Terms of reference

Job Opening number	:	25-United Nations Environment Programme-259658-Consultant
Job Title	:	Natural Resource Management Specialist
General Expertise	:	Programme Management
Category	:	Project Management
Department/ Office	:	United Nations Environment Programme
Organizational Unit	:	UNCS

Purpose

The objective of this consultancy is to provide technical services and facilitate stakeholder engagement in the development of participatory, evidence-based marine spatial planning and related management plans. Using Geographic Information Systems (GIS), Remote Sensing (RS), economic valuation, and biodiversity analytics, the Consultant will support the creation of a comprehensive, stakeholder-validated Integrated Environmental Management Plan (IEMP) for the communities of Mkuranga. This integrated approach will inform policy development, enhance community involvement, and guide long-term conservation and sustainable use of marine and coastal resources.

The position will be home-based. In executing the consultancy, the consultant will work closely with the Nairobi Convention Secretariat team and other designated officials and partners in the Western Indian Ocean region, as deemed appropriate and necessary.

Duties and Responsibilities

Organizational Setting

The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment. UNEP administers the Nairobi Convention for the Protection, Management and Development of the Coastal and Marine Environment of the Western Indian Ocean (WIO). The Contracting Parties to the Convention are Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa and United Republic of Tanzania.

UN Environment's, Ecosystems Division works with international and national partners, providing technical assistance and advisory services for the implementation of environmental policy, and strengthening the environmental management capacity of developing countries and countries with economies in transition.

Background of the Consultancy

UNEP/ Nairobi Convention, through the "The Partnership Project between the Nairobi Convention (NC) and the South West Indian Ocean Fisheries Commission (SWIOFC) for

resilient marine and coastal ecosystems and livelihoods (SWIOFC–NC PP2)" and UNEP's Ecosystems Division, Programme Coordination Project on "Conservation, Restoration, and Sustainable Use of Biodiversity," requires the services of a national specialist in natural resource management. The natural resource management consultant will use geographic information systems (GIS) and remote sensing (RS) to map at high resolution, coastal and marine biodiversity in the United Republic of Tanzania. The consultant will identify and zone off areas of biodiversity loss or gain over decadal times along the coastlines of Tanzania, identify major marine uses, spatial overlaps, ecological trade-offs, and potential conflicts. In addition, the natural resource management consultant will validate biodiversity loss/gain hotspots, undertake ecosystem valuation of goods and services, and develop valuation maps through extensive stakeholder engagements in Mkurunga and Mkoani districts. In the two districts, the consultant will supplement the biodiversity mapping, data analysis, economic value of goods and services by undertaking a cost-benefit analysis for the purposes of implementation, and establish a dashboard for visualization of the outputs.

Under the overall supervision of the Head of Nairobi Convention Secretariat, the consultant will be responsible for the following interlinked activities:

1. Geospatial Mapping (GIS & Remote Sensing)

a. Use high-resolution remote sensing and GIS to:

i. Develop marine biodiversity loss or gain spatial trend maps for Tanzania's coastal and marine areas.

ii. Map out areas in each coastal district of the United Republic of Tanzania requiring restoration as additional inputs for carbon offset schemes and climate mitigation.

iii. Carry out ground-truthing, incorporating local knowledge to validate the biodiversity loss and gain maps and degraded hotspots.

b. Develop interactive GIS-based maps layers of Mkuranga district and Mkoani district (Southeast Pemba) covering:

i. Physical and oceanographic features: bathymetry, seabed morphology, ocean currents, sea level trends, salinity, temperature, acidification, upwelling zones.

ii. Ecological and biodiversity assets: mangroves, seagrasses, coral reefs, beaches, rocky shores, critical fish habitats, migratory corridors (e.g. turtles, sharks), designated/proposed MPAs.

iii. Health indicators represented by habitat degradation, pollution hotspots, overfished zones, areas of climate change vulnerability and risks, oil spill sensitive areas.

iv. Human activities: settlements, infrastructure, ports, aquaculture zones, tourism hubs, alternative livelihoods (e.g. seaweed farming), industrial uses, fishing areas, fish landing points, Collaborative Fishery Managed Areas, Collaborative Management Areas, Beach Management Units, oil and gas blocks.

