



ANNEX I - B

BCLME Project Reference Number: BCLME/SEIS/05/01
Development of and making operational, a viable and integrative State of the Ecosystem Information System for the BCLME

Background:

The Benguela Current Large Marine Ecosystem (BCLME) Programme is a multi-sectoral initiative by Angola, Namibia and South Africa to facilitate the integrated management, sustainable development and protection of the Ecosystem. It is funded by the Global Environment Facility through the United Nations Development Programme with financial and in-kind contributions by the three member countries.

Key policy actions as specified of the BCLME Strategic Action Programme (SAP) are:

- Sustainable management and utilization of living marine resources
- Management of mining and drilling impacts
- Assessment of environmental variability, ecosystem impacts and improvement of predictability
- Management of pollution
- Maintenance of ecosystem health and protection of biological diversity
- Capacity strengthening

A prerequisite for the implementation of all of these policy actions is the availability of up-to-date information about the state of natural environment, state of living marine resources, impacts of mining and drilling activities, pollution, present health of ecosystem, available capacity etc. This information collectively provides a basis for sound management of individual resources and the ecosystem as a whole as well as enabling proper operational and long-term planning.

Prior to the commencement of the BCLME Programme, a suite of definitive synthesis reports on the BCLME was commissioned. While the information content of these syntheses is still useful, these documents in reality only reflect what was known at that time and/or the historic record. Since then substantial progress has been made in understanding the ecosystem and its components and as regards the provision of relevant information. For example, a number of transboundary fish surveys have been undertaken – providing for the first time a full picture of the distribution of species such as hake, while excellent progress has been made in understanding environmental variability and its impacts and improving predictability, and in developing an ecosystem approach to fisheries (EAF) for the region. Thus the time is ripe to capture the available data and information in an integrated up-to-date manner and to provide this information routinely to those responsible for managing the ecosystem and its resources as well as to those users who have activities in the EEZs of the three BCLME countries. Accordingly the BCLME Programme is embarking on the development of a comprehensive information system viz. “State of Ecosystem Information System” which comprises four main information sub-systems (components), viz. (A) State of Environment Information, (B) State of Living Marine Resources, (C) Negative Impacts on Ecosystem and (D) Ecosystem Indicators. The output from this project will be consistent with the requirements of the BCLME Project Document (and the LOGFRAME as revised in 2003) and BCLME Programme Mid-Term Review Report.

Objective:

The objective of Project BCLME/SEIS/05/01 is to develop and make operational, in close collaboration with appropriate management and academic institutions in Angola, Namibia and South Africa, an affordable, sustainable and user-friendly State of Ecosystem Information System (SEIS) for the BCLME region (relevant to activities in the EEZs of the three countries) to complement other data, assessments, information and advice required by the Interim Benguela Current Commission and other users to enable informed decision making that will ensure the integrated management, sustainable development and protection of the Benguela Current Large Marine Ecosystem.

Scope of Project BCLME/SEIS/05/01

The SEIS which this project aims to develop and implement is intended to provide managers and decision makers in the BCLME region with up-

to-date information about, state of the environment (including extreme and unusual natural environmental events and environmental changes); relevant information about the distribution and abundance of key harvested resources; actual fish catches; information about rare and endangered species and their conservation status; the status of alien and invasive species; impacts of mining and oil/gas extraction activities; information on pollution e.g. oil spills, ballast discharges etc; information at the ecosystem level (where possible) as well as on other activities within the EEZs of Angola, Namibia and South Africa. The BCLME SEIS will be system wide, address a range of time and space scales relevant to resource and operational management, and augment national state of environment (where these exist) and resource systems. This project addresses the BCLME in its entirety, but with particular focus on the marine boundary areas between Angola and Namibia (Angola-Benguela Front - ABF) and between Namibia and South Africa (Lüderitz-Orange River Cone area) in order to facilitate decision making by the IBCC. The design criteria / scope of work and outputs required are specified by the components below. The timetable for delivery, criteria for participation and proposal/tender requirements are applicable to all components.

COMPONENT A: STATE OF ENVIRONMENT INFORMATION SUB-SYSTEM

The development and implementation of a regional State of Environment Information Sub-system (SOE) and Environmental Early Warning System (EEWS) for the BCLME were identified as priorities in the TDA and SAP, and are key deliverables of the Programme.

