African Center for Aquatic Research and Education

Presentations use and notice:

Building upon the 2017 African Great Lakes Conference: Advancements and Investments

The Nature Conservancy

Dr. Patrick J. Doran & Peter Limbu, The Nature Conservancy
ACARE, Entebbe, Uganda, 6 November 2019

Advancing Partnerships, Research and Capacity

1. 2017 Conference recap and review.

2. Current status of African Great Lakes Conference Fund projects.

3. Finally, we will provide an update on emerging research that was presented at the AGLC.

Advancing Partnerships, Research and Capacity

The 2017 African Great Lakes Conference: Conservation and development in a changing climate

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https://doi.org/10.1016/j.jglr.2018.10.009

2017 African Great Lakes Conference

2017 African Great Lakes Conference

AFRICAN
GREAT LAKES
CONFERENCE

CONFÉRENCE DES
GRANDS LACS
AFRICAINS

2–5 May 2017 • Entebbe, Uganda
Conservation and Development in a Changing Climate
Conservation et Développement dans un Climat Changeant

Conference Report

2-5 May 2017

~300 Attendees
25 Countries

67 Talks
57 Posters
+
Plenaries, Side Events, Exhibits

2017 AGLC: Objectives

- Enhance coordination and cooperation of stakeholders working on conservation and development of the African Great Lakes;

- Strengthen the capacity of lake management institutions on the sustainable use of basin resources;

- Provide evidence-based information for implementation of policies and conservation actions;

- Promote and share tools and approaches for ecosystem-based management in the African Great Lakes; and,

- Promote and share best practices of empowered citizens actively engaged in basin management.

Themes

Balancing Conservation and Development

Sustaining ecosystem services requires appropriate balances between development and conservation

Climate Change Impacts, Mitigation and Adaptation

Understanding climate change effects, strategies, and funding opportunities

Sustainable Fisheries and Aquaculture Management

Examining the values, threats, past trends, current status and future changes in fisheries

Ecosystem Services and Biodiversity Benefits

Valuing ecosystem services and opportunities and challenges in maintaining biodiversity

Governance and Financing

Using case studies and models to improve stakeholders' participation in governance and the role of...

