

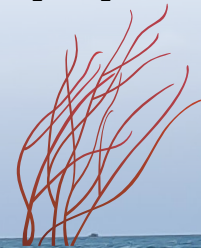
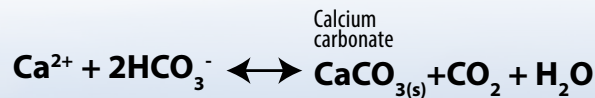
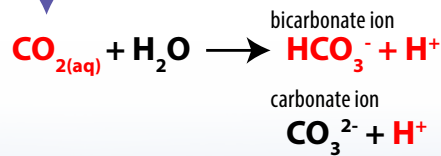
Inception Report

DEVELOPMENT OF OCEAN ACIDIFICATION ACTION PLAN in the Western Indian Ocean Region

High CO₂ world

Higher [CO₂(aq)]
Higher acidity [H⁺]
lower pH
lower carbonate saturation state

Carbon dioxide infusion
CO₂



FACT

The countries in the Western Indian Ocean (WIO) region, which include Comoros, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa, and Tanzania faces increased threats from Ocean Acidification.

July, 2024

SUMMARY

Our oceans absorb approximately 26% of annual human-caused (anthropogenic) (CO₂) emissions, mitigating. However, this result to a change in ocean carbonate chemistry known as ocean acidification (OA). OA has significant impacts on organisms, ecosystems and livelihoods of coastal communities.

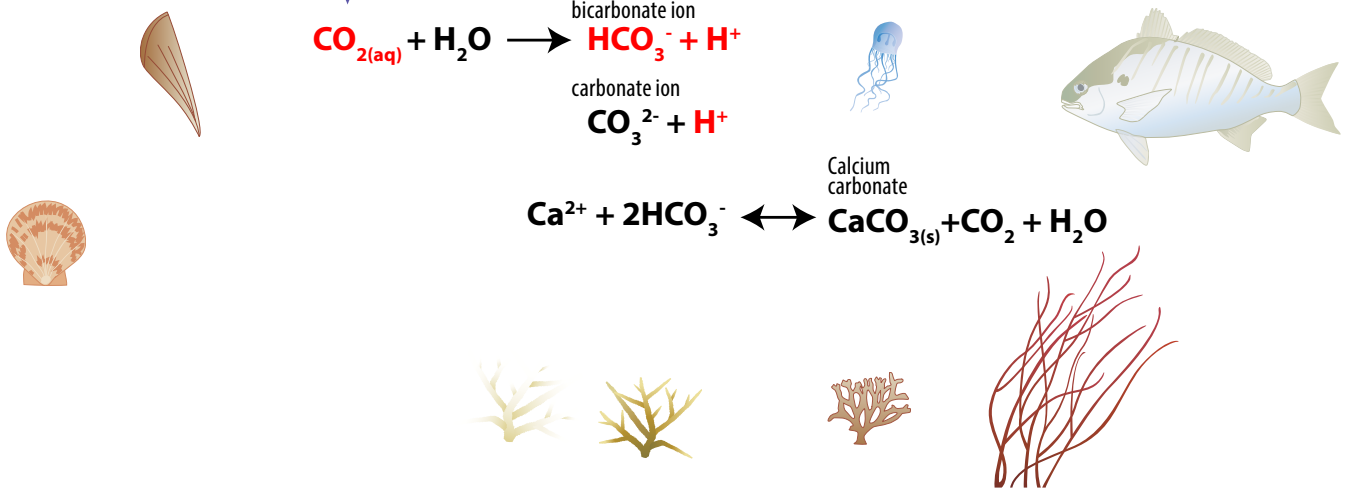
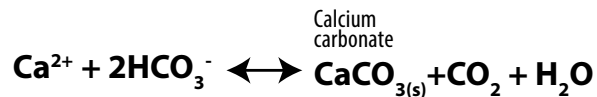
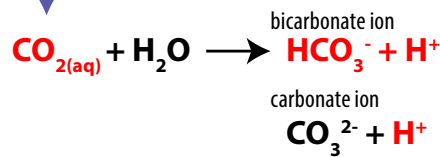
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Higher [CO₂]_(aq)
 Higher acidity [H⁺]
 lower pH
 lower carbonate saturation state