Design Criteria and Scope of Work (Component A)

A1. The BCLME SOE is to be designed and implemented for the region as a whole, with particular reference to provision of information about geopolitical boundaries and natural boundaries within the system (e.g. Angola-Benguela Front, Lüderitz/Orange River Cone), external system boundaries (e.g. Agulhas Retroflexion Area, Angola/Cabinda Front) and large scale ocean-atmosphere events or processes that impact on the system as a whole. The SOE should be incremental to country systems, and not replace country systems. (OR The SOE should build on the national SOE's and integrate over the entire BCLME area, with special attention to the transboundary (national and ecological) regions

A2. The SOE must be simple, cost-effective, extendable, timeous, be useful to both managers and scientists/researchers i.e. be seen as useful and be used by them, and provide essential data and information required for the development and implementation of the envisaged EEWS. It is envisaged that SOE will provide some “added value” in the form of first order interpretation, perhaps via an automated rule based function which could flag extreme or unusual events to draw users’ attention to these events and lay the foundation for more detailed interpretation and follow-up by the users. (SOE will, however, not provide forecasts or address predictability *per se* as this will more appropriately be the function of the BCLME EEWS.)

A3. The SOE will be a web-based system with cross-links with existing systems and websites (but not duplicate these). In this respect the user-friendly Climate Diagnostics Bulletin is a preferred model on which to base SOE. In addition, SOE should have a capability that will enable abridged reports in HTML format to be e-mailed to selected users.

A4. In developing SOE, the contractor will need to assess the **actual** operational needs of Angola, Namibia and South Africa in respect of a **regional** system, and compile information about monitoring activities in the various countries and satellite remote sensed (SRS) data utilization etc which might serve as useful inputs for SOE. It is likely that the regional system will make extensive use of SRS information and augment this where operationally practical and affordable by in situ measured data/information. The state of environment model used in Namibia by the Ministry of Fisheries and Marine Resource might be a useful one to consider. Close collaboration with BENEFIT (which Programme has extensive experience in environmental monitoring at the regional level) is essential.

A5. In designing the BCLME SOE, the measurements/data required will need to be specified unambiguously as well as their sources, when, for whom they are intended, who pays etc. Potential candidates might include *inter alia*:

- Sea level from regional tide gauge network
- Large scale SST plus anomalies
- Ditto for ocean colour
- Wind anomalies – speed, direction etc
- In situ measurements from ARGO floats and PIRATA etc

- Trends in selected parameters, e.g. upwelling indices, SST, dissolved oxygen, plankton etc., information, in particular trends, from measurements made at target (sentinel) sites

A6. Although not an EEWS, SOE should take account of EEWS priorities such as may be inferred from the TDA, SAP and as recommended by experts who participated in the recent International Workshop on Forecasting and Data Assimilation in the Benguela and Comparable systems. These are *inter alia*:

- Advanced warning of Benguela Ninos
- Predicting Harmful Algal Blooms
- Low Oxygen Water (LOW) events and pre-conditioning of LOW – both local and large scale
- Operational nowcasting of coastal sea states
- Major Agulhas events of the 2005 event
- Large scale changes in winds, upwelling and temperature regime changes etc.

The Contractor will be expected to do the following:

- Collaborate closely with the relevant management, industry and academic institutions in Angola, Namibia and South Africa that have a need for, or which are involved in the provision of, data, information and understanding of the environment and environmental processes which impact on the living marine resources of the BCLME and on other activities relevant to activities within the EEZs of the three countries
- Design, develop and implement (i.e. make operational) an SOE in accordance with the Design Criteria A1-6 above.
- Consult widely with all potential users and interested and affected parties in the three countries
- Play an active and integrating role to enable the Environmental Variability Advisory Group (EVAG) of the BCLME Programme to meet its obligations as specified in the BCLME Strategic Action Programme, Project Document and Revised LOGFRAME.

Outputs Required (Component A):

The primary output of SOE will be an operational user-friendly web-based information system. The SOE will be *de facto* a fully operational system for the BCLME region, suitably linked with other components of SEIS and EEWS. (Note that the SOE should be capable of being

adapted/expanded to incorporate future elements as they become operational.) The SOE will comprise *inter alia* the following products:

- Suitable environmental observational products - e.g. up-to-date weekly and monthly satellite derived sea surface temperature, chlorophyll, sea level, wind speed and direction etc. plus anomalies, sea-level from regional tide gauge network, etc. (Refer to #A5 of Design Criteria and Scope of Work)
- Relevant information (suitably collated and displayed graphically e.g. in the form of vertical and horizontal sections) about the state of environment as obtained from research and monitoring cruises conducted off Angola, Namibia and South Africa and from measurements made at sentinel sites
- Relevant information from moored instruments and floats e.g. from current meters, BCLME monitoring buoys, ARGO floats, PIRATA etc.
- Trends in key environmental parameters e.g. winds, upwelling indices, SST, salinity, dissolved oxygen, chlorophyll, plankton (including HABs).
- Various other products that are or may be relevant to operational activities in the EEZs of Angola, Namibia and South Africa
- User-friendly interpretations of all of the above.

