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PROGRESS REPORT 2023
REFF STEWARDSHIP

WAGENINGEN UNIVERSITY & RESEARCH

REEFolution

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Marine Conservation

Marine resources along our coastlines have been faced with many challenges from both natural and anthropogenic factors. Coral reefs are one of the diverse ecosystems supporting a large fraction of marine resources that are critical to the coastal communities. Coral reef ecosystems are experiencing degradation and numerous reef restoration efforts are being initiated to restore, revive, and accelerate their recovery. Majority of innovative reef restoration interventions are initiated and implemented together with coastal communities where social trust and acceptance has been achieved. Successful blue spot resulting from reef restoration work continue to emerge such as REEFolution-led restoration project in the Shimoni-Vanga seascape, south coast of Kenya. Shimoni seascape is unique marine ecosystem and conservation hotspot comprising of the Kisite Mpunguti Marine Park and Reserve and its adjacent locally managed marine areas (LMMAs).

Photo 1: Underwater world in Kisite Marine Park. Credit: Ewout Knoester

LMMAs are established and managed by the Beach Management Units (BMUs) with support from State and County Department of Fisheries as a participatory tool to sustainably co-manage the marine and coastal resources. The BMUs abides to by-laws that guided their marine conservation activities such as reef restoration in their respective LMMAs.

Photo 2: Coral tree nursery with ready coral fragments for outplanting in the Mkwiro Community Managed Areas within the Wasini Channel. Credit: Ewout Knoester

Despite successful implementation of the reef restoration project in Shimoni, the local communities are struggling and lacks a clear understanding and awareness of the emerging marine conservation knowledge and practice on reef restoration. The Rufford-funded project dubbed as '*Reef Stewardship*' strives to address this knowledge gap by enhancing awareness at the grassroots level through a hands-on approach. The project targets particularly the local subsistence fishers (Photo 3) and boat operators who are depends on the Shimoni seascape for their livelihoods through fisheries and ecotourism. Further, empower them with basic responsible tourism practices and authentic guiding skills for optimal visitor's experiences.

Photo 3: Subsistence fishers on the shores of the Wasini Channel, Shimoni. Credit: Ewout Knoester

REEF STEWARDSHIP

Project Launch and Implementation: stakeholder engagement

The project was launched in March 2023 and targeted community-based organizations, particularly 4 local Beach Management Units (BMUs) and 2 Boat Operator's Associations (BOAs) operating within the Shimoni Seascape. The targeted audience from the organizations is the active subsistence fishers and boat crews (i.e. coxswains, marine tour guides/divers). The project's initial phase involved logistics planning and communication with expected target audiences and other key stakeholders deemed relevant to successfully implement the project. The project lead contacted key stakeholders namely: Kenya Wildlife Service (KWS), State Department of Fisheries represented by Kenya Fisheries Service and Kenya Marine Fisheries and Research Institute, County Directorate of Fisheries, Pilli Pipa Dhow Safaris, BMUs, and BOAs (represented by the Wasini Youth Boat Operators and Kisite Community Boat Operators).

Photo 4: Orientation meeting with selected stakeholders who formed project implementation committee. Credit: Yvonne Muyia

These stakeholders were invited to be part of the project implementation committee (PIC) and an orientation meeting (Photo 4) was held on 26th April 2023. 10 representatives attended the meeting and were introduced to key aspects mainly project's objectives, activities, targeted audiences, implementation process,

