



Terms of Reference

Marine and Coastal Operations for Southern Africa (MarCOSouth): Economic Benefit Analysis and Report

Context

The Copernicus (ex-GMES) programme will provide accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security. It is headed by the European Commission (EC) in partnership with the European Space Agency (ESA) and the European Environment Agency (EEA).

GMES & Africa aims to promote the development of local capacities, institutional, human and technical resources for access to and exploitation of Earth Observation (EO) based services on an operational basis for sustainable development in Africa.

In order to rollout the implementation of the GMES & Africa initiative, three thematic areas were agreed upon and prioritized through consultations with African stakeholders, namely, (a) Long-Term Management of Natural Resources, (b) Marine and Coastal Areas, and (c) Water Resources Management, funded under the Pan African Program.

In 2017 the CSIR submitted a proposal in the GMES Marine and Coastal thematic area, together with partner organisations around Southern Africa that include the Benguela Current Convention (BCC), Western Indian Ocean Marine Science Association (WIOMSA), Coastal Oceans Research and Development – Indian Ocean (CORDIO) East Africa, University of Eduardo Mondlane (UEM), Institute of Marine Sciences – University of Dar es Salaam, National Sea Rescue Institute (NSRI) and the ABALOB research group, in response to a call from the African Union Commission (AUC). The proposal was based on significant technical synergy and co-funding from a current Operation Phakisa project i.e. Oceans and Coastal Information Management System (OCIMS) funded by the then Department of Environmental Affairs (DEA).

The MarCoSouth project maintains, further develops and provides a sustainable platform for local, institutional, human and technical capabilities in the African partner countries (i.e. Angola, Namibia, Mozambique, Tanzania, Kenya and South Africa) through the development of services focused on sustainable socio-economic development, empowering a wide range of users in the public and private sectors through the application of regionally-optimised satellite observations and model based forecasts in the South and East African Marine and Coastal domains.

It strongly contributes to the implementation of the African Space Policy and Strategy (ASPS) through application of world-leading satellite sensors, e.g. the European Sentinel series, with innovative and regionally optimised products. Examples of ASPS objectives addressed are: developing indigenous infrastructure and capabilities that service an African market; provision of regionally appropriate services and products; ensuring all levels of government are able to access data through a centralised portal.

The MarCoSouth project is strongly aligned to the existing Oceans and Coasts Information Management System (OCIMS). OCIMS has consolidated South African observational and forecasting expertise through the development of a range of services that are very similar in scope to those proposed for GMES & Africa. The MarCoSouth project will effectively provide a platform for the regional expansion of the services developed through OCIMS.

The MarCoSouth project is focused on providing decision-makers with services and tools in a clearly directed response to sustainable socio-economic development goals; directly linked to national, regional and continental mechanisms, and involving both Southern African Development Community and Indian Ocean Commission Regional Economic Centre and the South and East Africa GMES-Africa potential Regional Implementation Centres (RICs).

The MarCoSouth project aims to strengthen regional and national capacities to generate and apply Earth Observation services, as demonstrated by the user-focused Earth Observation service development methods, substantial proposed user engagement and training mechanisms, wide application range, multi-sensor and regionally optimised algorithms and products used, and sophisticated information technology and processing/serving capability of the proposed MarCoSouth Information Management System (IMS).

Development and sustenance of ocean observation systems require significant funding. In Africa, most of the existing ocean observation systems are funded through global scientific programmes. To encourage support to the development of new and strengthening existing systems by African countries and Regional Economic Commissions (REC), it is essential that a thorough assessment of the associated costs and benefits of sustained ocean observations is undertaken through an Economic Benefit Analysis and Report.

Expected Output

MarCoSouth needs a preliminary, quantitative, evidence-based economic analysis to 1) better inform the development of regional earth observation-based products, services and decision support tools, and 2) establish the potential economic benefits & driving criteria for MarCoSouth implementation scenarios. The expected output from the MarCoSouth Economic Benefit Analysis is a written report, including a highly synthesised analysis, based on the quantified potential economic benefits of Earth Observation services for decision-making on ocean governance and enabling the development of the ocean economy, using MarCOSouth as a case study.

The report should cover the Southern African region and the primary target audience is African Governments, relevant multilateral development banks (e.g. World Bank and the African Development Bank) and key bilateral partners (e.g. EU). The report is also anticipated to be of value to private sector interests relevant to the coastal, marine and maritime economies.

The impact report needs to be published in a credible public facing platform or publication as a once off. The report should clearly demonstrate the “value” of Earth Observation across ocean sectors, including its relative importance across sectors. Ideally a format that is highly accessible and marketable, visual and easily understood - that would assist greatly in the uptake.

Key Activities

The Benguela Current Convention (BCC) and the Western Indian Ocean Marine Science Association (WIOMSA), on behalf of the Marine and Coastal Operations for Southern Africa (MarCOSouth), would like to hire senior consultants to undertake the quantified potential economic benefits and value of Earth Observation services for decision-making on ocean governance and enabling the development of the ocean economy, using MarCOSouth as a case study.

