



Vrije
Universiteit
Brussel

INTERNATIONAL WORKSHOP

27 – 29 OCTOBER, 2014

NORTH COAST BEACH HOTEL, KILIFI COUNTY, KENYA

**SUSTAINABLE USE OF COASTAL AND MARINE RESOURCES IN KENYA:
FROM RESEARCH TO SOCIETAL BENEFITS**

PROGRAM



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DEDICATED TO THE MEMORY OF PROFESSOR PHILIP POLK, MARINE BIOLOGIST

(19 OCTOBER 1932 – 11 MAY 2014)



an inspiration and a friend to many in Kenya and Belgium



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Monday 27 October 2014

OPENING SESSION

8:00 – 8:30 REGISTRATION

8:30 – 10:00 OPENING SESSION

Welcome remarks by Dr. Renison Ruwa, *Director KMFRI*
Aims and objectives of the workshop by Prof. Jan Mees, *Director VLIZ*
Welcome remarks by Erastus Ekidor, *County Commissioner, Kilifi*
Welcome speech by Amason Jeffa Kingi, *Governor, Kilifi County*
Welcome speech by Prof. Micheni Ntiba, *PS, State Department of Fisheries*
Welcome speech by Roxane de Bilderling, *Belgian Ambassador to Kenya*
Welcome speech by Lou Dierick, *Honorary Consul, Mombasa*
Opening address by Chief Guest, Felix Koske, *Cabinet Secretary, Ministry of Agriculture, Livestock and Fisheries*

SESSION 1: SETTING THE SCENE

(Chair: Renison Ruwa and Jan Mees)

KEYNOTE SPEECH

10:00 – 10:30 Importance of marine science in developing countries
Prof. em. Mohamed Hyder, *Kenya*

10:30 – 11:00 Break

SESSION 1: SETTING THE SCENE (CONTINUED)

(Chair: Renison Ruwa and Jan Mees)

KEYNOTE SPEECH

11:00 – 11:25 Short history of Kenya-Belgium collaborations and the marine science landscape in Belgium
Prof. Jan Mees, *General Director, VLIZ, Belgium*

11:25 – 11:45 Marine sciences in the West Indian Ocean Region: the story of WIOMSA
The Kenya Coastal Development Project: matching science with development
Dr. Jackline Uku, *KCDP coordinator, President of WIOMSA and Senior Research Scientist, KMFRI, Kenya*

11:45 – 12:00 Marine sciences in the Agulhas and Somali Current Large Marine Ecosystems (ASCLME) project
Ms. Lucy Scott, *previously Data and Science Coordinator, UNDP/GEF financed ASCLME Project, South Africa*



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12:00 – 12:15 **Marine science in a global context and the Second International Indian Ocean Expedition**
Mr. Mika Odido, *Coordinator, Intergovernmental Oceanographic Commission (IOC) of UNESCO in Africa, UNESCO/IOC Sub Commission for Africa and the Adjacent Island States, Kenya*

12:15 – 12:30 **Kenya in the Western Indo-Pacific Realm - its coral reefs in space and time**
Dr. David Obura, *Director, Coastal Oceans Research and Development in the Indian Ocean (CORDIO East Africa), Kenya*

12:30 – 14:00	LUNCH
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SESSION 2:	SUSTAINABLE USE OF MARINE RESOURCES
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(Chair: Renison Ruwa and Jan Mees)

14:00 – 14:15 **Sustainable coastal and marine fisheries resources in Kenya: forging linkages between research and policy for societal benefits**
Mrs. Susan Imende, *Director, Fisheries Policy, Research and Regulation, Kenya*
Prof. Micheni Ntiba, *Principal Secretary, Ministry of Fisheries Development, Kenya*

14:15 – 14:30 **Marine sciences: state of the art in Kenya**
Dr. Renison Ruwa, *Director Kenya Marine and Fisheries Research Institute (KMFRI), Kenya*

14:30 – 14:45 **Marine sciences: state of the art in Tanzania**
Dr. Magnus Ngoile, *Policy and Governance Coordinator, United Nations Development Programme (UNDP)/Global Environment Facility (GEF) Agulhas Somali Current Large Marine Ecosystems (ASCLME), Tanzania*

14:45 – 15:00 **Marine pollution along the East African coast: problems and challenges**
Prof. Colin Janssen, *Faculty of Bioscience Engineering, Ghent University, Belgium*