Carbon dioxide infusion
 CO₂



low pH water &
 ΩAr &
 high pCO₂,
 high DIC & TA

pCO₂ &
 DIC

pH &
 ΩAr

Coral reefs receive seawater with high pH, TA & ΩAr suitable for calcification

Organic matter remineralization pathways (sulfate reduction and aerobic respiration) raising the total alkalinity and DIC

Catchment

Estuary

Coastal

Neashore Reef



Executive Summary

Our oceans absorb approximately 26% of annual human-caused (anthropogenic) (CO₂) emissions, mitigating climate change. However, this absorption has critical consequences to a change in ocean carbonate chemistry known as ocean acidification (OA). This phenomenon disrupt ocean chemistry, decreasing ocean pH and diminishes the availability of aragonite and calcite minerals, which are needed for the formation of shells and skeletons in calcareous marine organisms. OA poses a serious threat to health of marine, ecosystems, jeopardize food security and coastal protection for communities that depend on them. The United Nations' (UN) 2030 Agenda for Sustainable Development recognizes this threat through Sustainable **Development Goal (SDG) 14 Target 14.3**, aiming to minimise its impacts.

The countries in the Western Indian Ocean (WIO) region, which include Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia, South Africa, and Tanzania faces significant threats from OA impacts. This is because coastal communities in these countries highly depend on coastal and marine resources for their livelihood. To address this pressing threat, a tailored Regional OA Action Plan is required for the WIO region. This plan will leverage on latest scientific findings on OA and its potential impacts in the region to establish collaborative framework for monitoring, mitigating, and adapting to OA within a defined time-frame.

Recognizing this need, the United Nations Environment Programme (UNEP) Nairobi Convention, commissioned a consultant to develop a Regional OA Action Plan for the WIO. The plan will promote OA monitoring and identify mitigation and adaptation measures to address current and future OA impacts on marine and coastal ecosystems, ensuring their continued provision of goods and services to coastal communities in the WIO Region. This inception report provides information on:

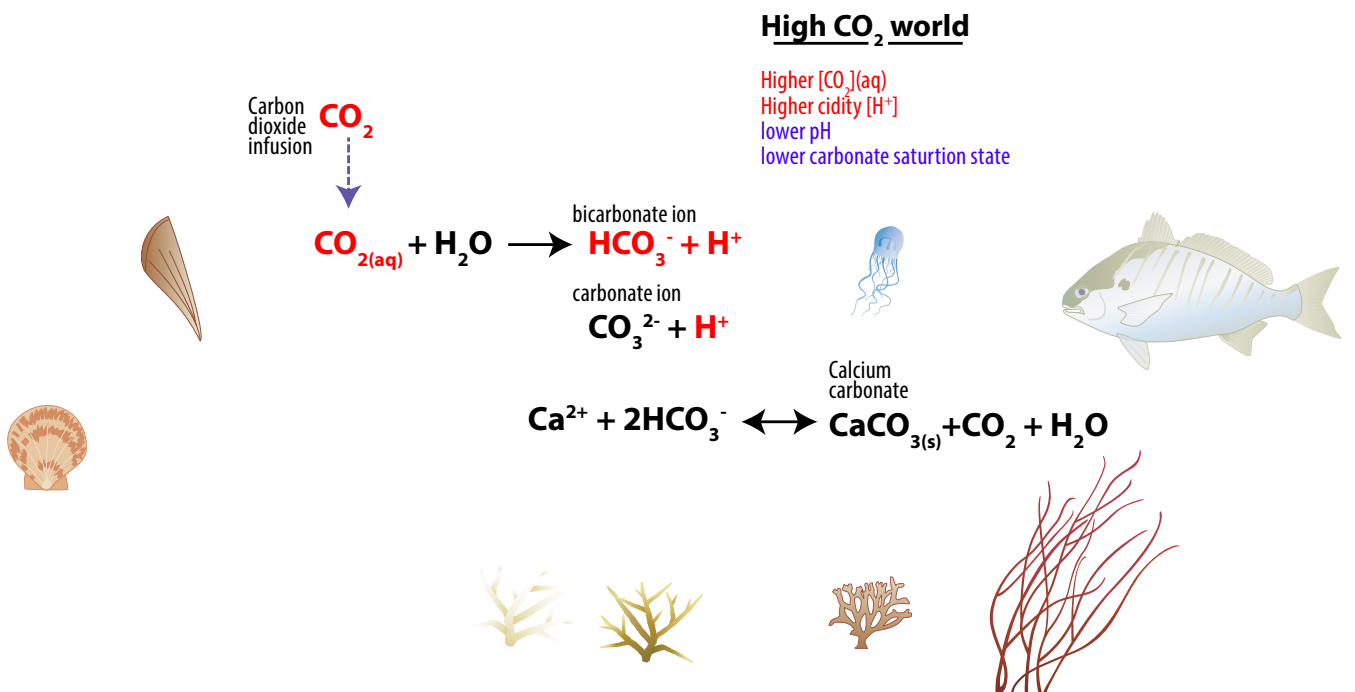
1. The consultant's understanding of the roles and responsibility in the assignment
2. The consultant's understanding of the consultancy's goals, objectives, and expected outcomes as outlined in the Terms of Reference (TOR).
3. The project scope, proposed methodologies to achieve assignment's goals, and a detailed work plan to complete the assignment, including specific activities, outputs, and submission dates.
4. Assumptions made for the successful completion of the assignment.