Population Dynamics, Health and the Environment

Using a community-based integrated approach for conservation and development
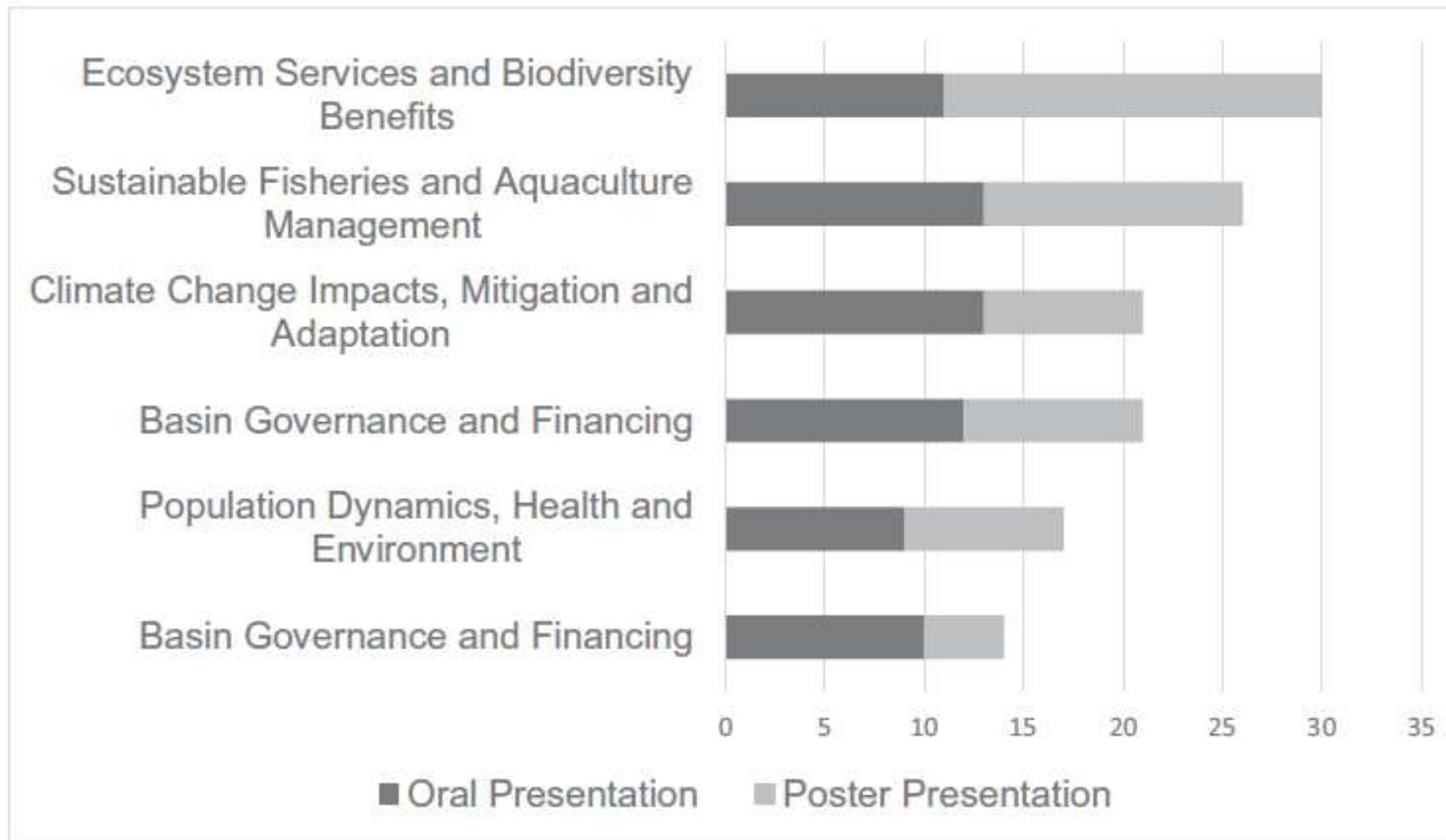
Themes