Photo 5: Mwanaisha (REEF Ranger) engaging with members of PIC, showing them around the REEFolution on-land restoration site. Credit: Yvonne Muyia

methods, and expected outcomes. Importantly, the PIC role to ensure successful implementation of the project. One critical role is provide oversight on the project implementation process and lobbying for targeted audience participation. Before the meeting, the representatives were shown around the REEFolution on-land restoration site (Photo 5) to get a glimpse of how coral reef restoration effort are conducted starting from on-land site where and how different artificial reef structures are prepared before they are deployed to the selected sites within the LMMA. This crucial introduction set the pace of the orientation meeting facilitated by Project leader with support from project assistant. After the brief tour, the representative were taken through REEFolution's mission and goals, followed by official introduction to the Reef Stewardship Project aims and clarity on implementation process and work plan particularly the sequence of project activities. The BMUs and Boat Operators' leaders were assigned a duty to identify and mobilize local fishers and boat crew and guides within their groups actively involves in fisheries and tourism activities. A resolution was made to include key representatives from Kenya Coast Guard Service and national administration unit (i.e., the chief and village admin) and a youth member from Shimoni Turtle Watch in the Implementation Committee.

Lobbying for Community Engagement

To ensure and guarantee project acceptance and committed engagement among the local communities, a community leaders' meeting was called through the PIC. The community leaders' meetings aimed at elaborating about the project goal and objectives as well as lobbying for participation of the target audiences. The meeting was held on 5th May 2023 at KWS Kisite Marine Park, Shimoni station (Photo 6, 7 & 8) and was attended by 27 participants comprised of community leaders from 4 BMUs (Mkwiro, Wasini, Shimoni and Kibuyuni), 2 Boat Operators (Wasini Youth and Kisite Community) and PIC members. Other participants include representatives from Kenya Coast Guard Service, Shimoni station, Shimoni Village admin, and Shimoni Turtle Watch.

Photo 6: Joshua Wambugu, Project lead engaging community leaders. Credit: Yvonne Muyia

The active participation of community leaders was a crucial step for the project in setting a good lobbying pace. Besides understanding the project's aim and goals, participants were informed about project activities, methods, and agreed criteria on how targeted audiences from different groups would be selected. Emphases were put on the target audiences to amplify expected project outcomes and impact. With 6 community-based organizations, each group was allocated 10 participants to reach the expected total of 60 participants for the hands-on (experiential) learning session on coral reef restoration.

Photo 7: Edward Karanja, Senior Warden, KWS Kisite Marine Park welcoming community leaders to the meeting hosted at his station. Credit: Yvonne Muyia

Though men dominate in the fisheries and tourism activities among the local communities in the Shimoni area, emphases were put to actively encourage women participants at the selection level per group. For effective hosting and execution of the experiential learning session, an agreement was reached to conduct the session in 2 sessions with 30 participants per session. The dates were equally agreed upon on 15th May and 12th June respectively. Through the official government agencies particularly the State Department of Fisheries and County Directorate of Fisheries as well as KWS, official invitations were prepared and sent out to the respective BMUs and BOAs with request share participant's names ahead of the experiential learning sessions.

Photo 8: Community leaders engaged in the meetings' discussions. Credit: Yvonne Muyia

Capacity Building for Locals

Training Workshop on Coral Restoration

The next phase of the project kicked-off with the first experiential learning session on coral restoration activities (Photo 9 & 10) held on 15th May 2023 at REEFolution's premises. The hands-on workshop was conducted over a day period where 30 participants (i.e. 5 fishers from each of the four BMUs and 5 boat operators from each association) were trained. The participants were first introduced through an interactive presentation and a tour within REEFolution on-land site (Photo 11 & 12) about REEFolution's work and approaches, and to broaden their understanding on coral restoration particularly how the project aims to build capacity on modern marine conservation knowledge.

Photo 9: Mercy and Dosa (Reef Rangers) Cleaning and maintaining a Coral tree nursery with ready coral fragments for out planting. Credit: Ewout Knoester

Photo 10: Thriving dome (Artificial structure) full of out-planted corals attracting lots of fish within the Wasini Channel. Credit: Ewout Knoester

Photo 11: Joshua Wambugu, Project lead engaging trainees on the first experiential learning session by first giving a presentation on coral restoration. Credit: Yvonne Muyia

Photo 12: Bulisa (REEF Ranger) engaging with the trainees, showing them around the REEFolution on-land restoration site. Credit: Yvonne Muyia

Reef Stewardship project aims to link and strengthen the capacity of the REEFolution's coral reef restoration project by empowering and building capacity through experiential learning engagement with the locals. The experiential workshop is the best approach to guarantee a quicker and impactful way to communicate and enhance knowhow on modern marine conservation knowledge, successes, changing trends on innovative coral restoration techniques among the locals, and encouraging locals to become reef stewards of their own marine and fishery resources within and beyond Shimoni-Vanga seascape.

