



A NOTAKA
TANZANIA INITIATIVE

STUDY MAPPING AND ANALYSIS ON THE CIVIC ENGAGEMENT ON THE CONTEXT OF CLIMATE MOBILITY.

**A Case Study of Nyarugusu
Refugee Camp Area and
Dar es Salaam Coastal Area.**

FUNDED BY AFRICAN UNION CIVIC TECH FUND

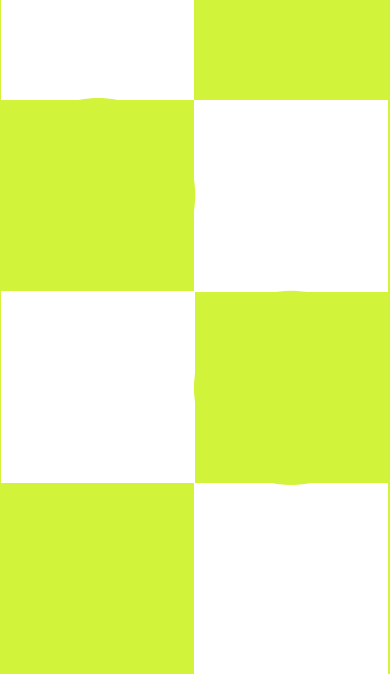
About No Taka Hub

Introducing No Taka Tanzania, a mobile climate action Eco Hub that is using geospatial technology to co-create climate solutions with vulnerable communities in East and Horn of Africa. Our goal is to address the pressing climate induced challenges, predict migration patterns and utilize data for climate adaptation planning.

Geospatial Data Climate Mobility Project - Kigoma, Tanzania.

The project is using Geospatial tools to map out land cover features of areas affected by climate change in the subject area and collect information to be used on sustainable agriculture, aquaculture, influencing land management policies and other social development activities planning. With the tools the project will also access the analysis of complex demographic and land cover data sets building adaptive capacities and providing awareness on social economic linkages for women fishers' livelihoods on the ground. The tools are geared to also inform on frequency in movement and other extra demographic qualities and even predictions of future migration trends.

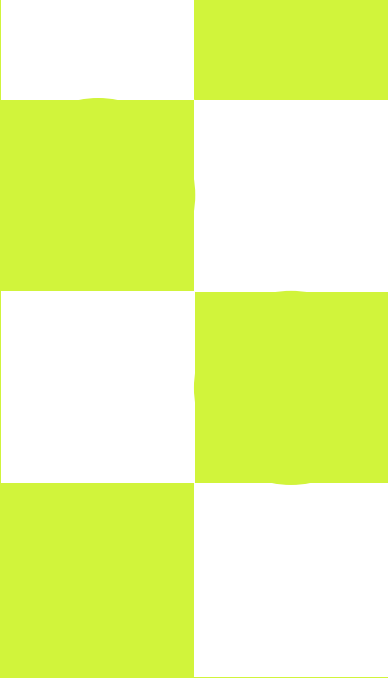




More on the Project

The small-scale fisheries sector has an essential role in transforming the food system of the United Republic of Tanzania. It contributes to ending poverty and hunger through healthy and sustainable diets and equitable livelihoods, and to leaving no one behind in the fight to end hunger and poverty. Gender equality is a basic human right that is fundamental to achieving gender-equitable small-scale fisheries in the United Republic of Tanzania, as more than 220 000 women are estimated to depend on the sector for their livelihoods (FAO, Duke University and WorldFish, 2023). Although women are less present in the harvesting phase of the value chain because of restrictive gender norms, they are largely engaged in post-harvest activities such as processing and trading. At the household level, women play an essential role in food and nutrition security through their responsibilities in provision and preparation of food consumed in their home.

However, climate warming has become one of the major drivers in the decline of the other major basin in the United Republic of Tanzania: Lake Tanganyika. The rise of water temperatures because of climate change in the next few decades is likely to put pelagic life at risk, including dagaa. This would mean exposing communities and vulnerable groups to an increased risk of food insecurity, including women relying on this species for their livelihood activities and revenues in the value chain. Therefore, it is crucial for sustainable management practices to be implemented in order to protect the ecosystem of Lake Tanganyika. This will help ensure the long-term food security and economic stability of these communities. This then further exacerbates the vulnerability of women in these communities, as they may have limited alternative sources of income or food security in the face of climate change. This can perpetuate a cycle of poverty and dependence on natural resources for survival. . It is crucial that efforts are made to address these vulnerabilities and provide women with sustainable income opportunities. Further research and understanding of how climate change is affecting the economic opportunities for these vulnerable women and how it influences their decisions to move or remain in their home communities to access opportunities is crucial, as Lake Tanganyika, which is situated between Tanzania and the Congo, poses a bridge for human mobility in the face of these climate impacts. . It is crucial that efforts are made to address these vulnerabilities and provide women with sustainable income opportunities.



Objectives:

- To utilize geospatial technology to map demographic and climate related data.
- To analyze the socio-economic impact of these environmental changes on women in the fishing industry and small holder sector.
- To influence local district decision makers and build their capacity process, the learning will be used to advocate for this particular cause at different policy processes.
- To advise on optional practises of climate adaptation and possibly later inform a pilot solution project from the analysis.
- To create concrete adaptation plans with Local Government Authorities.

The Study:

Introduction:

Climate change is a global phenomenon with profound local impacts, particularly on vulnerable populations such as migrant and refugee women. This research analysis focuses on the Nyarugusu Refugee Camp in Tanzania, examining how climate change exacerbates existing vulnerabilities and creates new challenges for women in these communities. By understanding these impacts, we can develop targeted interventions to enhance resilience and improve the quality of life for migrant/refugee women.

The Study:

SITUATIONAL CONTEXT!