Fig. 1. Summary of oral and poster presentations across the six themes of the African Great Lakes Conference.
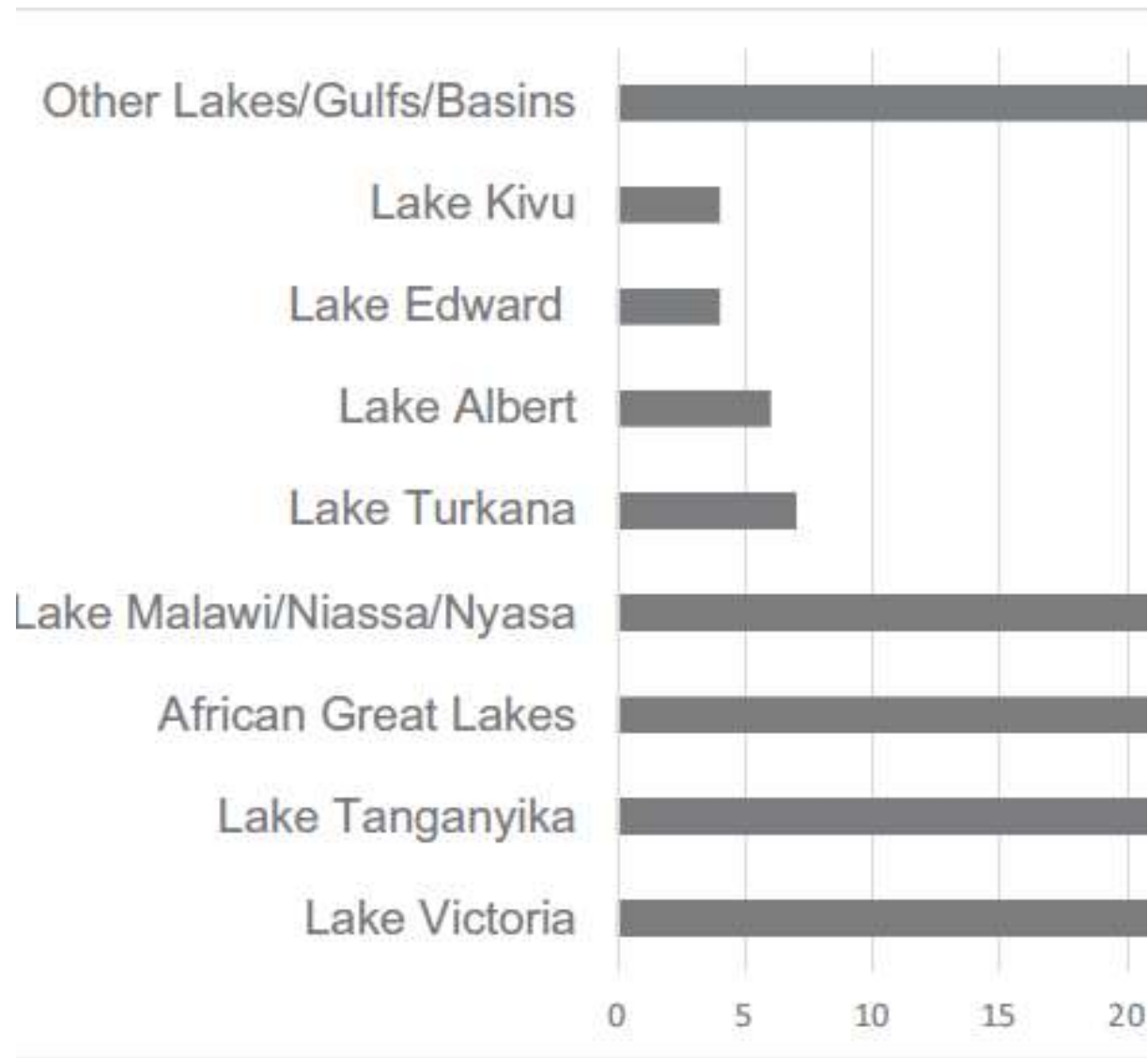
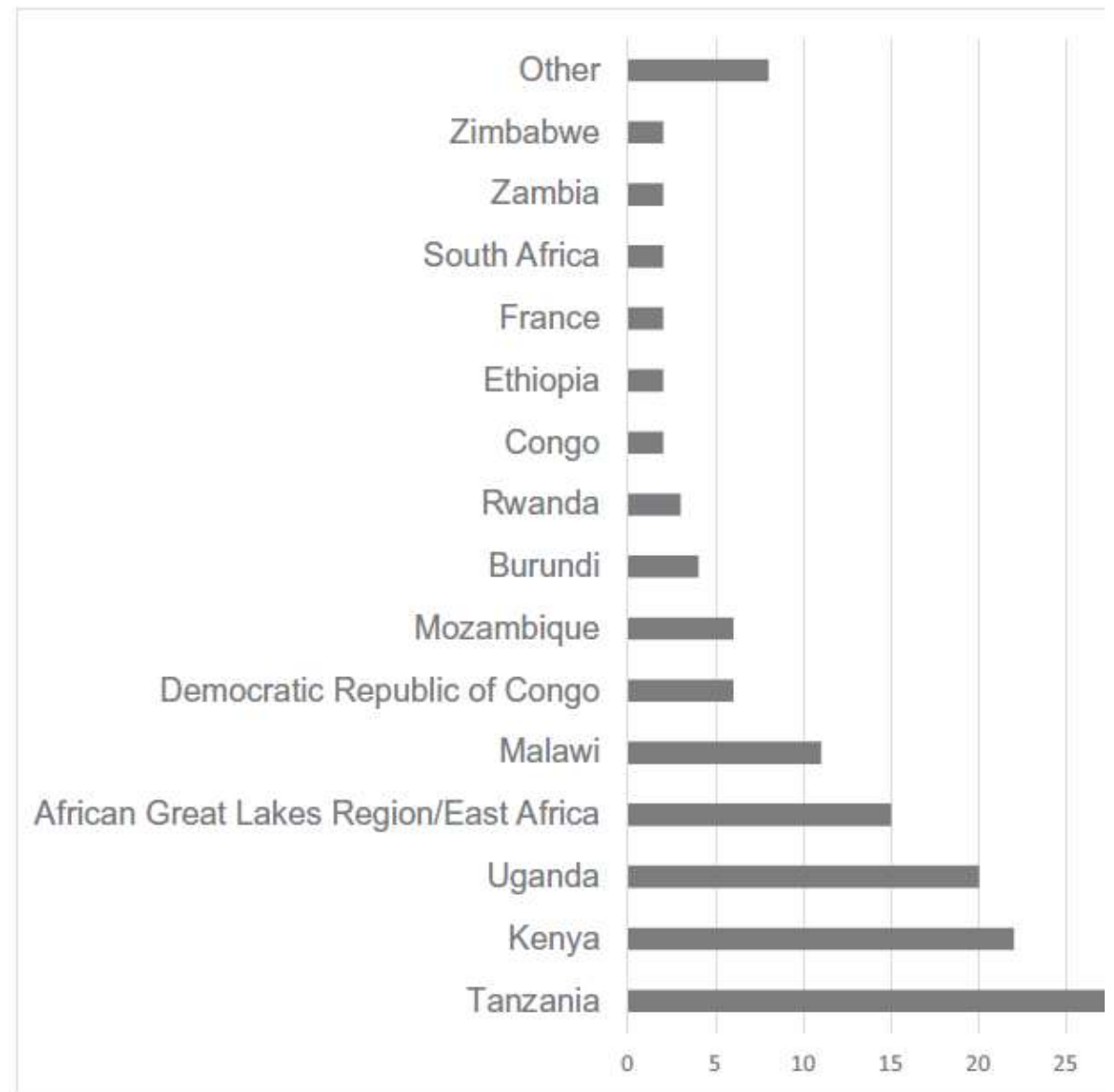Fig. 2. Summary of oral and poster presentations categorized

