African Centre for Aquatic Research and Education (ACARE)

African Great Lakes Advisory Groups (AGL-AGs)

Strategic Plan for the African Great Lakes Advisory Groups 2026–2030

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CONCEPTS AND TERMINOLOGIES

Indicator: An indicator is a sign of progress/change that results from a project. It measures a change in a situation or condition and confirms progress towards achievement of a specific result. It is used to measure a project impact, outcomes, outputs, and inputs that are monitored during project implementation to assess progress.

Key Activities: Actions taken or work performed, through which inputs are mobilized to produce outputs.

Mandate: A formally authorized mission to provide independent, expert analysis, strategic guidance, and facilitation support to key stakeholders. This mandate is not executive; advisory groups do not have the power to enforce decisions or deploy forces. Instead, their authority derives from their expertise, neutrality, and credibility.

Outcome: Measures the intermediate results generated relative to the objective of the intervention. It describes the actual change in conditions/situation as a result of an intervention output(s) such as changed practices as a result of a programme or project.

Output: Immediate result from conducting an activity, i.e., goods and services produced.

Performance Indicator: A measurement that evaluates the success of an organization or of a particular activity (such as projects, programmes, products, and other initiatives) in which it engages.

PESTEL Analysis: It is a framework or tool used to analyze and monitor the environmental (external) factors that have an impact on an organization.

Project: A project is a set of coordinated activities implemented to meet specific objectives within defined time, cost, and performance parameters. Projects aimed at achieving a common goal form a programme.

Strategic Issues: These are problems or opportunities emanating from situational analysis that an organization has to manage in order to be able to fulfill its mandate and mission.

Strategic Goal: General qualitative statements on what an organization is hoping to achieve in the long term. Each strategic goal is linked to a strategic issue. Goals are the foundations of your plan and need to be set at the start of the planning process.

Strategic Planning: It is the process of defining an organization's strategy or direction and making decisions on allocating its resources to pursue this strategy; it involves setting

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goals, determining actions to achieve the goals, and mobilizing resources to execute the actions.

Strategic plan: a formal, forward-looking document that outlines an organization's goals and the broad steps it will take to achieve them over the next five years. It serves as a roadmap that aligns an organization's mission with its actionable priorities, ensuring that everyone is working toward the same objectives.

Strategic Objectives: These are what the organization commits itself to accomplish in the long term; they establish performance levels to be achieved on priority issues and measures of success in fulfilling critical mission statement elements.

SWOT Analysis: It is used for understanding the strengths and weaknesses (internal factors) of the organization and for identifying both the opportunities open to the organization and the threats it faces (external factors).

Target: A target refers to the planned level of an indicator achievement.

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ACRONYMS

AA	ACARE Africa
AEHMS	Aquatic Ecosystem Health Management Society
AFS	American Fisheries Society
AG/AGs	Advisory Group(s)
ALP	Advanced Leadership Program
ARBEC	Aquatic Resources and Blue Economy Conference
AU	African Union
AWIS	African Women in Science
EAC	East African Community
GLFC	Great Lakes Fishery Commission
GLOW	Great Lakes of the World Conference
IAGLR	International Association of Great Lakes Research
IGAD	Intergovernmental Authority on Development
ILEC	International Lake Environment Committee
KPIs	Key Performance Indicators
LEAFAO	Lakes Edward–Albert Fisheries and Aquaculture Organization
LKAG	Lake Kivu Advisory Group
LMNNBFAN	Lake Malawi/Nyasa/Niassa Basin Fisheries and Aquaculture Network
LTA	Lake Tanganyika Authority
LT-SAG	Lake Tanganyika Science Advisory Group
LTuAG	Lake Turkana Advisory Group
LVAG	Lake Victoria Advisory Group
LVBC	Lake Victoria Basin Commission
LVFO	Lake Victoria Fisheries Organization
M&E	Monitoring and Evaluation
NaFIRRI	National Fisheries Resources Research Institute
PESTEL	Political, Economic, Social, Technological, Environmental, and Legal
SADC	Southern African Development Community
SDGs / SDG	Sustainable Development Goal(s)
SFS	Society of Freshwater Science
SIAL	Species in Ancient Lakes
SIL	International Society of Limnology
SMART	Specific, Measurable, Achievable, Relevant, and Time-bound
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TAFIRI	Tanzania Fisheries Research Institute
WAS	World Aquaculture Society

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CHAPTER ONE: INTRODUCTION

1.1   Background and Context

The African Great Lakes region comprises seven of the largest lakes in the world. Lake Victoria[1] covers ≈ 69,484 km² and is shared between Kenya, Uganda and Tanzania while Lake Tanganyika[2]   covers ≈ 32,900 km² shared between Burundi, DR Congo, Tanzania and Zambia. Lake Malawi (Nyasa/Niassa)[3] has a surface area of ≈ 29,604 km² shared   between   Malawi, Mozambique and Tanzania. Lake Turkana[4] is the fourth largest African Great Lake with a surface area of ≈ 6,405 km²   shared between Kenya and Ethiopia. Lake Albert[5]   (≈ 5,600 km²) and Lake Edward[6] (≈ 2,325 km²) is shared between Uganda and DR Congo, while Lake Kivu[7] (≈ 2,700 km²) lies between Rwanda and DR Congo. This vast lake region is a vital ecological and socio-economic zone supporting over 65 million people across ten countries: Burundi, the Democratic Republic of Congo, Ethiopia, Kenya, Malawi, Mozambique, Rwanda, Tanzania, Uganda, and Zambia. These freshwater systems are biodiversity hotspots—housing thousands of endemic species—and provide critical ecosystem services, including water for domestic and industrial use, fisheries and aquaculture, agriculture, transportation, socio-cultural activities and hydropower generation (UNEP, 2006; LVBC, 2016). However, these lakes face increasing pressures from anthropogenic and climatic factors. Rapid population growth, land-use change, pollution, overfishing, invasive species, and climate change threaten the ecological integrity of the lakes and the livelihoods of dependent communities (UNEP, 2019). Fragmented governance, limited scientific data sharing, and inadequate policy coordination across national boundaries further exacerbate these challenges.

To address these challenges, the African Center for Aquatic Research and Education (ACARE) has established six Advisory Groups (AGs) for the African Great Lakes to empower freshwater scientists to better address these issues. The Strategic Plan 2026-2030 outlines the AGs' roadmap for enhancing regional coordination, knowledge management, stakeholder capacity, and sustainable resource use across the African Great Lakes. The five-year Strategic Plan seeks to define the future direction of the Advisory Groups and make decisions such as resource allocation aimed at achieving the mission and vision of ACARE.

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[1] Encyclopædia Britannica (2024) – "Lake Victoria

[2] Encyclopædia Britannica – "Lake Tanganyika

[3] Encyclopædia Britannica – "Lake Nyasa

[4] African Great Lakes Information Platform (AGLI, 2024)

[5] ILEC World Lake Database (2023)

[6] Encyclopædia Britannica – "Lake Albert,

[7] Encyclopædia Britannica – "Lake Kivu

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1.2   Purpose

The Strategic Plan is pivotal in guiding the Advisory Groups (AGs) to prioritize efforts, effectively allocate resources, align the stakeholders on the organization's goals, and ensure that those goals are backed by data and sound reasoning. The strategic plan is a living document and will be subject to amendments as situations on the ground change. The Advisory Groups of ACARE are guided by the Council of Advisory Groups (CoAGs), also called the **Council,** made up of the representatives of each Advisory Group. The Council's goals and strategic objectives are aligned to ACARE's mandate and enable her to fulfill her mission and vision.

The Strategic Plan 2026-2030 purpose is to leverage scientific expertise, policy guidance, community engagement, and private sector collaboration, and it seeks to: i) strengthen evidence-based decision-making for sustainable lake basin management; ii) foster cross-border policy coordination among national, regional, and international stakeholders; iii) enhance stakeholder capacity-building for improved governance and resource stewardship; iv) promote climate resilience and adaptive management strategies; and v) facilitate resource mobilization and sustainable financing mechanisms.

1.3   The Scope

The Strategic Plan 2026-2030 provides a five-year roadmap for addressing the complex and interrelated challenges facing the seven African Great Lakes. These lakes span across ten countries:

i)   Burundi (Lake Tanganyika)
ii)   Democratic Republic of the Congo (Lakes Albert, Edward, Kivu, and Tanganyika)
iii)   Ethiopia (Lake Turkana)
iv)   Kenya (Lakes Turkana and Victoria)
v)   Malawi (Lake Malawi/Nyasa/Niassa)
vi)   Mozambique (Lake Malawi/Nyasa/Niassa)
vii)   Rwanda (Lake Kivu)
viii)   Tanzania (Lakes Malawi/Nyasa/Niassa, Tanganyika, and Victoria)
ix)   Uganda (Lakes Albert, Edward, and Victoria)
x)   Zambia (Lake Tanganyika)

1.4   History of the Organization

1.4.1   Lake Advisory Groups

To leverage collective expertise, ACARE established six Advisory Groups in 2019. Their work is guided by three core objectives: (1) Address the challenges of inadequate, short-term, and fragmented research across the African Great Lakes; (2) Build and sustain a strong community of African freshwater experts and decision-makers to address the ongoing challenges of the African Great Lakes; and (3) Respond to decades of calls for increased capacity building in Africa to tackle freshwater issues. Each Advisory Group is composed of aquatic experts drawn from the riparian

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countries where the Great Lakes are located, ensuring locally grounded knowledge and regional representation. The six advisory groups are as follows:

i) *Lake Edward Albert Advisory Group (LEAAG):* LEAAG members are from the riparian countries of Democratic Republic of the Congo and Uganda

ii) *Lake Kivu Advisory Group (LKAG):* LKAG members are from the riparian countries of Democratic Republic of the Congo and Rwanda

iii) *Lake Malawi/Nyasa/Niassa Basin Fisheries and Aquaculture Network (LMNNBFAN):* LMNNBFAN members are from the riparian countries of Malawi, Mozambique, and Tanzania

iv) *Lake Tanganyika-Science Advisory Group (LT-SAG):* LT-SAG members are from the riparian countries of Burundi, the Democratic Republic of the Congo, Tanzania, and Zambia

v) *Lake Turkana Advisory Group (LTuAG):* LTuAG members are from the riparian countries of Ethiopia and Kenya

vi) *Lake Victoria Advisory Group (LVAG):* LVAG members are from the riparian countries of Kenya, Tanzania, and Uganda.

During ACARE's *Annual Meeting of the African Great Lakes Stakeholder Network* held in February 2023 in Dar es Salaam, United Republic of Tanzania, the **Council of Advisory Groups (Council)** was established, bringing together representatives from each of the six Advisory Groups to ensure harmonized efforts across the African Great Lakes region. The Council's primary goal is to unite scientific, policy, community, and private sector expertise from the riparian countries to provide coordinated, evidence-based guidance for sustainable lake basin management. In collaboration with global partners, the Council fosters scientific networks and strengthens research, policy, and management capacity to address the challenges of the seven African Great Lakes.

1.4.2   ACARE Structure
Below is the structure of ACARE:

i) *ACARE:* A United States non-profit organization, created in 2017

ii) *ACARE Board:* The board is the highest governing body of ACARE, ensuring the core values of ACARE are followed and overseeing and guiding the ACARE Secretariat in good and relevant practices. The board consists of over 50% Africans to ensure professional, cultural, administrative, scientific, and other matters are conducted in a manner of good practices

iii) *ACARE-Africa:* ACARE-Africa is the Africa branch of ACARE. The continental office is formally located in Kisumu, Kenya[8]. ACARE-Africa is an African-registered (in Kenya),

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[8] ACARE-Africa should be considered the African branch, and not the Kenyan branch as we work in ten other countries with equal importance. ACARE-Africa was registered in Kenya for administrative ease.

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non-governmental organization; it was registered during 2025. The original purpose was for gaining access to funding streams available to African-based organizations.

iv) *ACARE-Africa Board:* Oversees and guides the ACARE Secretariat. The ACARE-Africa Board consists of members of the ACARE Board, plus an additional Kenyan freshwater expert.

v) *ACARE Secretariat:* The Secretariat of ACARE is made up of experts trained in freshwater sciences, large-lakes issues, and/or have specialized administrative capacity to administer five programs and other associated activities that address the issues on the African Great Lakes.

1.4.4 *ACARE Programmes*
a) *Advisory Groups*

The Advisory Groups make-up a network of over 200 African freshwater specialists representing all seven lakes, from all ten riparian countries. The Advisory Group program consists of six[9] Advisory Groups:

i) Lake Edward Albert Advisory Group (LEAAG)
ii) Lake Kivu Advisory Group (LKAG)
iii) Lake Malawi/Niassa/Nyasa Basin Fisheries and Aquaculture Network (LMNNBFAN)
iv) Lake Tanganyika-Science Advisory Group (LT-SAG)
v) Lake Turkana Advisory Group (LTuAG)
vi) Lake Victoria Advisory Group (LVAG)

While Advisory Groups are mainly for African experts, other experts globally are invited to engage in various roles. The Advisory Group structure comprises:

i) *Members:* A resident of a riparian country bordering the lake in which they are working; An expert on subjects relating to freshwater or large-lake sciences or issues on the lake(s) of that specific advisory group.

ii) *Advisors:* A large-lakes or freshwater expert invited or requested to be a part of regularly scheduled, specific advisory group meetings and who has the appropriate background and desire to assist the group in strengthening science.

iii) ***Expert Guests:*** Someone who has experience, knowledge, or other value and can assist in specific areas of research, funding, strategy, projects, or processes. An expert guest is typically asked to join a meeting for a specific purpose.

iv) **Observers**: Someone who is either requested or requests to attend a specific advisory group's meeting(s). This might include a funder, someone with a relevant project who

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[9] Due to the nature of collaboration between the experts on Lakes Edward and Albert, these members determined that only one advisory group, the Lake Edward Albert Advisory Group, was necessary.

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wants to attend and engage, or someone who is simply interested in the lake and learning about cooperative processes.

The Advisory Group program administers processes of collaboration using various forms, including online and in-person meetings, and ranging in size from individual groups to international forums. The Advisory Groups program runs four types of networking meetings:

i) *Advisory Group meetings* are online and monthly. Each Advisory Group meets monthly at a predetermined date and time to ensure fluid, consistent communication and harmonization of efforts, shared knowledge, and potential partnerships on projects, research, or other efforts. Meetings are administered by the Secretariat's Advisory Group Program Manager and led by the Advisory Group chair and co-chair.

ii) *Inter-Advisory Group meetings* are online and annual. Each Advisory Group holds a meeting and invites members from all other Advisory Groups to join. The purpose is so that other Advisory Group members can observe different processes of engagement and learn about ongoing research or other potentially relevant efforts that could be transferred to their own resources. Meetings are administered by the Secretariat's Advisory Group Program Manager and led by the Advisory Group chair and co-chair.

iii) *Annual Meeting of the African Great Lakes Stakeholder Network*; in person, annually. Each January/February, ACARE holds the annual meeting to ensure in-person engagement between members of each Advisory Group occurs and for members of different Advisory Groups to meet. The purposes of this meeting are multi-fold and include building trust between members of the scientific community; sharing relevant scientific information and research efforts; learning new approaches to science from other experts on other lakes; sharing new ideas; harmonizing potential policy and management desires or approaches for individual lakes (or regions) for better lake resource outcomes; and training on various topics, from research techniques to new technologies to statistical analysis. Meetings are administered by the Secretariat staff; hosting and arrangements are assisted by host-country partners, and partner funding is often sought.

iv) *Global large lakes conference;* in person, every five years. ACARE intends to hold its first large lakes conference during 2027. "Scientific meetings and conferences are a part of the scientific process and can facilitate collaboration, idea-sharing, and harmonization of research and management" (Ives and Lawrence, 2018)[10]. Meetings will be administered by the Secretariat staff, local hosts, and international partners. Arrangements will be assisted by host-country partners; partner funding and support will be essential.

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[10] Ives, J.T. and T. Lawrence. (2018). A Tale of two Great Lakes conferences: Urging global collaboration on our largest freshwater resources. Journal of Great Lakes Research. Volume 44, Issue 6.

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b) *African Women in Science (AWIS)*

A program that trains around 12 women annually to increase women's involvement in freshwater sciences and leadership, where there are currently too few for the needed scientific investigations and management of these lakes. The AWIS program has three sub-programs:

i) Main—this encompasses a cohort (around 12 chosen women) that partakes in a 12-month program that includes:
   a) Travel to the annual meeting
   b) Engaging in on-line training and other sessions
   c) Travel component to North America for in-field trainings, leadership sessions, and attending a conference
   d) Travel component to Africa

ii) Alumnae—This keeps the women engaged in the broader network of women who have gone through the AWIS program. Keeping the women in a close support network. An additional component of an Advanced Leadership Program (ALP) engages 10 alumni to travel to one of the ten African Great Lakes countries for training and engagement.

iii) The mentorship program – engages women in the AWIS and Alumnae program to find mentors who fill a needed support in science, writing, or other professional or personal development. The mentorship program engages mentors from around the world.

c) *Monitoring*

A program intended to create long-term processes to collect comprehensive, time-series data and information to better inform decision making on the African Great Lakes resources. This program has had short-term components, including a pilot project on Lake Turkana.

> **Commented [1]:** this can be elaborated in the Situation Analysis

d) *Education & Training*

Ensure that talented African scientists and aquatic resource managers develop hands-on skills to better conduct research and manage the region's aquatic resources. This program is still being developed and the intent is for ACARE and/or its partners to develop a long-term effort to sufficiently, and consistently train those in need, especially in field sciences (e.g., water quality, trawls, etc.).

ACARE also engages partners who want to do short-term training or workshops. When partners need on-the-ground support for remote sensing, HABs training, statistics, etc., ACARE ensures those trainings can take place. ACARE conducts logistical support.

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e) *Information & Data*

Ensuring that existing information, data, and knowledge regarding freshwater resources is known and available to all, as freely as possible.

Websites: ACARE has two websites, its main site (www.agl-acare.org) and the African Lakes Hub (www.africanlakes.org).

The first site serves to describe ACARE, its programs, and other efforts. The site should also serve as a:

i) calendar for various regional events, meetings, and conferences
ii) Announcements of accomplishment
iii) It also wants to serve as a clearing house for professional, individual pages for network members so that, especially students, have the ability to have a professional-type page to post their CVs, links to their work, bios, etc.

The second website serves as a clearinghouse for as many publications including white and grey literature, reports, and books. The intent is to make information as freely available as possible so that research is not duplicated, and that research can build upon itself for more comprehensive understanding

1.4.5 *Council of Advisory Groups (CoAGs)*

Horizontal Communications: The Council is meant to harmonize efforts between each of the Advisory Groups, the main purpose is so that successful efforts (e.g., a monitoring program) could be replicated on other lakes. Any information from such an endeavor on various lakes could be tracked and used to compare and contrast lake information and data. Likewise, the Council considers issues and problems of common concern between Advisory Groups. Develop, coordinate, and/or propose joint programs, efforts, research, etc. of the Advisory Groups. Ensure "major" issues, programs, efforts, information, etc. are conveyed to each of the Advisory Groups.

Vertical Communications within the ACARE structure oscillates between the Council that serves as the harmonizing body between ACARE Board and the Advisory Groups. This means that if ACARE sends a directive to have a certain mission or policy, the Council relays that information to their respective AG; likewise, when AGs agree upon a directive/idea/policy, the Council communicates these decisions to ACARE.

> **Commented [2]:** How about ACARE-Africa? I am not yet sure how information will be channeled through it

ACARE's specialty is working with freshwater experts to provide support in harmonizing efforts on common-property, multi-jurisdictional freshwater lakes. ACARE's major goal is to positively influence policy and management of freshwater resources in Eastern and Southern Africa through sound science. ACARE has developed a long-term collaborative process by which the scientific, academic, policy, management communities, and others, interact through a structured process to prioritize and harmonize research and thus, harness the resources and knowledge to conduct

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research that results in useful, harmonized data and ideas to influence positive change. The entire focus of ACARE is to ensure that the ecological structure of the African Great Lakes, and those who depend on them are preserved and enhanced.

With that, ACARE serves as a regional focal point and clearing house for critical information on the state of the African Great Lakes—identifying research gaps to inform future research. ACARE will provide fora and resources for a global collaboration of freshwater academics, researchers, managers, and policy makers to both strengthen ACARE as an institution, and strengthen the global freshwater community as a whole.

> **Commented [3]:** We need to think through the role of ACARE-Africa

1.4.6   Alignment to regional, continental and global agenda

The strategic plan has been developed in alignment with the following international, continental, regional, and national development frameworks:
i)   Sustainable Development Goals (UN's 2030 Agenda for Sustainable Development)
ii)   African Union (AU) Agenda 2063
iii)   East Africa Community (EAC) Vision 2050
iv)   Southern African Development Community (SADC) Vision 2050
v)   International Authority on Development (IGAD) Vision 2050

United Nations 2030 Agenda for Sustainable Development

In shaping this strategic plan, the Council of Advisory Groups will draw inspiration and guidance from the SDGs, recognizing them as a global framework for sustainable progress. The specific SDGs and their relevance to ACARE and the Council of Advisory Groups are given in table 1.1.

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Table 1.1: **Strategic Response of African Great Lakes Advisory Groups to the Specific Sustainable Development Goals (SDGs)**

SN	SDG Description	Strategic Response by AGL Advisory Groups
Goal 1	End Poverty in all its forms everywhere	Develop and implement pro-poor research programs and projects along the aquatic food systems value chain in the African Great Lakes region
Goal 2	End hunger, achieve food security, improve nutrition and promote sustainable agriculture	To reduce poverty in all its forms and improve nutrition and food security.
Goal 3	Ensure healthy lives and promote well-being for all at all ages	Promote healthy ecosystems and the sustainable use of aquatic resources, thereby enhancing nutrition, reducing disease, and fostering healthier lives and well-being for all.
Goal 13	Take urgent action to combat climate change and its impacts	Conduct long-term ecological research (LTER) and monitoring programs, including meteorological, hydrological, water quality, and fisheries, to guide policy decisions.
Goal 14	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Protect aquatic biodiversity and ensure sustainable use of the resources for the people who depend on them.
Goal 17	Strengthen means of implementation and revitalize the global partnership for sustainable development	Create partnerships and a collaborative network of experts across the African Great Lakes region to systematically prioritize, study, and gather and exchange relevant scientific information to positively change policy and management on the lakes.

Commented [4]: this response needs to mapped to the strategic objectives of the plan

Table 1.2: **Strategic Response of Advisory Groups to the African Union Agenda 2063**

SN	Aspirations of the AU Agenda 2063	Strategic Response by Advisory Groups
Goal 1	A high standard of living, quality of life, and well-being for all citizens.	Promote research and innovation to enhance food security, alongside resource mobilization, partnerships, and collaborations to increase investments and reduce rural poverty.
Goal 2	Well-educated citizens and skills revolution underpinned by science, technology and innovation.	Sustainable management of lake resources through ecosystem approach to fisheries management; strengthening of fisheries governance; enhancement of research capacity and transfer of climate-smart innovations and technologies
Goal 3	Healthy and well-nourished citizens.	Promote consumption of nutrient-dense, value-added fish and fish products through research and innovation.

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Goal 6	Blue/ocean economy for Accelerated economic growth	Sustainable management of lakes and aquatic resources through ecosystem approach to fisheries management; strengthening of fisheries governance; enhancing research capacity and transfer of innovations and technologies.
Goal 7	Environmentally sustainable and climate-resilient economies and communities.	Promote the development and utilization of community-driven climate-smart technologies and innovations.

East Africa Community Vision 2030:

The East Africa Community Vision 2050 is a long-term development blueprint that identifies policy for spearheading regional growth. The ACARE and CoAGs will, during the plan period, contribute to the goal as outlined in Table 1.2.

Table 1.3:   Strategic response by Advisory Groups to EAC Goals

SN	EAC Goal	Strategic Response by Advisory Groups
Goal 2	Increased investment and enhanced agricultural productivity for food security and a transformation of the rural economy.	Promote research and innovation to enhance food security, alongside resource mobilization, partnerships, and collaborations to increase investments and reduce rural poverty.
Goal 4	Sustainable utilization of natural resources, environment management and conservation with enhanced value addition.	Sustainable management of lake resources through ecosystem approach to fisheries management; strengthening of fisheries governance; enhance research capacity and transfer of climate-smart innovations and technologies

Table 1.4:   Strategic response by Advisory Groups to SADC Vision 2050

SN	SADC Strategic Pillar	Strategic Response by Advisory Groups
Pillar 3	Social and Human Capital Development	Improved food and nutrition security for the socio-economic well-being of people in the region
		Increased access to quality and relevant education and skills development, including in science and technology
		Increased job creation with decent work opportunities for full and productive employment in the region
Pillar 4	Gender, Youth, Environment and Climate Change, and Disaster Risk Management (cross-cutting issues)	Enhanced gender equality as well as women's empowerment and development, and elimination of gender-based violence
		Strengthen climate change adaptation and mitigation and improve disaster risk management in support of regional climate resilience.
		Sustainable utilization and conservation of natural resources and effective management of the environment

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The strategy aligns with key continental policy frameworks, including the African Union Agenda 2063, the Africa Water Vision 2025, SADC Vision 2050, EAC Vision 2050, and the Sustainable development Goals, specifically: SDG 6: Clean Water and sanitation; SDG 13: Climate Action; SDG 14: Life Below Water, all aiming to make a meaningful contribution to Africa's socio-economic transformation through improved ecosystem health and resilience.

To allow coordination and information sharing across the lakes, the Council of Advisory Groups (CoAG) of the African Great Lakes was established as a platform to harmonize and coordinate work done by the Advisory Groups. The CoAG operates within a regional governance framework aligned with institutions such as the East African Community (EAC), the Lake Victoria Fisheries Organization (LVFO), and the African Union (AU), and follows global partners initiatives such as African Great Lakes Initiative (AGLI) and the UN Decade on Ecosystem Restoration.

Through this plan, the Council seeks to fill critical advisory gaps, foster inclusive participation, and facilitate evidence-driven decision-making at multiple governance levels. It also emphasizes resource mobilization, private sector engagement, and climate resilience as cross-cutting themes. The successful implementation of this strategy will depend on strong partnerships, sustained funding, and robust monitoring and evaluation mechanisms.

1.5 Methods of Developing the Strategic Plan (process & Justification)
1.5.1 Strategic Planning Process
The development of the Strategic Plan 2026-2030 followed a participatory, consultative, and evidence-based approach to ensure ownership, legitimacy, and alignment with regional and global priorities. The process was designed to integrate diverse perspectives from individual lake Advisory Groups drawn from research institutions, management institutions, communities, and international partners, while grounding the plan in scientific evidence and practical realities of the African Great Lakes region.

The planning process involved setting the vision, mission, and establishing specific goals to guide the organization. Strategies were created to achieve the defined goals considering available resources and market conditions. The strategic plan also has an implementation plan with clear roles and responsibilities.

1.5.1.1 Situational Analysis
  i)   A comprehensive review of existing literature, regional policy frameworks (e.g., AU Agenda 2063, Africa Water Vision 2025, EAC Vision 2050, SDGs), and prior ACARE and Advisory Group reports was undertaken to establish a baseline understanding of ecological, socio-economic, and governance dynamics across the African Great Lakes.
  ii) SWOT and PESTEL analyses were conducted for each lake to identify strengths, weaknesses, opportunities, threats, and external drivers (political, economic, social, technological, ecological, legal) influencing sustainable management.

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1.5.1.2 Stakeholder Consultations
   i) Structured consultations were held with Advisory Group members, national governments, local communities, regional institutions and private sector actors.
   ii) Workshops and virtual meetings facilitated cross-lake dialogue, ensuring that local concerns (e.g., fisheries livelihoods, climate risks, gender equity) were integrated into regional strategies.

1.5.1.3 Expert Working Groups
   i) Council of Advisory Groups (CoAG) formed the Technical Working Groups composed of representatives from each of the African Great Lakes. The CoAG members have diverse expertise in freshwater science, policy and development who drafted the draft thematic inputs on governance, climate resilience, knowledge management, and resource mobilization.
   ii) Cross-disciplinary reviews strengthen scientific rigor / policy relevance of proposed strategies.

1.5.1.4 Validation and Alignment
   i) Draft strategic priorities were validated through regional workshops and peer reviews, ensuring alignment with member Advisory Groups, regional economic communities, and global commitments.
   ii) Feedback loops were established to refine objectives into Specific, Measurable, Achievable, Relevant, and Time-bound (SMART) outcomes.

1.5.1.5 Approval and Adoption
   i) The draft Strategic Plan was consolidated by the Council of Advisory Groups and presented to the Board of ACARE for endorsement.
   ii) The final plan reflects a consensus-driven vision and roadmap for collaborative action across all seven African Great Lakes.

1.5.2   Justification

Strategic planning is crucial for organizations because it provides a roadmap for achieving long-term objectives, identifying opportunities, and mitigating risks. It helps align organizational resources, activities, and goals, ensuring that everyone is working toward a common vision.

By combining rigorous analysis with inclusive participation, this methodology provides a strong foundation for achieving the Strategic Goals and ensuring that the African Great Lakes remain resilient ecosystems, supporting thriving communities and sustainable development. The chosen methodology ensured that the Strategic Plan is:

i)   ***Inclusive and participatory*** – engaging stakeholders from Advisory Groups at national and regional level to build ownership and legitimacy.
ii)   ***Evidence-based*** – grounded in scientific data, regional policy analyses, and global best practices for freshwater management.
iii) ***Aligned and synergistic*** – harmonized with existing national strategies, regional integration frameworks, and international commitments (AU Agenda 2063, SDGs, UN Decade on Ecosystem Restoration).
iv)   ***Adaptive and forward-looking*** – designed to remain relevant amid evolving climate, ecological, and socio-political challenges through continuous monitoring and review.

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CHAPTER TWO: STRATEGIC DIRECTION

2.1   Mandate of AGs

Under the Strategic Plan 2026-2030, the Advisory Groups of the African Great Lakes shall pursue the following mandate:

To establish active, visible, and widely recognized expert platforms at national and global scales, harmonizing research approaches and methods to elevate the profile and impact of African Great Lakes science.