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LIST OF ABBREVIATIONS

AJOL	Africal Journal Online
CO ₂	Carbon dioxide
GHG	Green House Gas
IMTAs	Integrated Multitrophic Aquaculture Systems
KPIs	Key Performance Indicators
OA	Ocean acidification
SDG	Sustainable Development Goal
TOR	Terms of Reference
UN	United Nations
UNEP	United Nations Environment Programme
WIO	Western Indian Ocean
WIOMSA	Western Indian Ocean Marine Science Association



1. INTRODUCTION

1.1. Background and rationale

On a global scale, about 26% of annual anthropogenic carbon dioxide (CO₂) emissions are absorbed by the oceans annually, serving as a mitigating factor against the impact of climate change. However, this process of CO₂ absorption comes at a cost. It alters the ocean's carbonate chemistry, leading to a phenomenon called ocean acidification (OA). OA is characterized by a decrease in ocean pH and a decline in the availability of calcite and aragonite minerals, which are crucial for the formation of shells and skeletons in calcareous marine organisms (e.g., corals). As a result, OA poses a significant threat to marine organisms, ecosystems (e.g., weakening coral reefs), and the well-being of coastal communities that depend on these resources for survival. The United Nations' (UN) 2030 Agenda for Sustainable Development recognizes this threat through Sustainable Development Goal (SDG) 14 Target 14.3, aiming to mitigate its impacts.

The **Western Indian Ocean (WIO) region**, including Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, the Seychelles, Somalia, South Africa, and Tanzania, faces significant threats from the OA impacts due to high dependence of its coastal communities on coastal and marine resources. Rising coastal pollution, fueled by population growth, urbanization, and development, degrades water quality and further intensifies the impacts of OA in the region. Additionally, the WIO region's vulnerability to other climate change-related impacts such as rising sea surface temperatures, flooding, and change in ocean circulation patterns, exacerbate the threats posed by OA.

To address the pressing threat of OA in the WIO region, a tailored **Regional OA Action Plan** is urgently needed. This plan, developed based on recent scientific findings of OA trends and their ecological and socioeconomic impacts, will serve as a strategic framework for collaborative efforts focused on monitoring, mitigating, and adapting to these challenges within a defined timeframe. Recognizing this need, the United Nations Environment Programme (UNEP) Nairobi Convention, responsible for protecting, managing, and developing the coastal and marine environment of the WIO, has commissioned a consultant to develop a Regional OA Action Plan.

1.2. Purpose and objectives

The consultancy objective is to develop a **Regional OA Action Plan** for the WIO. This plan will provide guidance on mitigation and adaptation measures to address current and future OA impacts on marine and coastal ecosystems, ensuring their continued ability to provide goods and services for sustainable livelihoods of coastal communities.