Small-scale Approach

In order to a personalized connection during the workshop, the 30 trainees were sub-divided into two groups of 15 participants (Photo 13 & 14). This allowed to have two concurrently activities i.e., building artificial reefs and snorkeling sessions. The small-scale approach, allows every participant to connect and interact properly with various facilitators in each activity hence increasing a sense of belonging reducing possible feeling of lacking attention. This approach complimented the hands-on technique. The hands-on approach is perfect approach allowing participants to experience the reality and behind the scenes of coral restoration especially with different artificial reef structures (Photo 15 & 16) and how they mimick natural reef upon deployment to serve different marine life.

Photo 13: Yatin Patel, Pilli Pipa Dhow Safaris, Dive Manger, taking the first sub-group through the snorkeling safety measures. Credit: Cindy Saru

Photo 14: The second sub-group involved in making of the MOSES-reef artificial reef. Credit: Yvonne Muyia

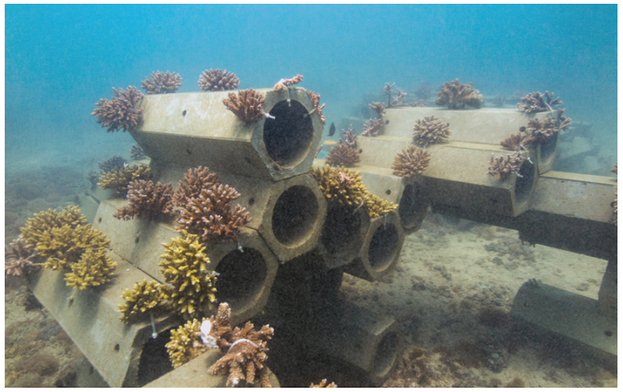

Photo 15: A MOSES-Reef artificial structure patch at Mkwiro Community Managed Area. Its design provides a substrate for coral recruits and shelter and a hiding area for Octopuses, eels, and other camouflaging fish.
Credit: Ewout Knoester

The behind the scene activities conducted included; the construction of MOSES-reef artificial reef structures and how the process is done (Photo 14 & 15). The MOSES-reef structures are designed not only as substrate allowing coral recruits to grow but with tunnel (hole) like structures that also offer preferred habitat or hiding shelter for fish, eels, and octopus. Snorkeling sessions were also carried out around the coral nursery zone as well as where different artificial reefs (Photo 16) have been deployed and are thriving as way of showing visible evidence on the positive ecological impacts from coral reef restoration.

Photo 16: The corals attached to the Cages (which is one of the Artificial reef structures) have grown to cover most parts of the cage. Credit: Ewout Knoester

First Experiential Field Session

Feedback on participant's expectation and perception

- Participants expressed their excitement for being involved and offered opportunity to acquire and learn about coral restoration particularly how restoration work is conducted, different types of artificial reef structures and restoration outcomes.
- Majority of participants were overwhelmed about the project and emphasized a need to enhance more awareness among locals and their involvement especially women and youth as future conservation leaders and researchers.
- There is need to enhance collaborative engagement and protection of community managed area.
- Participants acknowledged a need for local community engagement beyond Shimoni area as well as including exchange visits for benchmarking purposes.
- Participants acknowledged some locals have negative perception about coral restoration work as waste of time and lack of knowhow.
- Participants advocated for possible creation of sustainable and alternative job opportunities linked to fisheries or tourism sectors by empowering local boat operators with extra skills e.g., certified divers, coral restoration speciality, and marine tour guides.
- Participants emphasized the need to engage the commercial fish dealers as they are potential catalyst to the destruction of coral reefs by supplying illegal fishing gears to their contracted fishers in order to meet their commercial demand and interest.
- Limited participation of women due to culture and religion belief where women are/maybe restricted from certain activities.

