete Tandstad (FAO)
 - ii. Contribution to TDA/SAP process of LME programmes – Warwick Sauer (ASCLME)
 - iii. Ecosystem surveys in the Canary Current area – Birane Sambe (CCLME)
- Discussions

10.30 – 11.00 Coffee/Tea Break

- 11:00 – 13.00
- iv. Environmental surveys in support of the oil and gas industry in Africa – Bjorn Serigstad (IMR)
 - v. Outcome of the NansClim project – Larry Hutchins (South Africa)
 - vi. Development of GIS tools to support EAF management

13.00 – 14.00 Lunch

Session 4: ***Development of the Second Phase of the EAF-Nansen Project***
Moderator: Aubrey Harris (FAO, Harare)

- 14.00 – 15.30
- Presentation of the process – Gabriella Bianchi (FAO)
 Brief presentations on the four components of the project
- a. Science programme
 - b. Capacity Building
 - c. Policy and management
 - d. Public awareness raising and resource mobilization

15.30 – 16.00 Coffee Break

- 16.00 – 17.30
- The new Research vessel – development and proposed capabilities – Åsmund Bjordal (IMR)
 - Working Group Discussions on the various components

Thursday, 10 October 2013

Session 4: ***Development of the Second Phase of the EAF-Nansen Project (Continued)***
Moderator: Catherine Martens (MFA, Norway)

- 08.30 – 10.30
- Working Group Discussions on the various components

10.30 – 11.00 Coffee Break

11.00 – 13.00	<ul style="list-style-type: none">• Report back of Working Groups• Presentation by partners –<ul style="list-style-type: none">• Benguela Current Commission• UNEP• UNESCO• West Africa Regional Fisheries Programme –Sierra Leone
13.00 – 14.00	Lunch
14.00 – 16.00	<ul style="list-style-type: none">• Panel Discussions – What have we heard? What has been achieved? What next? <p>Panellists: Hashali Hamukuaya (Namibia, BCC), Jacqueline Uku (Kenya, KCDP), Aubrey Harris (FAO/SWIOFC), Najat El Monfaloti (Morocco, CECAF) and Brit Fisknes (Norway, Norad)</p> <p>Moderator: Kwame Koranteng (FAO, Rome)</p>
16.00	Closing Snacks

APPENDIX 3
OPENING REMARKS BY HON. BENEDICT N. OLE NANGORO (MP),
DEPUTY MINISTER FOR LIVESTOCK AND FISHERIES DEVELOPMENT

Excellency, The Norwegian Ambassador to Tanzania,

Excellency the FAO Representative in Tanzania,

Senior Advisors from the Norwegian Agency for Development Cooperation (NORAD),

Representatives from the FAO Headquarters, Rome,

Representatives of the Institute of Marine Research (IMR), Bergen,

Representative of the NEPAD Agency,

Directors of Fisheries from Beneficiary countries,

Executive and Technical Secretaries of Regional Fisheries Bodies and Regional Fisheries Management Organisations here present,

The EAF-Nansen project Coordinator,

Partner projects,

Distinguished Participants,

Ladies and gentlemen,

Ladies and gentlemen,

It is indeed a great pleasure and honour for me to be here today officiating the opening of this important Third Forum of the EAF-Nansen Project. I would like to welcome all of you individually and as a group to Tanzania. I would like to welcome our partners from FAO Rome, the Norwegian Agency for Development Cooperation (NORAD), and the Institute of Marine Research (IMR), from the University of Bergen. On behalf of my country and on behalf of all the fourteen countries that are participating in this programme, I would like to express our gratitude for the contribution you have all made to the sustainability of Fisheries Resources for all our countries. The Ecosystem Approach to Fisheries Management commonly known as EAF offers the best option to date in terms of management of fisheries resources.

I know some of you have travelled long distances to reach Dar es Salaam. As we have all agreed to take this opportunity to meet as fisheries stakeholders, adopt and implement the Ecosystem Approach in the management of our fisheries, **I welcome you all to Dar es Salaam and say KARIBUNI SANA. Please feel at home.**

Your Excellencies, Ladies and Gentlemen;

I am aware that, the EAF-Nansen project (“**Strengthening the Knowledge base for and Implementing an Ecosystem Approach to marine fisheries in Developing Countries**”) which is a partnership between NORAD, IMR and FAO, was started in December 2006 as a new phase of the long running Nansen Program which carried out fisheries resource surveys in developing countries for well over 30 years. I am informed that in 1982–83, the R/V *Dr Fridtjof Nansen* carried out fisheries assessment surveys in the waters of the United Republic of Tanzania. I understand that the objective of the EAF-Nansen project is to support developing countries, especially those in Africa, to adopt the ecosystem approach in the management of their fisheries. This will enable the countries fulfill international commitments towards the implementation of the ecosystem approach to fisheries (EAF).