The Advisory Groups will drive science-based action for the African Great Lakes by generating and harmonizing knowledge on ecosystems, fisheries, climate, and socio-economic dynamics; translating this evidence into actionable policy guidance and advocacy for coherent regional policy frameworks; and building capacity through inclusive training, mentorship, and empowerment of early career scientists, women, youth, and marginalized communities. They will foster cross-border coordination and partnerships among governments, communities, researchers, civil society, and the private sector, while mobilizing financial, technical, and institutional resources to promote innovative, eco-friendly investments that secure the long-term sustainability of the lakes and the livelihoods they support.

To achieve the mandate, the following functions will be used:

i)   *Scientific Advisory and Knowledge Generation* – Provide evidence-based research, technical guidance, and harmonized methodologies for monitoring ecosystems, fisheries, climate impacts, and socio-economic dynamics.

ii)   *Policy Guidance and Advocacy* – Translate scientific findings into actionable policy recommendations, and advocate for harmonized legal and policy frameworks that safeguard ecosystems and livelihoods.

iii) *Capacity Building and Stakeholder Empowerment* – Strengthen technical, institutional, and community capacities through training, mentorship, and inclusive participation of women, youth, and marginalized groups.

iv)   *Regional Coordination and Partnerships* – Serve as platforms for cross-border collaboration, ensuring dialogue and synergy among governments, communities, research institutions, civil society, and private sector actors.

v)   *Resource Mobilization and Sustainability* – Mobilize financial, technical, and institutional resources, while promoting eco-friendly investments and innovative financing to ensure long-term sustainability.

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2.2 Analysis of Mission Statements

The mission statements of ACARE and AGs collectively highlight the central role of collaboration and partnerships in the management of freshwater ecosystems. They emphasize that effective governance can only be achieved through joint action, whether in the form of cross-boundary cooperation, stakeholder engagement, or networks that foster communication and dialogue. This focus reflects the shared nature of aquatic resources and the need for collective stewardship.

Another prominent theme is the reliance on science, research, and knowledge-sharing as the foundation for decision-making. The missions consistently frame science as a tool for guiding sustainable management, with some going further to incorporate elements of education, innovation, and advocacy. This scientific grounding is portrayed as essential for translating research into policies and practices that safeguard ecosystems.

A strong commitment to sustainability and responsible resource management also runs across all the mission statements of ACARE and the Lake Advisory Groups. Terms such as "sustainable management," "long-term health," and "resilient ecosystems" underscore the intention to preserve natural resources for both current and future generations. This sustainability perspective is not purely ecological; it is closely tied to community well-being and socio-economic development. Many mission statements directly link ecosystem health to livelihoods, food security, and the prosperity of local populations, thereby situating environmental management within a human-centered framework.

2.3 Analysis of Vision Statements

The visions of ACARE and AGs articulate an aspirational picture of the future, grounded in the principle of ecosystem sustainability and resilience. They consistently envision thriving and healthy aquatic systems that can withstand pressures and continue to provide essential ecological services. This ecological foundation is complemented by a human dimension that stresses societal benefits such as food security, clean water, employment opportunities, cultural identity, and improved livelihoods. In some cases, the visions extend beyond material well-being to encompass broader values such as justice, equity, peace, and inclusive development.

Another defining feature of the visions is their emphasis on governance and cooperation. Many explicitly point to regional collaboration, inclusive governance systems, and science-driven policy as the vehicles through which sustainable futures will be achieved. By framing cooperation as both a process and an outcome, these visions underscore the interdependence of nations and communities in managing shared resources.

Finally, several visions adopt a global and inspirational perspective. They aim not only to secure sustainability within their immediate contexts but also to position themselves as beacons of innovation, scientific advancement, and international leadership. This ambition signals a desire to

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elevate freshwater ecosystem management beyond local concerns, casting it as a model for global sustainability practices.

2.4   Strengths Observed

Taken together, the mission and vision statements are notable for their integration of science, policy, and community well-being. They consistently affirm sustainability, cooperation, and inclusivity as guiding principles, while also balancing ecological goals with socio-economic priorities. Importantly, some visions articulate forward-looking aspirations that extend to innovation and global recognition, demonstrating a willingness to lead by example in freshwater resource management.

2.5   Gaps and Areas for Strengthening

Despite their strengths, the statements show some variability in tone and emphasis. While certain missions and visions are heavily technical, focusing on science and policy, others lean toward socio-cultural priorities such as livelihoods and cultural resilience. A more harmonized language would create stronger coherence across the groups. More strengthening could be achieved by explicit integration of climate change resilience, which only appears in a few statements, despite its centrality to freshwater sustainability. Furthermore, while some visions highlight values of justice and equity, others are more narrowly ecological and would benefit from broader social framing. Finally, the aspirational nature of many statements could be complemented by clearer, measurable outcomes to better evaluate progress over time.

2.6   Synthesis

The missions and visions converge around a shared purpose: to build systems that integrate science, collaboration, and inclusive governance in order to achieve healthy freshwater ecosystems that sustain human well-being. They collectively imagine a future in which communities can rely on clean water, abundant food, sustainable livelihoods, and peaceful cooperation. At the same time, they aspire to position freshwater ecosystem management as a source of innovation, inspiration, and global leadership in sustainable development. Consequently, the vision and mission statements for the Advisory Groups were harmonized with that of ACARE as follows:

2.6.1   Vision

A thriving African Great Lakes ecosystem, where sustainable management practices foster resilient biodiversity, equitable resource use and vibrant communities, serving as a global model of ecosystem stewardship.

2.6.2   Mission

To foster collaborative, transboundary scientific research and knowledge-sharing that informs policy, strengthens capacity, builds partnerships, and mobilizes resources to provide clean water, nutritious food, healthy biodiversity, and enhanced economic opportunities for local communities, while strengthening resilience in the face of climate change.

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2.7 Strategic Goals

The Strategic Plan for the African Great Lakes Advisory Groups (AGSP 2026-2030) is guided by five interconnected goals that translate ACARE's vision into practical action for the sustainable management of freshwater ecosystems across the region. Together, these five goals form the backbone of ACARE's coordinated approach to science, policy, and capacity development for resilient freshwater ecosystems and sustainable livelihoods.

i) **Generation and dissemination of scientific knowledge on freshwater ecosystems:** To generate, integrate, and disseminate high-quality scientific knowledge on freshwater ecosystems that directly informs policy, guides management, and supports sustainable livelihoods

ii) **Building capacity and empowerment:** To strengthen individual and institutional capacities for science, governance, and community action through inclusive training, mentorship, and empowerment programmes that build leadership and innovation across the African Great Lakes.

iii) **Resource mobilization and institutional building:** To strengthen ACARE's institutional systems and financial sustainability through diversified funding, sound governance, and operational efficiency that support long-term implementation of the Lake Advisory Groups Strategic Plan.

iv) **Enhancing ecosystem sustainability and climate resilience:** To promote ecosystem sustainability and climate resilience across the African Great Lakes through research-driven restoration, adaptive management, and knowledge-based policy support

v) **Strengthening collaboration and partnerships:** To strengthen multi-level collaboration and partnerships that enhance coordinated research, policy harmonization, and joint action for the sustainable management of the African Great Lakes.

2.8 Expected Outcomes

The expected outcomes of implementing this strategic plan for each goal will be:

1. Strengthened evidence-based policy development and informed decision-making across the African Great Lakes region.
2. Enhanced institutional and community capacity for sustainable freshwater management and innovation.
3. Establishment of a sustainable endowment fund, and improved operational efficiency and accountability to ensure long-term institutional sustainability.
4. Contributing to improved ecosystem health, adaptive management, and resilience of the African Great Lakes.
5. Enhanced coordination, advocacy, and shared governance for the sustainable management of the African Great Lakes.

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2.8   Core Values

Partnerships and Collaboration: We promote collective responsibility, cross-border cooperation, and shared learning among riparian states, communities, and institutions to safeguard the African Great Lakes.

Resilience and Sustainability: We are committed to environmental stewardship and adaptive practices that sustain ecosystems, strengthen community resilience, and secure resources for future generations.

Inclusivity and Equity: We embrace diversity and ensure that women, youth, and marginalized groups have meaningful participation in decision-making and benefit equitably from Great Lakes resources.

Scientific Rigor and Innovation: We uphold the highest standards of science, fostering innovation and knowledge exchange to provide practical solutions for sustainable lake basin management.

Environmental and Social Responsibility: We recognize the interdependence of people and ecosystems, promoting ethical, eco-friendly, and socially responsible actions in all our initiatives.

Stewardship and Accountability: We operate with openness, integrity, and responsibility, ensuring that our actions and decisions are credible, evidence-based, and trusted by stakeholders.

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CHAPTER THREE: SITUATIONAL ANALYSIS

3.1   Critical Challenges

The focus is on several critical challenges and issues, including:

i)   **Regional Coordination and Governance** such as strengthening cross-border collaboration among governments, regional institutions, and development partners, enhancing policy coherence and harmonization within existing regional governance frameworks (EAC, SADC, LVBC, AU) and improving mechanisms for data sharing, joint planning, and decision-making.

ii)   **Sustainable Resource Management,** addressing overfishing, habitat degradation, water quality and water pollution through integrated lake basin management, promoting climate resilience strategies to mitigate the impacts of climate change on freshwater ecosystems and supporting innovative conservation approaches, such as ecosystem-based management and nature-based solutions.

iii)   **Stakeholder Capacity and Engagement** including building the technical and institutional capacities of local communities, policymakers, and the private sector, encouraging inclusive participation of marginalized groups, including women and youth, in decision-making and strengthening the role of scientific research and traditional knowledge in sustainable lake management.

iv)   **Knowledge Management and Evidence-Based Decision-Making** through establishing regional data platforms to improve access to real-time information on lake health and resource use, facilitating research collaborations with universities, research institutions, and global networks, developing policy briefs, best practice guidelines, and technical reports for informed governance.

v)   **Resource Mobilization and Private Sector Involvement** by identifying sustainable funding mechanisms, including public-private partnerships (PPPs) and donor engagement, promoting eco-friendly investments and responsible business practices in fisheries, hydropower, and tourism and leveraging global initiatives such as the UN Decade on Ecosystem Restoration for financial and technical support.

vi)   **Monitoring, Evaluation, and Adaptive Management** by establishing a robust monitoring and evaluation framework to track progress against key performance indicators (KPIs), implementing feedback and learning mechanisms to adapt strategies based on evolving challenges and opportunities and strengthening accountability and reporting mechanisms to ensure transparency and stakeholder engagement.

vii)   **Geographical and Institutional Scope** covers the African Great Lakes region spanning ten countries.

viii)   **Institutional collaboration**: The Council operates within existing regional governance structures (such as EAC, SADC, LVBC, AU) while engaging governments, civil society, private sector actors, and global partners.

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ix) **Policy alignment strategy** integrates with international and regional policy frameworks, ensuring synergy with broader socio-economic and environmental goals.

x) **Research and Development** is crucial for sustainable growth in the African Great Lakes region, addressing challenges like food security, biodiversity conservation, and economic development. Investing in R&D fosters innovation in agriculture, fisheries, and renewable energy, while mitigating conflicts over resources. Strengthening local R&D capacity ensures long-term resilience and regional stability

This Strategic Plan 2026-2030 serves as a blueprint for action, ensuring that the African Great Lakes region remains a thriving ecological and economic hub for future generations. The successful implementation of this plan will rely on strong partnerships, sustained funding, and continuous adaptation to emerging challenges.

3.2   External Environment (PESTEL)

PESTEL Analysis for the African Great Lakes Region, focused on regional governance, sustainable development, and environmental management relevant to the Council of Advisory Groups' Strategic Plan (2026-2030). A PESTEL analysis is a management framework and diagnostic tool. The outcome of this analysis will help you to understand factors external to your organization/group that can impact upon strategy and influence management decisions.

While the African Great Lakes are engines of ecological wealth and economic promise, their sustainable management is undermined by political fragility, economic inequality, social vulnerabilities, slow technological uptake, mounting environmental stress, and weak legal enforcement. A coordinated transboundary approach that bridges these PESTEL dimensions is essential if the lakes are to secure both livelihoods and ecosystems for future generations.

3.2.1   Political

The African Great Lakes are governed within highly varied political contexts, ranging from relative stability in Tanzania, Zambia, Rwanda, Uganda, and Kenya, to persistent insecurity in parts of the Democratic Republic of Congo (DRC) and Burundi. These disparities shape transboundary cooperation, with some lakes (such as Victoria under the East African Community and LVFO) benefitting from harmonized frameworks, while others (such as Kivu, Edward, Turkana, and Albert) remain constrained by weak bilateral arrangements and contested borders. Annual ministerial meetings and emerging lake basin charters show political will, with potential for regional integration. However, there are persistent disputes over border jurisdiction, and oil exploration continues to undermine cohesive management.

Action required:
i) Strengthen transboundary governance by collaborating with regional lake authorities (e.g., LVFO, Lake Tanganyika Authority (LTA) and existing lake management structures on research, data sharing, information dissemination and management decision-support systems

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ii) Facilitate structured dialogue and dispute resolution mechanisms for border, water-use, and oil/gas exploration conflicts, anchored in regional economic community and African Union platforms.

iii) Participate in annual multi-stakeholder fora to review progress and adapt joint management plans.

3.2.2 Economic

Economically, the lakes are central lifelines for fisheries, transport, energy, and tourism. Lake Victoria supports robust export-oriented fisheries and a growing aquaculture sector, while Tanganyika and Kivu anchor cross-border trade corridors and niche activities such as methane extraction. Lakes Malawi and Albert are emerging hotspots for oil and gas exploration, raising tensions and ecological risks. Despite these opportunities, economic disparities between riparian states limit joint investments, and many communities remain dependent on artisanal fishing without access to broader markets. Infrastructure gaps—particularly in DRC, Burundi, and peripheral regions like Turkana—further suppress economic potential, while donor dependence in Malawi and Mozambique underscores fragile financing for sustainable management.

Action required:
i) Promote inclusive blue economy models that diversify livelihoods—investing in aquaculture, eco-tourism, renewable energy, and value-added processing alongside capture fisheries.

ii) Support the integration of natural capital valuation into national accounts so that the true value of lake fisheries and ecosystem services guides policy and investment decisions.

3.2.3 Social

he social fabric of the lake basins is equally complex. Dense populations around Victoria and Malawi intensify exploitation, while pastoralist and marginalized groups around Turkana face deep poverty and food insecurity. Ethnic diversity and displacement in the DRC and Burundi often spill into lake governance, while refugee flows affect Lake Kivu. Across nearly all basins, women are underrepresented in fisheries decision-making and often confined to low-paying processing roles, with gender inequalities exacerbated by social vices. Youth bulges around Victoria and Albert drive employment pressures, contributing to overfishing. At the same time, deep cultural identities tie communities to the lakes, making them central not only for livelihoods but also heritage and identity.

Action required
i) Enhance gender equity by promoting women's leadership in fisheries governance

ii) Empower youth through training, innovation hubs, and entrepreneurship in aquaculture, processing, and digital platforms for lake-based enterprises.

iii) Promote community participation in policymaking through co-management structures, ensuring cultural heritage, ownership and compliance.

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3.2.4 Technological

On the technological front, adoption remains uneven. While some progress is evident—such as cage aquaculture in Victoria, vessel monitoring pilots in Malawi, most lakes still rely on traditional fishing and post-harvest methods. Poor cold storage, weak diagnostic and surveillance systems, and gaps in real-time catch monitoring hinder both sustainability and profitability. Research institutions and laboratories exist in all the basins, but limited investment and underutilization constrain their potential. Opportunities exist for renewable energy (solar, wind, methane), hydroacoustics, and environmental DNA techniques, yet these remain underdeveloped, especially in marginalized regions like Turkana and the eastern DRC.

Action required:
i)   Scale up innovative monitoring technologies (hydroacoustics, drones, satellite surveillance, environmental DNA, citizen science tools) for stock assessment and enforcement.
ii) Advocate for strengthening of diagnostic laboratories and aquatic health surveillance to prevent and respond to fish diseases and invasive species.
iii) Develop regional research networks to improve knowledge and technology transfer, with shared databases and open-access platforms.

3.2.5 Environmental

The environmental pressures are profound and interconnected. Overfishing and destructive gear are widespread, driving biodiversity loss in the African Great Lakes, which are home to endemic species, currently at risk. Pollution from urban effluents, agriculture, and plastics plagues nearly every basin, with invasive species such as water hyacinth exacerbating Victoria's crisis. Climate change compounds these pressures, altering hydrology in Turkana, increasing salinity, submerging settlements along Tanganyika, and intensifying flooding and displacement across Malawi and Edward. In Kivu, unique hazards such as limnic eruptions from gas buildup add layers of vulnerability. Catchment degradation through deforestation and sedimentation further depletes water quality, undermining resilience of ecosystems and communities alike.

Action required:
i)   Advocate for ecosystem-based management (EBM) frameworks that integrate fisheries, forestry, agriculture, and land use across catchments and climate change strategies.
ii) Promote basin-wide monitoring of invasive species and provide management advice to the stakeholders
iii) Partner with relevant institutions for joint pollution monitoring and reduction
iv) Promote the use of native species for aquaculture to prevent introduction of exotic species and loss of biodiversity.

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3.2.6 *Legal*

Legally, governance frameworks span from harmonized regional bodies like the Lake Victoria Fisheries Organization and Southern African Development Community (SADC) mechanisms, to weakly enforced or outdated regulations in other basins. Enforcement capacity remains a common Achilles' heel, even where sound laws exist. Bilateral agreements, such as the 2018 Uganda–DRC accord on Lakes Edward and Albert, offer a template for cross-border cooperation, but contested oil and gas deals in Albert or unresolved boundary disputes in Malawi illustrate persistent fragility. International conventions—from the CBD to the FAO Code of Conduct for Responsible Fisheries — provide guiding principles, yet their integration into national lake policies is inconsistent, particularly in fragile states like DRC.

Action required
i)   Support community legal empowerment programs so fishers and local stakeholders understand rights, obligations, and dispute resolution mechanisms.
ii)   Support harmonization of fisheries and aquaculture laws across all riparian states, drawing on successful LVFO and SADC experiences.

3.3   ACARE-AGs SWOT Analysis (consolidated)

3.3.1 *Strengths*
i)   Strong expertise and knowledge in fisheries, limnology, biodiversity, hydrology, and aquatic resource management across lakes.
ii)   Existence of regional and national management institutions (e.g., LVFO, LTA, LEAFAO) alongside research institutes and universities.
iii)   Growing partnerships and collaborations among riparian countries, academia, communities, and international organizations.
iv)   Access to research infrastructure (labs, vessels, data repositories) and adoption of modern monitoring technologies in some basins.
v)   Rich biodiversity, cultural heritage, and socio-economic importance of lakes, providing strong natural and community assets.

3.3.2 *Weaknesses*
i)   Limited technical and financial capacity, with strong dependence on external funding and inadequate national investment.
ii)   Weak or fragmented policy, legal, and governance frameworks, often uncoordinated across borders.
iii)   Poor translation of science into policy and management; limited dissemination of findings and weak science–policy linkages.
iv)   Coordination gaps among research institutions, governments, and communities; lack of harmonized data-sharing protocols.
v)   Limited or uneven community involvement and inadequate alternative livelihoods to reduce fishing pressure.

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vi) Language and cultural barriers that hinder collaboration across regions.
vii) Inadequate enforcement of fisheries regulations and poor management of illegal, unreported, and unregulated (IUU) activities.

3.3.3 Opportunities
i) Rising international recognition and support for research, monitoring, and conservation of African Great Lakes.
ii) Potential for regional cooperation and integration through harmonized monitoring programs, shared standards, and joint institutions.
iii) Advances in science, technology, and innovation (remote sensing, mobile data collection, geospatial mapping, aquaculture systems).
iv) Public-private partnerships and investment opportunities in sustainable aquaculture, eco-tourism, and renewable energy.
v) Community-based conservation and stewardship, building on indigenous knowledge and cultural heritage.
vi) Enhanced linkages between research, training, and policy for capacity building of the next generation of African scientists.
vii) Opportunity to position lakes as drivers of food security, climate resilience, and regional economic growth.
viii) Increasing community willingness to engage in stewardship, citizen science, management, and adaptive livelihood practices.

3.3.4 Threats
i) Political instability, conflicts, and governance challenges across some riparian states undermine cooperation and progress.
ii) Climate change and variability (warming waters, droughts, floods, extreme weather) threatening ecosystems and livelihoods.
iii) Population growth, urbanization, and land-use change, leading to overexploitation, habitat loss, and pollution.
iv) Expansion of extractive industries (oil, mining, large dams, water diversions) with major ecological and social risks.
v) Spread of invasive species and illegal fishing practices, reducing fish stocks and biodiversity.
vi) Declining and inconsistent funding for research and management, especially during economic downturns.
vii) Socio-economic inequalities (poverty, gender disparities, youth unemployment) driving unsustainable resource use and conflict.

The strength of the Advisory Groups lies in their diverse expertise, partnerships, and natural/cultural assets, but they face weaknesses in financing, governance, and coordination. The opportunities in international support, technology, and regional cooperation are significant, yet they are threatened by climate change, political instability, and resource exploitation.

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Table 3.1: **SWOT Enhancement Table for all African Great Lakes Advisory Groups, showing how to enhance strengths, mitigate weaknesses, maximize opportunities, and reduce threats.**

Strengths	Ways to Enhance
Strong expertise and knowledge in fisheries, limnology, biodiversity, hydrology, and aquatic resource management across lakes	Build cross-lake expert networks and joint research programs to amplify collective knowledge
Existence of regional and national management institutions (e.g., LVFO, LTA, LEAFAO) alongside research institutes and universities	Leverage and strengthen these institutions to develop continent-wide standards and shared protocols
Growing partnerships and collaborations among riparian countries, academia, communities, and international organizations	Expand collaboration into formalized platforms for long-term cooperation and resource-sharing
Access to research infrastructure (labs, vessels, data repositories) and adoption of modern monitoring technologies in some basins	Create shared access agreements and resource hubs to maximize utility across all lakes (i.e., African Lakes Hub)
Rich biodiversity, cultural heritage, and socio-economic importance of lakes, providing strong natural and community assets	Use biodiversity and cultural values as anchors for stewardship campaigns and global advocacy for conservation and funding (enhancing indigenous knowledge for conservation of the systems)
Existence of ACARE Global and partners	Strengthen linkages with global south and resource mobilization
Existence of the ACARE secretariat/ACARE Africa	Coordination mechanism across advisory groups
The Council of Advisory Groups	Provide technical backstopping and enhance coordination across advisory groups

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Table 3.2: **SWOT Enhancement Table for all African Great Lakes Advisory Groups, showing how to mitigate weaknesses, maximize opportunities**

Weaknesses	Ways to Mitigate
Limited technical and financial capacity, with strong dependence on external funding and inadequate national investment	Advocate for greater national government investment and diversify funding streams (PPP, trust funds)
Weak or fragmented policy, legal, and governance frameworks, often uncoordinated across borders	Develop harmonized governance frameworks and cross-border legal agreements
Poor translation of science into policy and management; limited dissemination of findings and weak science–policy linkages	Establish science–policy communication hubs and train scientists in policy engagement
Coordination gaps among research institutions, governments, and communities; lack of harmonized data-sharing protocols	Create regional data-sharing platforms with standardized protocols and incentives for cooperation
Limited or uneven community involvement and inadequate alternative livelihoods to reduce fishing pressure	Train communities in citizen science and promote alternative livelihoods like aquaculture, eco-tourism, and crafts
Language and cultural barriers that hinder collaboration across regions	Provide translation, multilingual materials, and inclusive facilitation in regional meetings
Inadequate enforcement of fisheries regulations and poor management of illegal, unreported, and unregulated (IUU) activities	Strengthen enforcement capacity with patrols, community rangers, and technology (drones, trackers)

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Table 3.3: **SWOT Enhancement Table for all African Great Lakes Advisory Groups, showing how to opportunities.**

Opportunities	Ways to Maximize
Rising international recognition and support for research, monitoring, and conservation of African Great Lakes	Secure long-term international partnerships, advocacy campaigns, and funding pipelines (i.e., ACARE-Africa chapter)
Potential for regional cooperation and integration through harmonized monitoring programs, shared standards, and joint institutions	Launch standardized monitoring systems and continental joint data repositories
Advances in science, technology, and innovation (remote sensing, mobile data collection, geospatial mapping, aquaculture systems)	Scale up use of modern technologies across basins and train local scientists to manage them
Public-private partnerships and investment opportunities in sustainable aquaculture, eco-tourism, and renewable energy	Develop business models that align PPPs with conservation and local livelihoods (i.e., cage aquaculture, early warning systems)
Community-based conservation and stewardship, building on indigenous knowledge and cultural heritage	Institutionalize indigenous knowledge in management plans and highlight cultural values in conservation
Enhanced linkages between research, training, and policy for capacity building of the next generation of African scientists (Education & Training)	Expand fellowship, mentorship, and training programs with policy engagement opportunities
Opportunity to position lakes as drivers of food security, climate resilience, and regional economic growth	Integrate African Great Lakes into national development and regional trade strategies
Increasing community willingness to engage in stewardship, citizen science, management, and adaptive livelihood practices	Support citizen science initiatives and co-management models that give communities a governance role

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Table 3.4: SWOT Enhancement Table for all African Great Lakes Advisory Groups, showing how to reduce threats.

Threats	Ways to Reduce
Political instability, conflicts, and governance challenges across some riparian states undermine cooperation and progress	Promote lake-based peacebuilding and diplomatic dialogue platforms
Climate change and variability (warming waters, droughts, floods, extreme weather) threatening ecosystems and livelihoods	Integrate climate adaptation measures, watershed management, and early warning systems
Population growth, urbanization, and land-use change, leading to overexploitation, habitat loss, and pollution	Mainstream sustainable urban planning, land-use regulation, and pollution control measures
Expansion of extractive industries (oil, mining, large dams, water diversions) with major ecological and social risks	Enforce strict environmental impact assessments and establish monitoring of extractive projects
Spread of invasive species and illegal fishing practices, reducing fish stocks and biodiversity	Develop coordinated invasive species management strategies and regional anti-IUU patrols
Declining and inconsistent funding for research and management, especially during economic downturns	Establish trust funds and endowments for stable, long-term financing
Socio-economic inequalities (poverty, gender disparities, youth unemployment) driving unsustainable resource use and conflict	Expand programs that focus on gender equity, youth empowerment, and livelihood diversification

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3.4 Sector Trends

The freshwater science and management landscape across Africa and beyond is evolving rapidly, shaped by dynamic partnerships, emerging technologies, and the increasing urgency of addressing climate and biodiversity challenges. Within this context, the African Center for Aquatic Research and Education (ACARE) operates in a complex ecosystem of conferences, research programs, and policy dialogues that both complement and influence its strategic direction. Understanding sectoral trends is therefore vital to ensure that ACARE's initiatives remain aligned with global best practices while responding to regional priorities in the African Great Lakes Basin.

This section examines the major trends shaping the sector, including patterns in global and continental scientific meetings, the roles and overlaps of partner institutions, and lessons drawn from ACARE's own performance in convening Advisory Group (AG) and Annual Meetings. It highlights opportunities for collaboration with organizations such as IAGLR, LVFO, LVBC, and PAFFA, while identifying challenges such as visa restrictions, funding limitations, and meeting fatigue. The section further explores how stakeholder influence, interest, and participation modes affect ACARE's engagement strategies. Collectively, this analysis informs a forward-looking approach to partnership development, program planning, and stakeholder alignment—ensuring ACARE continues to strengthen its leadership in freshwater ecosystem research and governance across Africa.

3.4.1 Competitor/Partner Analysis

The below is a list of global, continental, and regional entities who are aligned with ACARE. While all of the entities listed do not conflict with ACARE, many have meetings that could either a) overlap with ACARE's meetings or b) cause meeting fatigue. ACARE's intent is to have as many participants as possible at the meetings it holds. Though, as ACARE is not seeking profit (yet?), and we support participants attending our own meetings, the threat of participants not attending is minimal. Additionally, many of the listed entities and their meetings are desirable for ACARE and Advisory Group members to attend and engage to enhance the global freshwater expert network.

Global organizations with meetings: International Association of Great Lakes Research (IAGLR); Great Lakes Fishery Commission (GLFC); Species in Ancient Lakes (SIAL); International Lake Environment Committee (ILEC), Society of Freshwater Science (SFS), American Fisheries Society (AFS); International Society of Limnology (SIL); World Aquaculture Society (WAS); Aquatic Ecosystem Health Management Society (AEHMS) and (Great Lakes of the World (GLOW) Conference). At the continental front are the Pan African Fish and Fisheries Association (PAFFA) and the World Aquaculture Society (WAS)-African Chapter.

Regional: Lake Victoria Fisheries Organization (LVFO), Lake Victoria Basin Commission (LVBC), Lake Tanganyika Authority (LTA), Kenya Marine and Fisheries Research Institute (Aquatic Resources and Blue Economy Conference (ARBEC)), Tanzania Fisheries Research

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Institute (TAFIRI)-(FAV4ViBE), National Fisheries Resources Research Institute (NaFIRRI),
Universities, others.

3.4.2   Analysis of Past Performance

Since its establishment, the African Center for Aquatic Research and Education (ACARE) has
steadily advanced its mission of strengthening research, knowledge exchange, and collaborative
governance of Africa's Great Lakes. The organization's performance can be assessed through
several dimensions—scientific outputs, participation and engagement in meetings, Advisory
Group (AG) functionality, training and mentorship activities, and the overall visibility of African
freshwater research in global fora.

Publications and Knowledge Outputs:
ACARE has supported and facilitated the publication of numerous peer-reviewed articles, policy
briefs, and special journal sections, most notably through the Journal of Great Lakes Research
(JGLR) special section on African Great Lakes. Nine papers were formally published under
ACARE's coordination, and several additional outputs authored by AG members further reflect
ACARE's indirect contribution to building regional research capacity and advancing ecosystem
science. A standardized framework for attributing "ACARE-associated publications" is needed to
capture the full scope of outputs resulting from collaborative activities and grants.

Meetings and Advisory Group Engagement:
Annual meetings have consistently drawn significant participation from lake-specific Advisory
Groups, researchers, policymakers, and development partners. Attendance data indicate strong
representation from the African region, although participation from North American collaborators
fluctuates due to visa delays, travel costs, and limited funding. Despite these constraints, ACARE
meetings have provided crucial platforms for consensus-building, joint project formulation, and
thematic integration across lake basins.

Training and Capacity Development (AWIS):
The African Women in Science (AWIS) program has been a notable success, fostering gender
equity and scientific leadership through mentorship, research exposure, and technical training. The
participation rate has grown steadily, enhancing ACARE's reputation as an inclusive and
transformative network.

