Project Update: December 2023

Introduction
This progress report describes a series of comprehensive activities undertaken as part of the project titled "Understanding Local Community Perception and the Potential of Sustainable Aquaculture Development in Ecologically Sensitive Areas of Lake Victoria Crescent, Uganda. The activities we conducted included:

Modelling suitable fishpond sites for small scale aquaculture in the ecologically sensitive areas of the Lake Victoria crescent Uganda
In the pursuit of advancing sustainable aquaculture practices within the Lake Victoria crescent, this phase of focused on modelling suitable sites for pond aquaculture. This pivotal activity aimed to identify and assess areas within the Lake Victoria region that are conducive and non-conducive to the establishment of pond-based aquaculture considering the ecologically sensitive areas.

We were able to define and establish comprehensive criteria for selecting suitable sites based on environmental, geographical, and ecological factors, collaborated with experts and stakeholders to ensure a well-rounded understanding of the requirements for successful small-scale aquaculture.
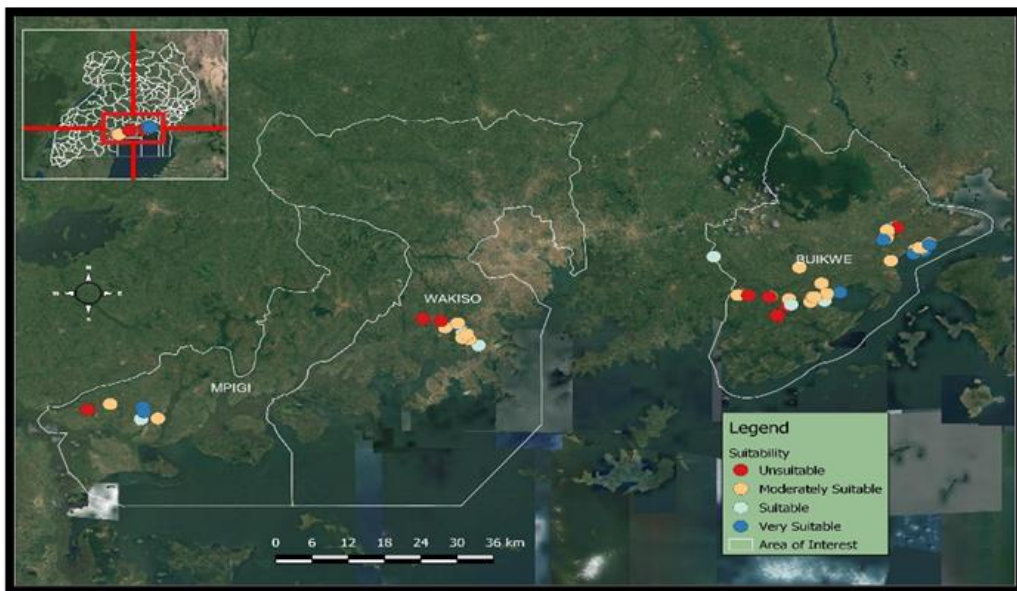

Figure one: Suitability modelling of pond sites in the project area.

We utilised advanced modelling techniques to analyse the collected data and identify potential and non-potential sites with optimal conditions for small scale aquaculture with focus on ponds. In this case, we employed Geographic Information System (GIS) technology to create detailed maps highlighting potential and non-potential sites considering ecological sensitivity. In our analysis, we integrated various layers of data to produce comprehensive visual representations for informed decision-making for the local leaders in the Lake Victoria crescent districts. We were able to map areas that are very suitable (VS), suitable(S), moderately suitable (MS) and unsuitable (US) (Figure 1)

Data collection on the small scale aquaculture technology in the lake Vitoria crescent Uganda

We gathered data from more than 169 community members to gain a comprehensive understanding of their perspectives on sustainable small-scale aquaculture. The collected data underwent thorough analysis to extract clear and insightful information. The objective was to provide policymakers in the project areas with valuable guidance based on the community members' perceptions. This process ensures that decision-makers have a well-informed foundation for crafting effective policies in support of sustainable aquaculture development.