Fig. 3. Summary of oral and poster presentations categorized by the countries of foc

Conference Resolutions

- **Are aware** that all seven African Great Lake basins are connected both by geographic proximity and common challenges that can either act as sources of cooperation or sources of conflict, and should be a basis for regional integration;

- **Are aware** that the issues and challenges facing the African Great Lakes and their basins can be addressed most effectively and economically by basin stakeholders, practitioners, scientists, managers, and policy makers working together across sectors;

ANNEX 1: RESOLUTION OF THE AFRICAN GREAT LAKES CONFERENCE

AFRICAN GREAT LAKES CONFERENCE 2017

RESOLUTION OF THE AFRICAN GREAT LAKES CONFERENCE: CONSERVATION AND DEVELOPMENT IN A CHANGING CLIMATE (ENTEBBE, UGANDA), 5TH MAY 2017

We the over 300 participants of the African Great Lakes Conference: Conservation and Development in a Changing Climate, organised by The Nature Conservancy in collaboration with the Lake Tanganyika Authority, with support from the MacArthur Foundation, Critical Ecosystem Partnership Fund, and other sponsors, hosted by the Republic of Uganda and attended by regional lake authorities, government leaders and makers, development and funding agencies, scientists, nity representatives, private sector groups, and the mperial Resort Beach Hotel, Entebbe, Uganda from ay 2017:

that conservation of ecosystems and sustainable development are the h which humanity can end poverty and economic growth;

ainable development is of governance as the means d promoting economic v statements by United Nations' nd the African

religious, cultural and aesthetic values that are critical to livelihoods of the people of the region;

- **Are concerned** that biodiversity and ecosystem services of the lakes and their basins are facing numerous threats including: unsustainable illegal fishing and trading practices, invasive species, habitat and environmental degradation, sedimentation, increased turbidity, nutrient and industrial pollution, eutrophication, and poor and inadequate governance systems, with many of these exacerbated by rapid human population growth rates;

- **Acknowledge** that climate change has intensified and is expected to magnify many of the threats severely affecting water security and natural resources that are the basis of the healthy ecosystems needed to sustain people's livelihoods in most communities in the African Great Lakes region;

