AGULHAS AND SOMALI CURRENT LARGE MARINE ECOSYSTEM (ASCLME) PROJECT

National data and information management plan - KENYA

The National plan should incorporate national mechanisms for data management and the archiving of new ASCLME data in national data centres. Networks and systems implemented by other projects, particularly ODINAFRICA (IOC/UNESCO), SWIOFP and WIO-LaB (through the Nairobi Convention) should be incorporated into the plan to be used as necessary.

National data and information plans should be based on the regional D&I framework, taking into account country-specific information. These national plans should just contain **supporting** information for the process of working with (accessing or archiving) data / information during the process of compiling the national Marine Ecosystem Diagnostic Analyses (MEDAs).

1. National D&I Coordinators

Harrison Ong'anda
Kenya Marine and Fisheries Research Institute
P.O. Box 81651-80100
Mombasa - Kenya

2. Specialists for the MEDA
Lists of specialists (budgeted up to 8 persons) for MEDA themes FOR KENYA

DATA	ACTION
COUNTRY OVERVIEW INCLUDING GENERAL OVERVIEW TO THE ECONOMY	
BIOPHYSICAL ENVIRONMENT Description of the coast and distinctive features General description of the climate.	Mr. Mafimbo

− Marine and coastal geology and geomorphology
− Freshwater resources and drainage, including rivers, estuaries and coastal lakes
Areas of concern
   o *Freshwater input into the coastal environment – impacts of water abstraction or pollution.*
   o *availability of fresh water resources*
   o *water abstraction and pollution -pollution input (agricultural or industrial)*
   o *Sediment input etc*
	Dr. Munga

− Physical Oceanography (Currents, Tidal regime, Sea level change including paleontology and prediction, Ocean temperature-climatologies and anomalies, salinity patterns-different water masses − Ocean-atmosphere interaction – heat flux, carbon exchange, cyclogenesis, and evaporation. Indian Ocean Dipole,	Dr. Nguli

prediction/forecasting) − Chemical Oceanography. Nutrients, persistent organic/inorganic pollutants	
Biological oceanography (oceanic) Primary production - climatologies and features / anomalies; biomass and phytoplankton taxonomy (dead zones, harmful algal blooms, ocean acidification) Secondary production - Zooplankton – biomass and taxonomy; patterns and features (trophic relationships)	Mr. Okuku
COASTAL ZONE AND CONTINENTAL SHELF Description and extent of coastal and marine habitats [Maps of coastal habitats (millennium products, ASCLME project; threats eg. Bleaching, acidification, destructive fishing methods - IUUs, coral mining, sand mining, seagrass clearing/beach cleaning, urban expansion, nutrient loading) Productivity of the coastal zone (corals, mangroves, seagrass beds) – overharvesting, unsustainable mangrove harvesting, pollution, sedimentation, sea level change, ecosystem health.	Dr. Boaz Kaunda

Macrofauna (state of biological knowledge)
Invertebrates
    Biodiversity and genetics
    Key species / groups that are being exploited, referring to section below for catch/economic stats
    (overharvesting, exotics, pollution, destructive fishing methods, effects, haditat destruction)
Fish and fish resources
    Biodiversity and genetics
    Key species / groups that are being exploited, referring to section below for catch/economic stats
    [Catch locations of non-commercial threatened species (eg coelacanths, dugongs)]
    (overharvesting, exotics, pollution, destructive fishing methods, effects, haditat destruction, effects of tourism)
	Dr. Chris Mulewa

Mammals (threats eg. pollution, physical destruction of habitat) Reptiles Birds (pollution, destruction of breading and nesting sites, lack of knowledge, introduced animals destroying nesting sites of ground-breeding birds) Exotics and alien species (state of knowledge and issues they cause) – ballast water, aquaculture and diseases, invasive-crown-of-thorns	Gladys
Long term predicted atmospheric changes (and potential vulnerability of Kenya)	Mr. Mafimbo
HUMAN ENVIRONMENT	
Demographics – current status and trends [Location, names, and current demographics of coastal populations] Sites of religious or cultural significance	Mr. Ochiewo

Human health Infrastructure (transport, road, rail, internet)	
ECONOMY	

General description, including:
  ➢ History
  ➢ GDP
  ➢ Key economic and social indicators
  ➢ Wage employment, by sector and province
  ➢ Balance of, and importance of imports/exports
  ➢ Importance of sectors
Tourism
Ports and marine transport
Manufacturing (boat building - here or under fisheries)
Mineral extraction (including oil and gas)
Aquaculture, agriculture and forestry
Fisheries (ornamental, artisanal, subsistence) and associated activities
  ➢ Fishing grounds (trawlable/untrawlable, nature of gear used)
  ➢ Fish market sites
  ➢ Fish landing sites
  ➢ Catch rates of key species/grounds
  ➢ Trends of catch rates (past 50 years where available)
  ➢ Frame survey results
  ➢ Bait collection activities
	COASTAL LIVELIHOOD PROJECT

3. Institutional sources of information for national MEDAs
Name and thematic area of responsibility of national institutions