Status of fishponds established in the Lake Victoria crescent.

Consultation with the key informants and fisheries officers within the project area

To establish a robust foundation for a thorough comprehension of community perceptions of sustainable aquaculture, we took additional steps by actively engaging district fisheries officers in the project area. This was help us to gain a clear insights and in-depth perspectives from these officers, who possess valuable expertise and local knowledge. By involving district fisheries officers, we sought to enhance the depth of understanding, ensuring a more comprehensive and nuanced grasp of the community's outlook on the sustainable aquaculture in the Lake Victoria crescent, Uganda.

Figure 2: Project principal investigator interacting with the district aqauacture officer project arae Districts about the state of sustainabe aquaculture in the lake victoria cresent Uganda.

Physical identification and documentation of established ponds in the lake victoria crsent, Uganda

We were able to map and identify various ponds and assess their condition in the ecologically sensitive area. Our focus was on determining the locations of existing ponds. In this effort, we actively engaged with local communities through focus group discussions to gain insights into the factors influencing the selection of pond locations. By understanding the community perspective, we aimed to enhance our efforts in preserving and managing these vital ecological features.

Research assistants observing and recording fishponds established in the area during data collection process.

The key output

- ✓ We successfully assessed the most suitable and non-suitable locations for fishpond development he we focused on factors, water availability, soil quality, and ecological compatibility and we believe the result map or set of guidelines indicating optimal areas for establishing fishponds.
- ✓ We successfully assessed the resource availability for sustainable aquaculture this involved understanding resource availability - water availability, feed sources, and land suitability. The information was shared with the district aquaculture officers and we hope it insights into how aquaculture can be developed sustainably without straining local resources.
- ✓ We empowered over 456 farmers; this was through designing and delivering training programmes on sustainable aquaculture practices. Out training sessions focused on pond management, species selection, water quality, and biodiversity conservation and alternative fish feeds – focused on black soldier fly larvae.

Conclusion

The progress made in the project "Understanding Local Community Perception and the Potential of Sustainable Aquaculture Development in Ecologically Sensitive Areas of Lake Victoria Crescent, Uganda" is significant and promising. The activities undertaken have contributed valuable insights to the overarching goal of promoting sustainable aquaculture practices in the ecologically sensitive areas of the Lake Victoria crescent. We modelled suitable fishpond sites for small-scale aquaculture. Through the integration of advanced modelling techniques and GIS technology, we successfully identified and mapped areas with varying degrees of suitability for pond-based aquaculture. This comprehensive approach, considering environmental, geographical, and ecological factors, provides local leaders in the Lake Victoria crescent districts with informed decision-making tools for the establishment of sustainable aquaculture practices.

Additionally, we engaged with the local community by collecting data from community members to understand their perspectives on sustainable small-scale aquaculture. The analysis of this data not only provided valuable insights into community perceptions but also served as a foundation for crafting effective policies to support sustainable aquaculture development. The emphasis on community input ensures that decision-makers have a well-informed understanding of the needs and preferences of the people in the project areas.

The project took proactive steps by consulting with key informants and district fisheries officers within the project area. This engagement aimed to deepen the understanding of community perceptions by tapping into the expertise and local knowledge of these officers. The collaboration with district fisheries officers enhanced the overall comprehension of sustainable aquaculture in the Lake Victoria crescent, contributing to a more nuanced and comprehensive perspective.

We believe as we move forward, the progress made in these critical areas sets the stage for the next phases of the project, emphasising the importance of sustainability, community involvement, and informed decision-making. The insights gained from modelling, community engagement, and consultation with key informants and fisheries officers will serve as a solid foundation for the development of strategies and policies that promote the sustainable growth of aquaculture in the ecologically sensitive areas of Lake Victoria Crescent, Uganda.

Acknowledgment

has been instrumental in facilitating the research project titled "Understanding Local Community Perception and Potential of Sustainable Aquaculture Development in Ecologically Sensitive Areas of Lake Victoria Crescent.

Other Project Field Photos