- **Are aware** that all seven African Great Lake basins are connected both by geographic proximity and common challenges that can either act as sources of cooperation or sources of conflict, and should be a basis for regional integration;

- **Are aware** that the issues and challenges facing the African Great Lakes and their basins can be addressed more effectively and economically by basin stakeholders, practitioners, scientists, managers, and policy makers working together across sectors;

- **Note** that financial and human resources are limited and collective handling of issues affecting the lakes and their basins through trans-boundary cooperation can promote regional economic growth and attract investment by sustainable development agencies;

- **Recognise** the need for timely information, robust data, and continual monitoring to guide policy for conservation and management of the resources of the African Great Lakes region;

Key Issues (22) & Solutions (26)

The participants agreed that the key issues that need to be addressed include the following:

1. The values of the African Great Lakes ecosystem services not having been adequately identified and evaluated, making it difficult to justify the benefits of their conservation and development;

2. Inadequate documentation of the distribution of endemic biodiversity;

3. Infestation of the lakes and rivers by invasive aquatic plants such as water hyacinth (*Eichornia crassipes*) and the Kariba weed (*Salvinia molesta*);

4. Collapse in stock of most commercially desirable fish species due to intense fishing pressure, illegal fishing and trading, environmental degradation and limited application of an ecosystem approach to fisheries;

5. Increase in utilisation of small pelagic fish species that provide highly nutritious and relatively inexpensive sources of protein, employment, and income especially among marginalised people living in poverty but who have limited information to guide their proper

The participants agreed that the solutions for addressing the issues include the following:

1. Identify and quantify the values of ecosystem services at basin and/or lake-wide scale to justify the need for their conservation and sustainable development;

2. Map the distribution of aquatic species, including their endemism and diversity, and determine and address the causes of decline in populations and species;

3. Determine the occurrence, dynamics, and causes of proliferation of major aquatic invasive organisms and put in place mitigation and control measures;

4. Undertake lake-wide assessments for key fish stocks, determine appropriate fishing capacity and exploitation patterns, control overcapacity, promote an ecosystems approach to fisheries development and management, and where necessary revise fisheries policy;

5. Generate information on the causes of the apparent increases and persistence in stocks of small pelagic species and develop specific management plans, including their value to nutrition and income of poor

Key Issues (22)   &   Solutions (26)

u) Establish a 'Network of African Great Lakes Basin Stakeholders' to coordinate action and exchange on priority issues defined by the African Great Lakes Conference and subsequent gatherings supported by the experience of the African Network of Basin Organizations and the International Network of Basin Organizations, as it develops its structure and functions;

Special Section – African Great Lakes

- 14 papers emerging from the 2017 AGL Conference

- Published December 2018

- Additional papers anticipated in:
  - Fisheries Management and Ecology
  - Lakes and Reservoirs: Research and Management

African Great Lakes Conservation Fund

African Great Lakes Conservation Fund

- $500,000 USD contributed by The MacArthur Foundation

- Designed to support:

  - Continued networking and information exchange

  - Multi-lake efforts on priority conference topics

- Selected by an Advisory Committee and administered by The Nature Conservancy

Promoting Environmentally, Economically, and Socially Sustainable Cage Aquaculture (Pesca) on the African Great Lakes

National Fisheries Resources Research Institute of the National Agricultural Research Organization (NaFIRRI/NARO)

PESCA project is developing a **decision support tool (DST) and BMPs** to guide development or improvement of policies and regulations to improve fish production and profitability from cage aquaculture with minimal impacts on the aquatic environment of the AGLs.