The second output will be a viable (affordable, implementable and sustainable) plan, developed in close consultation with management agencies, academic institutions and other users, for consideration by the IBCC that will enable the continuation of the SOE after completion of the present contract.

COMPONENT B: STATE OF LIVING MARINE RESOURCES (HARVESTED AND NON-HARVESTED SPECIES)

The State of Living Marine Resources Information Sub-system (SLMR) is intended to provide fisheries and conservation management authorities in the BCLME region with an informative overview of the state of the living marine resources (including harvested and non-harvested species). It is envisaged that the information will in general be updated annually (or where required by the IBCC and where feasible, more frequently).

Design Criteria and Scope of Work (Component B)

B1. The BCLME SLMR is to be designed and implemented for the region as a whole, with particular reference to provision of information about state of the living marine resources which are shared between countries or otherwise migrate across or straddle geopolitical boundaries and natural boundaries within the system (e.g. Angola-Benguela Front, Lüderitz/Orange River Cone), external system boundaries (e.g. Agulhas Retroflexion Area, Angola/Cabinda Front). The SLMR should be incremental to country systems, and not replace country systems.

B2. The SLMR must be simple, cost-effective, extendable, timeous, be useful to both managers and scientists/researchers i.e. be seen as useful and be used by them, and provide essential data and information required for the sustained utilization and conservation of the BCLME. It is envisaged that SLMR will provide some “added value” in the form of first order interpretation, perhaps via an automated rule based function which could flag extreme or unusual changes in the living marine resources (e.g. in the distribution, unusual behaviour etc.) to draw users’ attention to these and lay the foundation for more detailed interpretation and follow-up by the users. SLMR will, however, not provide stock assessments or other forms of operational management advice *per se*.

B3. The SLMR will be a web-based system with cross-links with existing national systems and websites where these exist (but not duplicate these). Primary outputs will be in the form of time series of relevant parameters which show trends and deviations starting from the date (year) when reliable records commence. SLMR should have a capability that will enable abridged reports in HTML format to be e-mailed to selected users.

B4. In developing SLMR, the contractor will need to assess the **actual** operational needs of Angola, Namibia and South Africa in respect of a **regional** system, and compile information about survey activities and sources of data in the various countries etc. which might serve as useful inputs for SLMR. It is likely that the regional system will make extensive use of information available within the various national fisheries and conservation authorities. Close collaboration with BENEFIT (which Programme has extensive experience in collaboration in the field of living marine resource research as well as in collaborated surveys at the regional level) is essential.

B5. In designing the BCLME SLMR, the measurements/data required will need to be specified unambiguously as well as their sources, when, for whom they are intended, who pays etc. Potential candidates, most of

which are amenable to display via time series plots, might include *inter alia*:

- Total landed catch and composition of major species by sector (pelagic, demersal, rock lobster, artisanal/subsistence etc.)
- Nominal value of the landed and processed catch
- Distribution of fishing effort and catch
- Quantum of effective fishing effort per sector/resource e.g. pelagic, demersal, rock lobster, linefish etc.
- Estimates of recruit and spawner biomass of commercially important species from surveys and/or population assessment models where such information is available and in the public domain
- Egg/larval distributions of commercially important species from surveys
- Estimates of population size for predators such as sea birds, seals etc.
- Assessments of rare and endangered species re conservation status
- MPAs, ratios of protected areas to coastline length coastal EEZ areas
- Alien and/or invasive species status
- By-catch levels/reductions

The Contractor will be expected to do the following:

- Collaborate closely with the relevant management, industry and academic institutions in Angola, Namibia and South Africa that have a need for, or which are involved in the provision of, data, information and understanding of the living marine resources and related processes in the BCLME – as well as those who are involved in other related activities within the EEZs of the three countries
- Design, develop and implement (i.e. make operational) an SLMR in accordance with the Design Criteria B1-5 above.
- Consult widely with all potential users and interested and affected parties in the three countries
- Play an active and integrating role to enable the Living Marine Resources Advisory Group (LMRAG) of the BCLME Programme to meet its obligations as specified in the BCLME Strategic Action Programme, Project Document and Revised LOGFRAME.