Situational Context:



Climate Change and Migration Nexus.

However, climate warming has become one of the major drivers in the decline of the other major basin in the United Republic of Tanzania: Lake Tanganyika. The rise of water temperatures because of climate change in the next few decades is likely to put pelagic life at risk, including dagaa. This would mean exposing communities and vulnerable groups to an increased risk of food insecurity, including women relying on this species for their livelihood activities and revenues in the value chain. Therefore, it is crucial for sustainable management practices to be implemented in order to protect the ecosystem of Lake Tanganyika. This will help ensure the long-term food security and economic stability of these communities.

This then further exacerbates the vulnerability of women in these communities, as they may have limited alternative sources of income or food security in the face of climate change. This can perpetuate a cycle of poverty and dependence on natural resources for survival. . It is crucial that efforts are made to address these vulnerabilities and provide women with sustainable income opportunities.

Gendered Impact of Climate Change

Women, particularly in the lake area settings, face unique challenges due to climate change. These challenges are often compounded by pre-existing gender inequalities, limited access to resources, and socio-cultural constraints. The following sections delve into the specific impacts of climate change on women in this area.



Impact on Health and Well-being

Health and Well-being

Climate change exacerbates health risks for women in fishing communities. Prolonged droughts and extreme weather events can lead to water scarcity, poor sanitation, and the spread of waterborne diseases. Women, who are often responsible for fetching water, face increased exposure to these health risks. Additionally, malnutrition resulting from food insecurity disproportionately affects women and children, weakening their immune systems and making them more susceptible to illnesses.

Quantitative Data: Out of the 105 women sampled, 65% reported experiencing waterborne diseases, and 70% reported malnutrition-related health issues.

Mental Health

The psychological impact of climate change on small women fishers is profound. The stress of displacement, coupled with the uncertainty of their future and the daily struggle for survival, can lead to mental health issues such as anxiety, depression, and post-traumatic stress disorder (PTSD). The lack of mental health services in these communities further exacerbates these issues, leaving women without the necessary support to cope with their trauma.

Quantitative Data: Among the 105 women sampled, 60% reported symptoms of anxiety and depression, and 40% showed signs of PTSD.

Livelihoods Opportunities

Climate change significantly impacts the economic opportunities available to small women fishers. In Kigoma, the prolonged dry spell has led to reduced fish stocks and the death of livestock, which are primary sources of livelihood for many families. Women, who often engage in small-scale fishing and livestock rearing, face the brunt of these economic losses. The scarcity of resources also limits their ability to engage in alternative income-generating activities, trapping them in a cycle of poverty.

Quantitative Data: 75% of the 105 women sampled reported a loss of livelihood due to reduced fish stocks and livestock death.

Access to resources

The competition for scarce resources in fishing communities often leads to unequal distribution, with women frequently being marginalized. Limited access to land, water, and financial resources hinders women's ability to rebuild their lives and secure sustainable livelihoods. This economic marginalization not only affects their immediate well-being but also limits their ability to invest in their children's education and future.

Quantitative Data: 80% of the women sampled reported limited access to essential resources, and 85% indicated that this limitation affected their children's education.

Gender-based Violence

Climate change exacerbates the risk of gender-based violence (GBV) in fishing communities. The scarcity of resources and the stress of displacement can lead to increased domestic violence. Additionally, women and girls are at higher risk of sexual violence when fetching water or firewood in isolated areas. The lack of adequate protection and legal recourse in these communities further perpetuates this cycle of violence.

Quantitative Data: 50% of the 105 women sampled reported experiencing gender-based violence.

Social Networks and Support Systems

The displacement caused by climate change disrupts social networks and support systems that women rely on for emotional and practical support. In fishing communities, women often find themselves isolated from their extended families and communities. This isolation makes it more challenging to cope with the stresses of displacement and to access the support they need to rebuild their lives.

Quantitative Data: 65% of the women sampled reported a loss of social support networks.

Socio-Economic Impact



Environmental and Institutional Impact

Land Degradation

The influx of migrants into fishing communities like those in Kigoma puts significant pressure on the local environment. Deforestation for firewood, overfishing, and unsustainable agricultural practices contribute to land degradation. Women, who are primarily responsible for collecting firewood and managing household resources, face the direct impact of environmental degradation. The scarcity of natural resources increases their daily workload and exposes them to greater risks.

Water Scarcity

Prolonged droughts and changing rainfall patterns due to climate change have led to severe water scarcity in fishing communities. Women, who are traditionally responsible for water collection, have to travel longer distances to find water, exposing them to physical strain and potential violence. The lack of clean water also affects their ability to maintain hygiene and sanitation, leading to health issues.

Quantitative Data: 70% of the women sampled reported traveling longer distances for water, and 60% reported health issues related to poor sanitation.

Access to Services

The provision of essential services such as healthcare, education, and legal protection in fishing communities is often inadequate. Climate change exacerbates these inadequacies by increasing the demand for services and straining the limited resources available. Women, who already face barriers to accessing services due to gender discrimination, find it even more challenging to get the support they need.

Participation in Decision-making

Women in fishing communities often have limited opportunities to participate in decision-making processes that affect their lives. Climate change adaptation and mitigation strategies are frequently designed without considering the specific needs and perspectives of women. This exclusion not only undermines the effectiveness of these strategies but also perpetuates gender inequalities.

Quantitative Data: 75% of the women sampled reported being excluded from decision-making processes.

The Project

LAKE TANGANYIKA KIGOMA
MUNICIPAL FISHING
COMMUNITIES.

Background:

The Kigoma region, located in northwestern Tanzania, is home to numerous small fishing communities that rely heavily on Lake Tanganyika for their livelihoods. These communities face numerous challenges, including limited access to basic services, inadequate infrastructure, and environmental degradation.