Tanzania Fisheries Research Institute (TAFIRI)

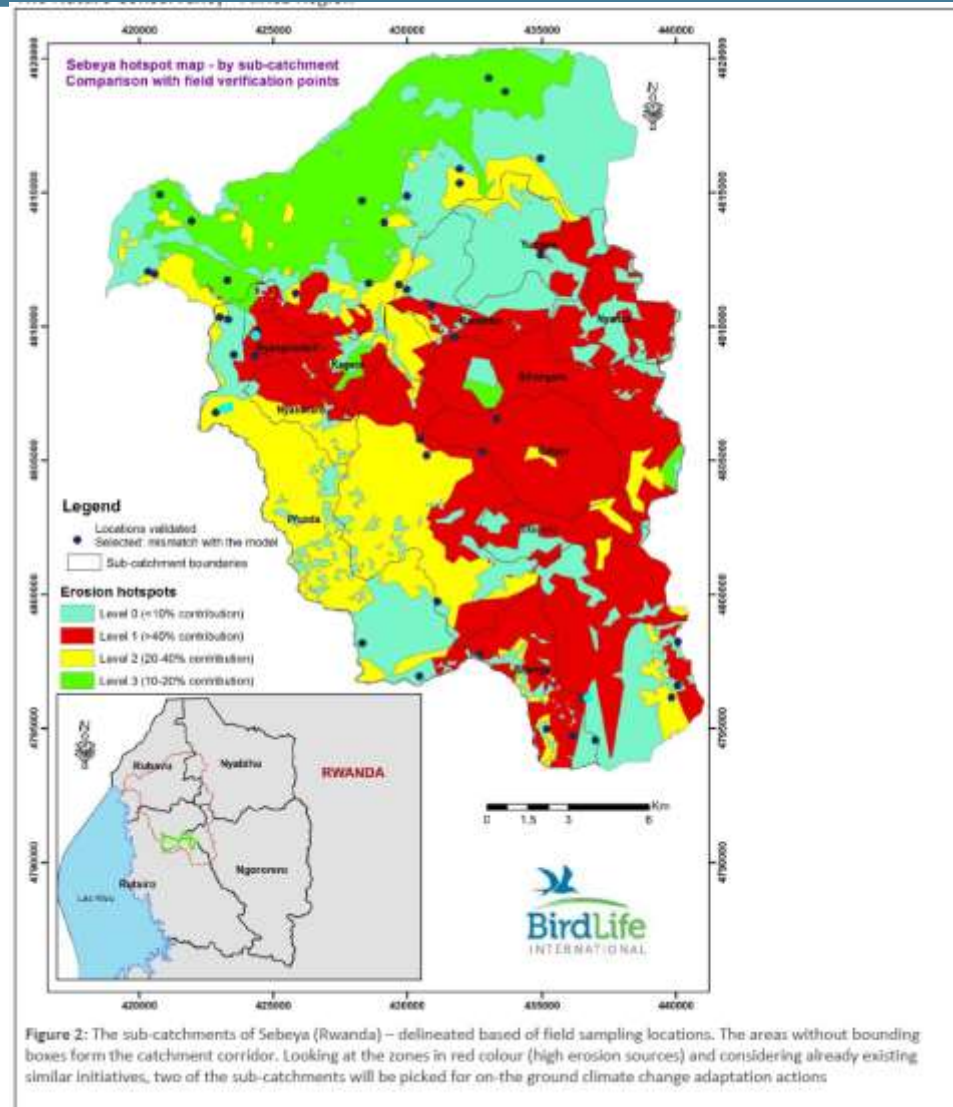e-CAS is a software developed to manage fish catch and related statistics. The software provides an opportunity for fisheries authorities to **engage Beach Management Units in collecting fisheries and related statistics** which are then sent by use of mobile phones to a central computer system for processing and utilization. The system increases the frequency of data collection as per the LTA and LVFO standard operating procedure.