Outputs Required (Component B):

The primary output of SLMR will be an operational user-friendly web-based information system. The SLMR will be *de facto* a fully operational system for the BCLME region, suitably linked with other components of SEIS. (Note that SLMR should be capable of being adapted/expanded to incorporate future elements as they become operational.) The SLMR will comprise *inter alia* the following products

- Total landed catch and composition, stock estimates/assessments and distributions etc. of the main species of commercial importance, and stock size estimates etc. of species having conservation status/potential. (Refer to #B5 of Design Criteria and Scope of Work)
- Fishing Effect
- Processing capabilities
- Relevant information (suitably collated and displayed graphically as distribution maps and/or via GIS) about the state of resources as obtained from research and assessment surveys (both by ship and aircraft) conducted off Angola, Namibia and South Africa and from measurements made at sentinel sites
- Relevant information about any assumptions made in estimating stock size/distribution etc. (e.g. natural mortality)
- Time series of relevant parameters (e.g. spawner and recruit biomass, catches of main species etc.) showing trends and deviations.
- Various other products that are or may be relevant to operational activities in the EEZs of Angola, Namibia and South Africa
- User-friendly interpretations of all of the above.

The second output will be a viable (affordable, implementable and sustainable) plan, developed in close consultation with management agencies, academic institutions and other users, for consideration by the IBCC that will enable the continuation of the regional SLMR after completion of the present contract.

COMPONENT C: NEGATIVE IMPACTS ON ECOSYSTEM (FROM MINING, OIL AND GAS EXTRACTION, POLLUTION, ALIEN AND INVASIVE SPECIES ETC.)

The Negative Impacts on Ecosystem Information Sub-system (NIE) is intended to provide fisheries and conservation management authorities in the BCLME region with information at the system level about negative anthropogenic impacts. Information on catastrophic events such as oil spills needs to be available in quasi-real time to support disaster relief/mitigation efforts, while it is envisaged that other information, e.g. pollution status, will in general only be updated annually (but where required by the IBCC and where feasible, more frequently).

Design Criteria and Scope of Work (Component C)

C1. The BCLME NIE is to be designed and implemented for the region as a whole, with particular reference to provision of information about negative impacts of anthropogenic impacts (unrelated to fishing *per se* e.g. mining, oil and gas extraction, pollution etc) on the living marine resources which are shared between countries or otherwise migrate across or straddle geopolitical boundaries and natural boundaries within the system (e.g. Angola-Benguela Front, Lüderitz/Orange River Cone), external system boundaries (e.g. Agulhas Retroflexion Area, Angola/Cabinda Front). The SLMR should be incremental to country systems, and not replace country systems.

C2. The NIE must be simple, cost-effective, extendable, timeous, be useful to both managers and scientists/researchers i.e. be seen as useful and be used by them, and provide essential data and information required for the sustained utilization and conservation of the BCLME. It is envisaged that NIE will provide some “added value” in the form of first order interpretation, perhaps via an automated rule based function which could flag extreme perturbations or unusual changes to draw users’ attention to these, and lay the foundation for more detailed interpretation and follow-up by the users.

C3. The NIE will be a web-based system with cross-links with existing national systems and websites where these exist (but not duplicate these). Primary outputs will be in the form of time series of relevant parameters which show trends and deviations starting from the date (year) when reliable records commence. NIE should have a capability that will enable abridged reports in HTML format to be e-mailed to selected users.

C4. In developing NIE, the contractor will need to assess the **actual** operational needs of Angola, Namibia and South Africa in respect of a **regional** system, and compile information from survey activities, EIAs and other sources of data in the various countries etc. which might serve as useful inputs for NIE. It is likely that the regional system will make extensive use of information available within the various national fisheries and conservation authorities.

C5. In designing the BCLME NIE, the measurements/data required will need to be specified unambiguously as well as their sources, when, for whom they are intended, who pays etc. Potential candidates might include *inter alia*:

- Information on land-based point sources of pollution and trends therein
- Pollution status in recognised development nodes (e.g. Luanda Bay, Walvis Bay, Table Bay)
- Marine litter
- Impacts of mining, dredging, oil and gas exploration and extraction on the seabed and water column
- Coastline modification caused by developments and other human activities
- Pollution from ships and marine platforms, including ballast water discharges
- Oil spills from marine accidents and other maritime disasters

The Contractor will be expected to do the following:

- Collaborate closely with the relevant management, industry and academic institutions in Angola, Namibia and South Africa that have a need for, or which are involved in the mining, oil and gas industries, shipping and other maritime operations etc. – as well as those who are involved in other related activities within the EEZs of the three countries
- Design, develop and implement (i.e. make operational) a NIE in accordance with the Design Criteria C1-5 above and deliver on the outputs required (see following section)
- Consult widely with all potential users and interested and affected parties in the three countries
- Play an active and integrating role to enable the Biodiversity, Ecosystem Health and Pollution Advisory Group of the BCLME Programme to meet its obligations as specified in the BCLME

Strategic Action Programme, Project Document and Revised LOGFRAME.