Challenges and Opportunities:
Persistent challenges include logistical barriers—visa acquisition for international conferences,
limited travel support, and high accommodation costs—which have sometimes restricted
participation in North America-based events such as IAGLR. Conversely, African-based programs
face oversubscription due to high demand from regional stakeholders. These factors emphasize the
need for balanced meeting locations, diversified funding mechanisms, and strengthened regional

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hubs to sustain inclusivity.

Performance Insights:

Overall, ACARE's past performance demonstrates steady institutional growth, increasing recognition, and tangible impact in promoting cross-lake collaboration. Strengthening coordination between Advisory Groups, formalizing publication tracking, and developing joint funding strategies with partners such as LVFO, NaFIRRI, and TAFIRI will further consolidate ACARE's role as the premier convener and thought leader in African Great Lakes science.

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Table 3.5: **Challenges, Root Causes, Impacts and Proposed Mitigations**

SN	Challenge	Root Causes / Details	Impact on Attendance	Proposed Mitigation	Responsible Party	Timeframe
1	Travel funding gaps	Limited institutional budgets; donor timelines misaligned with conference dates	Cancellations; reduced delegations	Create an annual travel fund; early budgeting; pooled scholarships with partners	ACARE + Institutions + Partners	6–12 months prior
2	High airfare costs	Long-haul routes; peak-season pricing	Late booking or non-attendance	Block-book group fares; book 3–6 months early; fare alerts	Institutions	3–6 months prior
3	Visa denials/delays	DS-160 backlogs; limited interview slots; document gaps	Last-minute cancellations	Visa readiness kits; early application windows; embassy liaison letters	ACARE + Participants	4–8 months prior
4	Scarcity of visa appointments	Seasonal surges; staffing constraints	Missed conference windows	Use regional consulates; appointment monitoring; paid rescheduling, where and when allowed	Participants	4–8 months prior
5	Weak supporting documentation	Incomplete invites; unclear funding proof	Higher refusal risk	Standardized invitation & funding letters; itinerary & return evidence templates	ACARE + Hosts	4–6 months prior
6	Accommodation costs	Host city price spikes; limited affordable rooms	Shortened stays; remote attendance	Pre-reserve room blocks; negotiate conference rates; roommate matching	Hosts + ACARE	2–4 months prior
7	Per diem shortfalls	National rates below local costs	Financial strain; reduced field/networking	Top-up via grants; per diem benchmarking; prepaid cards	Institutions + Donors	1–2 months prior
8	Registration fees	Limited fee waivers; currency volatility	Fewer presenters; late registration	Early-bird budgeting; fee waivers for LMIC; sponsor-backed waivers	Hosts + Donors	3–6 months prior
9	Currency fluctuations	FX swings (US$/CAD $)	Budget overruns	Hedge with early purchase; FX buffers in budgets	Institutions	2–6 months prior

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SN	Challenge	Root Causes / Details	Impact on Attendance	Proposed Mitigation	Responsible Party	Timeframe
10	Travel insurance & compliance	Mandatory coverage; hidden costs	Unexpected expenses	Bulk insurance policies; negotiated group rates	Institutions	1–2 months prior
11	Scheduling conflicts	Overlap with regional meetings/teaching	Split teams; missed sessions	Publish ACARE/AG calendar 12 months out; rotate dates	ACARE + Hosts	6–12 months prior
12	Limited travel grants	High demand, few awards	Excludes early-career researchers	Joint ACARE–IAGLR bursaries; ECR/AWIS-reserved slots	ACARE + Hosts + Partners	4–8 months prior
13	Data/material readiness	Abstracts late; visas tied to proof of activity	Visa risk; weak presence	Internal abstract deadlines; mentoring for submissions	AG Leads + Institutions	4–6 months prior
14	Digital access fallback	Unreliable virtual options	Lost visibility if travel fails	Guaranteed hybrid sessions; presenter-of-record backup	Hosts + ACARE	Event-time contingency

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3.4.3 Lessons Learnt

Over the past implementation cycles, ACARE has gained valuable insights from the organization of its meetings, collaborative research activities, and capacity-building programs. A key lesson is the importance of early logistical and administrative planning—particularly for travel, visa processing, and accommodation arrangements—to ensure equitable participation of African scientists in international conferences such as IAGLR. Establishing standardized invitation templates, visa support letters, and flexible travel budgets has proven critical in minimizing last-minute cancellations.

A second lesson relates to the balance between virtual and in-person engagement. The hybrid model adopted during global disruptions significantly increased inclusivity, especially for participants with limited funding. ACARE's experience shows that hybrid participation should remain a core option to maintain global linkages and reduce carbon footprints.

Thirdly, financial sustainability and resource diversification emerged as essential to maintaining continuity between annual meetings. Reliance on ad hoc donor support limits predictability and restricts participation of early-career scientists and women. Strengthening strategic partnerships and multi-year donor commitments is therefore crucial.

Finally, the need for robust documentation and communication systems was evident. Timely reporting, publication tracking, and data archiving ensure institutional memory, while continuous feedback mechanisms between Advisory Groups and the Secretariat enhance accountability and learning across the Great Lakes network.

3.4.4 Gap Analysis

The analysis of ACARE's performance reveals several institutional and operational gaps that, if addressed, could substantially enhance impact and sustainability:

i)   Funding and Resource Mobilization Gaps: Despite strong partnerships, ACARE remains highly dependent on short-term donor funding. The absence of a core endowment or diversified revenue model limits long-term programming. Establishing cost-sharing arrangements with member institutions and developing fee-based training programs could fill this gap.

ii)   Data and Publication Attribution Gaps: There is no standardized system for identifying and cataloguing ACARE-associated research outputs. A centralized digital repository and DOI-based tracking of publications by Advisory Group members would improve visibility and accountability.

iii) Regional Representation and Equity Gaps: Participation remains uneven across the Great Lakes. Certain basins (e.g., Lakes Edward and Albert) have fewer funded research activities compared to Lake Victoria. Strengthening cross-lake mentorship and ensuring equitable resource allocation will promote inclusivity.

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iv) Institutional Capacity and Staffing Gaps: Limited permanent technical and administrative staff constrains follow-up on commitments and reporting. Recruitment of a small, dedicated coordination team per basin would improve responsiveness.

v) Monitoring, Evaluation, and Learning (MEL) Gaps: While activities are well executed, there is no harmonized results framework to track outputs and outcomes across projects. A standardized MEL dashboard with clear indicators, baselines, and targets should be institutionalized.

vi) Stakeholder Engagement and Communication Gaps: Information dissemination and visibility beyond the core scientific community remain limited. Enhancing public-facing communication through newsletters, policy briefs, and multimedia channels would strengthen ACARE's identity and policy influence.

3.4.5   Stakeholder Analysis

The stakeholder analysis identifies and categorizes the diverse groups and institutions that influence, participate in, or are affected by ACARE's programs across the African Great Lakes region. It highlights each group's interests, level of importance, and degree of influence on Advisory Group activities. Key stakeholders include indigenous and traditional fishing communities, cage fish farmers, processors, traders, consumers, government and regulatory bodies, scientists, academia, environmental NGOs, development partners, and private sector developers. Each contributes uniquely to sustainable lake governance—from policy formulation and knowledge generation to livelihoods and conservation advocacy. The analysis emphasizes that highly influential stakeholders, such as governments, researchers, and development partners, are critical for decision-making and resource mobilization, while community groups and small-scale actors require empowerment and capacity building to strengthen their participation. Understanding these relationships enables ACARE to design inclusive engagement strategies, foster collaboration, and enhance the effectiveness and legitimacy of its freshwater initiatives.

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Table 3.6: **Step 1 and 2 of Stakeholder Analysis**

Stakeholder Groups	Interest (s)	Effects on AG Interest(s) + 0 -	Importance of Stakeholder for Advisory Groups U = Unknown 1 = Little/No Importance 2 = Some Importance 3 = Moderate Importance 4 = Very Important 5 = Critical Player	Degree of Influence of for Advisory Groups U = Unknown 1 = Little/No Influence 2 = Some Influence 3 = Moderate Influence 4 = Significant Influence 5 = Very Influential
Indigenous and traditional fishing communities	Income Food Nutrition Employment	+	5	5
Processors, Traders	Income Employment	+	3	2
Consumers	Food Nutrition	+	4	4
Cage Fish Farmers	Income Employment	+	5	5
Government and Regulatory Bodies	Laws and Policies Resource Management Sustainability Conservation	+	5	5
Scientists and Researchers	Knowledge Generation Conservation Sustainability	+	5	5

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Stakeholder Groups	Interest (s)	Effects on AG Interest(s) + 0 −	Importance of Stakeholder for Advisory Groups U = Unknown 1 = Little/No Importance 2 = Some Importance 3 = Moderate Importance 4 = Very Important 5 = Critical Player	Degree of Influence of for Advisory Groups U = Unknown 1 = Little/No Influence 2 = Some Influence 3 = Moderate Influence 4 = Significant Influence 5 = Very Influential
Environmentalists and Conservation Groups/NGOs	**Conservation Development Advocacy Capacity building Public awareness**	**+**	**4**	**4**
Academia	**Knowledge generation and dissemination Capacity building**	**+**	**4**	**4**
Development Partners/Collaborators	**Technical and financial support Sustainability**	**+**	**5**	**5**
Developers	**Economic benefits**	**+**	**4**	**4**

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Table 3.7: **Step 3 of Stakeholder Analysis (Contd.)**

INFLUENCE OF STAKEHOLDER	IMPORTANCE OF ACTIVITY TO STAKEHOLDER					
	Unknown	Little/No Importance	Some Importance	Moderate Importance	Very Important	Critical Player
Unknown						
Little/No influence						
Some Influence				• **Processors** • **Traders**		
Moderate Influence						
Significant Influence					• **Developers** • **Academia** • **Environmentalists and Conservation Groups/NGOs** • **Consumers**	
Very Influential						• **Development Partners/Collaborators** • **Scientists and Researchers** • **Government and Regulatory Bodies** • **Cage Fish Farmers** • **Indigenous and traditional fishing communities**

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Table 3.8: **Step 4 of Stakeholder Analysis (Contd.)**

INTEREST OF STAKEHOLDER GROUP	TYPE OF PARTICIPATION					
	Information Sharing (One-Way Flow)	Consultation (Two-Way Flow)	Collaboration (Increasing control over decision making)	Empowerment (Transfer of control over decision making and resources)	Capacity Building (Better Governance and Management)	Skills Development (Livelihood options and improved standard of living)
Development Partners/Collaborators	√	√	√	√	√	√
Scientists and Researchers		√	√	√	√	√
Government and Regulatory Bodies	√	√	√		√	√
Cage Fish Farmers					√	
Indigenous and traditional fishing communities		√	√		√	√
Consumers	√	√	√	√		
Environmentalists and Conservation Groups/NGOs	√	√	√	√	√	√
Academia	√	√	√		√	√
Developers	√	√	√			
Processors, Traders	√	√				√

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CHAPTER FOUR: STRATEGIC ISSUES, GOALS AND OBJECTIVES

4.1   Strategic issues

The plan identifies five major issues that must be addressed to achieve sustainable management of freshwater ecosystems. First, there is inadequate scientific knowledge, data, and advisory capacity, which limits evidence-based decision-making. Second, weak institutional and community capacity hinders effective resource management at both local and regional levels. Third, financial, technical, and institutional resources remain insufficient, undermining the ability to implement long-term programs. Fourth, ecosystems face increasing environmental stress and climate vulnerability, threatening biodiversity and the livelihoods of dependent communities. Finally, governance and institutional coordination remain weak, leading to fragmented policies, duplication of efforts, and missed opportunities for collective action.

4.2   Strategic Goals

To respond to these challenges, the plan sets out five overarching goals. The first is to scale up innovative monitoring technologies while strengthening regional research networks that generate and share scientific knowledge. The second goal focuses on building institutional and community capacity through training, mentorship, and inclusive leadership. The third goal is to mobilize financial, technical, and institutional resources to ensure continuity of programs and projects. The fourth goal emphasizes enhancing ecosystem sustainability and climate resilience by integrating long-term monitoring, environmental modelling, and adaptation measures. The fifth goal seeks to strengthen governance, collaboration, and partnerships by promoting harmonized frameworks, cross-border agreements, and international cooperation.

4.3   Strategic Objectives (Key Results Areas)

4.3.1   Scientific Knowledge and Innovation

The plan commits to implementing funded projects across advisory groups, producing technical reports, and managing data repositories. It will generate research proposals, publish information packages in multiple languages, and diversify community livelihoods through inclusive blue economy models. In addition, it will conduct natural capital valuations to quantify the economic value of fisheries and ecosystem services.

4.3.2   Institutional and Community Capacity

Capacity building will be anchored in training needs assessments and the development of relevant curricula. Each advisory group will deliver at least five short courses annually and expand mentorship and fellowship programs targeting early-career scientists, with a strong focus on gender equity. Research infrastructure will be strengthened by mapping existing facilities, upgrading laboratories, and promoting modern technologies, while building expert networks across lakes to amplify collective knowledge.

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4.3.3   Resource Mobilization and Institutional Building

The plan recognizes the need for sustainable financing. It proposes identifying funding opportunities aligned with thematic priorities, submitting targeted research and development proposals, and strengthening institutions to manage both financial and technical resources effectively.

4.3.4   Ecosystem Sustainability and Climate Resilience

Environmental sustainability will be advanced through the production of annual ecosystem and climate status reports and the institutionalization of environmental and climate modelling. Indigenous knowledge and cultural values will be integrated into management plans, while citizen science and co-management models will empower communities as active stewards. Climate adaptation strategies will include watershed management, pollution control, and early warning systems, supported by long-term monitoring and joint data repositories.

4.3.5   Governance and Partnerships

Governance will be strengthened through the establishment of at least one formal collaboration per advisory group annually. Memoranda of Understanding will formalize regional and international partnerships, while stakeholder dialogues and multi-stakeholder fora will provide spaces for joint decision-making. Citizen science platforms and cross-border frameworks will be expanded, and long-term international partnerships secured. Finally, freshwater ecosystem priorities will be integrated into national development plans and regional trade strategies to ensure political and economic alignment.

Commented [9]: Let is consider merging with Chapter 2 given that these are the same strategic goals mentioned

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Table 4.1: **Summary of Strategic Issues, Goals and Objectives**

SN	Strategic issues	Strategic Goals	KRA	Objectives	Strategies	Activities	Budget
1	Inadequate scientific knowledge, data, and advisory capability	Generation & dissemination of scientific knowledge on freshwater ecosystems	Research and innovation	1. implement funded projects - 2/AG in 5 years	● Research in thematic areas	● Identify and implement 2 research activities in each AG ● Produce 10 technical reports	
					● Diversification of livelihoods	● Develop 2 inclusive blue economy models that diversify livelihoods	
					● Natural capital valuation	● Conduct 1 assessment of the value of natural resources for inclusion into national accounts on fisheries and ecosystem services for AG	
					● Manage new and existing data	● Collect, store and analyze all data ● Create/update the data repository on quarterly basis	
					● Technological innovation	● Implement monitoring of 2 thematic research using innovative technologies in each AG	
					●	● Train 2 communities in citizen science and promote alternative livelihoods like aquaculture, eco-tourism, and crafts in each AG	
				2. Each AG to submit at least 4 proposals/ year	● Synergized sourcing and response to all calls for proposal	● Identify relevant 4 funding opportunities in line with existing data gaps by each AG ● Develop and submit 4 research proposal by each AG	
			Information packages	3. At least 5 info packages via publications, IEC materials & policy brief/AG/year	● Dissemination of scientific information	● Develop 5 scientific communication materials in French, Portugue, and English ● Participating in various dissemination events (conferences, workshop, seminars etc.)	
					●	● Develop harmonized governance	

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SN	Strategic issues	Strategic Goals	KRA	Objectives	Strategies	Activities	Budget
						frameworks and cross-border legal agreements	
					●	● Create regional/continental data-sharing platforms with standardized protocols and incentives for cooperation	
					●	● Provide 5 translation, multilingual materials, and inclusive facilitation in regional meetings	
2	Weak institutional and community capacity (resource management)	Building capacity and empowerment	Training	4. Conduct at least 5 short courses/year/AG -informed by TNA	● Capacity building	● Conduct a Training Needs Assessment for each of the AGs ● Develop and produce training materials for 5 short courses for all AG ● Conduct training in 5 identified resource management themes	
					● Gender mainstreaming	● Develop 5 gender inclusive training materials ● Conduct 2 training on leadership and entrepreneurship(?) by each AG ● Build cross-lake expert networks and joint research programs to amplify collective knowledge for each 3-5 disciplines - (Add Strategy)	
			Mentorship programs	5. At least 1 mentorship per AG with at least 10 mentees	●	● Expand fellowship, mentorship, and training programs with policy engagement opportunities for 10 mentees per year	
					●	● Expand programs that focus on gender equity and early career scientists to each AG	
			Access to research infrastructure	6. Mapping of infrastructure and at least 1 lab	●	● Leverage and strengthen these institutions to develop basin-wide standards and shared protocols	

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SN	Strategic issues	Strategic Goals	KRA	Objectives	Strategies	Activities	Budget
				strengthened with new equipment per lake	●	● Promote the use of modern technologies across basins and train 5 local scientists to manage them	
					●	● Strengthen all AGs as a model for ecosystem management	
3	Inadequate financial technical and institutional resources	- resource mobilization and institutional building	Resource Mobilization Chapter	Resource Mobilization Chapter	● Resource Mobilization Chapter	● Resource Mobilization Chapter	
4	Increasing environmental stress and climate vulnerability	Enhancing ecosystem sustainability and climate resilience	Long-term monitoring report	7. Produce at least 1 status report/AG/year related to enhancing ecosystem sustainability and climate resilience	● Environmental Modelling	● Climate modelling report	
					● Knowledge management	● Use biodiversity and cultural values as anchors for stewardship campaigns and global advocacy for conservation and funding (enhancing indigenous knowledge for conservation of the systems) ● Institutionalize indigenous knowledge in management plans and highlight cultural values in conservation	
					● Long time monitoring	● Launch standardized monitoring systems and basin-wide joint data repositories	
					●	●	
					●	● Support citizen science initiatives and co-management models that give communities a governance role	
					●	● Integrate climate adaptation measures, watershed management, and early warning systems	
					●	● Mainstream sustainable urban planning, land-use regulation, and pollution control measures	

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SN	Strategic issues	Strategic Goals	KRA	Objectives	Strategies	Activities	Budget
					●	● Monitoring of selected extractive projects (Merge)	
5	Weak governance and institutional coordination	Strengthening collaboration and partnerships	Establish partnerships and collaborations	8. At least 1 collaboration of partnership established per AG/year	● Collaborate with regional lake authorities	● Develop MoUs for collaboration in thematic areas ● Implement and monitor collaborations through quarterly reports	
					● Facilitate dialogue for natural resource governance	● Conduct stakeholders' meetings in thematic areas ● Participate in annual multi-stakeholder fora to review progress and adapt joint management plans.	
					● Citizen science	● Develop and implement citizen science in thematic areas (Merge)	
					●	●	
					●	● Expand collaboration into formalized platforms for long-term cooperation and resource-sharing (Create shared access agreements and resource hubs to maximize utility across all lakes by each AG (i.e., African Lakes Hub)	
					●	● Strengthen linkages with global south	
					●	● Coordination mechanism across advisory groups	
					●	● Secure 2 long-term international partnerships, advocacy campaigns, and funding pipelines (i.e., ACARE-Africa chapter)	
					●	● Integrate African Great Lakes into national development and regional trade strategies	

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CHAPTER FIVE: STRATEGIC INITIATIVES & ACTION PLAN

5.1 Key Success factors (Key Priority Areas)

5.1.1 Annual Meetings

Since 2019, ACARE has successfully convened seven annual meetings, creating consistent platforms for knowledge exchange, collaboration, and strategic planning. Participation has grown remarkably over time, from about 70 delegates at the inaugural meeting in Entebbe in 2019 to more than 200 in Lusaka in 2025. This steady increase demonstrates both the expanding relevance of ACARE and the growing demand for collective dialogue on freshwater ecosystem management.

5.1.2 Advisory Group Meetings

Alongside the annual gatherings, Advisory Group meetings have served as vital mechanisms for technical engagement and cross-lake coordination. These meetings, held regularly, bring together diverse participants including scientists, managers and policymakers. The number of meetings and the breadth of participation reflect the advisory groups' role as the operational arms of ACARE, ensuring that research and management priorities remain aligned with regional realities.

5.1.3 Publications under ACARE

Publications have been a visible outcome of ACARE's commitment to advancing science-policy linkages. Technical reports, policy briefs, and peer-reviewed articles have not only informed management but also contributed to building a shared body of knowledge across the African Great Lakes region. These outputs provide the evidence base that strengthens advocacy and decision-making.

5.1.4 African Women in Science (AWIS) Program

Since inception, the program has successfully organized four cycles, with the fifth currently underway in 2025. Participation has been steady, with notable variations over the years. The inaugural 2021 cohort enrolled 18 participants, followed by a dip to 11 in 2022, before recovering to 18 in 2023. In subsequent years, 13 participants joined in 2024, and the ongoing 2025 session has 12 participants, highlighting both consistency and resilience in attracting young scholars and professionals.

Beyond participant numbers, the initiative has achieved several significant success metrics. Exchange visits to the International Association for Great Lakes Research (IAGLR) conference have been a core feature, starting with 11 participants in 2020, followed by 9 in 2022, 9 in 2024, and a peak of 13 in 2025. Complementing this, field-based exposure at the Experimental Lakes Area (ELA) has steadily expanded, with 4 participants in 2022, 6 in 2023, and 8 participants in both 2024 and 2025, demonstrating the program's growing emphasis on experiential learning.

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Mentorship has also emerged as a strong pillar, with 17 mentees supported in 2023, rising to 20 in 2024, before stabilizing at 17 in 2025. This reflects the program's sustained investment in personalized guidance and professional development.

Cumulatively, the program has built a vibrant network of 59 alumni, creating a strong foundation for long-term collaboration, knowledge exchange, and impact. Together, these achievements underscore not only the continuity of the program but also its growing international recognition, practical engagement opportunities, and the strengthening of mentorship and alumni networks.

5.1.5 *Resource Mobilization*
ACARE's financial base has grown significantly since inception. After an initial period without external funding in 2017–2018, the organization began raising funds in 2019 and secured $143,751 in 2020. Subsequent years have seen steady growth, reaching $600,000 in 2023. In 2025, resource diversification was achieved with $70,000 generated from two distinct funding streams, marking an important milestone in financial sustainability. This trajectory reflects ACARE's growing credibility with donors and partners.

5.1.6 *Partnerships and Memoranda of Understanding*
Strategic partnerships have been central to ACARE's success. Multiple institutions have engaged through formal Memoranda of Understanding, enabling collaborative research, joint workshops, and capacity-building initiatives. These partnerships have amplified ACARE's reach, strengthened its technical base, and enhanced the legitimacy of its recommendations at both regional and global levels.

5.1.7 *Governance: ACARE Board Growth*
The governance structure of ACARE has also evolved to keep pace with its expanding mandate. From a small founding board of three members in 2017, the board gradually expanded to ten members by 2024, reflecting broader representation and inclusivity. In 2025, the establishment of the ACARE-Africa Board with seven members marked a new chapter in decentralizing leadership and embedding ownership across the continent.

5.1.8 *Staff Growth*
Parallel to board expansion, ACARE's staffing capacity has grown steadily. The secretariat began with only three staff members in 2017 and remained modest until 2020. By 2021, the team expanded to six, enabling more specialized programmatic work. Further growth to nine staff members by 2024–2025 reflects a stronger institutional base and the ability to deliver on increasingly complex projects and partnerships.

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5.2 Corporate Strategy (Strategy Mix)

ACARE's corporate strategy is built on a balanced mix of approaches that together enable the organization to achieve impact, ensure sustainability, and maintain relevance across the African Great Lakes region and beyond. This strategy mix integrates growth, partnership, innovation, capacity development, and financial diversification, creating a robust framework for long-term success:

i) Growth and Expansion Strategy: ACARE has deliberately pursued both organizational and programmatic growth. This is evident in the steady increase in the size of its board, the establishment of the ACARE-Africa Board, and the expansion of staff capacity from three in 2017 to nine in 2025. Programmatically, ACARE has expanded from convening small-scale meetings with 70 participants to annual gatherings of more than 200 stakeholders, reflecting both the demand for its convening power and its recognition as a regional leader.

ii) Partnership and Collaboration Strategy: Central to ACARE's strategy is building and leveraging partnerships. Through the signing of Memoranda of Understanding with regional and international institutions, ACARE has created collaborative frameworks that enhance joint research, policy engagement, and knowledge transfer. Advisory Groups function as operational nodes that unite diverse stakeholders around shared research and management priorities, ensuring that the strategy is inclusive and regionally harmonized.

iii) Innovation and Knowledge Strategy: Innovation underpins ACARE's approach to research and monitoring. The strategy emphasizes the use of cutting-edge technologies such as hydroacoustics, drones, satellite surveillance, and environmental DNA, while also promoting citizen science. Publications, technical reports, and open-access databases are designed to strengthen the science-policy interface. Programs like the African Women in Science (AWIS) initiative demonstrate ACARE's commitment to integrating innovation with inclusivity, generating a pipeline of empowered scientists and leaders.

iv) Capacity Development Strategy: Recognizing weak institutional and community capacity as a core challenge, ACARE has adopted capacity development as a key strategic pillar. This includes short courses, mentorship programs, gender-mainstreamed leadership training, and cross-lake expert networks. Investments in laboratories, training facilities, and modern monitoring equipment ensure that regional institutions are strengthened to deliver sustainable scientific and policy outcomes.

v) Financial Sustainability and Resource Mobilization Strategy: ACARE's strategy also prioritizes financial resilience. Beginning with no external funding in 2017–2018, ACARE progressively scaled up its resource mobilization, raising $600,000 in 2023 and diversifying funding streams by 2025. This strategy reduces reliance on single donors, secures long-term program sustainability, and positions ACARE as a credible partner for both bilateral and multilateral funders.

vi) Governance and Institutional Strengthening Strategy: A strong governance framework supports the entire strategy mix. The growth of the ACARE Board, the establishment of ACARE-Africa, and the introduction of formalized coordination mechanisms ensure effective oversight, accountability, and representation. This governance model promotes

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inclusivity, cross-border harmonization, and alignment with continental and global sustainability agendas.

5.3 Strategies (programmes & strategies to be implemented)

5.3.1 Scientific Knowledge and Innovation Programme

This programme focuses on generating, managing, and disseminating scientific knowledge that supports sustainable management of freshwater ecosystems. It emphasizes research, data collection, and technological innovation as the foundation for evidence-based policy.

Strategies to implement:
i) Implement funded research projects across advisory groups, ensuring outputs are directly linked to management needs.
ii) Apply innovative technologies such as hydroacoustics, drones, satellite surveillance, and environmental DNA in monitoring and stock assessment.
iii) Establish and update open-access data repositories, with quarterly data collection and analysis.
iv) Produce technical reports, policy briefs, and multilingual information packages to bridge the science–policy–community gap.
v) Diversify livelihoods by piloting inclusive blue economy models in aquaculture, eco-tourism, and crafts.
vi) Conduct natural capital valuations to integrate ecosystem services into national accounts and policy frameworks.

5.3.2 Capacity Development and Empowerment Programme

This programme addresses weak institutional and community capacity by strengthening skills, knowledge, and leadership across the African Great Lakes region.

Strategies to implement:
i) Conduct training needs assessments (TNAs) and design tailored short courses in resource management themes.
ii) Deliver at least five short courses per year for each advisory group, supported by training materials and curricula.
iii) Establish mentorship and fellowship programs, targeting at least ten mentees annually, with a focus on gender equity and early-career scientists.
iv) Develop gender-inclusive training modules and leadership programmes to promote equitable participation.
v) Strengthen institutional infrastructure by upgrading laboratories, equipping research facilities, and training local scientists in modern technologies.
vi) Build cross-lake expert networks and joint research programs to promote regional learning and collaboration.

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5.3.3   Resource Mobilization and Institutional Building Programme

Financial sustainability and institutional resilience are critical to the success of ACARE. This programme ensures that adequate financial and technical resources are mobilized to sustain long-term initiatives.

Strategies to implement:
i)   Identify and respond to at least four funding opportunities per year aligned with identified research gaps.
ii)   Develop and submit research and capacity-building proposals across advisory groups.
iii)   Diversify funding sources by engaging bilateral donors, multilateral agencies, private sector partners, and philanthropic organizations.
iv)   Strengthen institutional systems and governance structures to manage funds transparently and effectively.
v)   Build advocacy campaigns to highlight the importance of freshwater ecosystems in regional and global policy arenas.

5.3.4   Ecosystem Sustainability and Climate Resilience Programme

This programme integrates environmental sustainability with climate adaptation to ensure resilience of ecosystems and the livelihoods that depend on them.

Strategies to implement:
i)   Produce annual ecosystem status and climate resilience reports for each advisory group.
ii)   Institutionalize environmental and climate modelling tools to inform long-term planning.
iii)   Integrate indigenous knowledge and cultural values into conservation campaigns and management frameworks.
iv)   Launch basin-wide standardized monitoring systems and joint data repositories.
v)   Support citizen science initiatives and co-management frameworks to empower communities as custodians of freshwater resources.
vi)   Mainstream climate adaptation, watershed management, and pollution control into management strategies, complemented by early warning systems for climate-related risks.

5.3.5   Governance, Collaboration, and Partnerships Programme

Strong governance and collaboration form the backbone of ACARE's operations. This programme enhances coordination, cross-border cooperation, and inclusive decision-making.

Strategies to implement:
i)   Establish at least one formal partnership or collaboration per advisory group each year.
ii)   Develop Memoranda of Understanding (MoUs) with regional and international institutions to strengthen collaboration in thematic areas.
iii)   Facilitate annual multi-stakeholder dialogues and forums to review progress and adjust management strategies.

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iv) Expand citizen science initiatives and integrate them into governance frameworks.
v) Formalize regional cooperation platforms, such as the African Lakes Hub, to enable shared access to resources and data.
vi) Secure long-term partnerships, advocacy pipelines, and funding streams to embed freshwater priorities in continental and global agendas.
vii) Ensure integration of freshwater ecosystem management into national development strategies and regional trade agreements.