Impact of Climate Change on Women in Kigoma Health and Well-being

The prolonged dry spell in northwestern Tanzania has led to water scarcity and poor sanitation in Kigoma's fishing communities. Women, who are responsible for water collection, face increased health risks due to the lack of clean water. The stress of displacement and the daily struggle for survival also take a toll on their mental health, with many women experiencing anxiety and depression.

Economic Opportunities

The dry spell has led to reduced fish stocks and the death of livestock, which are primary sources of livelihood for many families in Kigoma. Women, who engage in small-scale fishing and livestock rearing, face significant economic losses. The scarcity of resources limits their ability to engage in alternative income-generating activities, trapping them in a cycle of poverty.

Gender-based Violence

The scarcity of resources and the stress of displacement have led to increased incidents of gender-based violence in Kigoma's fishing communities. Women and girls are at higher risk of sexual violence when fetching water or firewood in isolated areas. The lack of adequate protection and legal recourse in these communities further perpetuates this cycle of violence.

Environmental Degradation

The influx of migrants into Kigoma has put significant pressure on the local environment. Deforestation for firewood, overfishing, and unsustainable agricultural practices have led to land degradation. Women, who are primarily responsible for collecting firewood and managing household resources, face the direct impact of environmental degradation.

The Project

UNCHARTED WATERS: THE UNSEEN ISSUES OF CLIMATE MIGRATION ON TANZANIAN FISHERS

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

Climate migration has significantly impacted smallholder fishers in Tanzania, particularly those migrating from Kigoma to Dar es Salaam. In Dar es Salaam, the focus has been on building capacity for a sustainable blue economy, emphasizing community engagement in marine conservation and sustainable fishing practices.

Local fishers have been educated on the impacts of climate change, which include environmental degradation and reduced fish stocks, leading to economic challenges for small-scale fishermen. These challenges have prompted migration to other coasts in search of better opportunities.

In Kigoma, the prolonged dry spell has exacerbated water scarcity and poor sanitation, affecting the health and economic opportunities of local communities, particularly women. The reduction in fish stocks and livestock deaths have further strained economic resources, leading to increased migration.

Notably, No Taka Tanzania has found that 40% of migrant fishers in the researched Dar es Salaam coast originate from Kigoma coast, driven by these climate-induced challenges. This migration has also led to increased pressure on local environments, highlighting the need for sustainable practices and support for affected communities.

The climate migration challenge has not only affected women fishers but also smallholder service providers, such as food vendors who cater to the fishing communities. These vendors face economic hardships as reduced fish stocks lead to decreased demand for their services. Additionally, disputes have arisen between native and migrant fishers over fishing practices. Native fishers often accuse migrants of using destructive methods that harm the environment, exacerbating tensions as migrants are unfamiliar with local sustainable practices.

Cultural beliefs further complicate the situation, particularly for women fishers. In some communities, women are isolated from using boats and must rely on men to transport them to fishing areas. This is due to cultural myths that menstruation cycles negatively impact the climate, allegedly causing fish decline and water level rise. These beliefs not only limit women's economic opportunities but also perpetuate gender inequality within the fishing industry.

The Project

UNCHARTED WATERS: THE UNSEEN ISSUES OF CLIMATE MIGRATION ON TANZANIAN FISHERS

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

Objective:

To amplify the voices of women in the fishing community by collecting their stories .This initiative aims to highlight the unique challenge they face , both socially and economically to foster a supportive environment where their contributions are recognized and valued . By documenting these narratives , the program seeks to advocate for gender equality and empower women to play a more significant role in decision making processes related to marine resources

Supporting objective:

To build capacity on a sustainable blue economy , participants will learn about sustainable fishing practices , the principles of blue economy and importance of Marine Protected Areas. This session aims to equip local fishers with knowledge to engage in environmentally friendly practices that ensure the long term viability of marine resources

Duration: A5 day consultation with around 200 smallholder fishers and entrepreneurs in the Lake Tanganyia - Kigoma Municipal area and a two days event designed for consultation and capacity building on blue economy and impacts of climate change with around 30 smallholder fishers and entrepreneurs in the Dar es Salaam coast - Msasani area:

- Collecting stories from women fishers
- Building capacity in sustainable blue economy for fishers and decision makers
- Facilitating a general focus group discussion on climate change

Description Of Activities

Stories of women fishers : the women were engaged in guided discussions to share their opinions on blue economy , climate change as well as their socio- economic challenges that they face in their fishing activities and the related. The women's views and perceptions were explored , as they actively engaged in the general focus group discussions , depicting their role in economic development in the fishing

The Project

UNCHARTED WATERS: THE UNSEEN ISSUES OF CLIMATE MIGRATION ON TANZANIAN FISHERS

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

Capacity Building On Sustainable Blue Economy.

Facilitation conducted to enhance community engagement in the decision making processes for marine conservation and sustainability

Knowledge shared to the local fishers to empower the group of fishers that are determined to achieve economic resilience while protecting the marine resources. With the knowledge on blue economy, climate change impact and economic resilience the promotion of environmentally sustainable practices has been enabled, ensuring long term viability of fish stocks and healthy aquatic ecosystems.

General Focus Group Discussions.

Local fishers were involved in a general discussion on the blue economy, climate change, economic resilience and the issues related to fishing activities. The following includes the general perceptions and contributions of the local fishers on the topics throughout the training sessions:

Activities causing climate change:

- Human activities
- Natural disasters
- Changes or use of technology

Effects of climate change on fishing activities:

Ecosystems are increasingly affected, especially due to climate change, because of carbon emissions or pollution from industries, which is the reason for the impact of climate change on fishing activities.