2. While ensuring compliance with open data standards, interoperability, metadata protocols, and user accessibility for integration with mobile/web platforms, perform geospatial analysis of the map layers in 1(b) above supplemented by stakeholder engagement in Mkuranga and Mkoani district (Southeast Pemba) to map out:

a. Areas of potential marine resource-use conflicts.

b. Areas or zones vulnerable to climate shocks.

c. Ship navigation routes.

d. Community-priority conservation areas, fisheries closure areas, designated community-level marine parks, designated/proposed blue carbon areas, areas with opportunities for eco-tourism.
e. Presentation of the map layers obtained from from 1 and 2 to local and district stakeholders for validation and endorsement.
3. Undertake economic valuation of marine ecosystems goods and services economic valuation and potential investment opportunities in Mkuranga district and Mkoani district
a. Classify and catalog coastal and marine assets, their ecosystem goods and services to provide background and context for the area by mapping the available data in Mkuranga and Mkoani districts
b. Conduct ecosystem services analysis through comparative risk analysis of the ecosystems (under provisioning services, cultural services, regulating/supporting services) and prioritize the ecosystems for further valuation in terms of food provisioning, raw materials provisioning, carbon sequestration, ecotourism and recreation, regulation of extreme events, and scarce habitats.
c. Conduct a baseline ecosystem services valuation quantifying the revenue generated in US dollars for:
i. food provisioning from marine fish catch, mariculture, and agriculture
ii. the gathering of raw materials, particularly fuelwood and timber
iii. cultural services of tourism and recreation
iv. carbon sequestration services
v. regulating services related to the maintenance of scarce habitats
vi. the regulation of extreme events
d. Identify gaps in 3(iii) above requiring additional collection of field data in Mkuranga and Mkoani, and actual data collection, and presentation to stakeholders to support the construction of the relevant bio-economic models
4. Following the ecosystem services valuation in 3 above, conduct a cost-benefit analysis to evaluate the benefits of implementing proposed bioeconomic activities (e.g. new MPA, carbon offset co-managed sites, octopus closure sites, seaweed farming plots, pelagic anchovies (dagaa) etc in Mkuranga and Mkoani), and the costs of implementation
a. Propose green/blue finance instruments for funding management plan and implementation of proposed bio-economic activities
b. Recommend further policy measures and management interventions required to enhance (i) blue economy opportunities, (ii) inputs to national biodiversity conservation strategies and action plans for protecting biodiversity and ecosystem services, and (iii) options for resilience of ecosystem towards national climate action plans outlining how Tanzania plans to reduce greenhouse gas emissions and adaptation to climate change.
5. Environmental dashboard
a. Provide a detailed dashboard displaying:
i. story maps and web maps for visualizing marine biodiversity loss and gain.
ii. maps showing degraded hotspots in Tanzania requiring restoration.
iii. webmaps, and storymaps with data drawn from 1 and 2 above for the visualization of the state of Mkuranga and Mkoani districts.
iv. Valuation of ecosystems goods and services in Mkuranga and Mkoani districts.
v. Cost-benefit analysis for implementation of environmental and socioeconomic measures to

accelerate blue economy initiatives and innovations.

Ultimate result of service

1. Inception report submitted and approved, including a detailed work schedule aligned with project timelines and objectives.
2. Report submitted outlining available datasets and identifying spatial data gaps across the project area.
3. Documentation of stakeholder validation meetings submitted, including participant lists, key feedback, and summary of discussions.
4. Spatial maps of Mkuranga and Mkoani Districts developed, validated, with physical, biological, geomorphological and socioeconomic data.
5. Economic valuation report of marine ecosystem good and services in Mkuranga and Mkoani districts
6. Dashboard developed with interactive online map layers and accompanying geospatial database established and access link provided.