5.3.6 Activities (timelines, milestones & responsibility)

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Table 5.1:   Strategic Plan M&E Framework

Programme / Activity	Timeline	Milestones	Responsibility	Key Performance Indicators (KPIs)
1. Scientific Knowledge & Innovation				
Implement funded projects in thematic research areas	2026-2030	2 funded projects per AG in 5 years	Advisory Groups (AGs), ACARE Secretariat	• Number of funded projects initiated and completed • % of projects aligned with strategic themes
Produce technical reports and policy briefs	Annual	10 technical reports & 5 policy briefs per year across AGs	Researchers, Communications Unit	• Number of technical reports produced • Number of policy briefs disseminated • Citation and uptake in policy documents
Establish and update open-access data repositories	Quarterly	Repository updated quarterly; regional platform by 2027	Data/IT Teams, AGs	• Frequency of repository updates • Number of datasets uploaded • User access/download statistics
Apply innovative monitoring technologies (drones, eDNA, hydroacoustics)	2026-2030	2 innovative monitoring projects per AG by 2028	AGs, Partner Institutions	• Number of technologies deployed • Number of monitoring surveys conducted • % Improvement in data quality/coverage
2. Capacity Development & Empowerment				
Conduct Training Needs Assessments (TNAs)	2026	TNAs completed in all AGs by 2026	Capacity Building Unit, AGs	• Number of TNAs completed • % of AGs with updated training plans
Deliver short courses in resource management themes	Annual	5 short courses per AG per year	AGs, Partner Universities	• Number of courses delivered • Number of participants trained (by gender)

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Programme / Activity	Timeline	Milestones	Responsibility	Key Performance Indicators (KPIs)
				• Post-training evaluation scores
Establish mentorship and fellowship programmes	Annual	At least 10 mentees per AG per year	Mentorship Committees, AWIS	• Number of mentorships established • Number of mentees enrolled (by gender, career stage) • % reporting improved skills/capacity
Upgrade laboratories and research facilities	2026–2029	1 lab per AG strengthened by 2028	AGs, Governments, Donors	• Number of labs upgraded • Value of new equipment installed • Number of scientists trained to use new facilities
3. Resource Mobilization & Institutional Building				
Identify and respond to funding calls	Annual	4 proposals submitted per AG per year	AGs, Resource Mobilization Team	• Number of proposals submitted • Success rate of proposals (%) • Value of funding secured annually
Diversify funding sources and partnerships	2026-2030	At least 2 new funding streams per year	ACARE Secretariat, Board	• Number of funding streams secured • % of budget supported by diversified sources
Strengthen institutional systems for transparency	2026-2027	Financial systems aligned with donor standards	Finance & Admin Unit	• Number of audits completed • % compliance with donor requirements • Timeliness of financial reports
4. Ecosystem Sustainability & Climate Resilience				
Produce annual ecosystem and climate reports	Annual	1 report per AG per year	Research Teams, AGs	• Number of reports produced • Number of reports disseminated to stakeholders

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Programme / Activity	Timeline	Milestones	Responsibility	Key Performance Indicators (KPIs)
				• Evidence of uptake in policy processes
Institutionalize environmental and climate modelling	2026-2030	Systems operational in 4 basins by 2028	AGs, Partner Institutions	• Number of models developed and applied • % of AGs using modelling results for planning
Support citizen science and co-management	2026-2030	2 initiatives per AG by 2027	AGs, Community BMUs	• Number of citizen science initiatives launched • Number of local participants involved • % of management plans informed by citizen science
Integrate climate adaptation and early warning systems	2026-2030	Strategies mainstreamed by 2029	AGs, National Agencies	• Number of adaptation strategies implemented • Number of functional early warning systems established • % reduction in climate-related vulnerability
5. Governance, Collaboration & Partnerships				
Establish new partnerships and collaborations	Annual	1 new partnership per AG per year	ACARE Secretariat, AG Chairs	• Number of partnerships formalized • Type and scope of partnerships (regional/global)
Develop and implement MoUs with institutions	2026-2030	2 MoUs per AG signed by 2027	ACARE Board, Secretariat	• Number of MoUs signed • Number of joint activities implemented under MoUs

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Programme / Activity	Timeline	Milestones	Responsibility	Key Performance Indicators (KPIs)
Facilitate annual multi-stakeholder fora	Annual	Annual forum held; joint reports produced	ACARE Secretariat, Partners	• Number of fora convened • Number of participants (by category, gender) • Number of joint recommendations adopted
Formalize regional cooperation platforms (e.g., African Lakes Hub)	2026–2029	Hub operational by 2028	ACARE Secretariat, Board	• Hub established and functional • Number of institutions actively participating
Secure long-term advocacy and funding pipelines	2026-2030	2 international partnerships & advocacy campaigns per year	ACARE Board, Resource Mobilization Team	• Number of advocacy campaigns launched • Number/value of long-term funding agreements secured

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CHAPTER SIX: IMPLEMENTATION & COORDINATION FRAMEWORK

This chapter defines how the ACARE Council of Advisory Groups (CoAG) Strategic Plan 2025–2029 will be operationalized. It translates the strategic goals into coordinated actions, specifying institutional roles, coordination mechanisms, timelines, and reporting structures.

6.1 Coordination Framework
6.1.1 Purpose of the Coordination Framework
This Coordination Framework provides mechanisms for aligning the implementation of the Strategic Plan across the African Center for Aquatic Research and Education (ACARE), the Council, and the Advisory Groups (AGs). Its purpose is to ensure coherence, accountability, efficiency, and impact in delivering strategic goals for sustainable management of the African Great Lakes.

6.1.2 Coordination Structure
ACARE/ACARE Africa Boards
i)   Provides strategic direction, policy guidance, and oversight.
ii)   Reviews progress reports and approves major initiatives e.g., MOUs.
iii)   Advises on governance, partnerships, and funding mechanisms.

ACARE / ACARE-Africa Secretariat
i)   Overall coordination and oversight of strategic plan implementation.
ii)   Ensures alignment of AG activities with regional priorities and transboundary issues.
iii)   Mobilization and management of financial and technical resources.
iv)   Convening of the Council & AGs meetings
v)   Monitoring, evaluation, and reporting of progress.
vi)   Facilitating partnerships at regional and global levels.

6.1.3 Council of Advisory Groups
i)   Translate strategic goals into coordinated annual work plans and budgets.
ii)   Monitor overall progress against KPIs and the strategic plan.
iii)   Facilitate resource mobilization and allocation across AGs.
iv)   Serve as the central hub for communication and problem-solving between AGs.
v)   Report progress and challenges to ACARE.

6.1.4 Advisory Groups (AGs)
i)   Conduct research, data collection, and innovation in thematic areas on the AGL.
ii)   Generate, package, and disseminate scientific knowledge for policy uptake.
iii)   Implement specific activities, training, and community engagement initiatives.
iv)   Report progress, challenges, and lessons learned to ACARE Secretariat.
v)   Foster collaborations with local stakeholders and communities.

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6.1.4   Coordination Mechanisms
1**.**   **Joint Annual Work Planning:**
   i)   ACARE convenes annual stakeholder network meetings with the Council and AGs.
2.   **Regular Communication Channels**
   i)   Quarterly virtual meetings between ACARE Secretariat, Council leadership, and AG Chairs.
   ii)   Monthly AG coordination calls to track progress on activities.
   iii)   Dedicated online knowledge-sharing platform (dashboard, repository, or intranet) for real-time data and document sharing.
3.   **Monitoring, Evaluation, and Reporting (MER)**
   i)   ACARE Secretariat leads MER with inputs from AGs.
   ii)   Quarterly progress reports submitted by AGs to ACARE.
   iii)   Semi-annual consolidated reports presented by ACARE to the Council.
   iv)   Independent mid-term and end-term reviews to assess performance and outcomes.
4.   **Partnership and Resource Mobilization Coordination**
   i)   ACARE Secretariat coordinates donor engagement, ensuring AGs and Council are kept informed.
   ii)   Joint proposals developed with AGs, endorsed by Council, submitted through ACARE.

6.1.5   Accountability and Transparency Measures
   i)   Defined Roles & ToRs: Each body (ACARE, Council, AGs) has clear Terms of Reference.
   ii)   Performance Contracts: AGs and Secretariat staff implement activities under measurable targets.
   iii)   Open Information Sharing: All reports, budgets, and evaluations shared with stakeholders.
   iv)   Feedback Loops: Community voices and stakeholder feedback integrated through AGs into decision-making.

6.1.6   Institutional Framework
This section defines the governance, leadership, and partnership structures established to ensure strategic oversight, accountability, and effective collaboration for the implementation of the Council of Advisory Groups' Strategic Plan (2026–2030).

The governance structure is designed to provide strategic direction, operational coordination, and technical implementation through a multi-tiered system with clear reporting lines.

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6.2   Governance & Leadership Structure

Figure to come

6.2.1   Roles and Decision-Making Processes
Table 6.1:   Leadership Roles & Accountability Mechanisms:

Entity	Leadership Role	Key Accountabilities
ACARE & ACARE Africa Board	Oversight	- Overall coordination of strategic vision and oversight - Approval of integrated annual work plans and budgets - Endorsement of major partnerships and MOUs
ACARE Secretariat	Lead Coordination	- Accountable for overall strategic vision and resource mobilization - Approval of AG-specific work plans - Provides high-level scientific and policy guidance - Operational decision-making within the approved budget - Ensures financial sustainability of the strategic plan
Advisory Council	Operational Leader	- Accountable for the coordinated implementation of the plan across all AGs - Monitor progress against KPIs and report to ACARE - Ensure efficient and equitable resource allocation
Advisory Group (AG) Chairs	Technical Implementers	- Accountable for delivering the specific outputs and outcomes outlined in their AG's annual work plan. - Manage AG resources effectively. - Report accurately and timely on progress and challenges. - Technical decision-making for project implementation. - Day-to-day management of AG activities

Strategic Decisions: Made by the ACARE Secretariat based on recommendations from the Advisory Council, often requiring a quorum and a majority vote.
Operational Decisions: Made by the Advisory Council within the scope of the approved strategic plan and budget.
Technical Decisions: Delegated to the respective AGs to ensure efficiency and context-specificity.

6.2.2   Role of ACARE and ACARE-Africa Secretariat in Advancing the Strategic Plan

Both ACARE and ACARE-Africa's Secretariat is the main coordinating institution tasked with enabling the success of the Strategic Plan by focusing on three critical functions:

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1. **Resource Mobilization:**
   i)   Develop and Execute a Resource Mobilization Strategy: Identify and target potential donors, foundations, and government funding agencies aligned with the strategic goals.
   ii) Proposal and Grant Development: Champion the development of high-quality funding proposals and grants for cross-cutting and large-scale initiatives that benefit multiple AGs.
   iii) Secure Core Funding: Advocate for and secure flexible funding to cover institutional overheads, governance, and secretariat functions to ensure sustainability.

2. **Partnerships:**
   i)   Cultivate Strategic Alliances: Forge and maintain high-level partnerships with regional bodies (e.g., AU, Lake Basin Commissions), international organizations, and major NGOs to leverage their influence, expertise, and resources.
   ii) Broker Collaboration: Act as a broker to connect AGs with the technical partners they need to succeed.
   iii) Brand Ambassador: Represent the collective work of the Advisory Groups at international fora, enhancing the network's visibility and credibility.

3. **Sustainability:**
   i)   Policy Influence: Use the collective evidence generated by the AGs to advocate for science-informed policies at national and regional levels, creating an enabling environment for long-term impact.
   ii) Financial Stewardship: Ensure prudent financial management and oversight of the entire network, promoting cost-effectiveness and accountability to donors.
   iii) Institutional Strengthening: Champion initiatives that build the long-term capacity of the Advisory Council and AGs, ensuring the network remains effective beyond the 2026-2030 plan period.

6.2.3   Partnerships and Collaborations

A multi-stakeholder approach is essential for achieving the plan's ambitious goals. Partnerships will be managed at different levels of the governance structure.

i)   Strategic Partnerships: (Managed by ACARE Secretariat) Long-term alliances with major development partners, regional political bodies, and global funding partners for policy influence and large-scale funding.
ii) Technical Partnerships: (Managed by the Advisory Council and AGs) Collaborations with research institutions, universities, and specialized NGOs to provide expertise, technology transfer, and joint implementation of projects.
iii) Community and Government Partnerships: (Coordinated by the AGs) Essential collaborations with local communities, sub-national governments, and relevant national agencies to ensure local ownership, relevance, and effectiveness of interventions.
iv) Partnership Protocol: All formal partnerships will be governed by Memoranda of

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Understanding (MoUs) that clearly define roles, responsibilities, contributions, and intellectual property rights.

CHAPTER SEVEN: FINANCING FRAMEWORK AND STRATEGY

6.3   Implementation Budget

The implementation plan translates ACARE's strategic vision into actionable programmes and projects, with clear timelines, milestones, responsibilities, and indicative budgets.

The Scientific Knowledge and Innovation Programme will drive research and knowledge generation. Priority projects include implementing thematic research, producing technical reports and policy briefs, deploying innovative monitoring technologies such as drones and environmental DNA, and establishing regional open-access data repositories. Milestones include two funded projects per advisory group by 2027, at least 10 technical reports annually, and operational data platforms by 2029. Responsibility lies with advisory groups and research partners, supported by the ACARE Secretariat. The indicative budget is USD 3.75 million over five years.

The Capacity Development and Empowerment Programme will address weak institutional and community capacity. Key projects involve conducting training needs assessments, delivering at least five short courses per advisory group annually, developing mentorship and fellowship programmes, mainstreaming gender in training, and upgrading one diagnostic laboratory per basin by 2028. Milestones include the launch of structured mentorship by 2026 and operationalized upgraded labs by 2028. Roles will be shared among the Capacity Building Unit, advisory groups, universities, and donors. The estimated budget is USD 3.05 million.

The Resource Mobilization and Institutional Building Programme will secure sustainable financing. Projects include preparing and submitting at least four proposals per advisory group annually, diversifying funding sources, and strengthening financial systems. By 2027, ACARE targets at least two new funding streams and a 50% success rate in grant applications. The ACARE Board, Secretariat, and Resource Mobilization Team will lead these efforts, with an indicative budget of USD 2.95 million.

The Ecosystem Sustainability and Climate Resilience Programme will enhance long-term environmental health. Activities include annual ecosystem and climate reports, climate modelling, integrating indigenous knowledge, launching standardized monitoring systems, and promoting citizen science. By 2029, basin-wide monitoring systems will be fully operational. Advisory groups and national agencies will be responsible, supported by the Secretariat and research teams. The estimated budget is USD 3.8 million.

Finally, the Governance, Collaboration and Partnerships Programme will strengthen coordination and cooperation. Projects include signing at least one new partnership per advisory group annually,

Commented [10]: This section and associated costs are under discussion

Commented [11]: Given the importance of this section, I suggest that this be captured into a separate Chapter as Financing Framework and Strategy

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developing Memoranda of Understanding with regional and international institutions, facilitating annual multi-stakeholder fora, and operationalizing the African Lakes Hub by 2028. Milestones include formalized MoUs and two long-term international partnerships by 2029. The Secretariat, Board, and advisory groups will coordinate this programme with a budget of USD 2.95 million.

In total, the action plan requires approximately USD 16.5 million for the 2026-2030 period. This comprehensive framework ensures that programmes are well-sequenced, responsibilities clearly defined, and milestones measurable, thereby positioning ACARE to deliver sustainable impact across science, capacity, resilience, and governance.

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Table 6.2: **Detailed Budget Framework for Goal 1 — Scientific Knowledge & Innovation (2026-2030)**

Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
1.1 Thematic & Cross-Lake Research	• Conduct research on fisheries, water quality, biodiversity, socio-economics across the African Great Lakes. • Support postgraduate (MSc/PhD) research linked to ACARE priority themes. • Facilitate annual competitive research calls.	• 10 multi-lake research projects implemented. • 40 postgraduate theses supported. • Two funded research calls per year.	ACARE Secretariat, AGs, Partner Universities, KMFRI, NaFIRRI, TAFIRI	2026-2030	**2,000,000**
1.2 Monitoring Technologies & Equipment	• Procure and deploy drones, eDNA field kits, water sensors, and hydroacoustic devices. • Develop real-time remote-sensing and GIS-based dashboards. • Maintain calibration and service contracts.	• 12 field monitoring units operational. • Real-time lake observation platform established. • 5-year maintenance plan functional.	ACARE Secretariat, ICT Unit, AGs, Partner Labs	2026-2029	**900,000**
1.3 Knowledge Products & Publications	• Produce annual technical reports, data briefs, and policy papers per basin. • Facilitate open-access journal publications and knowledge dissemination workshops. • Host regional scientific writing and data interpretation workshops.	• ≥10 technical reports and 20 briefs per year. • 30 ACARE-associated peer-reviewed publications. • Two writing workshops annually.	ACARE Secretariat, Researchers, Advisory Groups, Universities	2026-2030	**400,000**
1.4 Data Management & Repository Development	• Establish and maintain an ACARE open-access research repository and metadata systems. • Develop standardized data-sharing protocols and interoperability frameworks. • Host regional data management training.	• Operational repository by 2027. • 4 harmonized data standards developed. • 2 regional data workshops.	ACARE ICT Unit, Partner Institutions, Data Experts	2026-2029	**200,000**
1.5 Coordination, Communication & M&E	• Conduct annual Knowledge & Innovation review workshops. • Monitor, evaluate, and synthesize research outcomes via M&E dashboard.	• Annual synthesis meetings held. • M&E dashboard updated annually.	ACARE Secretariat, M&E Unit, Communication Team	2026-2030	**250,000**

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	● Disseminate findings through newsletters, web updates, and public briefs.	● Annual Knowledge Brief published.			
					3,750,000

Summary of Expected Results

i)   10 basin-level research projects and 40 postgraduate theses.
ii) 30 peer-reviewed papers and 20 annual policy briefs.
iii) Drone/eDNA monitoring systems operational in all basins by 2028.
iv) Regional open-access repository for Great Lakes data live by 2028.
v)   Annual review workshops and knowledge dissemination products institutionalized.

Table 6.3:   Detailed Budget Framework for Goal 2 — Institutional & Community Capacity Development (2026-2030)

Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
2.1 Training & Mentorship for Scientists and Practitioners	● Organize technical training for Advisory Groups, fisheries officers, and students. ● Conduct ToT (Training of Trainers) for national and regional partners. ● Facilitate leadership and research management training.	● 200 professionals trained. ● 8 regional ToT sessions completed. ● Enhanced institutional leadership skills.	ACARE Secretariat, Partner Universities, AGs, KMFRI, NaFIRRI	2026-2030	**1,200,000**
2.2 Community Co-Management & Extension Services	● Build capacity of BMUs and local associations on co-management. ● Conduct community awareness on sustainable fishing and lake stewardship. ● Provide extension materials and communication tools.	● 20 community co-management units strengthened. ● 50 BMU leaders trained annually. ● 10 extension toolkits distributed.	ACARE Secretariat, AGs, LVFO, LVBC, County Governments	2026-2030	**500,000**
2.3 Technical Exchange & Fellowship Mobility	● Support exchange visits for scientists and students between Great Lakes institutions. ● Facilitate short-term residencies and internships.	● 40 exchange fellows hosted. ● 8 annual study tours completed. ● Strengthened regional learning networks.	ACARE Secretariat, Universities, Research Institutes	2026-2029	**300,000**

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Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
	• Sponsor participation in global and regional conferences.				
2.4 Digital Learning & Knowledge Platforms	• Develop online learning modules and digital content. • Establish a virtual training hub for freshwater science. • Translate training materials into local languages.	• 1 e-learning portal established. • 10 courses hosted online. • Improved access to training resources.	ACARE ICT Unit, Partner Universities	2026-2028	200,000
2.5 Programme Coordination, Monitoring & Evaluation	• Conduct annual review and capacity assessment meetings. • Maintain training database and report dissemination. • Integrate results into M&E dashboard.	• 5 annual review reports produced. • Capacity assessment indicators tracked. • Improved institutional accountability.	ACARE Secretariat, M&E Unit	2026-2030	250,000
					3,050,000

Summary of Expected Results

i) 200 professionals trained and certified across partner institutions.

ii) 40 AWIS fellows and 20 community-based units empowered.

iii) Digital training hub established for continuous learning.

iv) Cross-lake exchanges institutionalized, enhancing regional cooperation.

v) Capacity performance integrated into ACARE's M&E system.

Table 6.4:   Detailed Budget Framework for Goal 3 — Resource Mobilization & Institutional Building (2026-2030)

Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
3.1 Financial Systems Strengthening	• Develop and deploy digital financial management and accounting systems.	• Automated financial management system in use by 2028.	ACARE Secretariat, Finance & Admin Unit	2026-2028	400,000

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Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
	• Conduct financial policy reviews and update manuals. • Train finance and administrative staff in donor compliance.	• Updated financial policy and audit guidelines. • 10 staff trained in compliance and reporting.			
3.2 Donor Engagement & Partnership Development	• Identify and engage potential regional and international donors. • Conduct resource mobilization missions and funding workshops. • Develop and submit grant proposals and concept notes.	• 2 new funding streams annually. • At least 10 proposals submitted by 2030. • Broadened donor and partner base.	ACARE Secretariat, Resource Mobilization Team, Board	2026-2030	700,000
3.3 Endowment & Sustainability Fund Development	• Establish an ACARE Endowment Fund for long-term operations. • Develop investment guidelines and governance framework. • Mobilize seed capital from member states, partners, and philanthropies.	• Endowment fund launched by 2028. • Seed funding target of USD 1 million reached. • Annual returns reinvested for sustainability.	ACARE Board, Finance Unit, Partners	2026-2030	1,200,000
3.4 Governance & Institutional Reforms	• Review and strengthen organizational structure and HR policies. • Conduct Board induction and capacity-building workshops. • Develop internal control and accountability mechanisms.	• Revised organizational structure and governance framework. • Trained Board and management team. • Increased institutional efficiency.	ACARE Board, Secretariat, HR Committee	2026-2029	350,000
3.5 Administrative Support & ICT Systems	• Procure vehicles, ICT infrastructure, and communication tools for Secretariat operations. • Improve office facilities and internet connectivity. • Develop administrative reporting templates.	• Upgraded office systems and equipment. • ICT-enabled operations. • Enhanced internal communication efficiency.	ACARE Secretariat, ICT & Admin Units	2026-2030	300,000

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Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
					2,950,000

Summary of Expected Results

i) Digital financial systems aligned with donor requirements operational by 2027.

ii) Two new funding streams mobilized annually, ensuring diversified revenue sources.

iii) Endowment fund launched by 2029 with a sustainable investment mechanism.

iv) Governance reforms institutionalized to strengthen accountability.

v) Modernized Secretariat infrastructure for efficient coordination and reporting.

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Table 6.5: **Detailed Budget Framework for Goal 4 — Ecosystem Sustainability & Climate Resilience (2026-2030)**

Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
4.1 Environmental & Climate Modelling	• Develop integrated climate and hydrological models for major African Great Lakes. • Conduct basin-wide data collection and analysis for climate projections. • Build capacity of AG researchers in modelling tools and software.	• 4 basin-level climate models developed and validated. • Annual lake climate forecasts produced. • 30 scientists trained in modelling and forecasting.	ACARE Secretariat, AGs, Partner Institutions, Universities	2026-2029	800,000
4.2 Ecosystem Monitoring & Reporting	• Implement annual ecosystem health assessments for each lake. • Conduct biodiversity and water quality surveys using eDNA and remote sensing. • Publish ecosystem and climate status reports.	• Annual ecosystem reports published (5 years × 5 lakes). • Biodiversity baseline data compiled for all lakes. • Policy briefs disseminated to regional institutions.	AGs, KMFRI, NaFIRRI, TAFIRI, LVFO, LVBC	2026-2030	1,000,000
4.3 Climate Adaptation & Early Warning Systems	• Design and pilot community-based early warning systems. • Integrate adaptation strategies into lake management plans. • Train local stakeholders on climate preparedness and resilience.	• Functional early warning systems in 4 basins by 2029. • 10 adaptation measures implemented. • Reduced vulnerability indicators recorded.	ACARE Secretariat, AGs, National Agencies, County Governments	2026-2030	900,000
4.4 Citizen Science & Co-Management Initiatives	• Establish citizen monitoring networks at community level. • Build capacity of BMUs in participatory data collection. • Facilitate joint planning meetings between scientists and local users.	• 2 citizen science initiatives per AG by 2028 • 200 local monitors trained. • 50% of AG management plans informed by citizen data.	AGs, BMUs, Community-Based Organizations, NGOs	2026-2030	500,000

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Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
4.5 Biodiversity & Habitat Restoration	• Implement community-driven habitat restoration projects. • Rehabilitate wetlands, spawning sites, and riparian buffers. • Conduct restoration monitoring and impact assessments.	• 10 degraded sites restored by 2029. • Improved biodiversity indices in target areas. • Local employment opportunities created.	ACARE Secretariat, AGs, NGOs, County Governments	2026-2029	400,000
4.6 Cross-Basin Learning & Knowledge Exchange	• Organize regional symposia and technical exchange visits. • Document and share lessons from adaptation pilots. • Produce knowledge briefs on best practices.	• 5 annual cross-lake symposiums held. • 10 case studies published. • Improved policy harmonization among lakes.	ACARE Secretariat, Partner Networks, Research Institutions	2026-2030	200,000
					3,800,000

Summary of Expected Results

i) Four lake basins with functional climate models and operational early warning systems by 2029.

ii) Annual ecosystem and climate reports integrated into policy processes.

iii) 10 restored habitats and 2 citizen science programs per Advisory Group.

iv) Strengthened community participation and data-driven adaptation measures across the African Great Lakes.

Table 6.6:   Detailed Budget Framework for Goal 5 — Governance, Collaboration & Partnerships (2026-2030)

Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
5.1 Stakeholder Platforms & Multi-Lake Fora	• Convene annual ACARE stakeholder conferences and Great Lakes Policy Forums. • Facilitate inter-lake and cross-border dialogues on governance, policy, and innovation. Produce annual proceedings and joint policy communiqués.	• One regional multi-stakeholder forum per year. • 5 sets of conference proceedings produced. • Increased stakeholder participation and visibility.	ACARE Secretariat, AG Chairs, Regional Partners	2026-2030	600,000

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Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
5.2 Partnership Development & Memoranda of Understanding (MoUs)	• Identify and formalize collaboration with regional and international institutions. • Develop MoUs defining joint research and training programs. • Monitor and review partnership performance.	• 2 MoUs signed per Advisory Group by 2028. • Annual partnership performance reports produced. • 20 institutions engaged under MoUs.	ACARE Secretariat, Board, Partner Institutions	2026-2030	400,000
5.3 Regional Cooperation Platform – African Lakes Hub	• Establish and operationalize the African Lakes Hub for coordination and knowledge exchange. • Equip and staff the hub with ICT infrastructure. • Develop web-based collaborative tools and digital resources.	• Hub operational by 2029. • 10 institutions linked through online platform. • Annual knowledge exchanges hosted.	ACARE Secretariat, Board, Partner Universities	2026-2029	700,000
5.4 Advocacy, Communication & Outreach	• Develop ACARE communication strategy and media campaigns. • Maintain ACARE website, newsletters, and digital branding. • Conduct advocacy on freshwater governance in regional and global events.	• 2 advocacy campaigns per year. • Communication strategy implemented by 2027. • Increased visibility and policy influence.	ACARE Secretariat, Communication Unit, AGs	2026-2030	500,000
5.5 Policy Engagement & Advisory Services	• Provide technical advisory services to governments, RECs (EAC, SADC, AU), and basin organizations. • Support harmonization of policies and regional legal instruments. • Develop annual policy briefs on governance and sustainability.	• 10 technical advisory missions conducted. • 5 policy briefs published annually. • Harmonized guidelines for freshwater management.	ACARE Secretariat, Board, National Ministries, LVBC, LVFO	2026-2030	450,000
5.6 Monitoring, Evaluation & Reporting	• Conduct annual review meetings for all governance and partnership activities. • Prepare performance scorecards and dashboards. • Facilitate external evaluations and audit reporting.	• 5 annual governance review reports produced. • M&E dashboard updated yearly.	ACARE Secretariat, M&E Unit, Board	2026-2030	300,000

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Component	Activities / Sub-Activities	Expected Outputs / Deliverables	Responsible Institution(s)	Timeframe (Years)	Estimated Cost (USD)
		• Institutional performance tracked consistently.			
					2,950,000

Summary of Expected Results

i) Five annual regional stakeholder fora and ten new MoUs across Advisory Groups.

ii) African Lakes Hub operational by 2028 with full ICT-based collaboration tools.

iii) Two advocacy campaigns annually to elevate ACARE's visibility and policy impact.

iv) Governance indicators and partnership outcomes integrated into ACARE's M&E dashboard.

v) Strengthened coordination, communication, and accountability mechanisms across all lake basins.

Table 6.7:   Summary of ACARE Five-Year Budget (2026-2030)

Strategic Goal / Programme	Key Components & Major Activities	Estimated Total Cost (USD)	% of Total Budget
Goal 1: Scientific Knowledge & Innovation	• Multi-lake research and innovation projects. • Deployment of drones, eDNA, and monitoring equipment. • Knowledge products, publications, and open-access data repository. • Annual scientific review and M&E coordination.	**3,750,000**	**22.73%**
Goal 2: Institutional & Community Capacity Development	• Training, mentorship, and leadership programs. • African Women in Science (AWIS) and youth fellowships. • Community co-management and extension services. • Digital learning platforms and exchange programs.	**3,050,000**	**18.48%**
Goal 3: Resource Mobilization & Institutional Building	• Financial systems modernization and audits. • Donor engagement and proposal development. • Establishment of ACARE Endowment Fund. • Institutional governance and administrative strengthening.	**2,950,000**	**17.88%**
Goal 4: Ecosystem Sustainability & Climate Resilience	• Environmental and climate modelling. • Ecosystem health monitoring and annual reporting.	**3,800,000**	**23.03%**

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	• Climate adaptation and early warning systems. • Citizen science, habitat restoration, and cross-lake learning.		
Goal 5: Governance, Collaboration & Partnerships	• Annual stakeholder fora and multi-lake conferences. • MoUs and regional partnership agreements. • Establishment of the African Lakes Hub. • Advocacy, policy advisory services, and governance M&E.	2,950,000	17.88%
		16,500,000	100.00%

Summary Observations

i) Highest investment: **Ecosystem Sustainability & Climate Resilience (Goal 4)** – reflecting ACARE's environmental mandate.

ii) Balanced allocation across research, capacity, and governance pillars ensures sustainability.

iii) Each goal contributes to ACARE's **core impact domains**: Knowledge Generation, Institutional Capacity, Sustainability, Climate Resilience, and Governance.

iv) All budgets are aligned with the **Action Plan milestones**, **Monitoring & Evaluation Framework**, and **donor engagement roadmap** (2026-2030).