2. The Scope

2.1. Assignment tasks

The assignment involves the following tasks:

1. Conduct a wide literature review of the latest scientific findings on OA and its potential impacts on food security and marine environment in the WIO region.
 - a) Provide a review of the state of OA in the WIO region based on scientifically credible information, and vulnerability assessment for a full range of OA risks and impacts.
 - b) Screen for data and indicators available from experts and relevant scientific bodies in the WIO to identify trends, threats, and opportunities to the marine ecosystem with respect to food security and the marine environment.
 - c) Provide a brief version of the OA action plan and provide possible adaptation and mitigation measures for food security, and policy options for decision-makers and other stakeholders.
2. Draft and submit a regional OA Action Plan for the WIO region:
 - a) The Action plan strategic priorities for the WIO region may include:
 - i] Mitigating OA such as through the restoration of critical marine and coastal habitats and aquaculture approaches

- ii] Building resilience measures for affected communities, including the resilience of resilience of shellfish aquaculture and the fisheries value chain
 - iii] Measures to reduce local water-borne and airborne pollution that exacerbates OA.
 - iv] Mainstreaming resilience and adaptation measures to OA into policies, planning, and operations
 - v] Collaboration, OA observing network for monitoring and research including sharing of lessons to improve OA efforts.
- b) Develop a 10-year implementation plan for the regional OA action aligned to countries strategic priorities on climate change and OA with goals and related actions that address:
- i] The risks that OA poses to WIO assets and interests are well understood among policymakers, resource managers, affected socio-economic activities of coastal communities, and the public.
 - ii] Relevant monitoring information about OA that is widely accessible for decision making, delivered in a usable form, and routinely applied to climate change decisions across the public and private sectors.
 - iii] Scientific understanding of OA, interactions of OA with other environmental drivers, and how OA affects coastal and marine ecosystems for ocean and coastal management decisions.
 - iv] Countries integration of OA into decisions and policies, and to mainstream elements of the OA action plan into operations that contribute to minimise impacts of OA on marine biodiversity and communities likely to be affected by OA.
 - v] Strategic and effectively financed conservation and restoration efforts of mangroves, seagrass meadows, kelp forests, and salt marshes to secure carbon storage benefits and co-location of aquaculture with successful mangrove and seagrass conservation.
 - vi] Enhanced communication and systematic awareness of OA on efforts for reduction of Green House Gas (GHG) emissions, options for reducing local sources of acidifying pollutants, tools for assessing water quality indicators for management or regulatory actions, innovative and effective strategies addressing ecosystems and resilience of coastal communities, adaptation through improved technologies and management flexibility, and improving attention to oceans in international climate negotiations.
 - vii] A robust regional collaboration on OA-related policy, science, and communications with coordinated responses across the WIO region and strategic partnerships and networks to leverage opportunities for investments necessary to implement the OA action plan.
3. Prepare a summary brief of the OA action plan, the OA implementation plan and related measures for assessing progress.
 4. Participate in the validation of the regional OA Action Plan for the WIO region by policymakers, managers, and experts, and incorporate inputs, and additional comments into the action plan.
 5. Provide the final regional OA action plan for the WIO to include measures for assessing progress in implementing the OA Action Plan, communication, and outreach.

2.2. Methods and approaches

The consultant will employ various methods and approaches to achieve the assignment's objectives. These methods include reviewing relevant documents, analysing data on OA indicators from global data sets, consulting with OA experts and relevant scientific bodies in the WIO, and receiving feedback from the validation workshop. Details on methods and approaches to complete each task outlined in Section 2.1 are provided below.

2.2.1. Conduct a wide literature review of the latest scientific findings on OA and its potential impacts on food security and environment in the WIO Region

2.2.1.1. To provide a review of the state of OA in the WIO based on scientifically credible information, and vulnerability assessment for a full range of OA risks and impacts

In this assignment, the consultant will undertake a thorough review of all relevant documents, encompassing both published literature and unpublished materials.