The output from the Activity

The first session trained 30 participants drawn from 4 BMUs (Shimoni, Kibuyuni, Wasini, and Mkwiro) and 2 Boat Operator Association (Wasini Youth and Kisite Community). Majority of participants were mainly men, youth, and only 3 women. Despite the low numbers of women, they were highly motivated, eager and actively participated in equal capacity and energy in the construction of the artificial structure (Photo 17) as well as the snorkeling experience (Photo 18). Participants' enthusiasm to spread out coral restoration awareness message and its associated value was evident from they feedback.

Photo 17: Mwanatumu, one of the women participant, connecting metal rods used in the MOSES-reef molds. Credit: Yvonne Muyia

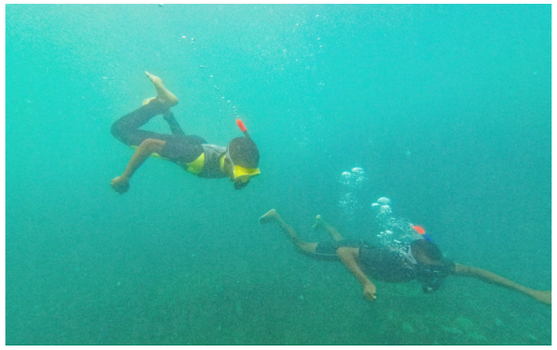

Photo 18: Trainees snorkeling around the nursery and artificial structures at Firefly site in Wasini Channel. Credit: Dzivula Gube

Second Experiential Field Session

Following a successful implementation of the first training workshop, The second experiential field learning session was held on 12th June at REEFolution's on-land site. The second group of 30 participants were engaged in coral reef restoration workshop (Photo 19). Like the first experiential session, participants were drawn from same community groups (i.e. 4 BMUs and 2 Boat Operators). Besides the facilitators of the workshop sessions, local media journalists from Mombasa based local radio station (Radio Rahma FM) were invited. The aim to have local journalist was to assist with broadening the project publicity and outreach by participating and interact with participants. Expected results from the 2 journalists was an online article and a 3 minute video highlighting women empowerment through the project, advocating for reef stewardship among the locals and how REEF Stewardship project broadens understanding modern conservation knowledge. We adapted the same small-scale approach in conducting the sessions with a prior introduction presentation and tour about REEFolution. Afterward introduction to the project objectives, implementation process, expectations and outcomes.

Photo 19: Ayub (Volunteer Reef Ranger) engaging the trainees on how to construct a coral tree nursery. Credit: Cindy Saru

Photo 20: Joshua Wambugu, Project lead presented to 30 new trainees about the Second experiential learning session on coral restoration. Credit: Cindy Saru

Constructing MOSES-reef structure

Photo 21: Participants engage in hands-on construction and filling in mixture in the MOSES-reef mold for MOSES-reef artificial structure. Credit: Cindy Saru

Snorkelling Session

The snorkeling session were carried out after safety briefing with snorkeling gears and techniques (Photo 22, 23 & 24).

Photo 22 & 23: All Trainees on board! for a snorkeling session around the nursery and artificial structures at the Firefly site in Wasini Channel. Credit: Dzivula Gube

Photo 24: Participants ready for snorkeling at the coral nursery and artificial structures within the CMA in the Wasini Channel. Credit: Dzivula Gube

Feedback and Perception

- Participants recommended for a platform to continue apply the learnt knowledge and restoration skills.
- Participants are keen to learn more about the basic knowledge of coral reefs and its ecosystem and future of coral restoration efforts, particularly with effects of climate change.
- There is need to pay attention on healthy coral reef to prevent them from being destroyed as well while restoring and reviving degraded coral reef areas.
- Enhance conservation awareness among the local communities to protect their marine resource within CMA and beyond.
- BMUs are keen to expand or initiate coral restorations with potential support from REEFolution to help kick start the programs.
- More emphasize on the involvement of other fish dealers who use illegal or destructive fishing gears in such workshops to fully curb challenges regarding coral restoration and sustainable fishing.
- Ensure the project has a long term plan beyond project implementation period.