Table 6.8: Annual Budget Summary by Strategic Goal (2026–2030)

Strategic Goal / Programme	2026 (USD)	2027 (USD)	2028 (USD)	2029 (USD)	2030 (USD)	Total (USD)
Goal 1: Scientific Knowledge & Innovation	700,000	850,000	900,000	800,000	500,000	3,750,000
Goal 2: Institutional & Community Capacity Development	550,000	700,000	750,000	650,000	400,000	3,050,000
Goal 3: Resource Mobilization & Institutional Building	500,000	650,000	700,000	650,000	450,000	2,950,000
Goal 4: Ecosystem Sustainability & Climate Resilience	650,000	800,000	850,000	900,000	600,000	3,800,000
Goal 5: Governance, Collaboration & Partnerships	550,000	650,000	700,000	650,000	400,000	2,950,000
	2,950,000	3,650,000	3,900,000	3,650,000	2,350,000	16,500,000
	17.88%	22.12%	23.64%	22.12%	14.24%	100.00%

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6.4   Work Plan

The implementation of the ACARE Council of Advisory Groups (CoAG) Strategic Plan (2025–2029) will follow a phased and structured five-year workplan designed to translate strategic goals into coordinated actions across the African Great Lakes region. The workplan aligns institutional roles, timelines, and deliverables within a coherent framework that promotes accountability, learning, and impact.

i)   During Year 1 (2026), the focus will be on institutional alignment and system establishment. This includes launching the Strategic Plan, finalizing governance instruments, and operationalizing coordination mechanisms among the ACARE–Africa Secretariat, CoAG, and the Lake Advisory Groups (LAGs). Priority actions will involve development of the African Lakes Data and Knowledge Hub prototype, training of M&E focal persons, piloting of the dashboard in two lakes (Victoria and Tanganyika), and establishment of thematic working groups for scientific knowledge, capacity building, resource mobilization, resilience, and partnerships.

ii)   In Year 2 (2027), emphasis will shift to scaling up research and capacity development. This phase will expand long-term ecological monitoring programmes, implement cross-lake data harmonization, and launch at least two joint research projects per lake under Goal 1. Fellowship schemes and gender-inclusive training programmes such as African Women in Science (AWIS) and early-career research networks will be fully rolled out. Institutional strengthening activities—such as governance reviews, financial management training, and establishment of the African Great Lakes Fund—will be undertaken to enhance organizational resilience.

iii) Year 3 (2028) will consolidate scientific outputs and initiate ecosystem restoration and climate adaptation pilots. Each lake will implement targeted interventions, including wetland restoration, pollution control, and climate-smart aquaculture trials. Data from these initiatives will feed into policy briefs and contribute to the "State of the African Great Lakes Report." Partnerships with regional economic communities (EAC, SADC, IGAD) and development partners will intensify, focusing on co-funded projects and transboundary governance frameworks.

iv)   Year 4 (2029) will focus on monitoring, knowledge translation, and regional policy uptake. The M&E dashboard will be fully operational across all lakes, providing quarterly progress reports and annual scorecards. The CoAG Secretariat will coordinate synthesis of results, showcasing lessons learned and best practices. At this stage, ACARE will also strengthen engagement with governments and regional organizations to ensure policy harmonization and implementation of shared management plans across the Great Lakes.

v)   Finally, Year 5 (2030) will emphasize evaluation, sustainability, and scale-up. A comprehensive review of the Strategic Plan will be conducted, assessing achievements against targets, financial performance, and stakeholder satisfaction. The focus will be on sustaining funding streams through the Great Lakes Fund, institutionalizing data systems, and publishing the final "State of Implementation Report." Lessons from this phase will inform the design of the next strategic cycle (2030–2035).

Overall, the five-year workplan is cyclical and adaptive—beginning with system setup, followed by expansion, consolidation, and scaling. It is designed to ensure that ACARE and its partners progressively transform the management of Africa's Great Lakes through science-driven decision-making, inclusive participation, and sustainable institutional development.

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Table 6.9:   Annual Work Plan

SN	Programme	Project/Activity	Jan-2026	Feb-2026	Mar-2026	Apr-2026	May-2026	Jun-2026	Jul-2026	Aug-2026	Sep-2026	Oct-2026	Nov-2026	Dec-2026
1	Scientific Knowledge & Innovation	Implement funded projects in thematic areas	■	■	■	■	■	■	■	■	■	■	■	■
2	Scientific Knowledge & Innovation	Apply innovative monitoring technologies	■	■	■	■	■	■	■	■	■	■	■	■
3	Capacity Development & Empowerment	Conduct TNAs & deliver short courses	■	■	■	■	■	■	■	■	■	■	■	■
4	Capacity Development & Empowerment	Upgrade labs & mentorship programs	■	■	■	■	■	■	■	■	■	■	■	■
5	Resource Mobilization & Institutional Building	Submit funding proposals & diversify sources	■	■	■	■	■	■	■	■	■	■	■	■
6	Resource Mobilization & Institutional Building	Strengthen financial systems						■	■	■	■	■	■	■
7	Ecosystem Sustainability & Climate Resilience	Produce annual ecosystem & climate reports	■	■	■	■	■	■	■	■	■	■	■	■
8	Ecosystem Sustainability & Climate Resilience	Launch citizen science & monitoring frameworks	■	■	■	■	■	■	■	■	■	■	■	■
9	Governance, Collaboration & Partnerships	Sign MoUs & establish partnerships	■	■	■	■	■	■	■	■	■	■	■	■
10	Governance, Collaboration & Partnerships	Formalize African Lakes Hub	■	■	■	■	■	■	■	■	■	■	■	■

SN	Programme	Project/Activity	Jan-2027	Feb-2027	Mar-2027	Apr-2027	May-2027	Jun-2027	Jul-2027	Aug-2027	Sep-2027	Oct-2027	Nov-2027	Dec-2027
1	Scientific Knowledge & Innovation	Implement funded projects in thematic areas	■	■	■	■	■	■	■	■	■	■	■	■
2	Scientific Knowledge & Innovation	Apply innovative monitoring technologies	■	■	■	■	■	■	■	■	■	■	■	■
3	Capacity Development & Empowerment	Conduct TNAs & deliver short courses	■	■	■	■	■	■	■	■	■	■	■	■

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SN	Programme	Project/Activity	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
4	Capacity Development & Empowerment	Upgrade labs & mentorship programs												
5	Resource Mobilization & Institutional Building	Submit funding proposals & diversify sources	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
6	Resource Mobilization & Institutional Building	Strengthen financial systems	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
7	Ecosystem Sustainability & Climate Resilience	Produce annual ecosystem & climate reports	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
8	Ecosystem Sustainability & Climate Resilience	Launch citizen science & monitoring frameworks	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
9	Governance, Collaboration & Partnerships	Sign MoUs & establish partnerships	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
10	Governance, Collaboration & Partnerships	Formalize African Lakes Hub					▓	▓	▓	▓	▓	▓	▓	▓

SN	Programme	Project/Activity	Jan-2028	Feb-2028	Mar-2028	Apr-2028	May-2028	Jun-2028	Jul-2028	Aug-2028	Sep-2028	Oct-2028	Nov-2028	Dec-2028
1	Scientific Knowledge & Innovation	Implement funded projects in thematic areas	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
2	Scientific Knowledge & Innovation	Apply innovative monitoring technologies	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
3	Capacity Development & Empowerment	Conduct TNAs & deliver short courses												
4	Capacity Development & Empowerment	Upgrade labs & mentorship programs	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
5	Resource Mobilization & Institutional Building	Submit funding proposals & diversify sources	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
6	Resource Mobilization & Institutional Building	Strengthen financial systems												
7	Ecosystem Sustainability & Climate Resilience	Produce annual ecosystem & climate reports	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
8	Ecosystem Sustainability & Climate Resilience	Launch citizen science & monitoring frameworks	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
9	Governance, Collaboration & Partnerships	Sign MoUs & establish partnerships	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓
10	Governance, Collaboration & Partnerships	Formalize African Lakes Hub	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓	▓

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SN	Programme	Project/Activity	Jan-2029	Feb-2029	Mar-2029	Apr-2029	May-2029	Jun-2029	Jul-2029	Aug-2029	Sep-2029	Oct-2029	Nov-2029	Dec-2029
1	Scientific Knowledge & Innovation	Implement funded projects in thematic areas												
2	Scientific Knowledge & Innovation	Apply innovative monitoring technologies	■	■	■	■	■	■	■	■	■	■	■	■
3	Capacity Development & Empowerment	Conduct TNAs & deliver short courses												
4	Capacity Development & Empowerment	Upgrade labs & mentorship programs	■	■	■	■	■	■	■	■	■	■	■	■
5	Resource Mobilization & Institutional Building	Submit funding proposals & diversify sources												
6	Resource Mobilization & Institutional Building	Strengthen financial systems												
7	Ecosystem Sustainability & Climate Resilience	Produce annual ecosystem & climate reports	■	■	■	■	■	■	■	■	■	■	■	■
8	Ecosystem Sustainability & Climate Resilience	Launch citizen science & monitoring frameworks	■	■	■	■	■	■	■	■	■	■	■	■
9	Governance, Collaboration & Partnerships	Sign MoUs & establish partnerships												
10	Governance, Collaboration & Partnerships	Formalize African Lakes Hub	■	■	■	■	■	■	■	■	■	■	■	■

SN	Programme	Project/Activity	Jan-2030	Feb-2030	Mar-2030	Apr-2030	May-2030	Jun-2030	Jul-2030	Aug-2030	Sep-2029	Oct-2030	Nov-2030	Dec-2030
1	Scientific Knowledge & Innovation	Implement funded projects in thematic areas												
2	Scientific Knowledge & Innovation	Apply innovative monitoring technologies												
3	Capacity Development & Empowerment	Conduct TNAs & deliver short courses												
4	Capacity Development & Empowerment	Upgrade labs & mentorship programs												

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5	Resource Mobilization & Institutional Building	Submit funding proposals & diversify sources															
6	Resource Mobilization & Institutional Building	Strengthen financial systems															
7	Ecosystem Sustainability & Climate Resilience	Produce annual ecosystem & climate reports															
8	Ecosystem Sustainability & Climate Resilience	Launch citizen science & monitoring frameworks															
9	Governance, Collaboration & Partnerships	Sign MoUs & establish partnerships															
10	Governance, Collaboration & Partnerships	Formalize African Lakes Hub															

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6.5   Risk Management Framework

6.5.1   Risk Identification

i)   **Risk**: Limited funding – **Mitigation**: Diversified funding strategy
ii)   **Risk**: Political instability – **Mitigation**: Strong regional coordination and diplomacy
iii)   **Risk**: Data gaps – **Mitigation**: Partnerships with data-producing institutions

Effective risk management is essential to ensure the successful implementation of the Strategic Plan and the long-term sustainability of the Council's advisory functions. Given the complex and transboundary nature of the African Great Lakes region, the Council recognizes the need to identify, assess, and proactively mitigate a range of strategic, operational, environmental, and financial risks.

6.5.1   Risk Categorization

Risks are identified through stakeholder consultations, environmental scans, and lessons learned from previous regional initiatives. These are categorized into five key areas:

i)   **Strategic Risks:** Risks that could affect the Council's ability to achieve its long-term objectives (e.g., political instability, shifting policy priorities). To put this into perspective, I suggest the split into Political risks and Policy-related risks
ii)   **Operational Risks:** Risks that could disrupt day-to-day functions (e.g., inadequate human resources, ICT failures).
iii)   **Financial Risks:** Risks affecting the availability or sustainability of funding (e.g., donor withdrawal, exchange rate fluctuations).
iv)   **Environmental Risks:** Risks related to climate change and natural disasters (e.g., floods, droughts, extreme weather). What is described here are more of Climate Risks than Environmental risks. Environmental risks may include issues such as biodiversity loss, habitat destruction/loss, poor waste management etc.
v)   **Reputational Risks:** Risks to the Council's credibility or stakeholder trust (e.g., data inaccuracies, failure to deliver outputs)
vi)   Technological risks

6.5.2   Risk Management

The Risk Management Framework in the *Final Draft Strategic Plan (2026–2030)* provides a structured system for identifying, assessing, and mitigating potential threats to the successful implementation of the ACARE Council of Advisory Groups' strategic goals. It emphasizes a proactive, integrated, and adaptive approach to managing uncertainties across the transboundary African Great Lakes region.

The framework classifies risks into six key categories: strategic, operational, financial, environmental, reputational, and technological. Strategic risks include political instability and policy shifts; operational risks cover internal management gaps; financial risks involve donor

> **Commented [12]:** Given the importance of this, we might consider capturing this in a separate Chapter

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dependency and funding volatility; environmental risks focus on climate-related impacts; reputational risks relate to data credibility and delivery failures; and technological risks cover data loss or cybersecurity issues.

Mitigation measures include diversified funding strategies, strong regional coordination, partnerships with data institutions, climate-smart approaches, and capacity building for staff and stakeholders. Risks are continuously monitored through stakeholder consultations, environmental scans, and institutional reviews. Table 6.5 further details each risk's likelihood, severity, and mitigation strategy, with designated "risk owners" responsible for oversight and corrective actions. Overall, the framework embeds accountability, adaptability, and resilience within ACARE's governance structure to safeguard the Strategic Plan's objectives across political, environmental, and institutional dimensions.

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Table 6.10:   Strategic Objectives Framework

Strategic Objective	Outcome	Outcome Indicator	Projections				
			Y1	Y2	Y3	Y4	Y5

Table 6.11:   Risk Management Framework

S/No.	Risks	Description of the risk	Source of the risk	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measures
Strategic Objective 1: Strengthen Institutional Coordination and Governance							
1.	Political	Cross border conflicts/disputes	External	High	High	High	● Use of online platforms for effective communication and coordination
2.	Human	Lower levels of participation in meetings and collaborations Absence of key competences and capacity	Internal	Medium	Medium	Medium	● Trainings/capacity building and skill ● Sensitization and lobbying for presences in organizations
3.	Policy and regulatory framework	Conflicting regulations	External	High	High	High	● Facilitate the harmonization of relevant policies
Objective 2: Enhance knowledge management and data sharing							
4.	Technical	Absence of data sharing platforms/mechanisms	Internal	Medium	Medium	Medium	● Leverage on the existing data sharing platforms ● Development of partnerships for data sharing
		Conflicting property rights	Internal	Medium	Medium	Medium	● Enhance IP Agreements
5.	Financial	Inadequate finance for implementation of proposed activities	External	High	High	High	● Develop resource mobilization strategies
6.	Climate	Climatic condition	External	High	High	High	● Adopt climate smart approaches
7.	Cyber security	Loss of data	External	High	High	High	● Establishment of loss controls
Objective 3: Build capacity and stakeholder engagement							

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S/No.	Risks	Description of the risk	Source of the risk	Risk Likelihood (L/M/H)	Severity (L/M/H)	Overall Risk Level (L/M/H)	Mitigation Measures
8.	Financial	Inadequate finance for implementation of proposed activities	External	High	High	High	● Develop resource mobilization strategies
9.	Cultural	Conflict with cultural norms	External	High	High	High	● Conforming to existing and acceptable culture
10.	Social	Low literacy	External	Medium	Medium	Medium	● Develop and adopt appropriate communication
Objective 4: Promote sustainable Resource Management and Climate Resilience							
11.	Technical	Lack of supporting data/information	Internal	Medium	Medium	Medium	· Data sharing platforms
12.	Policy	Conflicting resource allocations for implementation	External	Medium	Medium	Medium	● Develop policy briefs to sensitize ● Lobbying for sustainable management of resources
13.	Climate	Climatic change	External	High	High	High	● Adopt climate smart approaches
Objective 5: Mobilize Resources and Partnerships							
14.	Financial	Competition for the same resource	External	high	High	High	● Donor mapping ● Lobby for government capitation ● Create strategic/multiple partnerships
15.	Human	Capacity to mobilize the resources	Internal	High	High	High	● Trainings/capacity building on resource mobilization
		Technology developments	Internal	High	High	High	● Innovative ways for resource mobilization

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CHAPTER SEVEN: RESOURCE REQUIREMENTS AND MOBILIZATION

7.1   Financial Requirements (2026–2030)

7.1.1   Estimated Financial Envelope

The total estimated budget for implementing the Strategic Plan (2026-2030) is USD 17.5 million. This amount will finance programmes, projects, and institutional strengthening efforts across the seven African Great Lakes.

i)   Scientific Knowledge & Innovation: USD 3.5 million
ii)   Capacity Development & Empowerment: USD 4.2 million
iii)   Resource Mobilization & Institutional Building: USD 1.8 million
iv)   Ecosystem Sustainability & Climate Resilience: USD 5.6 million
v)   Governance, Collaboration & Partnerships: USD 2.4 million
        Total: USD 17.5 million (2026–2030)

Annual Resource Requirements (Indicative)
i)   2026: USD 3.6 million
ii)   2027: USD 3.4 million
iii)   2028: USD 3.7 million
iv)   2029: USD 3.5 million
v)   2030: USD 3.3 million

This staggered allocation ensures early investments in capacity-building and monitoring systems, followed by scaling up programmes in years 3–5.

7.1.2   Funding Sources

To realize these financial requirements, the Council of Advisory Groups (CoAG) will diversify funding sources to reduce reliance on single streams:

1.   Donor Agencies & Development Partners
      o   Bilateral agencies (e.g., GIZ, USAID, NORAD, SIDA)
      o   Multilateral organizations (World Bank, AfDB, FAO, UNEP, UNDP, UNESCO)
      o   Foundations (e.g., MasterCard Foundation, Bill & Melinda Gates Foundation, MacArthur Foundation)
      o   Target: USD 85 million (65%) over 5 years
2.   National Governments & Regional Economic Communities
      o   Co-funding through ministries of environment, fisheries, water, and regional blocs (EAC, SADC, IGAD).
      o   Integration into national development plans to access public financing.
      o   Target: USD 15 million (12%)
3.   Private Sector & Corporate Sponsorship
      o   Companies in fisheries, aquaculture, eco-tourism, renewable energy, and ICT.

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Commented [13]: I suggest this be merged with the section on Implementation Budget

- o Public–private partnerships (PPPs) linked to blue economy investments.
  - o Target: USD 15 million (12%)
4. In-kind Contributions
   - o Research institutions, NGOs, and universities providing laboratories, vessels, personnel, and training facilities.
   - o Target: USD 15 million (12%)
5. Innovative Financing Mechanisms
   - o Establishment of an African Great Lakes Fund (multi-donor basket).
   - o Green bonds, carbon credits, and payments for ecosystem services.
   - o Diaspora giving campaigns and membership schemes.

7.1.3 Resource Mobilization Strategies

i) Donor Acquisition & Retention: Donor mapping, targeted engagement packages, and annual donor roundtables.

ii) Proposal Development: At least 4 high-quality proposals per Advisory Group annually.

iii) Corporate Partnerships: Branding opportunities for sustainability-linked companies.

iv) Individual Giving & Memberships: Leverage alumni, diaspora, and high-net-worth individuals.

v) Strategic Communication & Visibility: Position the CoAGs as action-oriented think tanks through media, conferences, and policy dialogues.

7.2 Human Resources & Capacity Needs

This outline creates a clear HR blueprint by Advisory Group while linking to the Strategic Plan's goals of scientific excellence, governance, and community empowerment.

> **Commented [14]:** I suggest this be moved to the Situation Analysis

7.2.1 Lake Victoria Advisory Group (LVAG)

The Lake Victoria Advisory Group requires a dedicated coordinator supported by research officers in fisheries, aquaculture, water quality, and biodiversity, alongside a policy liaison officer, ICT/data specialist, and community engagement officer. To fulfil its mandate, the group needs expertise in advanced fisheries stock assessment using hydroacoustics and eDNA, innovations in aquaculture technologies such as cage culture and hatcheries, and skills in climate modelling for ecosystem resilience. Competence development will focus on policy advocacy, translation of scientific knowledge into governance instruments, and building strong capacities for gender mainstreaming and community mobilization.

7.2.2 Lake Tanganyika Science Advisory Group (LT-SAG)

For Lake Tanganyika, the Science Advisory Group will establish a programme manager, biodiversity and limnology experts, a fisheries economist, an M&E officer, and a communications specialist. The skills required include harmonization of fisheries law across riparian states, biodiversity monitoring and habitat restoration, and valuation of fisheries and ecosystem services.

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Competence development will emphasize cross-border collaboration, training in citizen science, and data harmonization protocols that allow sharing of information across four countries.

7.2.3   Lake Malawi/Nyasa/Niassa Advisory Group (LMNNBFAN)
This Advisory Group requires a programme coordinator, fisheries and aquaculture specialists, an aquatic health expert, a training and capacity-building officer, and ICT/data analysis support staff. The skills set should include disease surveillance and aquatic biosecurity, cage aquaculture management, and the use of GIS and remote sensing for fisheries mapping. Additional competences include blue economy investment modelling in eco-tourism and renewable energy, and gender-sensitive value chain development. Competence development efforts will strengthen laboratories for aquatic biosecurity, train officers in aquaculture technologies, and mainstream gender across fisheries value chains.

7.2.4   Lake Edward–Albert Advisory Group (LEAAG)
The Lake Edward–Albert Advisory Group needs a basin programme officer, an aquatic ecosystem scientist, a socio-economist, a governance and policy analyst, and a knowledge management officer. Skills required include ecosystem-based management of fisheries in areas impacted by oil and mining, cross-border governance frameworks, and natural capital accounting. Competence development will build capacity in conflict resolution, peacebuilding linked to fisheries management, participatory livelihood diversification, and stronger cross-border policy coordination.

7.2.5   Lake Kivu Advisory Group (LKAG)
The Lake Kivu Advisory Group requires a programme coordinator, limnology and geochemistry specialists, a fisheries scientist, an environmental monitoring officer, and a gender and community inclusion specialist. The group needs technical skills in gas monitoring and safety (methane and carbon dioxide), cross-border stock monitoring of pelagic fisheries, and aquaculture systems that support community livelihoods. Competence development will target risk communication and disaster preparedness, applied aquaculture demonstration, and leadership training that mainstreams gender and inclusivity in decision-making processes.

7.2.6   Lake Turkana Advisory Group (LTuAG)
The Lake Turkana Advisory Group requires a programme manager, fisheries and aquatic ecology specialists, a climate change and hydrology expert, a community engagement officer, and an ICT/M&E specialist. The skills set required include climate impact modelling to assess hydropower and salinity impacts, dryland aquaculture and adaptive livelihood systems, and integration of indigenous knowledge into modern fisheries management. Competence development actions will focus on conflict-sensitive approaches to managing resource use, ICT-

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based monitoring tools such as mobile apps and drones, and building resilience through community-driven adaptive strategies.

7.2.7 Cross-Cutting Competence Development

Across all Advisory Groups, there is a shared need for strengthening skills in resource mobilization, proposal development, and donor engagement. Each group will be expected to generate at least four high-quality proposals annually and establish mentorship programmes for training future researchers. Multilingual communication capacities (English, French, Portuguese) are also essential for regional collaboration, alongside investment in laboratory and diagnostic infrastructure. Competence development programmes will further embed gender mainstreaming, youth engagement, and inclusivity across all Advisory Group functions.

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Table 7.1:   Human Resources & Capacity Needs by Lake Advisory Group

Advisory Group	Staff Establishment	Skills & Competence Needs	Competence Development Actions
Lake Victoria Advisory Group (LVAG)	- Coordinator - Research Officers (Fisheries, Aquaculture, Water Quality, Biodiversity) - Policy & Governance Liaison Officer - ICT/Data Management Officer - Community Engagement Specialist	- Advanced fisheries stock assessment (hydroacoustics, eDNA) - Aquaculture innovation (cage culture, hatcheries, feed) - Climate modelling and resilience - Policy advocacy and science–policy translation - Gender mainstreaming and community mobilization	- Training workshops on advanced fisheries assessment - Regional aquaculture innovation exchange - Climate resilience training (2026–2028) - Annual policy briefs co-developed with governments - Gender & youth leadership training
Lake Tanganyika Science Advisory Group (LT-SAG)	- Programme Manager - Limnology/Biodiversity Scientist - Fisheries Economist/Value Chain Specialist - M&E Officer - Communications & Outreach Officer	- Fisheries law and governance harmonization - Biodiversity monitoring and habitat restoration - Valuation of fisheries & ecosystem services - Citizen science training - Data harmonization	- Annual cross-border fisheries law workshops - Training in biodiversity monitoring protocols - Capacity-building on ecosystem service valuation - Regional citizen science toolkit development - Data-sharing harmonization workshops
Lake Malawi/Nyasa/Niassa Advisory Group (LMNNBFAN)	- Programme Coordinator - Fisheries Scientist (Capture & Aquaculture) - Aquatic Animal Health Specialist - Training & Capacity Building Officer - Data Analyst/ICT Support	- Aquatic disease surveillance and biosecurity - Cage aquaculture management - GIS/remote sensing for fisheries mapping - Blue economy modelling (eco-tourism, aquaculture, energy) - Gender-sensitive value chain development	- Laboratory strengthening for biosecurity - Training on cage aquaculture technologies - GIS/remote sensing training modules - Annual blue economy investment workshops - Gender-responsive value chain development training
Lake Edward–Albert Advisory Group (LEAAG)	- Basin Programme Officer - Fisheries & Ecosystem Scientist - Socio-Economist/Community Specialist - Governance & Policy Analyst - Knowledge Management Officer	- Conflict-sensitive ecosystem management - Cross-border governance frameworks - Natural capital accounting - Peacebuilding in fisheries - Participatory livelihood diversification	- Training in conflict resolution & natural resource governance - Development of cross-border management frameworks - Natural capital accounting workshops - Community peacebuilding programmes - Skills-building in alternative livelihoods
Lake Kivu Advisory Group (LKAG)	- Programme Coordinator - Limnology/Geochemistry Specialist - Fisheries Scientist (pelagics, aquaculture)	- Gas monitoring & safety (methane, CO_2) - Cross-border stock monitoring - Applied aquaculture systems	- Hazard monitoring training (methane/CO_2) - Training in small pelagic fisheries monitoring - Applied aquaculture demonstration projects

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Advisory Group	Staff Establishment	Skills & Competence Needs	Competence Development Actions
	- Environmental Monitoring Officer - Gender & Community Inclusion Specialist	- Risk communication & disaster preparedness - Gender-sensitive leadership	- Disaster preparedness simulations - Gender mainstreaming workshops
Lake Turkana Advisory Group (LTuAG)	- Programme Manager - Fisheries & Aquatic Ecology Scientist - Climate Change & Hydrology Expert - Community Engagement Officer - ICT/M&E Specialist	- Climate impact modelling (hydropower, salinity) - Dryland aquaculture & adaptive livelihoods - Indigenous knowledge integration - Conflict-sensitive resource management - ICT-based monitoring tools	- Climate modelling & hydrology training - Dryland aquaculture demonstration sites - Indigenous knowledge integration workshops - Conflict-sensitive approaches training - ICT/digital monitoring capacity development

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7.3   Infrastructure and Technological Requirements

7.3.1   Lake Victoria Advisory Group (LVAG)

Lake Victoria requires strengthened research infrastructure including well-equipped fisheries laboratories, limnology facilities, and hatcheries for aquaculture innovation. Technological requirements include hydroacoustic survey equipment, eDNA analysis facilities, remote sensing systems, and ICT-enabled platforms for knowledge management. Cold storage and processing units are needed to support value addition, alongside data servers to host regional information platforms.

7.3.2   Lake Tanganyika Science Advisory Group (LT-SAG)

For Lake Tanganyika, the priority infrastructure includes research vessels, water quality monitoring stations, and cross-border data hubs. Modern biodiversity monitoring tools such as GIS and remote sensing platforms are essential. Technological requirements include interoperable data management systems, communication infrastructure for transboundary collaboration, and equipment for ecosystem service valuation and socio-economic data collection.

7.3.3   Lake Malawi/Nyasa/Niassa Advisory Group (LMNNBFAN)

This Advisory Group requires functional aquatic animal health laboratories, hatcheries, and pilot aquaculture demonstration centers. Technological needs include GIS and remote sensing facilities, automated water quality probes, biosecurity diagnostic equipment, and e-learning platforms for training and capacity development. Infrastructure for blue economy investments such as eco-tourism facilities, aquaculture parks, and renewable energy-linked water systems will also be prioritized.

7.3.4   Lake Edward–Albert Advisory Group (LEAAG)

The Lake Edward–Albert group requires modern laboratories for fisheries ecology and pollution analysis, as well as cross-border coordination offices and meeting hubs. Technological needs include monitoring systems for oil, mining, and water quality impacts, advanced socio-economic survey tools, and knowledge-sharing platforms for bilateral collaboration. Infrastructure for natural capital accounting and conflict-sensitive data collection is also necessary to link ecological change with livelihood outcomes.

7.3.5   Lake Kivu Advisory Group (LKAG)

Lake Kivu requires highly specialized infrastructure including gas monitoring stations for methane and carbon dioxide, as well as fisheries research laboratories with capacity for pelagic stock assessments. Technological needs include safety and early-warning systems for limnic eruptions, aquaculture demonstration units, and cross-border communication systems. ICT-based knowledge-sharing platforms, coupled with community-level environmental monitoring kits, are also key requirements.

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7.3.6 Lake Turkana Advisory Group (LTuAG)

For Lake Turkana, priority infrastructure includes hydrological monitoring stations, dryland aquaculture demonstration centers, and mobile field laboratories for water and fish health. Technological requirements include satellite-based drought monitoring systems, drones for surveillance of water levels and resource use, and ICT-based community data collection apps. Renewable energy-powered water pumping and storage systems are essential for sustainable aquaculture and livelihoods.

7.3.7 Cross-Cutting Infrastructure and Technology Needs

All Advisory Groups require centralized regional data platforms, harmonized monitoring equipment, and modern laboratories linked to universities and research institutions. Investment in ICT systems—including servers, cloud platforms, and multilingual communication portals—will facilitate data sharing and knowledge management. Mobile applications, drones, and satellite imagery will enhance real-time monitoring, while renewable energy systems (solar, wind, hydropower-linked facilities) will reduce operational costs. Training centers equipped with modern technologies will serve as hubs for capacity building, and regional coordination offices will provide the physical infrastructure needed to anchor Advisory Group activities.