Outputs Required (Component C):

The primary output of NIE will be an operational user-friendly web-based information system. The NIE will be *de facto* a fully operational system for the BCLME region, suitably linked with other components of SEIS. (Note that NIE should be capable of being adapted/expanded to incorporate future elements as they become operational.) The NIE will comprise *inter alia* the following products

- GIS and/or distribution maps showing land-based sources of pollution, pollution status in development nodes, impacts from mining, dredging, oil and gas extraction activities, etc. (Refer to #C5 of Design Criteria and Scope of Work)
- Relevant information (suitably collated and displayed graphically as impact maps and/or via GIS) about the impacts of non-fishing related human activities on the seabed, water column and living marine resources from research and assessment surveys (both by ship and aircraft) conducted off Angola, Namibia and South Africa and from measurements made at sentinel sites
- Environmental disaster events (e.g. major spills of hazardous chemicals/materials and oil)
- Updates on ballast water discharges and other maritime operations that have potentially negative impacts
- Relevant information about any assumptions made
- Time series of all relevant parameters such as pollutants, showing trends and deviations
- Various other products that are or may be relevant to operational activities in the EEZs of Angola, Namibia and South Africa
- User-friendly interpretations of all of the above.

The second output will be a viable (affordable, implementable and sustainable) plan, developed in close consultation with management agencies, academic institutions and other users, for consideration by the IBCC that will enable the continuation of the regional NIE after completion of the present contract.

COMPONENT D: ECOSYSTEM INDICATORS INFORMATION SUB-SYSTEM

The Ecosystem Indicators Information Sub-system (EIS) is intended to provide fisheries and conservation management authorities in the BCLME region with information about the status of the BCLME as a whole by focusing on key ecosystem indicators. It is envisaged that it will only be possible to update this information infrequently i.e. every few years. Accordingly, the initial EIS will of necessity be of a fairly general nature and is intended to be a support to those involved in development of EAFs and in ecosystem conservation.

Design Criteria and Scope of Work (Component D)

D1. The BCLME EIS is to be designed and implemented for the region as a whole, and will draw on information generated by the BCLME Programme and Country sponsored EAF activities. The EIS should, however, be designed to be incremental to country systems, and not replace country systems.

D2. The EIS must be simple, cost-effective, extendable, timeous, be useful to both managers and scientists/researchers i.e. be seen as useful and be used by them, and provide essential data and information required for the sustained utilization and conservation of the BCLME. It is envisaged that by addressing the entire BCLME, the EIS will provide some “added value” in the form of first order interpretation thereby laying the foundation for more detailed interpretation and follow-up by the users.

D3. The EIS will be a web-based system with cross-links with existing national systems and websites where these exist (but not duplicate these). Primary outputs will be in the form of time series of relevant ecosystem indicators. EIS should have a capability that will enable abridged reports in HTML format to be e-mailed to selected users when the need arises.

D4. In developing EIS, the contractor will need to assess the **actual** operational needs of Angola, Namibia and South Africa in respect of a **regional** system, and compile information from country and BCLME Programme sources, giving the appropriate source credit. (It is likely that the regional system will be based on information available within the various national fisheries and conservation authorities and from BCLME Programme supported activities.)

C5. In designing the BCLME EIS, the contractor will need to pay particular attention to the provision of information that is relevant to the identification and description of the current state of the ecosystem and the identification of long-term ecosystem changes, including species alterations and regime shifts. This will provide a basis against which future changes will/may be measured

The Contractor will be expected to do the following:

- Collaborate closely with the relevant resource management and conservation authorities as well as industry and academic institutions in Angola, Namibia and South Africa that have a need for, or which are involved in ecosystem and EAF work
- Design, develop and implement (i.e. make operational) a EIS in accordance with the Design Criteria C1-5 above and deliver on the outputs required (see following section)
- Consult widely with all potential users and interested and affected parties in the three countries
- Play an active and integrating role to enable the Chief Technical Advisor of the BCLME Programme and the Programme Steering Committee meet their obligations as specified in the BCLME Strategic Action Programme, Project Document and Revised LOGFRAME.