Fishing methods harmful to the environment:

- Bomb fishing
- Longline nets
- Ringnet: Dredging sand on reefs and islands, dragging stones, leaving net pieces on corals, fishing in prohibited areas
- Explosives
- Traps
- Kokoro

The Project

UNCHARTED WATERS: THE
UNSEEN ISSUES OF CLIMATE
MIGRATION ON TANZANIAN
FISHERS

ADAPTATION PLAN

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

With collaboration with Local Government leaders, Fisheries Authority and Fishers we came up with a blueprint design of climate adaptation plan and strategy on sustainable fishing (to be further advanced in availability of funds). Find below the key points of the plan:

Environmentally friendly fishing methods include:

- Trap fishing
- Line and hook fishing
- Jarife net fishing
- Night fishing with small nets
- Octopus fishing using spears
- Net fishing starting from 3 nautical miles
- Silence

Challenges in fishing activities:

- Environmental degradation
- Illegal fishing
- Lack of cooperation from other organizations
- High fees (Licenses, Taxes)
- Poor markets
- Inadequate fishing equipment

Effects of climate change on the environment:

- Soil erosion (beaches)
- Decline in the economy of fishermen, especially small-scale fishermen

Value chain in fishing activities:

Process:

1. Availability of capital, fuel, bait, line, hook, food, and fish storage equipment
2. Harvesting:

The Project

UNCHARTED WATERS: THE
UNSEEN ISSUES OF CLIMATE
MIGRATION ON TANZANIAN
FISHERS

ADAPTATION PLAN

Peculiar Study Findings. - A Dar EsSalaam Coast Project extension.

There are many ways of harvesting; we use a line and hook to go to the allowed area, then anchor the vessel and start harvesting.

Fish bait:

- Pieces of squid
- Small shrimps
- Fish
- Rice fish
- Marine worms
- Crabs
- Beans
- Specially made baits sold in fishing areas

Challenge: Due to climate change, harvests have decreased, making it uncertain for small-scale fishermen to catch even a few fish per day compared to previous years.

1. **Post-harvest:**

Remove the anchor and return to the port, then start looking for a market to sell.

The products are sold through auctions without a fixed price; sales depend on the market of the day.

2. **Processing:**

Start by preparing fish processing tools like knives, machetes, boards, tables, water for washing fish, and buckets for waste water. Then, process the fish by separating usable parts, e.g., scales, guts, cheeks, etc., and clean the processing area. This activity also involves non-fishermen who handle processing.

3. **Selling:**

There are two ways to sell; the first is to sell fish without processing and the second is to sell after processing.

- The market used to sell these fish is Mwaloni. Sales are done by auction and negotiation.
- The price of fish or seafood depends on the quantity and size of the fish.

The Project

UNCHARTED WATERS: THE
UNSEEN ISSUES OF CLIMATE
MIGRATION ON TANZANIAN
FISHERS

ADAPTATION PLAN

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

4. Distribution

- Distribution is done in two ways; wholesale and retail, while considering markets.
- Distribution is carried out by traders who are responsible for fish sales.

Challenges in the value chain:

- Waste generated in fishing activities
- Packaging of fishing equipment and food residues
- Fish waste - Bones, scales, guts, cheeks
- Some fish produce a lot of waste, e.g., Tenga, Nduaro, Chewa, Jodari, and others.

Suggested ways to add value to fish products:

- Proper methods of preserving fish and seafood
- Factors that reduce the value of fish or seafood
- Fishing methods used
- Fish preservation methods
- Market deterioration for selling fish
- Poor transportation methods for fish and seafood

Discussed Sustainable fishing methods:

- In a general discussion, fishermen agreed on sustainable fishing methods after being empowered on these sustainable methods and how they consider environmental conservation for the following reasons:
- These methods are legally accepted
- Sustainable fishing methods do not harm marine life
- Conservation and preservation of the environment
- Contribution of these methods to the growth of seagrass
- They allow marine life to have time to reproduce
- How to use these sustainable fishing methods; availability of education on how to use these sustainable methods

The Project

UNCHARTED WATERS: THE
UNSEEN ISSUES OF CLIMATE
MIGRATION ON TANZANIAN
FISHERS

ADAPTATION PLAN

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

Challenge: Cost, long time hours spent in this type of fishing, bait costs emerged as the common ones.

In general, fishermen have outlined how fishing is done, how they earn their daily income. Climate change has contributed to the reduction in availability and distribution of fish, thus posing a challenge to the fishing sector, affecting small-scale fishermen's activities. Also, in discussing the fishing sector, challenges include:

- Lack of modern boats for fishing activities
- Lack of quality equipment
- Lack of capital

If these challenges are addressed, they will provide an opportunity for fishermen to engage in modern and sustainable fishing, thus allowing fishermen to grow economically and conserve the environment and sea beaches.

Participants

The project involved 30 participants and stakeholders from Kinondoni Municipal and Beach Management unit based in the Msasani Ward, Kinondoni, Dar es Salaam

Data Collection

The project involved the data collection activities that provided a platform for women to share their insights and perspectives on social and economic challenges related to fishing activities and the impacts of climate change. Empowering women through amplifying their voices in order for them to be built for their active participation in the decision making processes related to marine resources.

No taka Tanzania conducted a data tool capturing session, group and individual interviews that were geared by the general discussions that women were part and parcel of, discussing the socio-economic challenges that affected their fishing activities.

The Project

UNCHARTED WATERS: THE UNSEEN ISSUES OF CLIMATE MIGRATION ON TANZANIAN FISHERS

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

The individual interviews among women was effective as it enabled the women to share their perceptions and attitudes from their own point of view and experience. The method involved suited the project goal , nature of data to be collected, resources available and the target population.