15:00 – 15:15 **The importance of oceanography and hydrography in Kenya**
Dr. Charles Magori, *Assistant Director, Oceanography and Hydrography, KMFRI, Kenya*

15:15 – 15:30 **Marine fisheries research in Kenya**
Dr. Edward Kimani, *Assistant Director, Fisheries Division, KMFRI, Kenya*

15:30 – 16:00	Break
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SESSION 2: SUSTAINABLE USE OF MARINE RESOURCES (CONTINUED)

(Chair: Renison Ruwa and Jan Mees)

- 16:00 – 16:15 Research vessels as an essential tool for ocean exploration and data acquisition**
Dr. André Cattrijse, *Manager, Research Infrastructure division, VLIZ, Belgium*
- 16:15 – 16:30 RV Mtafiti scientific strategy for sustainable research in the Kenyan and WIO waters**
Dr. Enock Wakwabi, *Deputy Director, Kenya Marine and Fisheries Research Institute (KMFRI), Kenya*
- 16:30 – 16:45 Surveys with the RV Fridtjof Nansen: experiences from the Western Indian Ocean Region**
Dr. Kwame Koranteng (substitute), *coordinator of the EAF (Ecosystem Approach to Fisheries) -Nansen project, Fisheries Management and Conservation Service (FIMF), Food and Agriculture Organization (FAO) of the United Nations (UN), Italy*
- 16:45 – 17:00 Fisheries governance in coastal and marine Kenya under the Kenya Coastal Development Project**
Mr. Kennedy Shikami, *Manager, Fisheries component, KCDP/KMFRI, Kenya*
- 17:00 – 17:15 Legacy and lessons from SWIOFP – 2 years on**
Prof. Johan Groeneveld, *Oceanographic Research Institute (ORI), South Africa*
- 17:15 – 17:30 Fish stock assessment in the Kenyan EEZ: current status**
Prof. Boaz Kaunda Arara, *Department of Fisheries and Aquatic Sciences, University of Eldoret, Kenya*
- 17:30 – 17:45 KCDP fisheries research: progress update for the year 2013-2014**
Gladys Okemwa, *Research scientist, Fisheries Division, KMFRI, Kenya*
- 17:45 – 18:00 Quality control and value addition sub-component in KCDP component 1: Fisheries**
Peter Oduor- Odote, *Senior Research Scientist, Fisheries Division KMFRI, Kenya*

18:00 – 19:30

RECEPTION



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SESSION 3. COASTAL RESOURCE MANAGEMENT

(Chair: James Kairo and Ann Vanreusel)

- 8:30 – 8:45 Integrated coastal zone planning and implementation**
Prof. Nico Koedam, *Plant Biology and Nature Management (APNA), Free University of Brussels (VUB), Belgium*
- 8:45 – 9:00 Blue carbon storage and climate change mitigations**
Dr. James Kairo, *Principal Scientist, KMFRI, Kenya*
- 9:00 – 9:15 South African estuaries: natural and anthropogenic drivers of ecosystem state**
Dr. Anusha Rajkaran, *Lecturer, Faculty of Science, Rhodes University, South Africa*
- 9:15 – 9:30 ~~A comparative survey of mangrove dynamics in India, Sri Lanka, Malaysia and Kenya~~**
Ass. Prof. Dr. Behara Satyanarayana, *Institute of Oceanography and Environment (INOS), Universiti Malaysia Terengganu, Malaysia*
- 9:30 – 9:45 Eco-toxicology in coastal and marine systems**
Prof. Mohammed Ali Sheikh, *Head of Graduate Studies and Research, the State University of Zanzibar and Coordinator, Tanzania Commission for Science and Technology (COSTECH), Zanzibar, Tanzania*
- 9:45 – 10:00 Biodiversity and health of marine and coastal ecosystems in Kenya**
Jelvas Mwaura, *Research Scientist, KMFRI, Kenya*

10:00 – 10:30 Break

(Chair: James Kairo and Ann Vanreusel)

- 10:30 – 10:45 The restoration and rehabilitation of damaged or degraded mangrove ecosystems in Kenya**
Dr. Jared Bosire, *World Wide Fund for Nature (WWF), Kenya*
- 10:45 – 11:00 Mangroves facing climate change: landward migration potential in response to projected scenarios of sea level rise**
Prof. Nico Koedam, *Plant Biology and Nature Management (APNA), Free University of Brussels (VUB), Belgium*
Prof. Farid Dahdouh-Guebas, *Systems Ecology and Resource Management, Free University of Brussels (ULB/VUB), Belgium*