2.2.1.1.1. Published literature

To identify the latest scientific findings, the consultant will use comprehensive academic and research platform like Web of Science, Scopus, Google Scholar, and Zotero. The search strategy will employ a combination of OA indicator (pH OR carbonate ion concentration OR aragonite saturation state OR calcite saturation state OR fugacity of carbon dioxide OR Revelle factor OR dissolved inorganic carbon OR total alkalinity OR total hydrogen ion content OR Free hydrogen ion content), the WIO region member state (Comoros OR France OR Kenya OR Madagascar OR Mauritius OR Mozambique OR Seychelles OR Somalia OR South Africa OR Tanzania), relevant marine resources (fisheries OR organisms OR ecosystems OR mariculture), and broader marine environment (marine, ocean, sea). Additionally, the African Journal Online (AJOL) will be used to access published articles in the WIO region, which are relevant for OA. Following the search, a critical review of the retrieved literature will be conducted to document the current state of knowledge on OA's status, trends, and impacts on marine organisms, ecosystems, and fisheries within the WIO.

2.2.1.1.2. Grey literature

To gain a comprehensive understanding of the OA and its impacts on the WIO, the consultant will extend the review beyond published literature to encompass grey literature such as regional and national reports, conference proceedings, and strategic documents from WIO countries and institutions. The consultant is aware of important regional report on OA published by the Western Indian Ocean Marine Science Association

(WIOMSA) in 2022. This report highlights on the current state of OA in the WIO region and the ongoing initiatives undertaken by individual countries. The consultant will build upon this foundation by systematically searching the websites of relevant institutions, associations, and organizations working on OA in the WIO. Direct contact with these entities may also be necessary to identify unpublished resources. All gathered documents including the WIOMSA report, will then be reviewed to extract the latest information on the status, trends, and impacts of OA on marine organisms, ecosystems, and the livelihood of coastal communities in the WIO.

2.2.1.2. Screen for data and indicators available from experts and relevant scientific bodies in the WIO to identify trends, threats, and opportunities to the marine ecosystem with respect to food security and marine environment

To gain further insights, the consultant will tap into established networks of OA experts within the WIO region. This will facilitated the collection of valuable data and indicators that can be analyze to identify trends, threats, and opportunities related to the inter-connection of marine ecosystems, food security, and the environment. Moreover, collaboration with relevant scientific organizations in the WIO, such as WIOMSA, will further enrich the data collection process. A specific focus will be placed on reviewing a recent report (WIOMSA, 2022) on monitoring OA in six countries: Kenya, Tanzania, Mozambique, South Africa, Mauritius, and Seychelles. This report provides recommendations for future research and identifies key information needs in the region.

The information gathered during through this process, alongside the findings from the literature review will be analysed to identify patterns, trends, threats, and opportunities pertaining to the relationship between the marine ecosystem, environmental factors and food security. Due to the short-term and often discontinuous nature of available monitoring data for OA indicators in the WIO, determining trends based on these data is not feasible. To address this limitation, the consultant will utilize global datasets from the National Centers for Environmental Information at NOAA (<https://www.ncei.noaa.gov/access/ocean-carbon-acidification-data-system/synthesis/surface-oa-indicators.html>) to compute trends of OA indicators in the WIO based on emission pathways. These pathways lead to varying atmospheric concentrations of greenhouse gases and

other climate forcers, which could, in turn, generate different OA trends in the WIO. pathways.

2.2.1.3. Provide a brief version of OA action plan and provide possible adaptation and mitigation measures for food security, and policy options for decision makers and other stakeholders

The consultant will prepare a brief version of OA action plan. Moreover, a brief version of potential adaptation and mitigation measures for food security, with policy options for decision-makers and other stakeholders. This will be based on information gathered during the literature review and the WIOMSA (2022) report, which explores site-level mitigation measures and seascape-level recommendations in the Tanga-Pemba seascape.

2.2.2. Draft and submit a regional OA Action Plan for the Western Indian Ocean (WIO) region

The development of the WIO Regional OA Action Plan will involve a multi-step process:

2.2.2.1. Action Plan formulation

The information gathered through literature review (Sections 2.2.1.1) and consultation with experts (Section 2.2.1.2) will form the foundation for a comprehensive action plan. This plan will contain the following components:

1. **Distinct objectives:** These clearly define the desired outcomes of the action plan in addressing OA impacts in the WIO region.
2. **Strategic actions:** Specific actions and associated activities to achieve objectives.
3. **Key Performance Indicators (KPIs):** Measurable indicators to track progress and assess the effectiveness of the action plan.