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Table 7.2:   Infrastructure & Technological Requirements by Lake Advisory Group

Advisory Group	Infrastructure Needs	Technological Needs
Lake Victoria Advisory Group (LVAG)	- Fisheries laboratories and limnology facilities - Hatcheries for aquaculture innovation - Cold storage and processing units - Regional data servers and knowledge hubs	- Hydroacoustic survey equipment - eDNA analysis facilities - Remote sensing systems - ICT-enabled platforms for data management
Lake Tanganyika Science Advisory Group (LT-SAG)	- Research vessels and water quality monitoring stations - Cross-border data hubs - Meeting and coordination centers	- GIS and remote sensing platforms - Interoperable data management systems - Communication infrastructure for transboundary collaboration - Tools for ecosystem service valuation
Lake Malawi/Nyasa/Niassa Advisory Group (LMNNBFAN)	- Aquatic animal health laboratories - Hatcheries and aquaculture demonstration centers - Infrastructure for eco-tourism and renewable energy-linked systems	- GIS and remote sensing facilities - Automated water quality probes - Biosecurity diagnostic equipment - E-learning and training platforms
Lake Edward–Albert Advisory Group (LEAAG)	- Modern laboratories for fisheries ecology and pollution analysis - Cross-border coordination offices - Meeting hubs	- Oil, mining and water quality monitoring systems - Advanced socio-economic survey tools - Knowledge-sharing platforms for bilateral collaboration - Tools for natural capital accounting
Lake Kivu Advisory Group (LKAG)	- Gas monitoring stations for methane and CO_2 - Fisheries research laboratories for pelagic assessments - Aquaculture demonstration units - Cross-border communication facilities	- Safety and early-warning systems for limnic eruptions - ICT-based knowledge-sharing platforms - Community-level environmental monitoring kits
Lake Turkana Advisory Group (LTuAG)	- Hydrological monitoring stations - Dryland aquaculture demonstration centers - Mobile field laboratories for water and fish health - Renewable energy-powered pumping and storage systems	- Satellite-based drought monitoring systems - Drones for water level/resource surveillance - ICT-based community data collection apps
Cross-Cutting Needs (All AGs)	- Centralized regional data platforms - Modern laboratories linked to universities - Regional coordination offices - Training centers with modern technologies	- ICT servers and cloud platforms - Multilingual communication portals - Mobile apps, drones, and satellite imagery - Renewable energy systems to reduce costs

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7.4   Resource Mobilization Strategies

The following set of strategies balances traditional donor financing**,** government co-funding**,** private sector investment, and innovative financial instruments, while embedding sustainability and ownership.

7.4.1   Donor Engagement and Development Partner Collaboration

The Strategic Plan will actively engage bilateral and multilateral development partners, including agencies such as USAID, GIZ, NORAD, SIDA, FAO, World Bank, AfDB, and UNEP. Regular donor roundtables will be institutionalized to align Advisory Group priorities with global and regional funding mechanisms, ensuring predictable multi-year funding commitments. A dedicated donor engagement platform will be established to provide transparent updates on progress, highlight success stories, and encourage co-financing of programmes across the African Great Lakes.

7.4.2   National Government and Regional Bloc Support

Member states and regional economic communities (EAC, SADC, IGAD, AU) will be encouraged to integrate Advisory Group programmes into their national development and regional cooperation plans. By anchoring activities in existing budget lines for water, environment, fisheries, and blue economy, national governments will contribute co-funding and policy support. Annual ministerial meetings will be used to secure political buy-in and pledges of financial contributions to the regional fund.

7.4.3   Private Sector Partnerships and Corporate Social Responsibility (CSR)

Resource mobilization will target private sector actors in aquaculture, fisheries processing, eco-tourism, renewable energy, ICT, and transport sectors. Public–Private Partnerships (PPPs) will be developed for joint investment in sustainable blue economy ventures, while CSR contributions will be sought for research, training, and conservation projects. Companies investing in sustainability-linked projects will be offered branding opportunities as partners of the African Great Lakes Advisory Groups.

7.4.4   Foundations, Trusts, and Philanthropy

International foundations such as the Bill & Melinda Gates Foundation, MasterCard Foundation, MacArthur Foundation, and regional philanthropic trusts will be engaged through tailored proposals. These funds will be directed towards youth empowerment, gender inclusion, innovation hubs, and long-term ecosystem restoration projects. A dedicated philanthropy desk will be created to map funding opportunities and match them with the Strategic Plan's thematic priorities.

7.4.5   In-kind Contributions and Academic Partnerships

Universities, NGOs, and research institutions will be mobilized to provide in-kind support through

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laboratory space, vessels, scientific expertise, training venues, and ICT platforms. These contributions will significantly reduce operational costs while strengthening institutional ownership. Regional academic networks will also be leveraged to co-host training, research, and knowledge-sharing programmes.

7.4.6   Innovative Financing Mechanisms

The Strategic Plan will explore non-traditional sources of financing such as green bonds, blue economy bonds, and carbon credits generated through ecosystem restoration projects. Payment for Ecosystem Services (PES) schemes will be piloted around catchment conservation, with revenues reinvested in lake management. Diaspora contributions and alumni membership schemes will also be initiated to diversify funding bases and enhance financial sustainability.

7.4.7   Strategic Communication and Visibility

An effective communication strategy will underpin resource mobilization by positioning the Council of Advisory Groups as a credible, action-oriented platform. Annual "State of the Great Lakes" reports, success stories, and policy briefs will be widely disseminated to attract donors and partners. Participation in international forums such as the UN Decade on Ecosystem Restoration, COP climate negotiations, and global water conferences will be prioritized to raise visibility and build partnerships.

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Table 7.3: **Resource Mobilization Strategies**

Approaches	Activities
Donor Acquisition & Retention	Define strategic priorities and develop targeted donor/development partners profiles that align with them
	Create and maintain a donor mapping & tracking tool to match funding priorities with potential donors on an ongoing basis
	Identify and approach new development partners (donors), including regional organizations, bilateral agencies, and global freshwater conservation foundations
	Develop donor engagement packages (annual reports, policy briefs, testimonials, videos) to demonstrate impact and value.
	Activate AG resource mobilization committees to seek grant calls, track them, apply for funds
Grant Writing	Develop and submit a minimum of XX proposals annually, targeting major funders (e.g., MasterCard Foundation, GIZ, African Development Bank, relevant ministries).
Corporate Sponsorship	Establish corporate sponsorship opportunities with a focus on sustainability-linked companies (e.g., fisheries, renewable energy, eco-tourism).
Individual Giving	Individual giving campaigns with high net-worth individuals through global supporters, diaspora, and allies.
Paid Membership Drive	Explore Advisory Group paid membership opportunities
Partnerships & Collaborations	Develop partnerships with relevant institutions for in-kind support (MOUs, Collaborative Working Agreements…)
	Cultivate high-level relationships with governments local and international partners and institutions
Build Resource mobilization Capacity	Build resource mobilization capacity within ACARE (hire or train staff dedicated to donor relations and proposal writing). Hire a resource mobilization staff person as part of the ACARE Secretariat
	Train and empower AG members to mobilize resources with online trainings on resource mobilization and social media presence for visibility
Build Strategic Communication and Branding	Strengthen the Advisory Groups' visibility through mainstream (traditional) and social media (LinkedIn, Instagram, Twitter/X, Facebook) by positioning the AG as action-oriented think tanks; use campaigns focused on storytelling, impact, and donor recognition; strategize on quarterly or annual social media topics
	Have a presence at relevant conferences and summit through strategic events, tabling. Get on the stage!
Sustainability & Long-Term Financing	Establish a multi-donor basket fund or **"African Great Lakes Fund"** for long-term financial sustainability.
	- Explore innovative financing mechanisms such as payment for ecosystem services, carbon credits, or green bonds tied to lake conservation.

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7.5 Methods and Approaches to Resource Management

This outline clearly separates financial, equipment, data, and HR management approaches, while also tying them back to transparency, efficiency, and sustainability.

7.5.1 Financial Resource Management

The Strategic Plan will apply transparent, accountable, and results-based financial management approaches. Funds will be managed through integrated financial systems that allow real-time tracking of expenditures and ensure compliance with donor and government requirements. Annual budgets will be aligned to strategic objectives, with quarterly reviews and external audits conducted to maintain credibility. Risk-based financial planning will be adopted to anticipate donor fluctuations, while resource mobilization strategies will diversify income streams. Financial sustainability will also be promoted through cost-sharing models, public–private partnerships, and innovative financing such as green and blue bonds.

7.5.2 Equipment and Infrastructure Management

Equipment and infrastructure will be managed through a structured asset management system that includes procurement, inventory tracking, preventive maintenance, and replacement schedules. Standardized procurement procedures will ensure quality, cost-effectiveness, and compliance with international standards. Equipment-sharing protocols among Advisory Groups and partner institutions will maximize efficiency, while training on the use and maintenance of specialized equipment (e.g., hydroacoustic survey systems, remote sensing tools, laboratory diagnostics) will be institutionalized. Sustainability will be ensured by prioritizing renewable energy solutions, digital monitoring devices, and local servicing arrangements.

7.5.3 Data and Knowledge Resource Management

The Strategic Plan emphasizes data-driven decision-making supported by harmonized collection, storage, and sharing protocols. Methods will include the establishment of regional data hubs, use of GIS, remote sensing, and mobile applications for real-time monitoring, and the adoption of open science principles to ensure accessibility. Standard operating procedures will guide data quality assurance, while regular training will build local capacities in data collection, analysis, and visualization. Knowledge management platforms will disseminate findings through annual "State of the Great Lakes" reports, policy briefs, and multilingual digital repositories. Data security and ethical considerations, including respect for indigenous knowledge, will be central to this approach.

7.5.4 Human Resource Management

Human resources will be managed through a competency-based approach that emphasizes capacity development, inclusivity, and performance accountability. Advisory Groups will establish clear staff structures, including coordinators, scientists, policy analysts, ICT officers, and community engagement specialists. Skills mapping and capacity needs assessments will be conducted to inform targeted training in technical fields (fisheries science, climate modelling,

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aquaculture, governance) and soft skills (leadership, communication, negotiation). Mentorship programmes will nurture the next generation of researchers, while gender equity and youth participation will be institutionalized in recruitment and leadership roles. Performance appraisal systems and continuous professional development programmes will ensure efficiency and staff retention.

7.5.5 Cross-Cutting Approaches

All resource management domains will be guided by principles of transparency, accountability, inclusivity, and sustainability. Monitoring and evaluation frameworks will integrate financial, equipment, data, and HR indicators to track efficiency and impact. Collaboration with governments, universities, NGOs, and the private sector will enhance resource sharing and reduce duplication. Innovative digital tools will underpin management practices, while adaptive approaches will allow the system to evolve in response to emerging challenges.

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Table 7.4:   Resource Management Methods and Approaches

Resource Type	Methods/Approaches	Expected Outcomes	Lead Actors
Financial Resource Management	- Results-based budgeting and integrated financial systems - Quarterly reviews and external audits - Risk-based planning and donor diversification - Cost-sharing models and PPPs - Innovative financing (green/blue bonds)	- Transparent and accountable financial systems - Sustainable and diversified funding base - Enhanced donor and stakeholder confidence	- Finance Units of Advisory Groups - Council of Advisory Group Secretariat - National Treasuries - Donor Agencies
Equipment and Infrastructure Management	- Asset management systems (procurement, inventory, maintenance) - Standardized procurement procedures - Equipment-sharing protocols across AGs - Renewable energy-based systems - Training for equipment use and maintenance	- Efficient and cost-effective use of assets - Extended equipment lifespan - Reduced operational costs through renewable energy - Enhanced technical capacity	- Council of Advisory Group Secretariat - Advisory Group Coordinators - Procurement Units - Partner Universities and Research Institutions
Data and Knowledge Resource Management	- Establishment of regional data hubs - Use of GIS, remote sensing, and mobile monitoring apps - Open science principles and multilingual repositories - Data quality assurance protocols - Knowledge dissemination via reports and briefs	- Reliable and harmonized data across lakes - Improved accessibility and transparency - Evidence-based decision-making - Strengthened regional cooperation	- Data Taskforces - Research and ICT Officers - Universities and Regional Networks - Policy and Knowledge Management Units
Human Resource Management	- Competency-based recruitment and clear staff structures - Capacity needs assessments and skills mapping - Mentorship and professional development programmes - Gender equity and youth inclusion strategies - Performance appraisal systems	- Skilled and motivated workforce - Inclusive and gender-balanced leadership - Improved staff retention and performance - Strong pipeline of future experts	- HR Units of Advisory Groups - Council of Advisory Group Secretariat - Partner Universities and Training Institutions - Gender and Youth Forums
Cross-Cutting Approaches	- Transparency, accountability, and inclusivity principles - Integrated monitoring and evaluation frameworks - Collaboration with governments, NGOs, and private sector - Digital tools for adaptive management	- Stronger governance and accountability - Enhanced efficiency and reduced duplication - Adaptive systems responsive to emerging challenges	- Council of Advisory Group Secretariat - Advisory Groups - Governments and Regional Bodies - Private Sector and Civil Society

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CHAPTER EIGHT: SUSTAINABILITY & SCALING STRATEGIES

The outlined sustainability plan balances ecological, socio-economic, institutional, technological, and financial impacts, while clearly showing pathways for scaling and sustainability.

8.1   Strengthening Ecosystem Resilience

In the long term, the Strategic Plan will contribute to improved ecological integrity of the African Great Lakes by promoting sustainable fisheries, biodiversity conservation, pollution control, and climate adaptation. The expected impact is healthier freshwater ecosystems that can continue to provide essential services such as food security, clean water, hydropower, and livelihoods for millions of people across the region. Restoration of critical habitats and improved governance frameworks will enhance ecosystem resilience against climate change and human pressures.

8.2   Socio-Economic Transformation and Livelihood Security

The plan aims to catalyze socio-economic transformation by diversifying livelihoods, promoting aquaculture and blue economy ventures, and strengthening community-based enterprises. In the long term, these interventions will create jobs for youth and women, reduce poverty, and improve household resilience to economic and environmental shocks. By linking sustainable resource management with market opportunities, the strategy will ensure that lake-dependent communities achieve inclusive and equitable growth.

8.3   Institutionalization and Policy Influence

Through sustained engagement with governments, regional bodies (EAC, AU, SADC, IGAD), and global partners, the Strategic Plan will institutionalize Advisory Group roles as central think tanks for science–policy dialogue. The long-term impact will be stronger, harmonized regional governance structures and evidence-based policy formulation that integrates scientific knowledge and local priorities. This will lead to durable institutional reforms and enhanced political will for transboundary lake management.

8.4   Knowledge Generation, Capacity Development, and Human Capital

By establishing training programmes, mentorship systems, and regional knowledge hubs, the plan will build a critical mass of African experts in fisheries, water resources, climate science, and governance. In the long term, this will generate a new cadre of leaders equipped with technical and policy skills to manage the African Great Lakes sustainably. The scalability of this approach lies in replicating mentorship and capacity-building models across multiple lakes and embedding them into university curricula and professional development frameworks.

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8.5 Technology and Innovation for Scaling Solutions

Investments in ICT platforms, remote sensing, drones, and digital knowledge-sharing hubs will enable the scaling of innovative monitoring and management solutions across all lakes. The long-term plan envisions interoperable regional data systems, open-access repositories, and scalable digital applications that can be adopted by national institutions and local communities. Innovations in aquaculture, renewable energy, and eco-tourism will be scaled through public–private partnerships, ensuring that sustainable models are replicated across basins.

8.6 Financial Sustainability and Scalable Investment Models

The long-term sustainability of this Strategic Plan will rely on diversified funding streams, including donor commitments, government co-financing, private sector partnerships, and innovative financing instruments such as blue bonds and carbon credits. Establishing an African Great Lakes Trust Fund will create a sustainable financing mechanism for continuous implementation. Scalable investment models—such as ecosystem-based payment schemes, revolving funds for community enterprises, and blended finance—will ensure that successful pilots are replicated and expanded regionally.

8.7 Regional and Global Scaling Pathways

The long-term scalability plan aligns the Advisory Groups' work with continental and global frameworks such as AU Agenda 2063, the Africa Water Vision 2025, the EAC Vision 2050, and the Sustainable Development Goals (SDGs). Lessons learned will be documented and disseminated through regional forums, scientific publications, and global platforms such as the UN Decade on Ecosystem Restoration. This will position the Advisory Groups as continental centers of excellence, enabling replication of best practices beyond the African Great Lakes to other transboundary water systems.

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Table 8.1: Long-Term Impact and Scalability Plan

Impact Area	Long-Term Outcomes	Scalability Pathways	Key Actors
Ecosystem Resilience	- Healthier freshwater ecosystems providing food, water, and livelihoods - Restored habitats and improved biodiversity - Enhanced resilience to climate change and human pressures	- Replication of ecosystem-based management models across lakes - Scaling of habitat restoration pilots to basin-wide programmes - Adoption of regional climate adaptation plans	- Advisory Groups - National Ministries of Environment & Fisheries - Regional Bodies (EAC, AU, SADC) - NGOs and Conservation Partners
Socio-Economic Transformation	- Diversified livelihoods and reduced poverty - Increased employment for youth and women - Stronger household resilience to shocks	- Scaling aquaculture, eco-tourism, and blue economy enterprises - Expansion of value chain and market access initiatives - Replication of livelihood diversification models across communities	- Local Communities & BMUs - Private Sector (Fisheries, Tourism, Energy) - National Development Agencies - NGOs and Civil Society
Institutionalization and Policy Influence	- Advisory Groups institutionalized as science–policy think tanks - Harmonized regional governance structures - Strong evidence-based policy formulation	- Integration into national and regional policy frameworks - Expansion of advisory role to additional lakes and basins - Replication of governance models across riparian states	- Advisory Groups - Regional Economic Communities (EAC, IGAD, SADC) - AU & National Governments - Development Partners
Knowledge & Human Capital	- New cadre of African freshwater experts - Strengthened technical and policy leadership - Sustained research and training capacity	- Replication of mentorship models across lakes - Integration into university curricula and professional programmes - Regional knowledge hubs linked with global networks	- Universities & Research Institutes - Advisory Groups - Training Institutions - Donors and Scholarship Bodies
Technology and Innovation	- Scalable digital tools for monitoring and management - Expanded use of aquaculture,	- Interoperable regional data systems and repositories - Scaling aquaculture/renewable energy pilots through PPPs	- ICT Units - Private Sector (Tech & Energy) - Advisory Groups

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Impact Area	Long-Term Outcomes	Scalability Pathways	Key Actors
	renewable energy, and eco-tourism innovations	- Regional adoption of ICT-based monitoring platforms	- Governments and Regional Data Platforms
Financial Sustainability	- Diversified and sustainable funding streams - Established African Great Lakes Trust Fund - Long-term financial resilience for Advisory Groups	- Innovative financing (blue/green bonds, PES, carbon credits) - Establishment of revolving funds for communities - Blended finance models scaled regionally	- Donor Agencies - Governments & Treasuries - Private Sector Investors - Regional Trust Fund Secretariat
Regional and Global Scaling	- Alignment with AU Agenda 2063, EAC Vision 2050, SDGs - Lessons shared regionally and globally - Advisory Groups recognized as centers of excellence	- Participation in global platforms (UN Decade on Ecosystem Restoration, COP) - Dissemination of best practices through publications and forums - Expansion of advisory model beyond Great Lakes	- Advisory Groups - AU, EAC, SADC, IGAD - UN Agencies - Global Research & Conservation Networks

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8.8   Environmental and Social Sustainability Frameworks

This outline balances **ecological priorities** (ecosystem restoration, climate resilience, pollution control) with **social priorities** (equity, livelihoods, safeguards, cultural integration), while embedding them in policy alignment and accountability systems.

8.8.1   Environmental Sustainability Framework

a) Ecosystem Protection and Restoration: The Strategic Plan will promote conservation of aquatic habitats, wetlands, and catchment areas through integrated lake basin management and ecosystem-based approaches. Restoration initiatives will target degraded habitats, reforestation in catchments, and rehabilitation of wetlands to improve water quality, biodiversity, and climate resilience.

b) Climate Change Adaptation and Mitigation: Climate resilience will be embedded across programmes through early-warning systems, climate risk observatories, and scenario modelling. Ecosystem-based adaptation measures—such as shoreline buffer zones, catchment conservation, and nature-based solutions—will reduce vulnerability to floods, droughts, and other climate shocks.

c) Pollution Control and Resource Efficiency: Pollution mitigation will focus on reducing industrial discharge, agricultural runoff, and plastics into the lakes. Resource efficiency approaches, including circular economy principles, renewable energy adoption, and waste-to-resource initiatives, will be integrated into fisheries, aquaculture, and community livelihoods.

d) Sustainable Use of Natural Resources: Fishing practices will be guided by ecosystem-based management and science-based stock assessments to prevent overexploitation. Sustainable aquaculture technologies will reduce environmental footprints, while guidelines on land use, water abstraction, and mining will ensure ecological balance.

8.8.2   Social Sustainability Framework

a) Inclusive Participation and Equity: The Strategic Plan prioritizes inclusive participation of women, youth, indigenous peoples, and marginalized groups in governance, research, and resource management. Advisory Groups will establish gender and youth forums to ensure equitable representation in decision-making.

b) Livelihood Diversification and Poverty Reduction: Sustainability will be achieved by linking conservation with socio-economic transformation. Aquaculture, eco-tourism, and blue economy enterprises will provide alternative livelihoods that reduce dependence on fragile natural resources while addressing poverty and food insecurity.

c) Cultural and Indigenous Knowledge Integration: Cultural heritage and indigenous knowledge systems will be respected and integrated into lake management strategies. Traditional practices in fisheries, water use, and ecosystem stewardship will complement scientific approaches, fostering community ownership and sustainability.

d) Social Safeguards and Human Rights: All programmes will adhere to social safeguard principles, including protection against displacement, equitable benefit-sharing, and the right

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to a healthy environment. Human rights-based approaches will guide implementation, ensuring that the most vulnerable communities benefit from interventions without harm.

8.8.3   Cross-Cutting Approaches:

    i)   ***Policy Alignment***: All environmental and social frameworks will be aligned with AU Agenda 2063, the Africa Water Vision 2025, the EAC Vision 2050, and global frameworks such as the SDGs, the Paris Agreement, and the UN Decade on Ecosystem Restoration.

    ii)   ***Capacity Building****:* Communities, researchers, and policymakers will be trained on environmental stewardship, climate resilience, gender equity, and social inclusion.

    iii)   ***Monitoring   and   Accountability****:* Environmental and social sustainability indicators will be integrated into the Strategic Plan's Monitoring, Evaluation, and Learning (MEL) framework, with annual reporting on ecological health, gender equity, livelihoods, and community engagement.

    iv)   ***Partnerships and Collaboration****:* The framework will leverage partnerships with governments, NGOs, private sector, and international organizations to deliver sustainable environmental and social outcomes.

8.9   Long-Term Impact, Scalability, and Sustainability Frameworks

This section presents the detailed frameworks supporting Chapter Eight of the Strategic Plan, which focuses on long-term sustainability and scalability. It brings together the projected long-term impacts of the Strategic Plan, the pathways for scaling successful initiatives, and the environmental and social sustainability frameworks that will underpin implementation. The annex is designed to guide decision-makers, partners, and stakeholders in understanding how Advisory Group interventions will achieve durable ecological, socio-economic, and institutional outcomes, while ensuring inclusivity, resilience, and alignment with regional and global development agendas.

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Table 8.2:   Long-Term Impact & Scalability Plan

Impact Area	Long-Term Outcomes	Scalability Pathways	Key Actors
Ecosystem Resilience	- Healthier freshwater ecosystems providing food, water, and livelihoods - Restored habitats and improved biodiversity - Enhanced resilience to climate change and human pressures	- Replication of ecosystem-based management models across lakes - Scaling of habitat restoration pilots to basin-wide programmes - Adoption of regional climate adaptation plans	- Advisory Groups - National Ministries of Environment & Fisheries - Regional Bodies (EAC, AU, SADC) - NGOs and Conservation Partners
Socio-Economic Transformation	- Diversified livelihoods and reduced poverty - Increased employment for youth and women - Stronger household resilience to shocks	- Scaling aquaculture, eco-tourism, and blue economy enterprises - Expansion of value chain and market access initiatives - Replication of livelihood diversification models across communities	- Local Communities & BMUs - Private Sector (Fisheries, Tourism, Energy) - National Development Agencies - NGOs and Civil Society
Institutionalization and Policy Influence	- Advisory Groups institutionalized as science–policy think tanks - Harmonized regional governance structures - Strong evidence-based policy formulation	- Integration into national and regional policy frameworks - Expansion of advisory role to additional lakes and basins - Replication of governance models across riparian states	- Advisory Groups - Regional Economic Communities (EAC, IGAD, SADC) - AU & National Governments - Development Partners
Knowledge & Human Capital	- New cadre of African freshwater experts - Strengthened technical and policy leadership - Sustained research and training capacity	- Replication of mentorship models across lakes - Integration into university curricula and professional programmes - Regional knowledge hubs linked with global networks	- Universities & Research Institutes - Advisory Groups - Training Institutions - Donors and Scholarship Bodies
Technology and Innovation	- Scalable digital tools for monitoring and management - Expanded use of aquaculture, renewable energy, and eco-tourism innovations	- Interoperable regional data systems and repositories - Scaling aquaculture/renewable energy pilots through PPPs - Regional adoption of ICT-based monitoring platforms	- ICT Units - Private Sector (Tech & Energy) - Advisory Groups - Governments and Regional Data Platforms
Financial Sustainability	- Diversified and sustainable funding streams	- Innovative financing (blue/green bonds, PES, carbon credits)	- Donor Agencies - Governments & Treasuries

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Impact Area	Long-Term Outcomes	Scalability Pathways	Key Actors
	- Established African Great Lakes Trust Fund - Long-term financial resilience for Advisory Groups	- Establishment of revolving funds for communities - Blended finance models scaled regionally	- Private Sector Investors - Regional Trust Fund Secretariat
Regional and Global Scaling	- Alignment with AU Agenda 2063, EAC Vision 2050, SDGs - Lessons shared regionally and globally - Advisory Groups recognized as centers of excellence	- Participation in global platforms (UN Decade on Ecosystem Restoration, COP) - Dissemination of best practices through publications and forums - Expansion of advisory model beyond Great Lakes	- Advisory Groups - AU, EAC, SADC, IGAD - UN Agencies - Global Research & Conservation Networks

Table 8.3:   Environmental & Social Sustainability Frameworks

Dimension	Key Strategies	Expected Outcomes	Lead Actors
Environmental Sustainability	- Ecosystem protection and restoration (wetlands, catchments, habitats) - Climate change adaptation and mitigation (risk observatories, ecosystem-based adaptation) - Pollution control and resource efficiency (waste-to-resource, renewable energy) - Sustainable use of natural resources (fisheries management, aquaculture guidelines, land/water use regulations)	- Improved ecological integrity and biodiversity - Enhanced resilience to climate shocks - Reduced pollution and efficient use of resources - Sustainable fisheries and aquaculture practices	- Advisory Groups - Ministries of Environment & Fisheries - Regional Bodies (EAC, AU) - NGOs and Conservation Partners
Social Sustainability	- Inclusive participation and equity (gender, youth, marginalized groups) - Livelihood diversification and poverty reduction (aquaculture, eco-tourism, blue economy) - Cultural and indigenous knowledge integration - Social safeguards and human rights adherence	- Equitable representation in governance - Reduced poverty and increased livelihood options - Strengthened cultural ownership of management - Protection of vulnerable groups and rights	- Advisory Groups - Local Communities & BMUs - National Governments - Civil Society and Human Rights Organizations
Cross-Cutting Approaches	- Policy alignment with AU Agenda 2063, Africa Water Vision 2025, EAC Vision 2050, SDGs, and Paris Agreement - Capacity building in environmental stewardship, climate	- Harmonized policy and governance frameworks - Enhanced local and regional	- Advisory Groups - Council of Advisory Group Secretariat

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Dimension	Key Strategies	Expected Outcomes	Lead Actors
	resilience, and social inclusion - Monitoring and accountability through MEL frameworks - Multi-stakeholder partnerships and collaborations	capacity - Transparent reporting on sustainability indicators - Strong partnerships for long-term impact	- Governments and Regional Bodies - International Partners (UN, Donors, NGOs)

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CHAPTER NINE: MONITORING AND EVALUATION FRAMEWORK

9.1   Monitoring and Evaluation Framework

This framework balances rigor (indicators, reviews, tools) **with** flexibility (adaptive learning, stakeholder participation), ensuring accountability and continuous improvement.

9.1.1   *Purpose and Objectives*

The Monitoring and Evaluation (M&E) Framework provides the tools, processes, and indicators required to assess progress, ensure accountability, and inform adaptive management of the Strategic Plan. Its primary objectives are to:

- Track progress against strategic goals, objectives, and targets;
- Generate evidence for decision-making and resource allocation;
- Ensure accountability to stakeholders, donors, and member states;
- Facilitate learning and continuous improvement across Advisory Groups;
- Capture and disseminate lessons for regional and global replication.

9.1.2   *Key Components of the M&E Framework*

a) Results Framework and Indicators: Each strategic objective will be accompanied by a set of measurable indicators, both quantitative and qualitative. These will cover ecological health (e.g., water quality, biodiversity indices), socio-economic impact (e.g., number of livelihoods improved, percentage of youth/women engaged), institutional performance (e.g., policy reforms influenced), and financial sustainability (e.g., funds mobilized).

b) Data Collection and Reporting Mechanisms: Standardized protocols will be developed to ensure consistency in data collection across all lakes. Methods will include field surveys, remote sensing, participatory monitoring, and digital platforms. Advisory Groups will submit quarterly progress reports to the Council of Advisory Group Secretariat, which will compile annual performance reports.

c) Evaluation Timelines and Reviews

i)   **Baseline Assessment**: Conducted in 2026 to establish reference points.

ii)   **Mid-Term Review**: Scheduled for 2028 to assess progress, identify challenges, and adjust strategies.

iii) **Final Evaluation**: Carried out in 2030 to measure impact, sustainability, and scalability of interventions.

iv)   In addition, annual performance reviews will track immediate outputs and inform resource allocation.

d) Learning and Adaptive Management: Feedback loops will be embedded into the framework to ensure that monitoring results are used to adapt programmes. Regional knowledge-sharing workshops, policy dialogues, and publications will disseminate findings to governments, partners, and communities.

e) Stakeholder Engagement and Accountability: M&E will be participatory, involving governments, communities, academia, civil society, and development partners. Annual

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stakeholder forums will validate findings and provide recommendations for improving implementation. Dashboards and public reports will enhance transparency and trust.