Institution	Information
Kenya Marine and Fisheries Research Institute (KMFRI) is resposible for aquatic research both in fresh and marine waters to assist in formulation of policies	– hysical, biological and chemical oceanography – nvertebrates – ish and fish resources – roductivity of the coastal zone (corals, mangroves, seagrass beds)

for exploitaion of aquatic resources. The research includes fisheries, biological, chemical and physical oceanography.	
Fisheries Department (FiD) is responsible for regulation of fishing activities in the Kenyan waters. They are therefore responsible for licensing of all fishing crafts and enforcement of fishing regulations in line with the fishing act.	− quaculture − isheries − elated economics
Meteorological Department (MD) is responsible for providing information on climate and weather prediction.	Climate

Moi University comprises a number of faculties including School of Environemnet, Fisheries and Aquatic Science, and Wildlife Management	– nvertebrates – ish and fish resources
The Department of Rangeland Surveys and Remote Sensing (DRSRS) is a specialised government agency with developed staff and infrastructure capacities in Geographic Information Systems and Remote Sensingcapacities.	Agriculture and forestry
The National Museums of Kenya (NMK). Provides a	– Biodiversity and genetics (Fish and invertebrates) – Sites of religious and cultural significance – Exotics and alien species (state of knowledge and issues they cause) – Mammals and birds

repository of various plant and animal genetical information including those from the marine environment	
Central Bureau of Statistics (CBS) is a department of the Ministry of Finance responsible for collection, collation and management of information used for planning and budgetry exercise for the Government of Kenya	– emographics – conomy
Kenya Wildlife Service (KWS). Responsible for management of Kenya's marine parks and reserves	– roductivity of the coastal zone (corals, mangroves, seagrass beds) with regards to the MPAs – ammals and birds
National Environme	

nt Management Authority, is resposible for coordination and enforcement of safe environmental practices in Kenya	
CDA	− Human health − nfrastructure (transport, road, rail, internet)
Tana and Athi River Development Authority (TARDA).	− Geology and geomorphology − Freshwater resources and drainage, including rivers, estuaries and coastal lakes

4. List of national state of the environment reports (or similar) that have been produced over the past 50 years.

5. List of marine of coastal projects currently underway that may be related in some way to the ASCLME project, through direct collaboration, data exchange, or as interested parties in the TDA/SAP process.

6. Archiving and long-term data management of new ASCLME data in national data centres

National plan for the archiving of sectors of new data coming from the ASCLME project within each country. These allocations should not be arbitrary, but must be based on national mandates and international agreements. For example IOC member states must use data centres linked to IODE's NODC and WDC network as long term repositories for oceanographic data (IOC Oceanographic Data Exchange Policy - RESOLUTION IOC-XXII-6)

Examples of data categories are:

6.1 Specimens from ASCLME expeditions
1.1.1   Fish specimens will be curated at NMK
1.1.2   Invertebrate specimens to be curated at NMK

6.2 Oceanographic data from ASCLME expeditions will be archived at KMFRI/KeNODC

6.3 Fisheries data from ASCLME expeditions will be submitted to KMFRI

7. National metadatabase

7.1 General description (software, location, funder)
Geonetwork Opensource metadata management system. The software will be installed ASCLME computer. The software is developed and supported by the UN organisations (FAO, WFP, UNOCHA) and implements the OGC Catalog Service for the Web (CSW 2.0.1).

7.2 Field names and access controls
The following templates are available in Geonetwork:

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   ublin Core

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   GDC

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   SO19139 (vector/raster)

7.3 Flagging system for ASCLME-specific metadata

7.4 Requirements for modification for ASCLME purposes

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   one envisage

8. Meeting and reporting schedule

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    June 2009 - Appointment of MEDA specialists

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    August 2009 – MEDA stage 1 completed, date set for national review (peer review) meeting for current status

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    October 2009 – Date set for Causal Chain Analysis meeting and review of indicators and monitoring

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    December – date set for meetings for cost benefit analysis, and product subsequently submitted to ministries and relevant stakeholders

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   ecember 2009 D&I annual report to PCU

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   ecember 2010 D&I annual report to PCU (Data product development & Cruise DM)

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   ecember 2010 D&I annual report to PCU (Data product development & Cruise DM)

9. Financial arrangements

ITEM	AMOUNT (USD)	FINANCING
Computer server	15,000.00	SWIOFP/Nairobi Convention

Computer equipment (desktop/lap top)	6,000.00	ASCLME
ISP Connection	10,000.00	ASCLME
Meta data software		FAO/SWIOFP/ODINAFRICA
Purchase and maintenance of various software (GIS, Antivirus, OS etc)	15,000.00	ASCLME/ODINAFRICA
Back-up devices and archiving	1,500.00	ASCLME/SWIOFP/ODINAFRICA
Training for IT personnel	20,000.00	ASCLME/SWIOFP/ODINAFRICA
Furniture and office fixtures	10,000.00	ASCLME/SWIOFP/ODINAFRICA
Telephone and communications	5,000.00	ASCLME/SWIOFP/ODINAFRICA