Project Outcomes

The project was centered around the environmental sustainability thus the marine protected areas significance was shared through a session on blue economy hence was the drive of the discussion that was meant to bring awareness of sustainable use of fish resources. The project comprised of the following outcomes Outcomes:

1. Economic impacts through capacity building to the 30 participants.

The local fishers were equipped with the principles and significance of blue economy , thus boosting their knowledge on how to add value to their fish products , for their economic growth

2. Improved understanding and adaptation strategy on significance of sustainable fishing techniques and practices.

The local fishers engaged in the deep diving of the sustainable fishing techniques and practices, dissecting their applicability and developed an action plan on incorporating these techniques for sustainability and environmental conservation.

3. Gender equality awareness among local fishers in the fishing community.

The women were empowered as being the priority of the project in terms of number and priority in leading the discussions , this has been supported by the men fishers who cooperated in discussion making the sessions lively and gender balanced.

The Project

UNCHARTED WATERS: THE
UNSEEN ISSUES OF CLIMATE
MIGRATION ON TANZANIAN
FISHERS

Peculiar Study Findings. - A Dar Es Salaam Coast Project extension.

Project Challenges:

During the implementation of our project, we faced several challenges that impacted our progress and required strategic adjustments:

1. Closure of Lake Tanganyika Shores: Due to concerns over fish loss, the government initiated a maintenance and recovery program that lasted for four months. This closure made it difficult to access fishers, as many migrated to other areas, disrupting our project activities.

2. Migration of Fishers: The closure prompted fishers to migrate, which necessitated relocating our capacity-building sessions to the Dar es Salaam coast. This shift required additional logistical planning and resources to accommodate the new location.

3. Prolonged Government Permit Processes: The project experienced delays due to extended government permit processes. These bureaucratic hurdles slowed down our implementation timeline and required continuous follow-up to ensure compliance and obtain necessary approvals.

These challenges required adaptive strategies to ensure the project's continuity and success hence the adaptability strategy to Dar es Salaam.

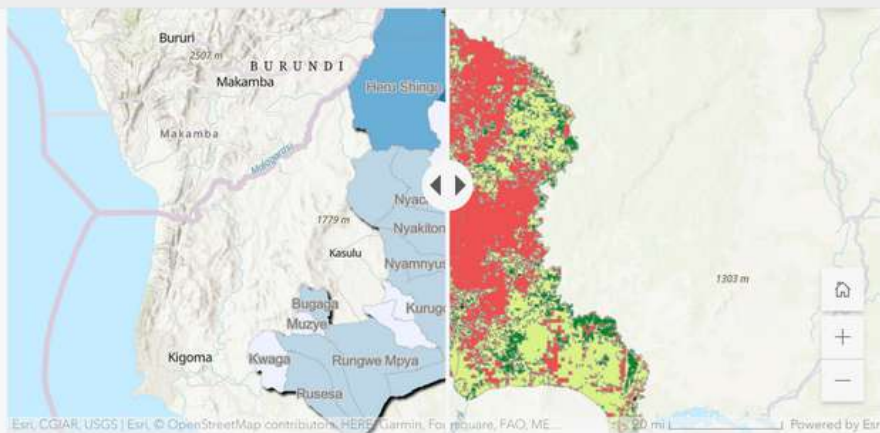
Case Study:

UNCHARTED WATERS: THE UNSEEN ISSUES OF CLIMATE MIGRATION ON TANZANIAN FISHERS

Climate Mobility - Geospatial Data Project

☆ 📄 ...

[Introduction](#) [Methodology](#) [Analysis](#) [Recommended Actions](#) [Map Gallery](#) [Acknowledgment](#)