9.1.3 Institutional Arrangements

i) **Council of Advisory Group Secretariat**: Overall coordination of M&E, production of consolidated reports, and donor engagement.

ii) **Advisory Groups (AGs)**: Primary data collection, analysis, and reporting within their respective lakes.

iii) **National Governments**: Support with policy alignment, provision of national statistics, and co-monitoring of transboundary initiatives.

iv) **Independent Evaluators**: Commissioned for the mid-term and final evaluations to ensure objectivity.

9.1.4 Tools and Approaches

i) **Logical Framework (LogFrame) and Results-Based Management (RBM)** to structure objectives, indicators, and outcomes.

ii) **Traffic Light Dashboards (Red–Amber–Green system)** for quick visualization of progress against key indicators.

iii) **GIS and Remote Sensing** for spatial monitoring of ecosystems and land-use changes.

iv) **Participatory Monitoring** involving communities in fisheries, aquaculture, and catchment protection.

v) **Digital Platforms** for real-time reporting, data sharing, and dissemination of results.

9.1.5 Risks and Mitigation in M&E

i) **Data Gaps**: Addressed by partnerships with universities and research institutions.

ii) **Limited Capacity**: Mitigated through regular training of M&E officers.

iii) **Political Sensitivity of Results**: Managed by ensuring transparency, inclusivity, and alignment with regional frameworks.

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Table 9.1:   Monitoring and Evaluation (M&E) Framework

Objective	Indicators	Data Sources	Frequency	Responsible Actors
Track progress against strategic goals	- % of strategic objectives achieved - Number of milestones completed on schedule	- Annual progress reports - Workplans and activity reports	Quarterly & annually	- Advisory Groups - Council of Advisory Group Secretariat
Generate evidence for decision-making	- Number of policy briefs produced - Extent of data cited in national/regional plans	- Research outputs - Policy documents - Government reports	Annually	- Advisory Groups - National Ministries - Regional Bodies
Ensure accountability to stakeholders	- Number of donor and stakeholder reports submitted - Audit compliance rate	- Donor reports - Independent audits - Financial statements	Annually & Mid-term	- Council of Advisory Group Secretariat - Finance Units - Independent Auditors
Facilitate learning and adaptive management	- Number of knowledge-sharing workshops - % of recommendations integrated into programmes	- Workshop proceedings - M&E learning notes - Adapted action plans	Bi-annually & annually	- Advisory Groups - Universities/Research Institutes - NGOs
Measure long-term impact and sustainability	- Change in ecological health indicators (water quality, biodiversity) - Number of livelihoods improved - Funds mobilized for sustainability	- Baseline survey (2026) - Mid-term review (2028) - Final evaluation (2030) - Socio-economic and ecological surveys	Baseline (2026), Mid-term (2028), Final (2030)	- Independent Evaluators - Council of Advisory Group Secretariat - Advisory Groups - National Governments

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Table 9.2: Visual traffic-light dashboard template in Excel for tracking M&E indicators annually. Each indicator can be color-coded (Red = Off-track, Amber = Moderate progress, Green = On-track

Objective	Indicators	Baseline (2026)	2026	2027	2028 (Mid-term)	2029 (Final)	Status (Traffic Light)
1. Track progress against strategic goals	% of strategic objectives achieved; Milestones completed on schedule						Pending
2. Generate evidence for decision-making	Number of policy briefs produced; Data cited in plans						Pending
3. Ensure accountability to stakeholders	Donor/stakeholder reports submitted; Audit compliance rate						Pending
4. Facilitate learning and adaptive management	Knowledge-sharing workshops; Recommendations integrated						Pending
5. Measure long-term impact and sustainability	Change in ecological health indicators; Livelihoods improved; Funds mobilized						Pending

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9.2 Key Performance Indicators (KPIs)

These KPIs are SMART (specific, measurable, achievable, relevant, and time-bound), and can be tracked through the Monitoring & Evaluation system in this strategic plan.

1. Institutional Coordination and Governance

i) Number of governance charters, frameworks, and ToRs developed and adopted by Advisory Groups.
ii) Frequency of coordination meetings with regional bodies (EAC, LVFO, AU, SADC, IGAD).
iii) % of strategic recommendations from Advisory Groups integrated into national/regional policies.
iv) Number of functional Technical Working Committees established across themes (fisheries, water, climate, data).

2. Knowledge Management and Data Sharing

i) Number of datasets uploaded to the centralized regional knowledge hub.
ii) % of lake basins using harmonized data collection protocols.
iii) Number of "State of the Great Lakes" reports published and cited in policy documents.
iv) Number of regional knowledge exchange workshops and participants engaged annually.

3. Capacity Development and Stakeholder Engagement

i) Number of training workshops delivered on ecosystem management, aquaculture, climate resilience.
ii) Number of individuals trained (disaggregated by gender, age, sector).
iii) % increase in participation of youth and women in Advisory Group decision-making processes.
iv) Number of mentorship programmes established and mentees supported across lakes.

4. Sustainable Resource Management and Climate Resilience

i) Number of policy briefs on fisheries, land use, pollution control, and climate adaptation produced annually.
ii) Number of pilot ecosystem restoration projects implemented (target: at least one per lake).
iii) % increase in vegetation cover or restored habitats in degraded lake basins.
iv) Number of national climate adaptation plans influenced with AG inputs.
v) Operational status of the Climate Risk Observatory by 2027.

5. Resource Mobilization and Partnerships

i) Amount of funds mobilized annually (USD) from donors, governments, and private sector.
ii) Number of new partnerships formalized through MoUs or joint initiatives.

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iii) % of Strategic Plan activities supported through multi-donor or co-financing mechanisms.
iv) Number of innovation challenges launched and solutions scaled regionally.

6. Monitoring, Evaluation, and Learning (MEL)
i) Timeliness of quarterly and annual performance reports submitted by Advisory Groups.
ii) Completion of baseline (2026), mid-term review (2028), and final evaluation (20309).
iii) % of recommendations from evaluations integrated into subsequent workplans.
iv) Number of stakeholder forums conducted to validate M&E findings.

7. Cross-Cutting Social and Environmental Sustainability
i) % reduction in pollution hotspots identified in priority lake basins.
ii) Number of communities adopting sustainable fishing and aquaculture practices.
iii) Number of gender/youth-focused initiatives mainstreamed across programmes.
iv) % of projects implementing social safeguards and human rights-based approaches.
v) Number of policies or programmes explicitly integrating indigenous knowledge systems.

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Table 9.3:   Key Performance Indicators (KPIs)

Strategic Objective	KPI	Baseline	Target (2029)	Data Source	Responsible Actor
Institutional Coordination and Governance	Number of governance charters, frameworks, and ToRs adopted	0 (2026)	7 charters/ToRs adopted	Council records, AG reports	Council of Advisory Group Secretariat, AG Coordinators
Institutional Coordination and Governance	Frequency of coordination meetings with regional bodies	Ad hoc	At least 1 per year	Meeting reports	Council of Advisory Group Secretariat, Regional Bodies
Institutional Coordination and Governance	% of strategic recommendations integrated into policies	0%	60% by 2029	Policy documents, government reports	National Ministries, Regional Bodies
Knowledge Management and Data Sharing	Number of datasets uploaded to regional hub	0	100+ datasets	Knowledge hub records	AG Data Officers, ICT Units
Knowledge Management and Data Sharing	% of lake basins using harmonized data protocols	0%	70% by 2029	Standardization reports	Data Standards Taskforce
Knowledge Management and Data Sharing	Number of 'State of the Great Lakes' reports published	0	5 reports	Publications	Scientific Advisory Group
Capacity Development and Stakeholder Engagement	Number of training workshops delivered	0	20 workshops	Training reports	Universities, NGOs, AGs
Capacity Development and Stakeholder Engagement	Number of individuals trained (gender/youth disaggregated)	0	1000 individuals	Training records	Capacity Building Units
Capacity Development and Stakeholder Engagement	% increase in youth/women participation in AG processes	Baseline survey	30% increase	Meeting participation records	Council of Advisory Group Secretariat,

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Strategic Objective	KPI	Baseline	Target (2029)	Data Source	Responsible Actor
					Youth/Gender Forums
Sustainable Resource Management and Climate Resilience	Number of policy briefs produced annually	0	10 briefs	Policy briefs	Policy Advisory Groups
Sustainable Resource Management and Climate Resilience	Number of pilot ecosystem restoration projects implemented	0	7 projects (1 per lake)	Project reports	NGOs, Local Authorities
Sustainable Resource Management and Climate Resilience	% increase in vegetation cover in restored areas	Baseline survey	30% increase	Satellite imagery, surveys	Climate Advisory Group, Local Govts
Sustainable Resource Management and Climate Resilience	Operational status of Climate Risk Observatory	Not established	Operational by 2027	Observatory records	Research Institutes, Donors
Resource Mobilization and Partnerships	Amount of funds mobilized annually (USD)	0	USD 100M cumulative	Financial reports	Finance Units, Donor Agencies
Resource Mobilization and Partnerships	Number of partnerships formalized (MoUs, joint initiatives)	0	15 MoUs	MoU documents	Private Sector Desk, AGs
Monitoring, Evaluation, and Learning (MEL)	Timeliness of quarterly and annual reports	Irregular	100% timely by 2029	M&E reports	AG M&E Officers, Secretariat
Monitoring, Evaluation, and Learning (MEL)	Completion of baseline, mid-term, and final evaluations	Not done	All 3 evaluations completed	Evaluation reports	Independent Evaluators, Secretariat

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Strategic Objective	KPI	Baseline	Target (2029)	Data Source	Responsible Actor
Cross-Cutting Social and Environmental Sustainability	% reduction in pollution hotspots	Baseline survey	20% reduction	Environmental monitoring reports	AGs, Ministries of Environment
Cross-Cutting Social and Environmental Sustainability	Number of gender/youth-focused initiatives mainstreamed	0	10 initiatives	Programme reports	Council of Advisory Group Secretariat, Gender/Youth Forums
Cross-Cutting Social and Environmental Sustainability	Number of policies/programmes integrating indigenous knowledge	0	5 policies/programmes	Policy reviews	National Governments, AGs

Table 9.4:   **KPI Tracker that aligns with the M&E dashboard**

Strategic Objective	KPI	Baseline (2026)	Target (2030)	2026 Progress	2027 Progress	2028 Progress	2029 Progress	Status (Traffic) Light)
Institutional Coordination and Governance	Number of governance charters, frameworks, and ToRs adopted	0	7 charters/ToRs adopted					
Institutional Coordination and Governance	Frequency of coordination meetings with regional bodies	Ad hoc	At least 1 per year					
Institutional Coordination and Governance	% of strategic recommendations integrated into policies	0%	60% by 2029					
Knowledge Management and Data Sharing	Number of datasets uploaded to regional hub	0	100+ datasets					
Knowledge Management and Data Sharing	% of lake basins using harmonized data protocols	0%	70% by 2029					
Knowledge Management and Data Sharing	Number of 'State of the Great Lakes' reports published	0	5 reports					

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Strategic Objective	KPI	Baseline (2026)	Target (2030)	2026 Progress	2027 Progress	2028 Progress	2029 Progress	Status (Traffic) Light)
Capacity Development and Stakeholder Engagement	Number of training workshops delivered	0	20 workshops					
Capacity Development and Stakeholder Engagement	Number of individuals trained (gender/youth disaggregated)	0	1000 individuals					
Capacity Development and Stakeholder Engagement	% increase in youth/women participation in AG processes	Baseline survey	30% increase					
Sustainable Resource Management and Climate Resilience	Number of policy briefs produced annually	0	10 briefs					
Sustainable Resource Management and Climate Resilience	Number of pilot ecosystem restoration projects implemented	0	7 projects (1 per lake)					
Sustainable Resource Management and Climate Resilience	% increase in vegetation cover in restored areas	Baseline survey	30% increase					

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Strategic Objective	KPI	Baseline (2026)	Target (2030)	2026 Progress	2027 Progress	2028 Progress	2029 Progress	Status (Traffic) Light)
Sustainable Resource Management and Climate Resilience	Operational status of Climate Risk Observatory	Not established	Operational by 2027					
Resource Mobilization and Partnerships	Amount of funds mobilized annually (USD)	0	USD 100M cumulative					
Resource Mobilization and Partnerships	Number of partnerships formalized (MoUs, joint initiatives)	0	15 MoUs					
Monitoring, Evaluation, and Learning (MEL)	Timeliness of quarterly and annual reports	Irregular	100% timely by 2029					
Monitoring, Evaluation, and Learning (MEL)	Completion of baseline, mid-term, and final evaluations	Not done	All 3 evaluations completed					
Cross-Cutting Social and Environmental Sustainability	% reduction in pollution hotspots	Baseline survey	20% reduction					

Strategic Objective	KPI	Baseline (2026)	Target (2030)	2026 Progress	2027 Progress	2028 Progress	2029 Progress	Status (Traffic) Light)
Cross-Cutting Social and Environmental Sustainability	Number of gender/youth-focused initiatives mainstreamed	0	10 initiatives					
Cross-Cutting Social and Environmental Sustainability	Number of policies/programmes integrating indigenous knowledge	0	5 policies/programmes					

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9.3 Performance Standards

These Performance Standards act as the minimum acceptable benchmarks for governance, data, capacity building, resource management, financial accountability, evaluation, and social safeguards.

1. Governance and Institutional Standards
  i) All Advisory Groups must operate under approved governance charters and terms of reference by 2026.
  ii) Annual coordination meetings with regional bodies (EAC, LVFO, AU, IGAD, SADC) must be convened, with 100% documentation and reporting compliance.
  iii) At least 70% of policy recommendations generated by Advisory Groups should be integrated into national and regional decision-making frameworks by 2029.

2. Knowledge and Data Standards
  i) Data must be collected using harmonized protocols and quality assurance frameworks across all lake basins.
  ii) A centralized knowledge hub should contain at least 100 validated datasets by 2029.
  iii) Annual **"State of the Great Lakes" reports** must be produced, peer-reviewed, and disseminated to stakeholders.
  iv) All research outputs and datasets must comply with open science principles and FAIR standards (Findable, Accessible, Interoperable, Reusable).

3. Capacity Development Standards
  i) Each Advisory Group must conduct at least four training workshops per year on fisheries management, climate resilience, and aquaculture innovation.
  ii) A minimum of 1,000 individuals (with 50% women and 40% youth participation) must be trained across all lakes during the plan period.
  iii) Mentorship programmes should be functional in each lake basin, pairing senior scientists with at least 10 mentees annually.
  iv) Inclusivity must be upheld by ensuring representation of marginalized groups in governance and training activities.

4. Environmental and Resource Management Standards
  i) Pilot ecosystem restoration projects must be established in all seven lakes by 2028.
  ii) Fisheries management must comply with scientifically defined catch limits and ecosystem-based approaches.
  iii) Water quality monitoring must meet regional and international standards (e.g., WHO water quality guidelines, FAO Code of Conduct for Responsible Fisheries).
  iv) At least 30% of degraded habitats in priority areas should show measurable recovery by 2029.

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5. Financial and Resource Mobilization Standards

i)   Annual financial audits must be conducted and published for all Advisory Groups and the Council of Advisory Group Secretariat.

ii) A minimum of USD 100 million must be mobilized from donors, governments, and private sector partners by 2029.

iii) At least 15 formalized partnerships (MoUs, PPPs, or joint initiatives) must be secured during the plan period.

iv) No more than 5% deviation is permitted between approved budgets and actual expenditures unless justified through adaptive management reviews.

6. Monitoring, Evaluation, and Learning Standards

i)   Quarterly and annual performance reports must be submitted by Advisory Groups on time, with 100% compliance by 2029.

ii) A baseline survey (2026), mid-term review (2028), and final evaluation (2030) are mandatory, with independent evaluators engaged.

iii) At least 80% of evaluation recommendations must be integrated into subsequent workplans.

iv) Stakeholder forums must be conducted annually to validate results and strengthen accountability.

7. Social Sustainability and Safeguards Standards

i)   All programmes must comply with social safeguard principles, including gender equality, human rights, and protection of vulnerable groups.

ii) At least 10 gender- or youth-focused initiatives must be mainstreamed into Advisory Group activities by 2029.

iii) Indigenous knowledge must be integrated into at least five policies or management programmes across lakes.

iv) All infrastructure or livelihood projects must conduct social and environmental impact assessments before implementation.

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Table 9.5:   Performance Standards

Domain	Standard	Measurement Criteria	Responsible Actors
Governance and Institutional	Advisory Groups operate under approved governance charters by 2026	Existence of approved charters and ToRs; compliance audits	Council of Advisory Group Secretariat, AG Coordinators
Governance and Institutional	Annual coordination meetings convened with regional bodies	Number of meetings held; documented reports submitted	Council of Advisory Group Secretariat, Regional Bodies (EAC, AU, IGAD, SADC)
Governance and Institutional	70% of policy recommendations integrated into policies by 2029	Policy tracking, government adoption records	National Ministries, Regional Bodies, Council of Advisory Group Secretariat
Knowledge and Data	Data collected using harmonized protocols across lakes	Adoption of standard protocols; QA/QC audits	Data Standards Taskforce, Research Institutions
Knowledge and Data	100 validated datasets uploaded to hub by 2029	Knowledge hub records; dataset audits	AG Data Officers, ICT Units
Knowledge and Data	Annual 'State of the Great Lakes' reports published	Number of reports produced and disseminated	Scientific Advisory Groups, Council of Advisory Group Secretariat
Capacity Development	At least 4 training workshops conducted per year	Training reports, participant lists	Universities, NGOs, AGs
Capacity Development	1,000 individuals trained (50% women, 40% youth) by 2029	Training records, gender/youth disaggregated data	Capacity Building Units, Universities
Capacity Development	Mentorship programmes functional in each lake basin	Number of active mentors/mentees; annual reports	Council of Advisory Group Secretariat, AG Coordinators
Environmental and Resource Management	Pilot ecosystem restoration projects established in all lakes	Project reports; field verification	NGOs, Local Authorities, AGs
Environmental and Resource Management	Fisheries management follows catch limits and EBM approaches	Catch assessment reports; policy reviews	Fisheries Advisory Groups, National Ministries
Environmental and Resource Management	30% recovery in degraded habitats by 2029	Satellite imagery, ecological surveys	Climate Advisory Group, Local Governments

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Domain	Standard	Measurement Criteria	Responsible Actors
Financial and Resource Mobilization	Annual financial audits conducted and published	Audit reports published and disseminated	Finance Units, Independent Auditors
Financial and Resource Mobilization	USD 100M mobilized by 2029	Financial reports; donor and partner commitments	Finance Units, Donor Agencies, Private Sector
Financial and Resource Mobilization	At least 15 formalized partnerships secured	Signed MoUs, PPP agreements	Council of Advisory Group Secretariat, Private Sector Desk
Monitoring, Evaluation, and Learning	Quarterly and annual reports submitted on time	Submission logs, compliance rates	AG M&E Officers, Secretariat
Monitoring, Evaluation, and Learning	Baseline, mid-term, and final evaluations completed	Evaluation reports available and reviewed	Independent Evaluators, Council of Advisory Group Secretariat
Monitoring, Evaluation, and Learning	80% of evaluation recommendations integrated into plans	Plan reviews, implementation tracking	Council of Advisory Group Secretariat, Advisory Groups
Social Sustainability and Safeguards	Compliance with gender equality, human rights, safeguards	Safeguard assessments, compliance checklists	Council of Advisory Group Secretariat, Civil Society, Human Rights Orgs
Social Sustainability and Safeguards	10 gender/youth-focused initiatives mainstreamed	Programme reports; gender/youth audits	Council of Advisory Group Secretariat, Gender/Youth Forums
Social Sustainability and Safeguards	Indigenous knowledge integrated into 5 policies/programmes	Policy reviews, stakeholder consultations	National Governments, Advisory Groups

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9.4   Evaluation Framework (Timelines & Feedback)
This framework ensures **regular evaluations, structured timelines, participatory approaches, and effective feedback loops** to strengthen accountability and learning

1. Purpose of the Evaluation Framework
The evaluation framework provides a structured process for measuring progress, assessing effectiveness, and ensuring accountability in the implementation of the Strategic Plan. It defines when evaluations will be conducted, the type of evaluations to be applied, and how feedback will be incorporated into learning and adaptive management.

2. Evaluation Timelines
- **Baseline Evaluation (2026):** Conducted in the first year to establish starting benchmarks on ecological, socio-economic, and institutional indicators. It will provide reference points against which progress will be measured.
- **Annual Performance Reviews (2026–2030):** Internal reviews carried out annually by Advisory Groups and the Council of Advisory Group Secretariat. These will track immediate outputs, document lessons, and adjust workplans.
- **Mid-Term Evaluation (2027):** An independent evaluation conducted halfway through the Strategic Plan. It will assess progress toward strategic objectives, identify gaps, and recommend corrective measures. Findings will inform re-alignment of activities for the remaining period.
- **End-of-Plan Evaluation (2029):** A comprehensive final evaluation measuring impact, sustainability, and scalability of interventions. It will assess the Strategic Plan's contribution to regional and global frameworks such as the SDGs, AU Agenda 2063, and the Africa Water Vision 2025.

3. Evaluation Approaches
- **Formative Evaluations:** Conducted at early stages to refine approaches and build capacity.
- **Summative Evaluations:** Conducted at mid-term and final stages to determine the overall impact, effectiveness, and efficiency.
- **Thematic Evaluations:** Focused assessments on specific themes such as gender, climate resilience, aquaculture, or governance.
- **Participatory Evaluations:** Engaging local communities, governments, NGOs, and private sector actors to ensure inclusivity and ownership.

4. Feedback and Learning Mechanisms
- **Feedback Loops:** Evaluation findings will feed into adaptive management processes. Corrective measures will be integrated into annual workplans.
- **Dissemination:** Results will be communicated through evaluation reports, policy briefs, annual "State of the Great Lakes" reports, and stakeholder forums.

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- **Stakeholder Validation:** Annual regional forums will be used to present evaluation findings to governments, partners, and communities for validation and feedback.
- **Knowledge Management:** Lessons learned will be documented in a centralized knowledge hub and shared through workshops, publications, and online platforms.
- **Continuous Improvement:** Recommendations from evaluations will be systematically tracked, with at least 80% integrated into subsequent programming and policy advice.

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Table 9.6: **Evaluation Framework (Timelines & Feedback)**

Evaluation Stage	Purpose	Timeline	Key Deliverables	Responsible Actors
Baseline Evaluation	Establish reference points for ecological, socio-economic, and institutional indicators	2026	Baseline survey report; indicator reference values	Independent Evaluators, Council of Advisory Group Secretariat, Advisory Groups
Annual Performance Reviews	Track outputs, document lessons, adjust workplans	Annually (2026–2030)	Annual performance review reports; updated workplans	Advisory Groups, Council of Advisory Group Secretariat
Mid-Term Evaluation	Assess progress, identify gaps, recommend corrective actions	2028	Mid-term evaluation report; recommendations for adjustment	Independent Evaluators, Council of Advisory Group Secretariat, Regional Bodies
End-of-Plan Evaluation	Measure overall impact, sustainability, and scalability	2029	Final evaluation report; impact assessment; policy briefs	Independent Evaluators, Council of Advisory Group Secretariat, National Governments, Development Partners
Thematic/Participatory Evaluations	Assess specific themes (e.g., gender, climate, governance); ensure inclusivity	As needed (2026–2030)	Thematic evaluation reports; stakeholder validation outputs	Advisory Groups, NGOs, Community Representatives, Development Partners

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9.5   Reporting Framework and Feedback Mechanism

This framework links data collection (field, digital, participatory) with reporting (quarterly, annual, thematic, evaluation) **and** feedback loops (forums, adaptive management, community engagement), ensuring that monitoring results are actionable and inclusive.

1. Purpose

The reporting framework ensures that data collected across Advisory Groups is standardized, credible, and timely. It provides mechanisms for synthesizing information, communicating results, and feeding back into decision-making processes at local, national, regional, and global levels.

2. Data Collection Mechanisms

- **Standardized Protocols:** All Advisory Groups will apply harmonized data collection methods for fisheries, water quality, biodiversity, socio-economic indicators, and governance.
- **Digital Tools:** Mobile applications, GIS, drones, and remote sensing technologies will be employed for real-time monitoring and data capture.
- **Participatory Approaches:** Local communities, including women and youth, will be engaged in citizen science and co-monitoring initiatives to enhance inclusivity and ownership.
- **Institutional Collaboration:** Universities, research institutes, and government agencies will serve as primary data custodians, ensuring quality assurance and validation.
- **Knowledge Hub Integration:** Collected data will be uploaded into a centralized regional knowledge hub accessible to stakeholders for analysis and decision-making.

3. Reporting Mechanisms

- **Quarterly Progress Reports:** Prepared by each Advisory Group and submitted to the Council of Advisory Group Secretariat. These will track outputs and short-term results.
- **Annual Performance Reports:** Consolidated by the Council of Advisory Group Secretariat and presented to stakeholders, donors, and regional bodies. Reports will highlight achievements, challenges, lessons learned, and financial accountability.
- **Thematic Briefs and Policy Notes:** Produced on demand to address emerging issues such as climate change, pollution, or invasive species.
- **Mid-Term and Final Evaluation Reports:** Independent evaluations in 2027 and 2029 will provide deeper analysis of outcomes, impacts, and sustainability.
- **Dashboards and Scorecards:** Traffic-light dashboards and KPI scorecards will be updated regularly for quick visualization of progress.

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4. Feedback Mechanism

- **Stakeholder Forums:** Annual forums will be convened to validate findings, receive feedback, and co-create recommendations.
- **Adaptive Management:** Feedback from evaluations and reports will be integrated into annual workplans, ensuring timely adjustments to programmes.
- **Knowledge Sharing:** Evaluation findings and best practices will be disseminated through workshops, newsletters, scientific publications, and online platforms.
- **Community Feedback Loops:** Local stakeholder feedback will be gathered through participatory monitoring, surveys, and community dialogues, ensuring grassroots voices inform regional decision-making.
- **Accountability Channels:** All reports will be made publicly accessible via the Council's website and regional platforms, strengthening transparency and trust among partners.

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Table 9.7: **Reporting Framework and Feedback Mechanism**

Report Type	Content/Focus	Frequency	Data Source	Audience/Recipients	Feedback Loop
Quarterly Progress Reports	Track outputs, activities completed, short-term results	Quarterly (2026-2030)	Advisory Group monitoring data; project activity logs	Council of Advisory Group Secretariat, Advisory Groups, Donors	Used to adjust quarterly workplans; feedback from Secretariat to AGs
Annual Performance Reports	Achievements, challenges, lessons learned, financial accountability	Annually (2026-2030)	Consolidated quarterly reports; AG submissions; financial records	Council of Advisory Group Secretariat, National Governments, Regional Bodies (EAC, AU), Donors	Annual stakeholder validation forums; adaptive management into next year's plan
Thematic Briefs and Policy Notes	Focused analysis on emerging issues (e.g., climate change, pollution, invasive species)	On demand / As needed	Research outputs; monitoring data; expert reviews	Policymakers, Regional Bodies, Media, Civil Society	Stakeholder roundtables; uptake into policy discussions
Mid-Term Evaluation Reports	Assessment of progress, effectiveness, gaps, corrective actions	2027	Independent evaluation data; AG reports; surveys	Council of Advisory Group Secretariat, National Governments, Development Partners	Integration into adjusted workplans for 2028–2029
Final Evaluation Reports	Impact, sustainability, scalability of Strategic Plan interventions	2029	Independent evaluation teams; national statistics; ecological and socio-economic surveys	Council of Advisory Group Secretariat, Regional Bodies, AU, Donors, Global Partners	Inform design of next Strategic Plan (2030–2034); lessons documented in knowledge hub
Dashboards and Scorecards	KPI tracking, traffic-light status of indicators	Updated continuously; published annually	M&E data; KPI tracker; knowledge hub inputs	Council of Advisory Group Secretariat, Advisory Groups, Donors, Public	Visual updates inform quarterly and annual reviews; shared at stakeholder forums

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ANNEX I: PESTEL Analysis by Lake and Countries

1. **Lake Tanganyika – *DR Congo, Tanzania, Burundi, Zambia***

i) **Political**:
- DR Congo and Burundi experience political instability and governance challenges.
- Tanzania and Zambia are more stable, but cross-border coordination on lake resource management is limited.
- There could be potential disputes over the fishing rights and resource access.
- Annual meetings of ministers show political will to address some of the challenges on the lake

ii) **Economic:**
- Lake is part of a business corridor facilitating imports and exports among the four riparian states
- Fisheries and transportation are key economic activities.
- High reliance on the lake for livelihoods, but economic inequality among countries affects joint investments.
- Infrastructure disparities, especially in DR Congo and Burundi.

iii) **Social:**
- Ethnic diversity and tension in DR Congo and Burundi; migration and displacement issues.
- Population pressure around the lake increases resource exploitation.
- Community dependence on artisanal fishing.
- Lack of promotion of alternatives to improve the well-being of local communities

iv) **Technological:**
- Low adoption of advanced fishing or monitoring technologies.
- Limited investment in cold storage, aquaculture, and transport infrastructure.
- Poor communication infrastructure makes joint management difficult
- Existence of equipped laboratories around the lake creates an opportunity for research

v) **Environmental:**
- Pollution from urban centers and agriculture.
- Excessive exploitation of fisheries resources, resulting in depletion
- Climate change impacting water levels and fish populations, submerging some settlements, fish habitats and investments in fisheries and aquaculture
- Deforestation and sedimentation degrading water quality.

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vi) **Legal:**
- Weak enforcement of fishing regulations and the existing Lake Tanganyika convention.
- Varied legal frameworks make harmonized management difficult.
- Existing regional bodies like the Lake Tanganyika Authority offer some coordination
- The new charter on fisheries management offers an opportunity for improved fisheries.