The consultant will prioritize actions that address key vulnerabilities and opportunities identified through literature review and consultations, strategies to promote OA monitoring, adaptation and mitigation, and encourage knowledge sharing and collaboration across the region. The strategic actions to be incorporated into the WIO Action Plan will build upon actions outlined in the Terms of Reference (TOR). The outline of these actions may include:

- a) Mitigation OA such as through restoration of critical marine and coastal habitats and aquaculture approaches .

In this strategic action, the consultant will prioritize activities aimed at mitigating the impacts of OA to coastal ecosystems and associated organisms. This could encompass activities such as conserving seagrass meadows, implementing of restoration projects for vital habitats like seagrass meadows, and farming of seaweed. Additional activities might include advocating for innovative aquaculture practices designed to mitigate the impacts of OA such as Integrated Multitrophic Aquaculture Systems (IMTAs).

- b) Building resilience measures of affected communities, including resilience of shellfish aquaculture and fisheries value chain

In this strategic action, the consultant will concentrate on activities aimed at enhancing the building the resilience of affected communities, including resilience of shellfish aquaculture and the fisheries value chain. These activities may encompass:

- i] Promoting IMTAs, e.g., the integration of seaweed and sea cucumbers. IMTAs help to mitigate OA and offer the potential for additional income streams for coastal communities.
 - ii] Minimising fish post-harvest losses maximizes the value of our seafood resources. This translates to improved food security and stronger economic opportunities for local communities.
- c) Implementation of measures to reduce local water-borne and airborne pollution that exacerbates OA

This strategic action will prioritize activities to address local factors that exacerbate the impacts of OA in the region. Some potential activities may include:

- i] Strengthening enforcement of regulations on industrial discharges and coastal development. This will help reduce pollution entering marine environments, thereby mitigating its contribution to OA

impacts to organisms, ecosystems and coastal communities livelihoods.

- ii] Advocacy for the adoption of clean energy alternatives to traditional fossil fuels. This shift will not only reduce CO₂ emissions, a major driver of OA, but also improve air quality in the region.
 - iii] Expanding monitoring stations to track air and water quality in WIO countries. This data will be crucial for understanding the impact of local stressors and evaluating the effectiveness of mitigation efforts undertaken.
- d) Mainstreaming resilience and adaptation measures to OA into policies, planning, and operations

This strategic action outline activities to mainstream resilience and adaptation to OA into policies, planning, and operations across WIO countries.

- e) Collaboration, OA observing network for monitoring and research including sharing of lessons to improve OA efforts

This strategic action will encompass activities that increase regional collaboration in the WIO. The proposed activities will be informed by drawing experiences from existing collaborative efforts, such as the WIO OA Working Group, the OA Observing Network (GOA-ON), and the OA Alliance. Additionally, they may involve promoting activities such as workshops, conferences, and webinars on topics related to OA.

2.2.2.2. Validation of Action Plan

The consultant recognizes the importance of stakeholder involvement in developing the WIO Regional OA Action Plan. As outlined in the TOR, the draft of OA plan will be presented at a regional workshops to solicit feedback from policymakers, managers, and scientific experts. Their insights and recommendations will be carefully considered and integrated into the final Action Plan.

2.2.2.3. Resource mobilization and sustainability

To ensure successful implementation of the WIO Regional OA Action Plan, the plan will involve resource mobilization strategic actions. These strategies will consist of activities that seek financial support from national governments, international organizations, and potential private sector partners to implement the action plan within ten years.