Photo 25: A feedback and discussion session on the activities conducted for the day. Credit: Cindy Saru

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Kwale Local Communities Safeguarding Reefs with Modern Technologies

3 days ago thecoast

Maimuna Aboud and her colleagues (Photo By Ruth Keah)

By Ruth Kadide Keah

Email, ***thecoasnewspaper@gmail.com***

Maimuna Aboud, a mother of two and a dedicated member of the Wasini Beach Management Unit (BMU) in Shimoni of K
poised in her diving gear, prepared to embark on a remarkable underwater journey.

Ocean Stakeholders

Having served as a member for two years, she epitomizes the spirit of a mined to enlighten her co
importance of preserving both the delicate dry land and vibrant ocean

With her sights set on exploring the restored coral reefs at Shimoni, Ma ronmental education shi
captivating adventure that will not only captivate her, but also inspire others to safeguard the wonders of nature in her l

LINK

Kupiga mbizi baharini.

zi kupandwa lakini
kuyapanda na
na mpiga mbizi,
nakuzwa kwa
ka sehemu
aribiwa ili
awaida.

ya kutengeneza
vyochukua muda,
kuhusu umuhimu
mashirika kama
mii yetu.

Maoni

Wengi walioshiriki walisema licha ya kuwa wazaliwa wa eneo la Shimoni, hawakuwa na ufahamu kuhusu uhifadhi wa mazingira ya bahari kwa kupanda matumbawe.Lakini baada ya elimu hiyo walipata ufahamu zaidi.

zo sijawahi kuziona
knolojia hii ni nzuri
ilsona samaki wengi
ao sijawahi kuwaona.

Maimuna Aboud
Wasini BMU

Nilipata fursa ya kuelimishwa na hata kupiga mbizi baharini na kujionea jinsi matumbawe yalivyopandwa baharini, inapendeza na inavutia sana.
Ningependa shirika hili la REEFolution lielimishe kinamama wengi zaidi ili tuweze kusaidia katika kulinda mazingira yetu ya bahari.

wahiokuja kwa
tunakutana baharini,
ini hasa
mbacho

Suleimana Rai
Wasini BMU

Nilipata kuelewa kazi ambazo shirika la REEFolution linafanya, nilijifunza jinsi ya kutengeza matumbawe mbadala, na baada ya hapo nilipata fursa ya kuyaona ndani ya maji.
Ningependa kuwashi wenzangu kukumbatia teknologia hii ya uregeshaji wa matumbawe baharini ili tutengeneza mazalia mazuri ya samaki na kuvutia watalii.

au 60,waelekezi
insi ya kuboresha
maoni tuliyopata
jiunga na shirika
na kulinda

Nafahamu uwepo wa kituo cha REEFolution, lakini nilikua sijui wanaregesha matumbawekivipi na kwa namna gani, lakini baada ya kuelimishwa, nilijua wanaregesha matumbawe vipi.
Nilijifunza kuyatengeza na nilijua kuwa matumbawe yaliyovunjika ndio hutumiwa kuzalisha matumbawe mapya, hivyo tunafaa kuyalinda kwani ndio rasilimali yetu.