Based on the analysis, a report should be prepared and include, but should not be limited to the following:

- Provide a brief review of public evidence of relevant regional ocean economy and development policies. Output should provide a list of critical policy questions and associated economic sectors.
- Identify key ocean and coastal economic sectors, based on policy review, existing regional strategy documents & in consultation with MarCoSouth.
- Establish the potential value, both direct (market) and indirect (e.g. from existing Natural Capital Accounting studies) of these sectors, based on existing and available studies.
- Identify critical Earth Observation approaches and establish estimates of value using e.g. a Value of Information (VOI) approach, for potential Earth Observation information systems, providing a short synthesis of the components of a mature Earth Observation system
- Estimate and provide a short synthesis the potential value of a mature Earth Observation services system,
- Evaluate and value the impact Earth Observation has on society and the environment and articulate specifically on how the socio-economic benefit as well as inclusive development could be improved and/or strengthened.
- Use the Earth Observation services synthesis to develop policy recommendations concerning the quantified importance of Earth Observation to critical policy questions. Identify clear opportunities to exploit study outputs at national, sub-regional and regional levels.

- Recommend prioritised future regional development areas for a Marine and Coastal Information Management System to maximise economic and socio-economic impact.

Key Outputs:

- Inception report outlining the work plan for delivery of the outputs of the consultancy.
- Final report that includes an executive summary in a highly visual and easily understandable format. All economic values to be reported in US\$.
- The report should be published in a credible public facing platform that is approved by the project stakeholders/evaluators.

Timeframe:

Responders will need to provide a detailed timeline with the approach. The study is expected to take up to 60 days. The deadline for the report is November 2021 (duration of two (2) months).

Qualifications / Special Skills or Knowledge

The assignment will be undertaken by a team of at least two experts from within and outside the Western Indian Ocean region. The experts shall have the following qualifications and experience:

Academic qualifications: Advanced university degree (MSc or PhD in a) economic valuation and b) other related disciplines relevant to the assignment

Professional experience: At least 5 years' experience in the economic valuation of natural resources and related disciplines, and demonstrable knowledge of earth observation technology and applications in the coastal, marine and maritime domains. Technical scientific and economic knowledge and work experience in Benguela Large Marine Ecosystem (BCLME) and the Western Indian Ocean regions will be an added advantage.

Language skills: Good command of spoken and written English language. Working knowledge of French/Portuguese is an asset.

Bidding Process to Follow for Consultancy

The consultant will prepare and submit:

- A technical proposal giving details on the available expertise and plan of work to achieve the deliverables
- A financial proposal giving a cost estimation for achieving the objectives of this project.
- The two proposals must be in **two separate documents** and should be clearly named Technical or Financial Proposal.

Technical Evaluation Criteria

Table 1: Points for the evaluation of quality/functionality

Criteria	Maximum Points
1. Understanding the requirements	20
2. Soundness of Technical Approach	30
3. Qualifications and skills of the experts on the team	10
4. Economic and domain experience of the experts on the team	20
5. Profile of similar quality publications	20
Total evaluation points for quality/functionality	100

Evaluation criteria 1: Understanding the requirements

Does the proposal explicitly demonstrate that the proponent understands the call's objective(s) and the final products to be delivered?

	Understanding the requirements
Poor (score 0)	Service provider has not provided sufficient description/explanation on their understanding of the requirements.
Good (score 10)	Service provider has provided sufficient description/explanation on their understanding of the requirements
Excellent (score 20)	Service provider has provided sufficient description/explanation on their understanding of the requirements with additional recommendation and suggestion.

Evaluation criteria 2: Soundness of Technical Approach

Does the proposal show a good understanding of the topic(s) through the literature review and questions that will guide the study?

	Soundness of Technical Approach
Poor (score 0)	Service provider has not provided a comprehensive and logical technical approach to the development of the report.
Good (score 15)	Service provider has provided a comprehensive and logical technical approach to the development of the report.
Excellent (score 30)	Service provider has provided a comprehensive and logical technical approach to the development of the report that is innovative and novel.

Evaluation criteria 3: Qualifications and skills of the experts on the team

Do these experts have the relevant education in economic valuation in particular?

	Qualifications and skills of the experts on the team
Poor (score 0)	The qualifications and skills of the experts on the team are not sufficient for the profile of the project
Good (score 5)	The qualifications and skills of the experts on the team are sufficient for the profile of the project
Excellent (score 10)	The qualifications and skills of the experts on the team are well known and will be a great asset to the project. Good network in academic and domain knowledge areas.

Evaluation criteria 4: Economic and domain experience of the experts on the team

Does the proposal clearly show the collective experience of the team to be involved in the consultancy and cover the key areas well? Do these experts have the relevant experience economic valuation in particular?

	Economic and domain experience of the experts on the team
Poor (score 0)	The economic and domain experience of the experts on the team are not sufficient for the profile of the project
Good (score 15)	The economic and domain experience of the experts are sufficient for the profile of the project. They have done similar projects in other domains.
Excellent (score 30)	The economic and domain experience of the experts on the team are well known and will be a great asset to the project. Similar projects have been conducted in similar domains with great success.

Evaluation criteria 5: Profile of similar quality publications

These include the likelihood of producing high quality outputs and generating new data/knowledge and add value and understanding.

	Profile of similar quality publications
Poor (score 0)	No record, experience of similar publications
Good (score 10)	A profile of similar quality publications
Excellent (score 20)	A profile of similar high quality and impactful publications