Outputs Required (Component D):

The primary output of EIS will be an operational user-friendly web-based information system. The EIS will be *de facto* a fully operational system for the BCLME region, suitably linked with other components of SEIS. (Note that EIS should be capable of being adapted/expanded to incorporate future elements as they become operational.) The EIS will comprise *inter alia* the following products:

- A succinct overview about the present status of the Benguela ecosystem, long-term changes therein including species alterations and regime shifts
- Key indicators and models used in the BCLME region to characterize the ecosystem and detect change therein
- Time series of all relevant ecosystem indicators
- Relevant information about any assumptions made and limitations of data and techniques/models employed
- Various other products that are or may be relevant to operational activities in the EEZs of Angola, Namibia and South Africa

The second output will be a viable (affordable, implementable and sustainable) plan, developed in close consultation with management agencies, academic institutions and other users, for consideration by the IBCC that will enable the continuation of the regional EIS after completion of the present contract.

ALL COMPONENTS

Timetable:

1. November 2005: Assessment of country requirements for SEIS sub-systems (components) A-D, potential types and sources of data and information
2. December 2005 – January 2006: Through consultative and participatory process (e.g. interaction with key users either one-on-one or through a suitable meeting/workshop) prioritise the data requirements, sources of data etc, and devise outline operational structure for the SEIS sub-systems together with details of costing, as well as the implementation structure and information about proposed key participants who will provide the basis for an ongoing and sustainable operational sub-system and overall system
3. January 2006: Provide prototype of an operational system
4. March 2006: Finalise proposals for implementation of a functioning SEIS
5. April - May 2006: Implementation of SEIS (i.e. make operational)

Criteria for Participation:

Potential contractors

- Would be expected to include nationals of Angola, Namibia and South Africa in their team
- Should involve international expert(s) or partner organization(s) which has competence in information systems in the execution of the project
- Must have a proven track record of delivery
- Must have demonstrable capability to lead and undertake the work and project management, *inter alia*,
 - expertise and capacity to utilize web-based information and outputs from numerical and other models

- in collaboration across disciplines and with government management agencies
- in developing operational strategies to address the needs of integrated management and sustainable development
- in production of reports, hand books, computer generated products, peer-reviewed technical publications etc

Attention of potential contractors is drawn to the penultimate bullet of the Proposal/Tender Requirements in respect of co-financing

Budget:

Please note that the estimated maximum budget for this Project (Reference Number: BCLME/SEIS/05/01) is 50 000 US Dollars (\$)

PROPOSAL/TENDER REQUIREMENTS

Contractors wishing to submit proposals/tenders in respect of the above Project are required to provide the following:

- Name of organisation/firm or individual/s submitting Tender
- Full particulars of Project Leader, Co-leaders and personnel who will be involved in the project (Abridged CVs for each participant outlining qualifications and quantifiable experience should be appended.) In the event of the designated Project Leader not being available for all or part of the project execution, please indicate who would be the responsible leader.
- Detailed work plan and timetable showing clearly how the Tenderer proposes to address the Project objectives, design criteria and scope of work and meet the output requirements of the various Components of the Project. The intended approach should be fully specified and linked to the timetable and incorporated into the work plan.
- Preference will be given to a single contractor or consortium. However, in view of the multi-disciplinary nature of the work and in order not to preclude contractors with more limited expertise from tendering, contractors may tender for one or more of the Components of the Project. Accordingly, contractors must indicate clearly what component(s) they are tendering for.
- Those tendering for the full Project (i.e. all components as a package) should indicate whether or not they are also prepared to be considered for individual components.
- In the event that the contractor is not tendering for all Components of the Project as a single package, a clear indication must be provided as to how the contractor plans to integrate their activities with those of other components
- Full details of capacity building and training that will be undertaken by the Tenderer must be specified.

- The Tenderer should indicate how the Criteria for Participation will be met.
- The Tenderer should specify value of their in-kind contribution to the project and the amount of co-finance they are able to lever or contribute directly.
- The Tenderer must state the total tender price for undertaking the work as specified, COMPONENT BY COMPONENT. In addition, a comprehensive breakdown of costs (in the requisite UNOPS format of: labour/salaries, running and capital equipment), and linked to the timetable must be provided for each Component. Costs associated with capacity building and/or training should be clearly specified.
All costing should be in US\$.