Shee Nasoro Mwachombo
Kibuyuni BMU

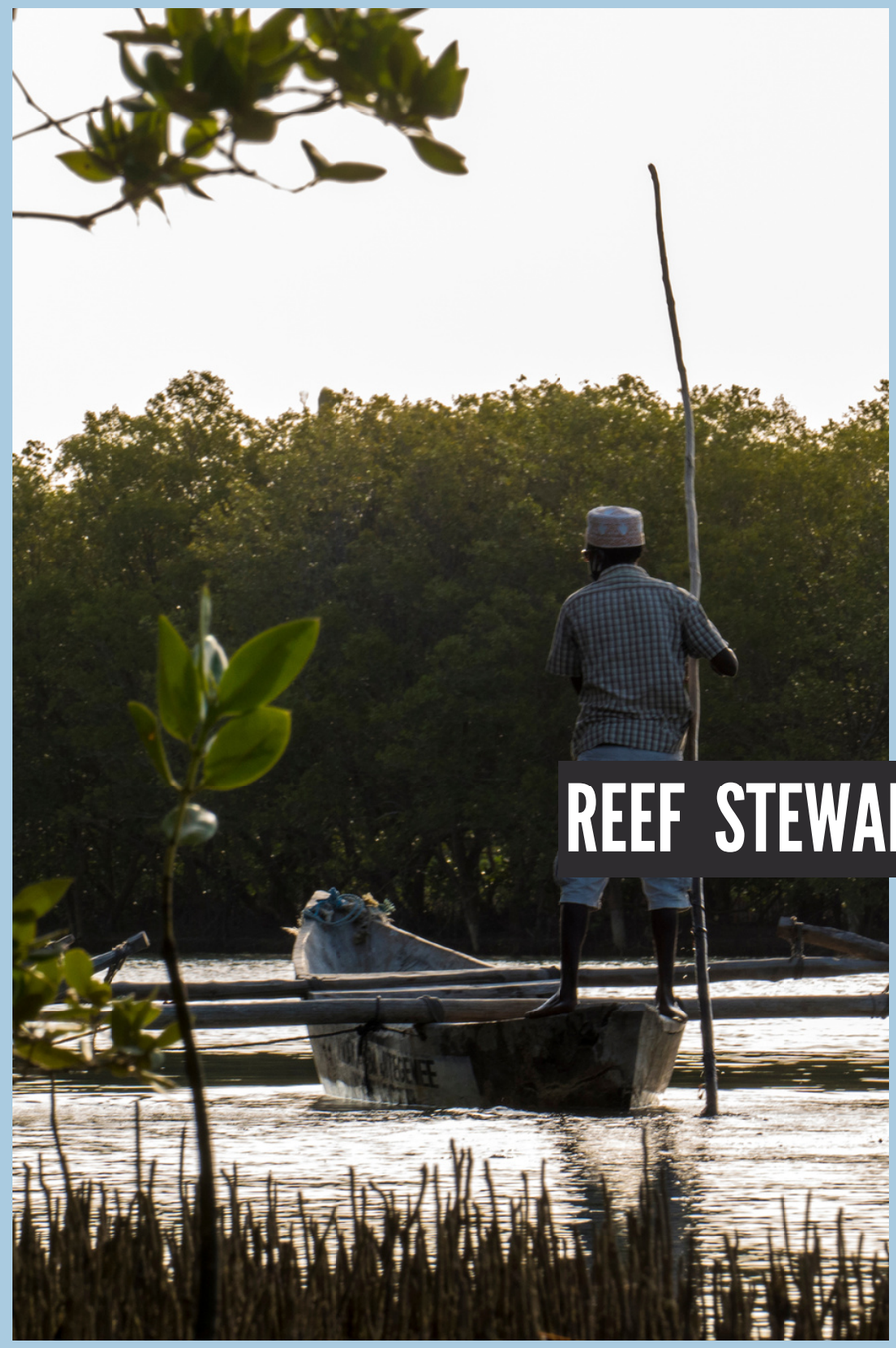
TOLEO LA #1
SEPTEMBA 2023

REEFolution FOUNDATION

JARIDA LA REEFOLUTION

Ushirikishwaji Wa Jamii katika Kuregesha Matumbawe Baharini.

PROJECT MEDIA OUTREACH



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