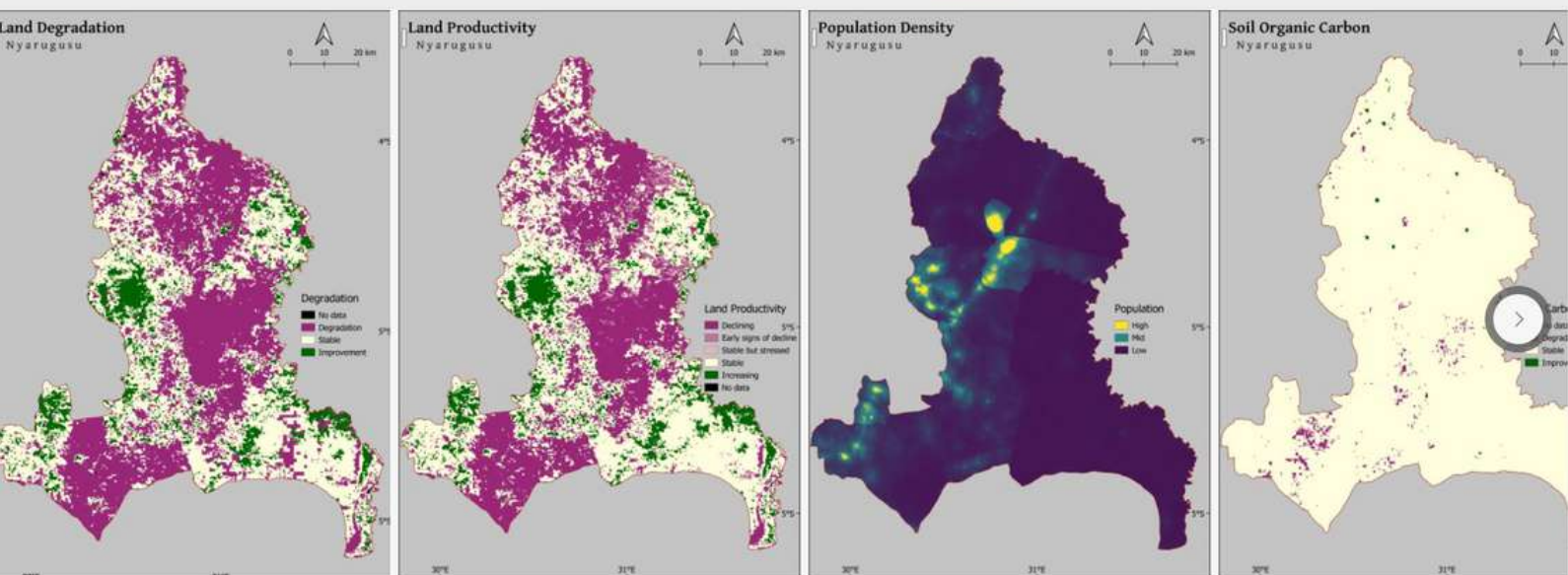
Comparison Maps

Remarkably, this study also underscores the reciprocal relationship between population density and land degradation. Invariably, areas with denser populations, and consequently more intensive human activities, are prone to higher degrees of land degradation. This correlation

Climate Mobility - Geospatial Data Project

☆ 📄 ...

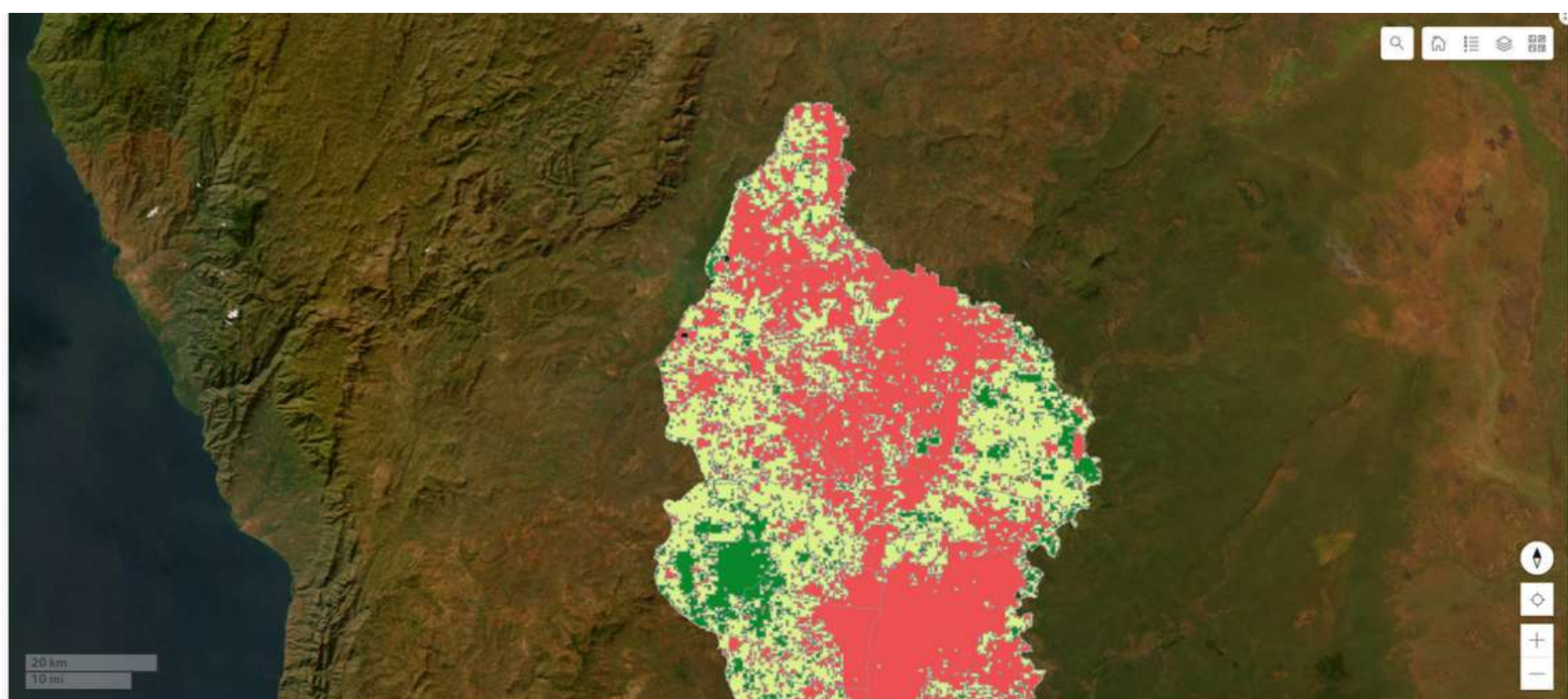
[Introduction](#) [Methodology](#) [Analysis](#) [Recommended Actions](#) [Map Gallery](#) [Acknowledgment](#)



Maps produced

Case Study:

UNCHARTED WATERS: THE UNSEEN ISSUES OF CLIMATE MIGRATION ON TANZANIAN FISHERS





RECOMMENDATIONS

For Development Actors.

Health Services: Improve access to healthcare services, including mental health support, for women in fishing communities. Mobile clinics and community health workers can be deployed to provide essential services.

Economic Empowerment: Implement livelihood programs that provide women with alternative income-generating activities. Skills training and microfinance initiatives can help women start small businesses and become economically self-sufficient.

Protection from GBV: Establish safe spaces and support services for survivors of gender-based violence. Strengthen legal frameworks and enforcement mechanisms to protect women from violence.

Stories of Change

(These stories are dubbed hypothetical names of women in the project area to protect their privacy and respect their rights).



Story 1: Mega's Struggle with Water Scarcity

Mega, a 35-year-old mother of four, has lived in a small fishing village in Kigoma for over a decade. The prolonged drought has made water collection a daily struggle. She now walks over 10 kilometers each day to fetch water, which has taken a toll on her health and limited her ability to care for her children. Despite these challenges, Mega remains in the village, hoping for improved water management solutions.