Travel Details

Travel will be organized by Substantive Office

Travel	Per Diem	Other	Total
0	0	0	0

Output/Work Assignments

- A detailed inception report including a methodology, activity schedule, data requirements, and stakeholder engagement plan 15th Sept 2025
- A report on data collection, detailed maps and ground truthing, showing decadal trends in biodiversity loss and gain in Tanzania 30th Octr 2025
- data collection (physical, biological, geomorphological, socioeconomic data and marine resource use) in Mkuranga and Mkoani, development of map layers, and data ground-truthing. 31st Nov 2025
- A comprehensive economic valuation report of coastal and marine ecosystem goods and services in Mkuranga and Mkoani districts, including spatial mapping of classified assets, comparative risk analysis, baseline valuation in USD across key ecosystem service categories, identification of data gaps, collection of additional field data, and stakeholder-validated recommendations to support bio-economic modeling and investment planning. 30th Dec 2025
- A detailed cost-benefit analysis report evaluating proposed bioeconomic activities in Mkuranga and Mkoani, including financial feasibility assessments, recommended green/blue finance instruments, and policy guidance to support blue economy growth, biodiversity conservation, and ecosystem resilience in alignment with national climate action plans.31st Jan 2026
- An interactive digital visualization tool—including a dashboard, web maps, and story maps—illustrating marine biodiversity loss and gain across Tanzania, with focused visualizations and key statistics on ecosystem status in Mkuranga and Mkoani districts, using data from geospatial mapping and ecosystem valuation analyses. 23r Feb 2026

Payment Schedule
i. First payment of USD 5,700 upon submission of a detailed inception report including a methodology, activity

schedule, data requirements, and stakeholder engagement plan.15th Sept 2025
ii. Second payment of USD 7,600 upon submission of a report on data collection, detailed maps and ground truthing, showing decadal trends in biodiversity loss and gain in Tanzania. 30th Oct 2025
iii. Third payment USD 7,650 following data collection (physical, biological, geomorphological, socioeconomic data and marine resource use) in Mkuranga and Mkoani, development of map layers, and data ground-truthing.31st Nov 2025
iv. Fourth payment of USD 7,650 upon submission of a comprehensive economic valuation report of coastal and marine ecosystem goods and services in Mkuranga and Mkoani districts, including spatial mapping of classified assets, comparative risk analysis, baseline valuation in USD across key ecosystem service categories, identification of data gaps, collection of additional field data, and stakeholder-validated recommendations to support bio-economic modeling and investment planning.30th Dec 2025
v. Fifth payment of USD 7,600 upon submission of a detailed cost-benefit analysis report evaluating proposed bioeconomic activities in Mkuranga and Mkoani, including financial feasibility assessments, recommended green/blue finance instruments, and policy guidance to support blue economy growth, biodiversity conservation, and ecosystem resilience in alignment with national climate action plans.31st Jan 2026
vi. Sixth payment of USD 6,800 upon submission of an interactive digital visualization tool—including a dashboard, web maps, and story maps—illustrating marine biodiversity loss and gain across Tanzania, with focused visualizations and key statistics on ecosystem status in Mkuranga and Mkoani districts, using data from geospatial mapping and ecosystem valuation analyses.23r Feb 2026

Contract Duration

Overall Contract Duration:	6 months
Estimated amount of actual time to worked (days, weeks, months):	6 months
Regular Working Hours (if applicable):	N/A
Total Remuneration:	US$.43,000
Payment Terms:	Payment upon delivery of outputs

Qualification Requirements/Evaluation Criteria

Education:

● Advanced university degree in the field of, ecology, environmental studies, marine science, natural resource management, or any related discipline is required.

Language:

English and French are the official working languages of the United Nations. For this position fluency in both oral and written English is required. Knowledge of spoken and written coastal dialect of Kiswahili is desirable.

JFQ/JSQ:

Advanced university degree in the field of, ecology, environmental studies, marine science, natural resource management, or any related discipline.

Professional Experience: A minimum of 7 years of professional experience in implementing programmes on conservation of coastal and marine biodiversity and natural resources management in the United Republic of Tanzania.

Experience and knowledge in the application of geographic information systems (e.g. ArcGIS), spatial data management. Knowledge on economic valuation of coastal and marine goods and services is an added advantage.

Experience working in a multidisciplinary set up with the government of Tanzania, non-government stakeholders and local communities on natural resource management is desirable.

Supervisor Name: _____

Title: _____