2.2.2.4. Develop a 10-year implementation plan for the regional OA action aligned to countries strategic priorities on climate change and OA

Following the development of the WIO Regional OA Action Plan, the consultant will develop a 10-year implementation plan. This implementation plan will ensure the Regional Action Plan aligns with the strategic priorities of each WIO country regarding climate change and OA. The following goals, as specified in the TOR, will be central considerations during the development of the implementation plan:

2.2.2.4.1. The risks that OA poses to the WIO assets and interests are well understood among policymakers, resource managers, affected socio-economic activities of coastal communities, and the public

Effectively conveying the risks of OA to stakeholders in the WIO region may entail executing strategic activities such as regional workshops or seminars. The plan will prioritize implementation of activities that increase OA awareness among policymakers, resource managers, and representatives from affected socio-economic sectors, coastal communities, and the general public. These activities should feature presentations by experts highlighting the current state of OA and its potential impacts on WIO assets. Furthermore, the use of plain language and visual aids can help convey complex OA scientific information to a broader audience.

2.2.2.4.2. Relevant monitoring information about OA that is widely accessible for decision making, and delivered in a usable form, and routinely applied to climate change decisions across the public and private sectors

To empower public and private sectors with the knowledge needed for effective decision-making on OA, this plan prioritizes the following key activities.

1. Establishing a centralized platform or database where OA monitoring data is collected, processed, and readily accessible to stakeholders.
2. Translating this data into easily understandable and actionable formats for decision-makers, possibly through the creation of user-friendly dashboards or interactive tools, is essential.
3. Fostering interdisciplinary collaboration among scientists, policymakers, and stakeholders can facilitate the integration of OA science into ocean and coastal management decisions.
4. Raising awareness and understanding of OA among policymakers, resource managers, and other relevant stakeholders.

2.2.2.4.3. Scientific understanding of OA, interactions of OA with other environmental drivers, and how OA affects coastal and marine ecosystems for ocean and coastal management decisions

To accomplish this objective, the plan will entail implementing activities aimed at improving the scientific understanding of OA, its interplay with other climate change-related environmental factors, and its effects on coastal and marine ecosystems. Potential activities include filling knowledge gaps regarding OA dynamics, and communicating research findings in workshops, conferences, and stakeholder engagement events to enhance dialogue and knowledge exchange among different sectors.

2.2.2.4.4. Countries integration of OA into decisions and policies, and to mainstream elements of the OA action plan into operations that contribute to minimise impacts of OA on marine biodiversity and communities likely to be affected by OA

Several activities can be implemented to help countries integrate OA considerations into national decision-making and policies. This may include developing and implementing OA-specific policies and strategies that address its impact on marine ecosystems and coastal communities. To

achieve this, activities may include establishing dedicated task forces to oversee OA initiatives and coordinate efforts across relevant sectors. Additionally, mainstreaming OA considerations can be achieved by incorporating specific actions of the OA action plan into existing ocean governance frameworks. This could involve revising environmental impact assessments, fisheries management plans, and coastal development regulations to account for OA risks and mitigation measures.

2.2.2.4.5. Strategic and effectively financed conservation and restoration efforts of mangroves, seagrass meadows, kelp forests, and salt marshes to secure carbon storage benefits and co-location of aquaculture with successful mangrove and seagrass conservation

Activities to be implemented to achieve this goal may include the following.

1. Securing adequate funding and resources specifically for conservation and restoration of coastal habitats;
2. Fostering partnerships between government agencies, conservation organizations, academia, and local communities leverages collective expertise and resources for conservation and restoration efforts;
3. Implementing ecosystem-based management approach is crucial for the long-term health of coastal habitats.

2.2.2.4.6. Enhanced communication and systematic awareness of OA on efforts for reduction of GHG emissions, options for reducing local sources of acidifying pollutants, tools for assessing water quality indicators for management or regulatory actions, innovative and effective strategies addressing ecosystems and resilience of coastal communities, adaptation through improved technologies and management flexibility, and improving attention to oceans in international climate negotiations.

The participation of WIO countries in international climate negotiations is crucial to enhance the focus on ocean conservation, particularly in

addressing climate change threats like ocean acidification, warming, and deoxygenation. By doing this, WIO countries can raise awareness and advocate for effective ocean governance in the WIO region in the face of these climate change threats.