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11:00 – 11:15 Blue carbon in the Western Indian Ocean

Dr. Gabriel Grimsditch, *Senior Project Officer, International Union for the Conservation of Nature (IUCN), Maldives*

11:15 – 11:30 Coastal ecosystems, coastal forestry and fisheries

Dr. Virginia Wang'ondou, *Lecturer, School of Biological sciences, University of Nairobi, Kenya*

11:30 – 11:45 Macrobenthos from Kenyan marine sediments: a review

Dr. Agnes Muthumbi, *School of Biological Sciences, University of Nairobi, Kenya*

11:45 – 12:00 Societal and economic benefits of research

Mr. Jacob Ochiewo, *Assistant Director, Socio-economics and Planning, KMFRI, Kenya*

12:00 – 14:00

LUNCH

SESSION 4 .

ROUND TABLE DISCUSSION: SUSTAINABLE USE OF MARINE RESOURCES

14:00 – 15:15 Round table discussion

Led by Dr. Renison Ruwa (KMFRI, Kenya) and Prof. Jan Mees (VLIZ, Belgium)

15:15 – 15:30 Round up

Rapporteurs Mr. Jacob Ochiewo (KMFRI, Kenya) and Dr. Delphine Vanhaecke (VLIZ, Belgium)

15:30 – 16:00

Break

SESSION 5 .

ROUND TABLE DISCUSSION: COASTAL RESOURCE MANAGEMENT

16:00 – 17:15 Round table discussion

Led by Dr. James Kairo (KMFRI, Kenya) and Prof. Ann Vanreusel (UGent, Belgium)

17:15 – 17:30 Round up

Rapporteurs Mr. Patrick Gwada (KMFRI, Kenya) and Dr. Karolien Van Puyvelde (VUB, Belgium)

SESSION 6.

KENYA COASTAL DEVELOPMENT PROJECT (KCDP)

17:30 – 18:30 Poster and exhibition session of KCDP



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SESSION 7. SUSTAINABLE AQUACULTURE DEVELOPMENT: CHALLENGES FOR KENYA

(Chair: Betty Nyonje and Gilbert Van Stappen)

- 8:00 – 8:15** **Integrated water resource management and aquaculture for equitable and sustainable livelihoods in East-Africa**
Prof. em. Patrick Sorgeloos, *Laboratory of Aquaculture & Artemia Reference Center (ARC), Ghent University (UGent), Belgium*
- 8:15 – 8:30** **Challenges for aquaculture development in eastern Africa**
Prof. Gilbert Van Stappen, *Laboratory of Aquaculture & Artemia Reference Center (ARC), Ghent University (UGent), Belgium*
- 8:30 – 8:45** **Aquaculture research and development in Kenya: an overview**
Dr. Betty Nyonje, *Assistant Director, Mariculture, KMFRI, Kenya*
- 8:45 – 9:00** **Recent advances in marine aquaculture research – implications for Kenya and the region**
Dr. Nigel Preston, *Research Director, Integrated Sustainable Aquaculture Production, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australia*
- 9:00 – 9:15** **Community based aquaculture initiatives in coastal Kenya**
Dr. James Mwaluma, *Senior Research Scientist, KMFRI, Kenya*
- 9:15 – 9:30** **Government intervention in aquaculture development in Kenya**
Dr. Harrison Charo Karisa, *Deputy Director of Fisheries, Ministry of Fisheries Development and Acting Director at the National Aquaculture Research Development and Training Centre (NARDTC), Kenya*
- 9:30 – 9:45** **Microbial biodiversity in Bohai Bay Saltworks and their biotechnological utilization**
Dr. Sui Liying, *Salt Research Institute of China National Salt Industry Corporation, China*
- 9:45– 10:00** **Environmental safeguards in Kenya – oceanographic and coastal perspectives**
Mr. Patrick Gwada, *Senior Research Scientist, KMFRI, Kenya*

10:00 – 10:30

Break

- 10:30 – 10:45** **The status and outlook of marine aquaculture development in South Africa**
Prof. Daniel Brink, *Vice Dean & Associate Professor, Faculty of AgriSciences, Stellenbosch University, South Africa*