Building the Resilience of Local Communities to Climate Change in the Kivu-Rusizi and Lake Tanganyika Basins, Using Community and Ecosystem-Based Adaptation Approaches

BirdLife International (ABN – Burundi, NaFIRRI)

Building on BirdLife sediment fingerprinting study on the impacts of climate change in the Lakes Kivu and Tanganyika basins, this project will enhance the resilience of communities within the Sebeya and Ruhwa catchments through agroforestry and sustainable agriculture, building capacity for climate change adaptation and disseminating best practices…

Building the Resilience of Local Communities to Climate Change in the Kivu-Rusizi and Lake Tanganyika Basins, Using Community and Ecosystem-Based Adaptation Approaches

Figure 2: The sub-catchments of Sebeya (Rwanda) – delineated based of field sampling locations. The areas without bounding boxes form the catchment corridor. Looking at the zones in red colour (high erosion sources) and considering already existing similar initiatives, two of the sub-catchments will be picked for on-the-ground climate change adaptation actions
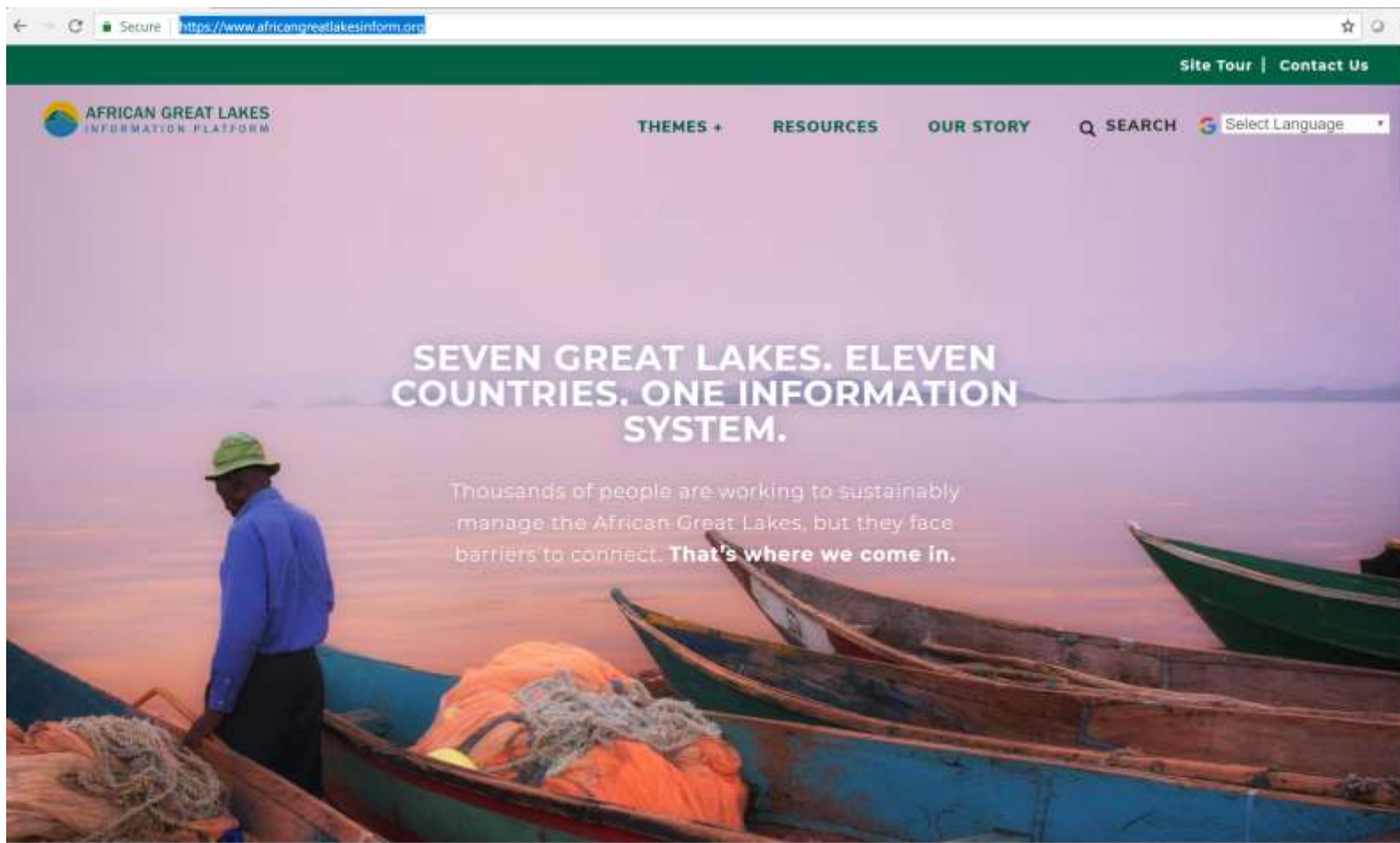
African Great Lakes Information Platform: An Open, Shared and Relevant IT Platform for State of the Art Knowledge and Information Sharing, Learning and Action

