

Blue Empowerment Info Note

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Setting Up of the IMTA Cage at Kijiweni: Cage Assembly at Changai and Setting at Kijiweni in Kwale County

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Overview

Blue Empowerment Project is founded on Integrated Multi-Trophic Aquaculture (IMTA) of seaweed and fish a productive, ecologically sustainable, and equitable farming system that can empower coastal women and communities through access to blue ocean resources. Work Package 4 is addressed under Objective 3 of the project that targets to design, set-up, test and optimize gender transformative fish-seaweeds IMTA solutions for the socio-economic empowerment, COVID-19, and Climate Change resilience of fisher women. The objective is to consider spatial and temporal designs to allow for an optimized IMTA solution, that is accessible, functional, and replicable, with an upscale potential. The focus is come up with an IMTA design that makes it easy to women to commercially operate, own and benefit from fish and seaweed IMTA farms.

A set of three marine cages were procured and locally fabricated in Kenya. The cages will be used for fish farming and are to form part of the IMTA system that will also include seaweed farming. A set of cages (3 in 1) were delivered to Changai Beach, Shimoni on the 9th of July 2023 for assembly by Maimun Co. Ltd. The cages were assembled and towed by boat to Kijiweni on 14th July 2023. These activities were preceded by community engagement, mooring site reconnaissance and pre-casting of mooring sinker. The cages were temporarily moored at Kijiweni and are poised and awaiting final positioning as informed by the IMTA design for women empowerment as envisaged in the project as will determined by a co-innovation platform.

Keywords: IMTA, Seaweed Farming, Blue Economy, Gender

Key Findings

Community Engagement at Shimoni

A community engagement meeting was held at Shimoni Beach Management Unit (BMU office at Shimoni. The meeting was attended by Linus Kosambo (KIRDI), Muswaib Ali (KeFS- Fisheries officer), Peter Mwangoo (Maimun Co. Ltd), Fatuma Usi (Bahari CBO), Omar Salim (BEP Field officer), Ishmael M. Ongera (County Fisheries Kwale-Fisheries officer), Mwajumbe Omar (Chairperson Changai fish landing site), Tei Bakari (Bahari CBO), Asma Kopa (ACTS), Mshee Mwabuzi (Changai BMU Self-help groups). Ali Omar (Shimoni BMU- Secretary), and Rishad Iki (Shimoni BMU-Chairperson). The following were the main findings and key issues during the meeting.

- a. Changai beach was selected because it offers enough flat space for assembling of the cages.
- b. Anchoring fee is necessary when working on or anchoring vessels at the landing beaches. BEP was to pay KES 1000 per day as an anchoring fee.
- c. Proper documentation for the agreements i.e., letter of commitment to show granted permission at the given costs necessary.
- d. Project to get license for the fingerling capture if they will come from the wild to avoid fishermen harvesting small sized fish in the name of BEP.

- e. It is critical to inform key stakeholders on cage assembly and installation. Rishad Iki- was to communicate with the Navy Station about cage assembling at the cage.
- f. Community needs to be informed on statutory requirements met, e.g., EIA conducted at Kijiweni.
- g. The community needs to be informed on safety and the demonstration of previous success, e.g., material of the cages (high density polyethylene - HDPE materials), sites/countries of deployment (Lake Victoria, Uganda and Tanzania, Europe, and China, etc.)
- h. Challenges experiences with other cages: death of laborer, lack of boat for transportation and breaking of the cages.
- i. Community needs to be informed on plans in BEP that will help prevent risks related to the cages such as (1) management system of the cage; report any destruction and risks, (2) public training awareness, (3) resident BMU to take main responsibility as one of the stakeholders.
- j. There is need to clarify to the community what will happen after the two and half years of the project, especially on the sustainability of the project.

Community Engagement at Kijiweni

A community engagement meeting was held at Kijiweni landing site on 7th July 2023. The meeting was attended by fourty community members led by Kijiweni village chairman and Kibuyuni BMU chairperson. The BEP Team was represented by Linus Kosambo (KIRDI), Tei Bakari (Bahari CBO), Fatuma Usi (Bahari CBO), Omar Salim (BEP Field officer) and Asma Kopa (ACTS)

Key Lessons

- a. Kijiweni community has high expectation from the BE initiative especially, the IMTA system.
- b. The Community lost a member at sea and a small prayer and feast was necessary before the commencement of the project activities.
- c. Community would like to meet the officer who conducted the EIA so that he/she can tell the community both the negative and positive impacts of the cage since most of the projects hide the negative side of the project until later when the community realize it by themselves.
- d. The community would like to receive feedback of the project just like the way they were informed during the start of the project i.e., share project results and handover project to the community.
- e. The community members requested that the project ensures safety of its workers by providing safety equipment and made a list of the requirements of the safety equipment listed below.
 - Boat a permanent one
 - Underwater torches
 - Life jackets
 - Raincoats
 - Flippers
 - Masks and snorkel
 - Lifering and ropes
- f. The project should leave an asset to the community.
- g. The project to find alternative way to support the community not just by contracting for example 10% of the benefits to come directly to the community.