Story 2: Zoena's Economic Hardship

Zoena, a 28-year-old widow, relied on small-scale fishing to support her family. The dry spell led to reduced fish stocks, leaving her without a stable income. She attempted to start a small business but faced numerous obstacles due to resource scarcity. Zoena's economic hardship forced her to consider relocating to an urban area in search of better opportunities in urban markets but faced the constraint of finances to embark on that new journey.

Stories of Change

(These stories are dubbed hypothetical names of women in the project area to protect their privacy and respect their rights).



Story 3: Diwani's Mental Health Struggles

Diwani, a 22-year-old single woman, has been deeply affected by the psychological stress of displacement and climate change. The uncertainty in her work environment and the daily struggle of lacking PPE have led to severe anxiety and depression. Without access to mental health services, Diwani feels isolated and hopeless, contemplating what to do next.



Story 4: Ankara's Fight Against Gender-Based Violence

Saida, a 30-year-old mother of two, faces the constant threat of gender-based violence as she moves to fend for the children. The scarcity of resources has led to increased domestic violence, and Saida has been a victim multiple times. She fears for her safety and that of her children, making her consider moving to a different community or even returning to her home country despite the risks.

Stories of Change

(These stories are dubbed hypothetical names of women in the project area to protect their privacy and respect their rights).



Story 5: Mwanauzuri's Environmental Challenges

Mwanauzuri, a 40-year-old community leader, has witnessed the severe environmental degradation in Kigoma. As someone responsible for catching sardines, she has seen firsthand the impact of deforestation and land degradation on water level rise. Mwanauzuri advocates for sustainable practices within the community but struggles with limited resources and support. Her commitment to her community seeks to empower women working towards a better future.

These individual stories highlight the diverse ways in which climate change impacts small women fishers and influence their decisions to move or stay. Each story underscores the need for targeted interventions to address their unique challenges and improve their quality of life.

Recommendations Targeted Interventions.



RECOMMENDATIONS

For Development Actors.

Health Services: Improve access to healthcare services, including mental health support, for women in fishing communities. Mobile clinics and community health workers can be deployed to provide essential services.

Economic Empowerment: Implement livelihood programs that provide women with alternative income-generating activities. Skills training and microfinance initiatives can help women start small businesses and become economically self-sufficient.

Protection from GBV: Establish safe spaces and support services for survivors of gender-based violence. Strengthen legal frameworks and enforcement mechanisms to protect women from violence.

Recommendations Targeted Interventions.



RECOMMENDATIONS

Environmental Management, Policy & Institutional Reforms .

Sustainable Resource Use: Promote sustainable agricultural practices and reforestation initiatives to mitigate land degradation. Provide women with training and resources to adopt these practices.

Water Management: Implement water conservation and management strategies to address water scarcity. Rainwater harvesting and the construction of boreholes can provide reliable water sources for fishing communities.

Inclusive Decision-making: Ensure that women are included in decision-making processes related to climate change adaptation and mitigation. Establish women's committees and provide platforms for their voices to be heard.

Access to Services: Strengthen the provision of essential services in fishing communities. Collaborate with international organizations and NGOs to improve healthcare, education, and legal protection for women.

Concluding Remarks

Climate change has a profound impact on small women fishers, exacerbating existing vulnerabilities and creating new challenges. In Kigoma, women face significant health, economic, social, and environmental challenges due to climate change. By implementing targeted interventions, promoting sustainable resource use, and ensuring inclusive decision-making, we can enhance the resilience of small women fishers and improve their quality of life. Addressing the unique needs of these women is not only a matter of justice but also a crucial step towards building sustainable and resilient communities in the face of climate change.

The Team



Executive Director/Data Lead

Careen Joel Mwakitalu



Program Lead

Sekela Richard



Program Manager - Climate Mobility

Melyne Susie Mani Berya



Community Manager

Richard Mahwata



Program Officer

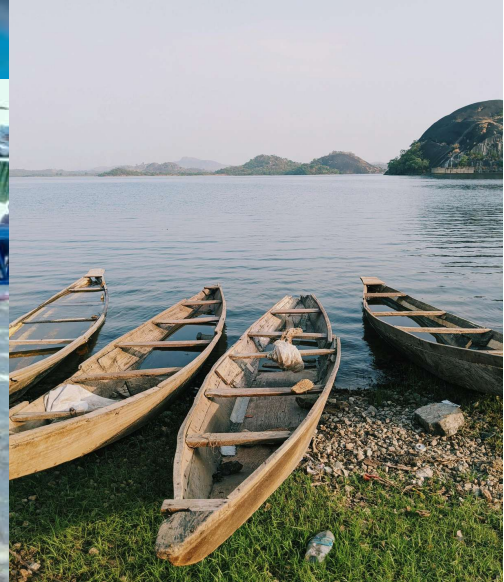
Eshe Simely



Finance Manager

Monjesta Dickson

Project Photos





Climate Adaptation Plan - Women Fishers Blueprint Dar & Kigoma Municipalities.



INTRODUCTION

This extended climate adaptation plan is tailored for women fishers in Kasulu District, Kigoma, addressing the challenges posed by climate change, such as fish decline and water level rise. The plan provides detailed strategies, actions, and supporting information to promote aquaculture as an alternative livelihood method. This plan ensures effective implementation and replication in other communities.

Objectives

1. **Utilize Geospatial Technology:** Leverage geospatial tools to monitor ecosystem changes and analyze socio-economic impacts on women fishers.
2. **Influence Policy and Governance:** Engage with local and national government to advocate for gender-equitable policies and sustainable practices.
3. **Promote Sustainable Fishing Practices:** Educate women fishers on sustainable methods and the principles of the blue economy.
4. **Enhance Livelihood Opportunities:** Develop alternative income-generating activities and provide skills training.
5. **Improve Health and Well-being:** Address health risks and provide mental health support.
6. **Strengthen Social Networks and Support Systems:** Rebuild social support systems and enhance community resilience.