Ladies and Gentlemen,

I am further aware that most of the world’s marine fish stocks are threatened with depletion partly due to inadequate legal frameworks, inadequate monitoring, controls and surveillance as well as

poor performance of conventional fisheries management practices. I strongly believe that EAF-Nansen Project initiatives will make it possible the implementation of the ecosystem approach to management of marine fisheries and contribute a great deal to the promotion of sustainable utilization and conservation of marine fisheries resources. As a management tool, EAF will allow the resource to build resilience and allow it to re-build itself to required stock levels.

Ladies and Gentlemen,

EAF as a concept and management model is built on an intrinsic link between environment and development. It was not until 1962, following **the work and publication of Rachel Carson's 'Silent Spring'** that people began to understand how closely linked environment and development truly are. In 1972, Rene Dubos and Barbara Ward, wrote the book 'Only one Earth' that sounded an alarm about the impact of human activity on the biosphere, but also expressed optimism that a shared concern for the future of the planet could lead **humanity to create a common future**. In the same year i.e. 1972, the Rome Club published their famous report 'Limits to Growth' which predicted dire consequences if growth was not slowed. In 1983, the World Commission on Environment and Development was formed and chaired by the **then Norwegian Prime Minister Gro Harlem Brundtland**, and after three years of hard work the Commission published the report on **social, economic, cultural and environmental issues**.

The UNCED Rio Conference in 1992 synthesized all these ideas and put them into Agenda 21, the Convention on Biodiversity, the framework Convention on Climate Change, the Rio Declaration and a statement on non-binding Forest Principles. Participating NGOs in the Rio Conference signed a set of alternative treaties. Enough to say that EAF is part of the wider framework that focuses on the wise use of resources and that management of such resources should be holistic and integral in nature.

Your Excellencies, Ladies and Gentlemen

In 2008, the study jointly undertaken by the World Bank and the FAO, resulted in the publication of the report; '**The Sunken Billions**' which stated that the difference between the potential and actual net benefits of marine fisheries was estimated at about USD 50 billion per year, and that between 1974 and 2008, there was an estimated USD 2.2 trillion resource related losses. The study strongly argued for the economic justification for embarking on Fisheries Reforms and EAF as well as MCS should be seen as part of such reforms.

Your Excellencies, Ladies and Gentlemen

The Fisheries Sector in Tanzania plays an important role in the economic development of the country although its contribution to the economy (1.4 percent) is minimal according to 2012 reports. The country has marine territorial waters covering a total of 64 000 km² and an Exclusive Economic Zone covering about 223 000 km² and a coastline of about 1 424 km long bordering the Indian Ocean. The sector provides substantial employment, income, and livelihood to many Tanzanians, and foreign earnings and revenue to the country. The fishery industry employs more than 182 741 full time fishers and more than 4 000 000 Tanzanians are engaged in fisheries related activities including fishing, fish processing, marketing and fish trade. However, much of the fishing grounds are being exploited by artisanal fishers with rudimentary fishing vessels and poor fishing technologies.

Your Excellencies, Ladies and Gentlemen

I wish to give you some highlights on the implementation status of the EAF-Nansen Project in Tanzania. The EAF national project was officially inaugurated in July 2010 after the formation of a NTG to oversee the implementation of the project activities. With the support of the Ministry of Livestock and Fisheries Development, the EAF-Nansen Project Coordination Unit and the South West Indian Ocean Fisheries Project, the NTG started awareness creation at the various fisheries institutions and fisheries communities. Elaborate communication and information materials were produced and used in the awareness creation activities. The NTG then initiated the preparation of the Artisanal Pelagic Fishery Management Plan which was the main outcome of the Project in its first phase. The Management Plan has already been approved/adopted according to Fisheries Act No. 22 of 2003 with its Principle Regulations of 2009. Currently, we are working on the identification of pelagic fishers with their fishing gears in their respective landing sites so they can easily be reached during the implementation. Our aim is to create awareness on the concept of the ecosystem approach to fisheries management to facilitate implementation of the measures in the management plan. So far we have already covered four districts of Bagamoyo, Kinondoni, Temeke and Mkuranga. Plans are under way to reach the remaining 12 coastal districts of the country.

The concept of Ecosystem Approach to Fisheries Management was also introduced in the Fisheries Sector Development Programme (FSDP) and the Tanzania Agriculture and Food Security Investment Plan under the Ministry of Agriculture, Food Security and Cooperatives.

Introducing EAF in the management of artisanal fisheries in Tanzania will not only address sustainability issues, but will also ensure a broader range of ecosystems services and functions. This will in turn provide a greater array of human benefits including economic, social and environmental.

I wish to congratulate all countries supported by the EAF-Nansen Project for cooperating with FAO through EAF-Nansen to develop fisheries management plans which will ensure that fisheries resources are well managed and utilized sustainably. You are together this week to discuss the results, lessons learnt and how the management plans will improve the management of fisheries in your country. We urge Norad, FAO, and the IMR to continue to support the implementation of the approved management plans so that all agreed management measures in the plans will be put in place as desired.

I wish you all the best in your discussions and deliberations towards the implementation of the ecosystem approach to fisheries and the fisheries management plans in particular. This is the only way to ensure the sustainability of marine fishery resources.

With these few remarks, I officially open the Third Forum of the EAF-Nansen Project.

Thank you very much for your attention.