Cage Delivery

- a. Cage delivery required a good pre-planning commitment of the local communities and key stakeholders.
- b. Working through the local BMUs is critical for the success of operations at the landing sites.
- c. Managing the expectations of the community is important, especially in instilling a sense of co-ownership and volunteer work for local development.

Cage Assembly

- a. Electric power supply is necessary, so it is important that the supplier makes local arrangements.
- b. Some parts need further customization.

Mooring Sinkers casting

- a. Pre-casting of the mooring blocks (sinkers) needs to be done in advance.
- b. Desing of the recommended mooring system is expensive: KES 970,000.

Cage Towing and Anchoring at Kijiweni

- a. Reconnaissance of anchoring site revealed underwater debris that had to be cleared by divers for two days.
- b. A local boat was used to tow the cage. A standby cage will be required for maintenance.
- c. The cage was anchored using sinkers previously pre-casted.

Implications of the Findings

Fingerlings Supply

- a. Fishermen will be contracted to supply rabbit fish fingerlings for stocking the three IMTA cages. However, there is need for express permission from the Fisheries Department. The fishermen who will supply the fingerlings will therefore need license from the fisheries department to catch fingerlings for stocking in the IMTA cages.
- b. Kenya Marine and Fisheries Research Institute (KMFRI) a partner in this project is currently establishing a hatchery at Shimoni. The hatchery will be important in the future in securing reliable and sustainable supply of fingerlings.
- c. Stocking of the cage with rabbit fish fingerlings can be immediately initiated in readiness of the official launch this implies that we need to make contracts with the selected business units that was elected to supply the fingerlings.

Security and Safety

- a. To ensure the security of the cage, there is need to have security guards at night who can hand over to daytime cage manager. There is need to have a well- documented log of daily handover.
- b. The cage and its location need to be marked with buoys.
- c. Training of lifeguards and the beneficiaries on safety and life skills needs to be organized.
- d. Safety gears and swimming skills will be mandatory to those who will be managing the cage.

Sustainability of the Project

- a. The community expressed their expectations to have a sustainable IMTA system design that can be operational and profitable well beyond the project duration. It is therefore critical that the business models are designed to meet this expectation.
- b. The IMTA system should be designed as sustainable enterprises that can be owned and run by women.
- c. The community to be made aware of the opportunities, business, products, and income streams that can be developed from the IMTA system.
- d. It is also important that there is every attempt to change the mindset of people beyond the cultural norms and barriers to embrace the IMTA system as a business and not a project geared towards improving the livelihood of the women and the local populace in general.

Co-Innovation, Transect Analysis and Final Mooring

- a. The final position of the cage will be determined by the outcome of the co-innovation platform and transect analysis exercises. This is to ensure that the cage and the IMTA farms are positioned to give the fisher women the access and ownership opportunities.
- b. The final mooring design will be determined by the availability of funds as per the attached quotation and literature.



A community engagement forum in Kwale County



IMTA Cage under construction in Kijiweni, Kwale County.

Conclusion

The cage was successfully assembled and moored at Kijiweni. The Final mooring position will be done after transect analysis and co-innovation exercises. Fingerlings for stocking the cage and other preparations for management, safety and business development can be initiated.

Further readings

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Author information

This series of briefs summarizes findings of a project entitled “Aquaculture Of Seaweeds And Fish: Opportunities For Blue Economic Empowerment And Covid-19 Resilience Of Fisher Women In Kenya” undertaken by researchers and practitioners from the African Centre for Technology Studies (ACTS), Kenya Industrial Research And Development Institute (KIRDI), Bahari CBO Network, Kenya Marine and Fisheries Research Institute (KMFRI), Kenyatta University (KU), and Sea Moss Corporation. The overall aim of the project is to contribute to the tackling of barriers for the empowerment of fisher women in Kenya’s coastal region through adoption of climate-smart integrated multi-trophic aquaculture (IMTA) of seaweeds and fish for improved livelihoods and resilience.

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