Climate Adaptation Plan - Women Fishers Blueprint Kigoma Municipal.

Key Challenges

Environmental Degradation: Deforestation, overfishing, and unsustainable practices leading to land degradation.

Water Scarcity: Prolonged droughts and changing rainfall patterns affecting water availability.

- **Economic Vulnerability:** Reduced fish stocks and limited alternative income sources.
- **Gender-based Violence:** Increased risk of violence due to resource scarcity and displacement.
- **Limited Access to Resources:** Marginalization in resource distribution and decision-making processes.

Strategies and Actions

1. Sustainable Resource Management

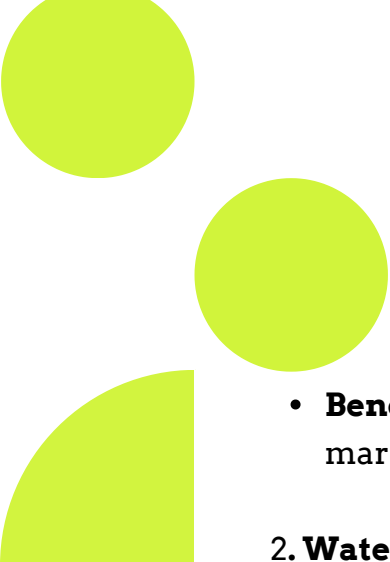
Activities:

- **Implement Environmentally Friendly Fishing Methods:** Train women fishers in techniques such as trap fishing and line and hook fishing, which are less harmful to marine life.
- **Conduct Workshops on Reforestation and Sustainable Agriculture:** Organize community workshops to educate on the importance of reforestation and sustainable farming practices.
- **Develop Community-led Monitoring Systems:** Establish local committees to monitor ecosystem health and report changes.

Supporting Information

Table 1: Comparison of Fishing Methods

Method	Environment al Impact	Sustainability
Trap Fishing	Low	High
Line and Hook Fishing	Low	High
Bomb Fishing	High	Low



Climate Adaptation Plan - Women Fishers Blueprint Kigoma Municipal.

- **Benefits of Sustainable Practices:** These methods help preserve marine biodiversity and ensure long-term fish availability.

2. Water Management

Activities

- **Construct Rainwater Harvesting Systems and Boreholes:** Implement infrastructure projects to capture and store rainwater, providing a reliable water source.
- **Train Women in Water Conservation Techniques:** Educate women on efficient water use and sanitation practices to reduce wastage.

Supporting Information

Table 2: Water Management Techniques

Technique	Description
Rain Water Harvesting	Collecting and Storing Rain Water for Use
Bore Hole Construction	Drilling Wells to Access Ground Water

- **Impact:** Improved water access reduces health risks and supports agricultural activities.

Climate Adaptation Plan - Women Fishers Blueprint Kigoma Municipal.

3. Economic Empowerment

Activities

- Establish Microfinance Programs: Provide financial services to women to start or expand small businesses.
- Provide Vocational Training: Offer training in alternative livelihoods such as aquaculture, crafts, and entrepreneurship.
- Create Market Linkages: Develop networks to connect women fishers with buyers and markets.

Supporting Information

Table 3: Economic Opportunities

Opportunity	Description
Microfinance	Access to small loans and financial services.
Vocational Training	Skills development for alternative livelihoods

- **Benefits:**

Economic empowerment leads to increased income and reduced poverty.

4. Health and Well-being

Activities

- Deploy Mobile Clinics: Provide healthcare services, including mental health support, directly to communities.
- Organize Health Awareness Campaigns: Educate on nutrition, hygiene, and disease prevention.

Climate Adaptation Plan - Women Fishers Blueprint Kigoma Municipal.

Supporting Information

• Table 4: Health Services

Service	Description
Mobile Clinics	On site health care services
Health Campaign	Community education on health issues

Impact: Improved health outcomes and reduced disease prevalence.

5. Social and Institutional Support

Activities

- **Form Women's Committees:** Establish groups to ensure women's participation in decision-making.
- **Strengthen Legal Frameworks:** Advocate for policies that protect women from violence and discrimination.
- **Develop Partnerships:** Collaborate with NGOs and government agencies for resource mobilization.

Supporting Information

Table 5: Institutional Support

Support Mechanism	Description
Women Committees	Groups for advocacy and decision making
Legal frameworks	Policies to protect women's rights



Climate Adaptation Plan - Women Fishers Blueprint Kigoma Municipal.

Benefits: Empowered women contribute to community resilience and development.

6. Community Engagement and Education

Activities

- **Conduct Capacity-building Sessions:** Educate on the blue economy and sustainable practices.
- **Facilitate Focus Group Discussions:** Provide platforms for women to share experiences and solutions.

Supporting Information

Table 6: Community Engagement

Engagement Activity	Description
Capacity building	Training on sustainable practices
Focus groups	Discussions to share knowledge and ideas

Roadmap

1. Phase 1: Assessment and Planning (Months 1-3)

- Conduct baseline studies to assess current challenges and resources.
- Engage stakeholders and form partnerships with local government and NGOs.

2. Phase 2: Implementation (Months 4-12)

- Roll out training programs and workshops.
- Establish microfinance initiatives and market linkages.
- Begin construction of water management systems.

3. Phase 3: Monitoring and Evaluation (Months 13-18)

- Monitor progress and impact of implemented strategies.
- Adjust plans based on feedback and outcomes.

4. Phase 4: Scaling and Replication (Months 19-24)

- Document best practices and lessons learned.
- Develop guidelines for replication in other communities.