2. **Lake Victoria – Kenya, Uganda, Tanzania**
   i) **Political**:
   - Generally stable, with strong regional cooperation under the East African **Community (EAC)**.
   - Shared interest in resource management, but occasional disputes over water resources
   - Joint lake monitoring exercises by different organizations in the three countries

   ii) **Economic:**
   - Significant fish exports (Nile perch, tilapia). In Tanzania sardines from Lakes Victoria and Tanganyika are exported to the DRC.
   - Growing aquaculture sector, especially cage culture in the lake.
   - Economically strategic for transport, hydropower, and irrigation.

   iii) **Social:**
   - High population density around the lake, putting pressure on natural resources.
   - Significant youth employment drives overfishing.
   - Rapidly growing young population with very dynamic social interest
   - Cultural similarities support cooperation.
   - Potential risk of disease outbreaks, nutrition and reduced household income.

   iv) **Technological:**
   - Moderate adoption of aquaculture and fishing tech.
   - Advances in monitoring (satellite, drones) emerging.
   - Regional universities active in R&D
   - Weak diagnostic labs and surveillance systems for aquatic animal health.

   v) **Environmental:**
   - Pollution from industrial and domestic waste.
   - Invasive species like water hyacinth, Kariba weed.
   - Overfishing and habitat destruction

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- Biodiversity loss as some native species face extinction risks due to predation, habitat destruction, bait fishing and pollution.
- Climate Change causing rising temperatures, erratic rainfall, and increased water levels affect fish habitats and breeding cycles
- Emerging aquatic animal diseases and poor biosecurity pose threats to ecosystem health, wild fish, and aquaculture.

vi) Legal:

- Harmonized laws under LVFO (Lake Victoria Fisheries Organization).
- Weak enforcement capacity
- The EAC framework supports joint legal actions.
- Each country has a National Fisheries and Aquaculture Act that governs fishing licenses, gear restrictions, and aquaculture practices.
- All the countries are signatory to International Agreements which commit them under global frameworks such as CBD, SDGs, WTO, FAO Code of Conduct for Responsible Fisheries among others that influence management priorities.

3. Lake Kivu – Rwanda, DR Congo

i) Political:

- DR Congo in general faces insecurity
- Rwanda is politically stable but with occasional cross-border tension.
- Lack of a harmonized transboundary Lake Kivu monitoring and management system
- Peace and security discussions rarely integrate environmental and fisheries governance, missing an opportunity to link stability with sustainable resource use.

ii) Economic:

- Fisheries targeting Limnothrissa miodon and methane gas extraction are key economic activities.
- There exists a potential for eco-tourism and energy generation.
- Economic disparities between the two countries in relation to methane extraction.
- Fish cage activities are in the early stages of development.
- Over-reliance on capture fisheries leading to stock depletion.
- Lack of suitable insurance products for fishers, thereby increasing the risks of economic loss.

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iii) **Social:**
- Refugee movements.
- Dependence on the lake for food and water.
- Gender inequality in the fisheries value chain means women are concentrated in low-paying processing roles and excluded from decision-making spaces
- There is limited representation of local fishing communities in policymaking bodies, reducing ownership and compliance with agreed management measures

iv) **Technological:**
- DR Congo lags in technology adoption but has a valuable number of dedicated academic members working on Lake Kivu.
- Lack of real-time fish catch monitoring systems across the lake makes it difficult to respond quickly to overfishing trends.
- A scarcity of appropriate equipment for more detailed taxonomic identification of species

v) **Environmental:**
- Rwanda has an established environmental monitoring system.
- Natural hazards and volcanic activity (e.g., limnic eruptions due to gas buildup).
- Pollution from urban centers, including waste production
- Shoreline degradation and unplanned urban expansion is accelerating erosion and siltation in littoral zones.

vi) **Legal:**
- Weak coordination on shared resource.
- Rwanda has strict environmental regulations.
- No comprehensive bilateral lake management treaty.
- Inconsistent penalties for illegal fishing gear in DRC
- Absence of a joint emergency response protocol for environmental disasters such as gas release events or major pollution spills.
- Weak integration of international environmental agreements into national lake governance policies.

4. **Lake Turkana – Kenya, Ethiopia**
   i) **Political**:
   - Security concerns (conflicts among pastoralist and fishing communities).
   ii) **Economic:**
   - Fisheries, water transportation, hydropower, irrigation and growing tourism.

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- Economic disparity between upstream and downstream users (Should be specified).
- Underdeveloped Infrastructure and Market Access. This hinders the development of a formal economy and suppresses the value of local products.

iii) Social:
- Marginalized communities near the lake. The Turkana basin remains most marginalized, with poor road networks, limited access to electricity, and weak connections to national markets
- Indigenous and nomadic populations rely on the lake.
- Food insecurity due to changing water levels.
- Cultural heritage sites at risk.
- Limited access to clean water and healthcare worsens living conditions
- Low literacy among communities living around the lake.
- High poverty rates in Turkana (Kenya) and South Omo (Ethiopia) limit economic diversification, increasing reliance on external aid.
- Indigenous land rights are often ignored in governments led projects

iv) Technological:
- Low technology use in fishing and postharvest handling and limited market linkages
- Monitoring tech exists but underutilized.
- Solar and wind energy opportunities exist but are underdeveloped due to funding gap

v) Environmental:
- The major rivers have been dammed for hydropower generation
- Impact of climate change on lake hydrology
- Displacement of people due to overflooding
- Increasing salinity affecting biodiversity.
- Unregulated waste disposal, especially plastic pollution
- Overfishing, deforestation in the catchment, and siltation threatens biodiversity (e.g., crocodiles, fish stocks).

vi) Legal:
- No formal water-sharing agreement.
- There is consensus through technical commissions and regional platforms to address the impact of dams construction in the rivers flowing into the lake
- Weak enforcement of environmental laws.

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5. **Lake Malawi/Nyasa/Niassa – Malawi, Tanzania, Mozambique**
   i) **Political**:
      - Lack of consensus on jurisdiction between Malawi and Tanzania.
      - Peaceful but strained diplomatic relations.
      - Generally high priority placed on the importance of the lake by all riparian states.
      - Influence of regional and continental frameworks influence political climate

   ii) **Economic:**
   - Key for fisheries, tourism, power generation and transport.
   - Oil and gas exploration is causing tensions between Malawi and Tanzania
   - Unequal economic benefits and investments.
   - The true value of fisheries not well understood in all riparian states.
   - No bilateral trade agreement between Malawi and Tanzania.
   - Differences in the economic status between Malawi (Developing) and Tanzania (Middle-income)
   - [Potential for regional blue economy initiatives
   - Potential role for African Continental Free Trade Area (AfCFTA) in shaping future trade rules.
   - Reliance on donor funding for fisheries management and conservation

   iii) **Social:**
   - Weak recognition of women's rights and gender dimensions in legal frameworks.
   - Limited cross-border enforcement mechanisms.
   - Coastal communities are heavily reliant on the lake.
   - Cultural identity tied to the lake (e.g., Yao, Chewa, Nyanja, Tumbuka, Tonga and Swahili peoples).
   - Migration due to climate pressures/forced relocations due to flooding.
   - Male dominance in capture fisheries and the fish trade
   - Fish distribution affected by climate change; women more affected in accessing fisheries resources
   - Prevalence of "sex for fish" phenomena
   - Tenure rights not well defined
   - Open access and poor governance constraining achievement of sustainable fisheries
   - Growing regional population increases demand for fish and pressure on resources
   - Food and nutrition security tied to lake fisheries

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    iv.   **Technological:**
- Moderate fishing tech adoption in Malawi. (Trawl fishery?)
- Potential for aquaculture development (e.g., Cage culture).
- Piloting use of vessel monitoring system (VMS) for monitoring illegal, unregulated and unreported fishing (IUU)
- Potential technological shift in research methods for estimating fish stocks, such as the use of environmental DNA and hydroacoustic techniques

v) Environmental:
- Biodiversity hotspot (many endemic fish species).
- Oil exploration technical causing ecological concern.
- Heavy sand mining technology for titanium causing ecological concern
- Threats from overfishing due to the use of illegal fishing nets
- Threats from pollution (microplastics and industrial effluents) and sedimentation.
- Climate variability affecting fish stocks and reduced resilience.
- Catchment degradation through deforestation.
- Invasive aquatic weeds/invasive species

vi) Legal:
- Uncoordinated policies raise concerns about the introduction of exotic species
- SADC frameworks promote cooperation.
- Joint Permanent Commission of Cooperation (JPCC) to foster closer ties.
- National laws on fishing, but lack of harmonization.
- Inadequate and outdated legal frameworks
- All countries are signatories to the Convention on Biological Conservation.
- Enforcement capacity is often limited leading to low compliance with fisheries regulations

6. **Lake Albert – Uganda, DR Congo**
   i) Political:
- DR Congo instability affects security.
- Oil exploration (Uganda side) creates cross-border tensions.
- Potential for armed conflict over resources.
- Same ethnic communities straddling the border.
- Border demarcation disputes.

   ii) Economic:
- Oil and gas exploration.
- Fishing supports local economies.

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- Continuous regional demand of fish

iii) Social:

- Communities vulnerable to displacement due to oil projects.
- Health issues from pollution.
- Youth unemployment along the fisheries and aquaculture sector
- Lack of gender lens in lake Albert fisheries
- Low fishing technology adoption.

iv) Technological:

- Advanced oil extraction technology (Uganda) and potential for oil spills due to poor technology in DR Congo.
- Gaps in conservation and management technologies: modelling, molecular and recent advancements

v) Environmental:

- Pollution from oil activities.
- Poor Urban planning
- Habitat degradation leading to fish population decline
- Non-native aquatic introductions (weeds and fish), aquaculture activities
- Climate change impacts with funding agencies/bodies currently focusing on climate smart initiatives

vi) Legal:

- Weak bilateral cooperation on environmental issues/ Differences in policy frameworks.
- Contentious Oil agreements.
- Bilateral Fisheries and Aquaculture Agreement signed in 2018 with creation of Lakes Edward Albert Fisheries and Aquaculture Organisation to coordinate harmonized management of the lake and its basin.

7. **Lake Edward – Uganda, DR Congo**
    i) **Political:**
    - Insecurity on DR Congo side, Uganda more stable
    - Conflict hinders lake management.

    ii) Economic:
    - Small-scale fishing and tourism (e.g., Queen Elizabeth Park, Virunga NP).
    - DR Congo side underdeveloped.
        iii) **Social:**

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- Poaching and illegal fishing are common.
- Communities rely on lake amid poverty.
- Cultural ties to the lake.
- Illegal fishing practices driven by poverty dynamics
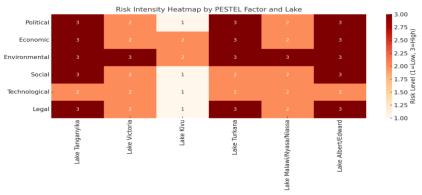
iv) **Technological:**
- Minimal tech in fisheries.
- Conservation tech in Uganda (e.g., anti-poaching).
- DR Congo limited capacity.

v) **Environmental:**
- Active conservation policies.
- Biodiversity under threat.
- Pollution (agriculture and mining) and habitat loss.
- Protected areas on Ugandan and DRC side (RAMSAR, UNESCO).
- Fluctuations on lake levels linked with climate change

vi) **Legal:**
- Uganda enforces strict environmental and fisheries laws.
- DR Congo parks are under the authority of ICCN – Virunga Foundation PPP
- Bilateral Fisheries and Aquaculture Agreement signed in 2018 with creation of Lakes Edward Albert Fisheries and Aquaculture Organisation to coordinate harmonized management of the lake and its basin.

PESTEL Analysis (Political, Economic, Social, Technological, Environmental, Legal)

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ANNEX II: Summary of ACARE-AG SWOT Analysis, 2024

Lake Edward and Albert Advisory Group (LEAAG)

Strengths:	Opportunities:
● Existence of the group of expertise and knowledge (LEAAG) in addressing issues related to the LEA basin. ● Increasing partnership and collaboration between the LEA member States. ● Existence of the LEA regional management body (LEA-FAO). ● Existence of National and Local Management Committees for the lakes (- National Directorates responsible for Fisheries Management, - Local/Provincial Governments, - Fishing Community (BMUs); ● Existence of National Research Institutions and Universities with Faculties related to Fisheries and Aquaculture in the LEA Member States, ● Strong partnerships and collaborations between National Research Institutions and Universities in the LEA Member States (CRH-Uvira, NaFIRRI, ICCN/ViNP, QEMak, UOB, UOR, USB, etc.); ● Access to some basic resources to support research and training (Labs, vessels, etc.).	● Increasing international attention and support for research and monitoring in the Great Lakes of Africa (ACARE, etc.); ● Potential for regional cooperation and integration to address common challenges (GLAG). ● Emerging opportunities for harmonized approaches to long term monitoring programs. ● Linkages between Research and Academic Training
Weaknesses:	**Threats:**
● Limited capacity and financial resources to fully address the complex challenges in the LEA basin; ● Poor Technical capacity (untrained fisheries staff), ● Dependence on external funding sources for sustainability ● Weak & un-harmonized political frameworks, ● Lack of community based institutional structures for management. ● uncoordinated and selective sectorial approaches to management, ● lack of well-defined institutional arrangements for management of cross border. ● inadequate enforcement of laws (weak and non-dissuasive laws) ● Un-coordination and lack of facilitations of existing research, management and community institutions, ● Un-existing/limited funding from national governments and international groups ● Absence of community laws, ● Poor dissemination capacity, ● Lack of Alternative livelihood options.	● Political instability in some countries and ongoing conflicts between and within the LEA member States. ● Lack of clear framework for involvement of all stakeholders in the management of the Lakes. ● Oil – and activities related to its discovery, ● Climate change & variability,

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Lake Kivu Advisory Group (LKAG)

Strengths:	Opportunities:
● The LKAG is composed of members who are well-skilled in designing research as some of the members are senior researchers. The research fields include Limnology and geochemistry: ● Biodiversity (morphology and molecular studies) ● Trophic- and community ecology ● Hydrology ● The members of the AG are actives in participating in the LKAG activities and meeting ● Flow collaboration between stakeholders from Rwanda and DRC,	● Increasing international attention and support for research and monitoring in the Great Lakes of Africa. ● Transboundary collaboration. cooperation and integration to address common challenges. ● Emerging opportunities for harmonized approaches to long term monitoring programmes. ● Linkages between Research and Academic Training ● Research-based that inspires researchers ● to write papers that contribute to the Lake Kivu health and livelihoods of riparian people/products (applied research, community outreach) ● Does the LKAG offer room for international and national partnerships? ● Opportunity provided by the AG for resource mobilization ● Opportunity for collaboration between different labs working in Lake Kivu ● Opportunity to define and propose appropriate measures requiring assessment to be conduct and proposed projects on Lake Kivu and its Basin
Weaknesses:	**Threats:**
● Limited capacity and financial resources to fully address the complex challenges in the region. ● Dependence on external funding sources for sustainability ● No formal organ to transmit the acquired knowledge to the decision-makers, it means a weak connection between the government and LKAG, ● No complementarity between laboratories (lack of collaboration between laboratories) ● Weak collaboration at the international level as through the AG we are still lacking a permanent funder, ● Weak endeavor in the field of fisheries research-action ● Collaboration between LKAG and the public sector for lake management is not well-established ● Lack of a clear management plan for the Lake Kivu and its Basin ● Legal and regulatory inconsistency in the Lake Kivu management ● A project envisioned to be conducted in a short-term period (e.g., summer school project)	● Poor involvement of national institutions responsible for the sustainable management of Lake Kivu and its Basin ● Limited or infrequent access to source of funding ● Ineffective projects or actions implementation ● Lack of community participation in the actions of LKAG ● Potential conflict of interest between the governments of both riparian countries and the LKAG as no formal agreement exist between the parts,

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Lake Tanganyika-Science Advisory Group (LT-SAG)

Strengths:	Opportunities:
● The LT-SAG members expertise and knowledge in addressing issues related to the LT. ● Strong partnerships and collaborations with experts and other stakeholders in the LT basin. ● Access to some basic resources to support its initiatives. ● Existence of a regional management authority (Lake Tanganyika authority) (Authorities & Organizations) ● Existence of National Research Institutions for Lake Tanganyika ● Wide representations of academia, government and international partners in the LT-SAG	● Increasing international attention and support for research and monitoring for Lake Tanganyika. ● Potential for regional cooperation and integration to address common challenges. ● Emerging opportunities for harmonized approaches to long term monitoring programmes for Lake Tanganyika. ● Linkages between Research and Academic Training ● Emerging political (SADC, COMESA, LTA, AU-IBAR), scientific, and public attention on the protection of aquatic resources
Weaknesses:	**Threats:**
● Limited capacity and financial resources to fully address the complex challenges in the lake basin. ● Dependence on external funding sources for sustainability ● Language limitation for better communication ● Lack of updated/comprehensive catch and effort data ● Low level of stakeholder participation. ● Fragmented policy frameworks (un-harmonized)	● Ongoing conflicts and political instability in some countries within the lake's region. ● Lack of clear framework for involvement of all stakeholders in the research and management of the lake ● Land overexploitation in the LT watershed ● Population growth coupled with rapid urbanization ● Relocation of experts ● Climate Change ● Oil Exploitation

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Lake Victoria Advisory Group (LVAG)

Strengths:	Opportunities:
● The members' expertise and knowledge in addressing issues related to Lake Victoria. ● Strong partnerships and collaborations with national, regional and international stakeholders to support synergies for research and development and resource mobilization. ● Access to some basic resources to support its initiatives. ● Existence of Regional Management Organization Committees for most of the lakes (Authorities & Organizations) ● Strong collaboration between research, training and governance institutions in the AGL region ● Existence of National Research and Training (higher learning). Institutions for the Great Lakes ● Knowledge and skill development about research and different practice in and outside the region ● Scaling-up, scaling out and scaling deep different research aspects for replication (e.g., adaptive research, community good practices, exchange visits to showcase research demonstration sites/community sites etc. ● Existing of Academic and Training Institutions for the Great Lakes ● Existence of network of local scientists and managers ● Political goodwill among the various countries ● Existence of lucrative local, regional and international markets ● Readiness of communities to adapt ● infrastructure for research that can aid the conduct of impactful research and generation of quality outputs ● Existence of harmonized systems and instruments ● Repository of historical and current data and information	● Increasing international attention and support for research and monitoring in the Great Lakes of Africa. ● increasing recognition of fisheries and aquaculture as key sectors for social transformation ● willingness of development partners to fund projects with potential to improve livelihoods ● existence of national, regional and global institutions and networks for research and development which creates and opportunity for effective service delivery. ● advancements in science and technology to enhance innovation, technology generation and dissemination ● Potential for regional cooperation and integration to address common challenges. ● Emerging opportunities for harmonized approaches to long term monitoring programs. ● Existence of learning and research institutions for continued research and training ● Linkages between Research and Academic Training ● Existence of the Great Lakes water bodies ● Commitment of the team ● The presence of the sub-committees to handle different aspects ● Existence of potential for aquaculture to complement capture fisheries
Weaknesses: ● Limited capacity and financial resources to fully address the complex challenges in the region. ● Dependence on external funding sources for sustainability ● Language barrier, some members are French and Portuguese speaking, with limited knowledge of English and vice versa ● Limited data sharing protocols/frameworks ● Inadequate dissemination of information and knowledge to stakeholders ● Limited research infrastructure and technical capacity ● Limited participation of researchers in Great Lakes ● Lack of regional bodies to manage some of these shared African Great Lakes ● Inadequate coherence in management between local and central governments	**Threats:** ● Ongoing conflicts and political instability in some countries within the Great Lakes region. ● Lack of clear framework for involvement of all stakeholders in the management of Great Lakes ● Inadequate resources ● Interference by elected politicians ● Accelerated demand associated with high population growth rates which puts pressure on the limited resources

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● Inadequate/limited facilities ● Cultural differences, leading to conflicts (social/political) ● Poor translation of research findings into policy and management decisions	● increasing rural-urban migration accompanied with the need for food. Also, the changing demographic structure that requires interventions that take into consideration the youth who are the majority ● Accelerated changes in societal eating habits with preference for white meat ● Corruption by enforcement officials (this is more of a weakness than threat) ● Climate change and environmental pollution ● declining funding and investment in research ● increasing climate change and variability ● Illegal importation of unlawful fishing gears, invasive spp. etc. ● Sand mining ● Pollution caused by rapid urbanization, and land use and land cover changes ● Unregulated and unplanned expansion of cage fish farming ● Decaling capture fisheries and the potential loss of livelihoods for millions of people dependent on the lakes ● Introduction of invasive/alien species

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Lake Malawi/Nyasa/Niassa

Strengths:	Opportunities:
● Rich fish biodiversity-The lake boasts the highest number of freshwater fish species worldwide ● Unpolluted water resource- the lake is among the few freshwater lakes with no significant water pollution ● Availability of the council's expertise and knowledge in addressing issues related to the lake ● Strong partnerships and collaborations with regional stakeholders. ● Access to some basic technical and financial resources to support its initiatives. ● Existence of Regional Management Committees for most of the lakes (Authorities & Organizations) ● Existence of National Research Institutions for the Great Lakes ● Existence of the National Research Agenda ● Strong research collaboration as demonstrated by previous fisheries and aquaculture projects ● Significant contribution of the fisheries sector to the local economies and societies through employment, trade, tourism, food and nutrition support. ● Adoption of modern monitoring technologies such as vessel monitoring systems (VMS) to improve fisheries management and compliance ● Advanced data collection techniques such as the use of mobile/tablets ● Advances in geospatial techniques for fisheries resource mapping for better planning and decision-making	● Increasing international attention and support for research and monitoring in Lake Malawi/Nyasa/Niassa. ● Potential for regional cooperation and integration to address common challenges. ● Emerging opportunities for harmonized approaches to long-term monitoring programmes. ● Linkages between Research and Academic Training for capacity building ● Buy-in communities in management efforts. Most community members have an interest ● Awareness creation to all stakeholders on the management of fisheries resources within the region. ● Potential to develop Public-Private partnerships to invest in sustainable fisheries and aquaculture projects
Weaknesses: ● Limited capacity and financial resources to fully address the complex challenges in the region. ● Dependence on external funding sources for sustainability ● Coordination challenges among stakeholders in the three riparian countries ● Lack of regional organization (such as LVFO and LTA for Lakes Victoria and Tanganyika respectively) to oversee all research and management matters of the riparian countries ● Lack of harmonized regional standard operating procedures within the region. ● Communication barriers due to differences in language and governance structures among the riparian countries can hinder effective communication and collaboration within the network. ● Delays in decision-making and implementation due to bureaucratic processes within governmental and regional organizations can slow the progress of critical projects and initiatives.	**Threats:** ● Ongoing political conflicts and instability on lake boundaries is the main threat to the initiatives ● Increased tourism may lead to security issues in the three riparian countries ● Differences in economic and human resource capacities may potentially lead to variations in implementation of the harmonized programs ● Persistent illegal, unreported and unregulated fishing activities will likely continue to undermine the conservation efforts ● Rapid population growth in the riparian countries will continue to increase the demand for fish, leading to overexploitation of resources

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● Uncompromised Lake Policy issues leading to research coordination changes. ● Lack of clear framework for involvement of all stakeholders in the management of the LMNN fishery ● Unsustainable fishing practices and overfishing leading to the depletion of key fish species especially in the shallow water zones	● The increased urbanization and agricultural activities around the lake will further stress the ecosystem ● Risk of reduced funding and support for fisheries management due to political or economic crises ● Climate change impacts such as rising temperatures and changing rainfall patterns, threaten the fisheries resources ● Increased frequency of extreme weather events such as strong winds leading to habitat destruction and reduced fish stocks.

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Lake Turkana Advisory Group (LTuAG)

Internal factors	
Strength ● Rich biodiversity: Lake Turkana is home to numerous species of fish, birds, and wildlife, making it a significant ecological hotspot. ● Cultural heritage: The lake area is rich in cultural history, with several indigenous communities living around it. ● Potential for renewable energy: Lake Turkana has significant wind and solar energy potential, which can be harnessed for sustainable development	**Opportunities** ● Sustainable tourism: There's an opportunity to develop eco-friendly tourism initiatives around Lake Turkana, leveraging its biodiversity and cultural significance. ● Renewable energy projects: Investments in wind and solar energy projects can help meet the region's energy needs while promoting sustainable development. ● Economic development: Development projects focused on agriculture, fisheries, and infrastructure can improve livelihoods for local communities and stimulate economic growth.
Weaknesses ● Vulnerable ecosystem: The lake's ecosystem is sensitive to environmental changes, including water diversion and climate change impacts. ● Water management challenges: There are concerns regarding water quality, overfishing, and management of water resources, which can affect both the ecosystem and local communities. ● Limited infrastructure: The surrounding region lacks adequate infrastructure for tourism and sustainable development, hindering economic growth.	**Threats** ● Climate change impacts: Lake Turkana is vulnerable to climate change, including changes in rainfall patterns and rising temperatures, which can affect water levels and ecosystem health. ● Political instability: Regional conflicts and political instability can disrupt development efforts and exacerbate existing challenges in the region
External factors	
Strength ● International recognition: Lake Turkana is a UNESCO World Heritage Site, which enhances its global significance and potential for conservation efforts. ● Regional collaboration: There are opportunities for collaboration among neighboring countries (Kenya, Ethiopia, and South Sudan) to address shared challenges and promote sustainable development around the lake.	**Opportunities** ● Cross-border cooperation: Enhanced cooperation among neighboring countries can facilitate joint management of resources, transboundary conservation efforts, and regional economic integration. ● Technological innovation: Advances in technology, such as remote sensing and data analytics, can improve monitoring and management of water resources, biodiversity, and ecosystem health in the Lake Turkana region ● Conservation partnerships: Collaborations with international organizations, NGOs, and research institutions can provide expertise, funding, and support for conservation and sustainable development initiatives.

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Weaknesses ● Economic disparities: The surrounding region faces socio-economic challenges, including poverty and lack of access to basic services, which can hinder development initiatives and exacerbate environmental pressures. ● Dependence on external aid: Limited local capacity and reliance on external aid for development projects can create vulnerabilities and dependencies in the long term.	**Threats** ● Water extraction projects: Plans for large-scale water extraction or diversion projects upstream of Lake Turkana, such as the Gibe III Dam in Ethiopia, pose a significant threat to water flow and ecosystem integrity, affecting both biodiversity and local communities downstream. ● Illegal fishing and poaching: Unregulated fishing activities and poaching can deplete fish stocks and threaten the survival of endangered species in and around Lake Turkana. ● Invasive species: The introduction of invasive species, such as the water hyacinth, can disrupt the lake's ecosystem, alter habitats, and negatively impact native flora and fauna.
Environmental factors	
Strength ● Unique ecosystem: Lake Turkana's ecosystem is characterized by its saline alkaline waters, volcanic islands, and desert surroundings, contributing to its ecological uniqueness and scientific value. ● Key habitat for wildlife: The lake supports a diverse array of wildlife, including crocodiles, hippos, and various bird species, serving as a critical habitat for migratory birds.	**Opportunities** ● Conservation initiatives: There are opportunities to strengthen conservation efforts and protected area management around Lake Turkana, including the establishment of marine reserves and the promotion of sustainable fishing practices. ● Ecotourism development: The unique natural landscapes and cultural heritage of Lake Turkana offer potential for ecotourism development, generating revenue for conservation and supporting local communities. ● Climate adaptation strategies: Implementing climate adaptation measures, such as water conservation practices and drought-resistant agriculture, can help mitigate the impacts of climate change on Lake Turkana's ecosystem and local livelihoods
Weaknesses ● Water scarcity: Lake Turkana faces challenges related to water scarcity, with declining water levels due to factors such as climate change, evaporation, and upstream water extraction projects. ● Pollution concerns: Pollution from agricultural runoff, industrial activities, and human settlements can degrade water quality and harm aquatic life in the lake. ● Erosion and sedimentation: Soil erosion and sedimentation from deforestation and land degradation can lead to siltation in the lake, affecting water clarity and ecosystem health	**Threats** ● Natural disasters: The region surrounding Lake Turkana is prone to natural disasters such as droughts, floods, and desert locust invasions, which can exacerbate environmental degradation and humanitarian crises. ● Habitat loss and fragmentation: Human activities such as deforestation, land conversion, and infrastructure development can lead to habitat loss and fragmentation, threatening the biodiversity and ecological integrity of the lake ecosystem ● Wildlife trafficking: Illegal wildlife trafficking, including the poaching of endangered species such as elephants and rhinos, poses a significant threat to biodiversity conservation efforts in the region.
Socioeconomic factors	

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Strength	Opportunities
● Cultural heritage: Lake Turkana is home to indigenous communities such as the Turkana, Samburu, and El Molo, with rich cultural traditions and knowledge of the local environment, providing opportunities for community-based conservation and sustainable development initiatives. ● Livelihood diversity: Local communities around Lake Turkana engage in a variety of livelihood activities, including fishing, pastoralism, agriculture, and handicrafts, contributing to livelihood resilience and cultural vitality.	● Community-based conservation: Engaging local communities in conservation initiatives and sustainable natural resource management can promote environmental stewardship, enhance livelihoods, and strengthen social cohesion and resilience. ● Sustainable agriculture and fisheries: Promoting sustainable agricultural practices, aquaculture, and value-added fish processing can improve food security, increase incomes, and reduce pressure on natural resources around Lake Turkana ● Social entrepreneurship: Encouraging entrepreneurship and innovation, particularly among youth and women, can spur economic development and create new opportunities for inclusive growth in Lake Turkana communities.
Weaknesses	**Threats**
● Poverty and marginalization: The region surrounding Lake Turkana experiences high levels of poverty, food insecurity, and limited access to education and healthcare services, exacerbating socio-economic vulnerabilities and hindering development efforts. ● Gender disparities: Women and girls in Lake Turkana communities often face socio-economic inequalities and limited access to resources and decision-making processes, affecting their well-being and empowerment ● Limited economic opportunities: Unemployment and underemployment are prevalent in Lake Turkana, with limited formal job opportunities and income-generating activities available to local residents.	● Political instability and governance challenges: Weak governance, corruption, and political instability in the region can undermine development efforts, exacerbate social tensions, and impede progress on conservation and sustainable development goals. ● Land tenure conflicts: Disputes over land ownership and resource rights among different ethnic groups and stakeholders can lead to conflicts, displacement, and insecurity, disrupting community cohesion and development initiatives. ● External exploitation: The extraction of natural resources, such as oil and minerals, in the Lake Turkana region by external actors can exacerbate environmental degradation, social inequalities, and human rights abuses, posing threats to local communities and ecosystems.

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