2.2.2.4.7. A robust regional collaboration on OA-related policy, science, and communications with coordinated responses across the WIO region and strategic partnerships and networks to leverage opportunities for investments necessary to implement the OA action plan

Activities to be implemented to achieve this goal may involve:

1. Establishing a formal structure, such as a Regional Task Force or Steering Committee, composed of representatives from governments, scientific institutions, NGOs, and industry stakeholders across the WIO region to oversee the implementation of the regional OA plan.
2. Organizing workshops and meetings to convene key stakeholders, for discussing common challenges, knowledge sharing, and identification of collaboration opportunities.
3. Establish and maintain a network of long-term OA monitoring stations across the WIO region
4. Implement training programs for scientists, policymakers, and resource managers in the WIO region on various aspects of OA monitoring, mitigation and adaptations
5. Facilitating the exchange of information, data, and best practices among stakeholders.

2.2.3. Prepare a summary brief of the OA action plan, the OA implementation plan and related measures for assessing progress

The consultant will prepare a summary of WIO Regional OA Action Plan based on the developed plan. It will include key aspects of OA monitoring, mitigation, and adaptation. Additionally, the summary will outline the implementation plan and key performance indicators to track implementation progress.

2.2.4. Participate in the validation of the

regional OA Action Plan for the WIO region by policymakers, managers, and experts, and incorporate inputs, and additional comments into the action plan.

The consultant will present the draft WIO Regional OA Action Plan at a validation workshop. This workshop will convene policymakers, resource managers, and scientific experts. Their insights, recommendations, and any additional comments will be carefully considered and incorporated into the final Action Plan.

2.2.5. Provide the final regional OA action plan for the WIO to include measures for assessing progress in implementing the OA Action Plan, communication, and outreach.

After carefully considering all feedback from policymakers, resource managers, and scientific experts during validation workshop, the consultant will prepare the WIO Regional OA Action Plan.

2.3. Output/Work Assignments

The following outputs are the final result of the service.

1. Inception report with a detailed work plan articulating understanding of the roles and responsibilities under this consultancy.
2. A detailed background literature including a list of all scientific references and sources consulted and/or utilized for the preparation of the background literature, and a list of all scientific centres, experts and scientific networks involved in OA in the region.
3. An OA brief to raise awareness of emerging OA issues amongst policy makers, managers, the civil society and other stakeholders.
4. Regional OA Action Plan and implementation plan.

3. ASSUMPTIONS FOR SUCCESSFUL COMPLETION OF THE ASSIGNMENT

The successful completion of the assignment is based on the following assumptions:

1. Firstly, smooth funding flow, ensuring a steady financial support system; and
2. Secondly, the absence of any pandemic outbreaks, like COVID-19, which could disrupt travel arrangements, particularly for essential activities like a validation workshop.



TIMELINE, MILESTONES AND REPORTING FOR ASSIGNMENT IMPLEMENTATION

Item	Assignment	Implementation months in year 2024				Output	Submission date
		July	August	September	October		
1	Development of inception report with a detailed work plan articulating understanding of the roles and responsibilities under this consultancy					Inception report with a detailed work plan developed	23 rd July, 2024
2	Conduct a wide literature review of the latest scientific findings on OA and its potential links to environmental impacts on food security in the WIO (ACTIVITY 1)					Documented detailed background literature of the latest scientific findings on OA and its potential links to environmental impacts on food security in the WIO	30 th August, 2024
3	Development of draft version 1 (V1) of a regional OA Action Plan for the WIO for review, specifically ACTIVITY 2A						
4	Develop 10-year implementation plan for the regional OA action aligned to countries strategic priorities on climate change and OA with goals and related actions (ACTIVITY 2B)					Near final regional OA action plan and a summary brief (V2)	30 th September
5	Development of draft version 2 (V2) of a regional OA Action Plan for the WIO for validation, specifically ACTIVITY 2A						
6	Prepare a summary brief of the OA action plan, the OA implementation plan and related measures for assessing progress (ACTIVITY 3)						
7	Participate in the validation of the regional OA Action Plan for the WIO region by policymakers, managers, and experts, and incorporate inputs, and additional comments into the action plan (ACTIVITY 4)					Final validated regional OA action plan for the WIO (V3)	9 th October, 2024
8	Preparation of the final regional OA action plan for the WIO to include measures for assessing progress in implementing the OA Action Plan, communication, and outreach (ACTIVITY 5)						