African Center for Aquatic Research and Education (ACARE) University of Nairobi (UoN)

African Great Lakes Information Platform (AGLI)...was created to promote research and collaboration and support decision-making to ensure the inter-generational sustainability of the lakes and their basins.

www.africangreatlakesinform.org

In support of the African Great Lakes Conference in 2017, The Nature Conservancy developed and launched an online knowledge management and sharing platform to facilitate the transfer of data and critical resource management strategies.

Current Status

- TNC launched AGLI in 2017.
- Transferred to University of Nairobi and ACARE in 2019.
    - Dan Olago, Evans Miriti, Ted Lawrence, Jess Ives
- Next steps:
    - refining the platform,
    - engaging with key stakeholders in the region, and
    - determining how to incorporate more measures of progress.

Strengthening Capacity in Research, Policy and Management Through Development of a Network of African Great Lakes Basin Stakeholders

African Center for Aquatic Research and Education (ACARE)

ACARE aims to...create lake committees on each of the African Great Lakes...to harmonize and prioritize research, guide regional research efforts, and facilitate communications between partner countries to positively affect freshwater policy and management...

Ideas in Action – Lake Tanganyika

Lake Tanganyika Freshwater Atlas for Sustainable Development and Conservation

<u>**Goal**</u>

Provide **spatially-explicit** conservation and management **information** that identifies priority areas for the protection of **biodiversity** and **ecosystem services**

The role of PHE in fisheries co-management

Key collaboration: Communities, Govt (District-Region-Ministry), TAFIRI, TANAPA, LTA, Basil Univ.,

- ✓ Fisheries management is a subset of environmental conservation complex - community view it as one block
- ✓ TNC – led ecosystem-based approach called Population-Health-Environment (PHE) practiced on L. Tanganyika
- ✓ TNC- Tuungane PHE proves to quickly change community behaviour and improve fisheries co-management
- ✓ Alternative livelihoods reduce fishing pressure and improve fisheries co-mgt.

Cage Aquaculture zoning with BMP on L. Tanganyika
Key collaboration: LTA, MLFD, TAFIRI, NaFiRRI, AU-IBAR, UDSM

- ✓ Workshop in Dar es salaam included key government and AGL experts from East Africa.

- ✓ Key needs and expertise needs for zonation of potential cage aquaculture zones was highlighted.

- ✓ Joint concept note for joint fundraising was developed and is available for potential donors

- ✓ A step-by-step draft zoning guideline for Tanzanian water bodies was developed and is available to be customized in other AGLs

Expansion of fisheries co-management to Zambia
Key collaboration: FZS (Zambia), LTDP, DoF, ZAWA-Nsumbu, VCDC

✓ Scoping survey carried out by TNC in Dec 2016 revealed potential for replicating TNC – Tuungane fisheries co-management package in the Zambian waters of Lake Tanganyika.

✓ A feasibility study carried out early 2018 by TNC in collaboration with FZS confirmed conservation opportunity in Zambian waters through fisheries co-mgt

✓ TNC is collaborating with FZS through grant to implement fisheries management in Zambian water

Role of electronic fish catch data (e-CAS) in AGL

Key collaboration: Districts, TAFIRI, MLFD, LVFO, GIZ?

- ✓ TNC is supporting eCAS work on Lake Tanganyika and L. Victoria on Tanzanian side

- ✓ On Lake Tanganyika, the database has been put in place and it has a provision to be linked with the whole lake Tanganyika

- ✓ by training CAS managers from riparian member states

- ✓ On L. Victoria, TNC work through LVFO & TAFIRI - data managers have been trained in L. victoria Kenya and Uganda sides and pilot e-CAS data collection started

ASANTENI