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- 10:45 – 11:00 Sustainable *Artemia* pond production in coastal saltworks as a tool to solve aquaculture challenges**
Assoc. Prof. Dr. Nguyen Van Hoa, *Head of Department of Coastal Aquaculture, College of Aquaculture and Fisheries, Can Tho University (CTU), Vietnam*
- 11:00 – 11:15 Review of coastal aquaculture development in Mozambique**
Mr. Rafael Miguel Rafael, *National Fisheries Research Institute (IIP), Mozambique*
- 11:15 – 11:30 The potential of integrating marine biotechnology with aquaculture for human health in Kenya**
Dr. Charles Gatune, *co-ordinator Aquaculture department, Karatina University, Kenya*
- 11:30 – 11:45 Aquaculture development in Tanzania: status, trends and perspectives**
Dr. Charles Mahika, *Director, Aquaculture development division, Ministry of Livestock Development and Fisheries, Tanzania*
- 11:45 – 12:00 Improvement of the living standard of rural communities in Kenya through *Artemia* production in coastal saltworks**
Morine Ngarari, *PhD, KMFRI, Kenya*
- 12:00 – 12:15 An overview of current status of Kenyan fish feed industry and feed management practices, challenges and opportunities**
Dr. Jonathan Munguti, *Assistant Director, Aquaculture - Inland division, KMFRI, Kenya*
- 12:15 – 12:30 A gap between small-scale community mariculture and mariculture as a business: can KCDP bridge the gap?**
David Mirera, *Research Scientist, Aquaculture Division, KMFRI, Kenya*

12:30 – 14:00

LUNCH

SESSION 8.

ROUND TABLE DISCUSSION: SUSTAINABLE AQUACULTURE DEVELOPMENT IN KENYA

14:00 – 15:00 Round table discussion

Led by Dr. Betty Nyonje (KMFRI, Kenya) and Prof. em. Patrick Sorgeloos (UGent, Belgium)

15:00 – 15:15 Round up

Rapporteurs Mr. David Mirera (KMFRI, Kenya) and Prof. Colin Janssen (UGent, Belgium)

15:15 – 15:45

Break



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SESSION 9. CAPACITY BUILDING AND EDUCATION

(CHAIR: ANN VANREUSEL AND BOAZ KAUNDA ARARA)

- 15:45 – 16:00 An overview of the institutions and education programs of higher learning in aquaculture development in Kenya**
Dr. John Radull, *lecturer at Maseno University, Kenya*
- 16:00 – 16:15 Approach of Stellenbosch University in promoting aquaculture education in Africa**
Prof. Daniel Brink, *Vice Dean & Associate Professor, Faculty of AgriSciences, Stellenbosch University, South Africa*
- 16:15 – 16:30 Capacity building in fisheries in Kenya**
Prof. Boaz Kaunda Arara, *Department of Fisheries and Aquatic Sciences, University of Eldoret, Kenya*
- 16:30 – 16:45 Building a regional training network of coastal, marine and continental water body scientists in the WIO region**
Dr. Karolien Van Puyvelde, *coordinator MSc Marine and Lacustrine Science and Management (Oceans & Lakes), Free University of Brussels, Belgium*
- 16:45 – 17:00 How to convey a complex message to a wide audience: avoiding the ocean divide between science and public understanding ?**
Prof. Nico Koedam, *Plant Biology and Nature Management (APNA), Free University of Brussels (VUB), Belgium*
- 17:00 – 17:15 IOC Regional Training Centre for the OceanTeacher Global Academy**
Dr. Harrison Charo Karisa, *Director Fisheries Resources Development and Marketing, State Department of Fisheries, Kenya*
- 17:15 – 17:30 Linking science and community development: the Community Driven Development Approach**
Faridah Hassan, *HMP Manager, KCDP, Kenya*

SESSION 10. ROUND TABLE DISCUSSION: EDUCATION AND CAPACITY BUILDING

- 17:30 – 18:30 Round table discussion**
Led by Prof. Boaz Kaunda Arara (University of Eldoret, Kenya) and Prof. Ann Vanreusel (UGent, Belgium)
- 18:30 – 18:45 Round up**
Rapporteurs Mr. Patrick Gwada (KMFRI, Kenya) and Prof. Nico Koedam (VUB, Belgium)
- 18:45 Closing address by** Dr. Renison Ruwa (KMFRI) and Prof. Jan Mees (VLIZ)



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Thursday 30 October 2014

OPTIONAL FIELD TRIP: VISIT TO SOME OF THE NATURAL RESOURCE MANAGEMENT AND
AQUACULTURE PROJECTS AROUND KILIFI COUNTY.