




# Blue Carbon *Case Studies*

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The Green Finance Kenya 2025  
Round Table, Nairobi, Sept. 3-4,  
2025

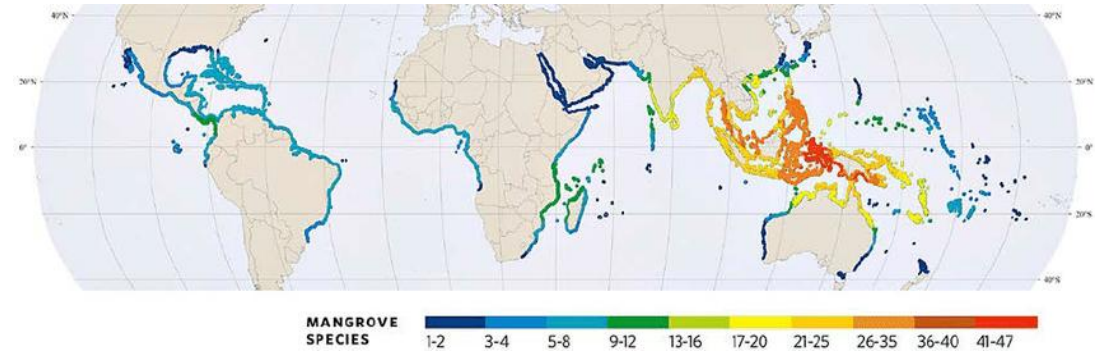


An aerial photograph of a coastal ecosystem. In the foreground, there is a shallow lagoon with a sandy bottom and patches of coral reef. A small, sandy island with several palm trees is situated in the middle of the lagoon. To the left, a larger landmass covered in dense green mangrove forest meets the water. The background shows a vast expanse of blue water extending to the horizon under a clear sky.

Blue Carbon = carbon associated  
with coastal & open ocean  
ecosystems

# Global mangrove distribution

- 14.7million ha
- Degradation rate: 1-2% per year
- Loss of carbon
- Kenya – 60,000ha









## Tanzania

- MoU between Blue carbon (UAE) and Tanzania to conserve 8 million ha of forest resources including 56,000 ha of mangroves and carbon trade



Mangrove is not just a tree;  
mangrove is life”

—  
Maria Damanaki The Nature Conservancy What other say...

The  
Economist



Western Indian Ocean Ecosystem Guidelines and Tools

# Guidelines for Seagrass Ecosystem Restoration in the Western Indian Ocean Region



Western Indian Ocean Ecosystem Guidelines and Tools

# Guidelines on Mangrove Ecosystem Restoration for the Western Indian Ocean Region



# GUIDANCE ON MANGROVE INDICATORS IN THE POST-2020 GLOBAL BIODIVERSITY FRAMEWORK

Version 1.0 for the CBD Open-Ended Working Group Meeting, 23 August – 3 September 2021 (OEWG-3)



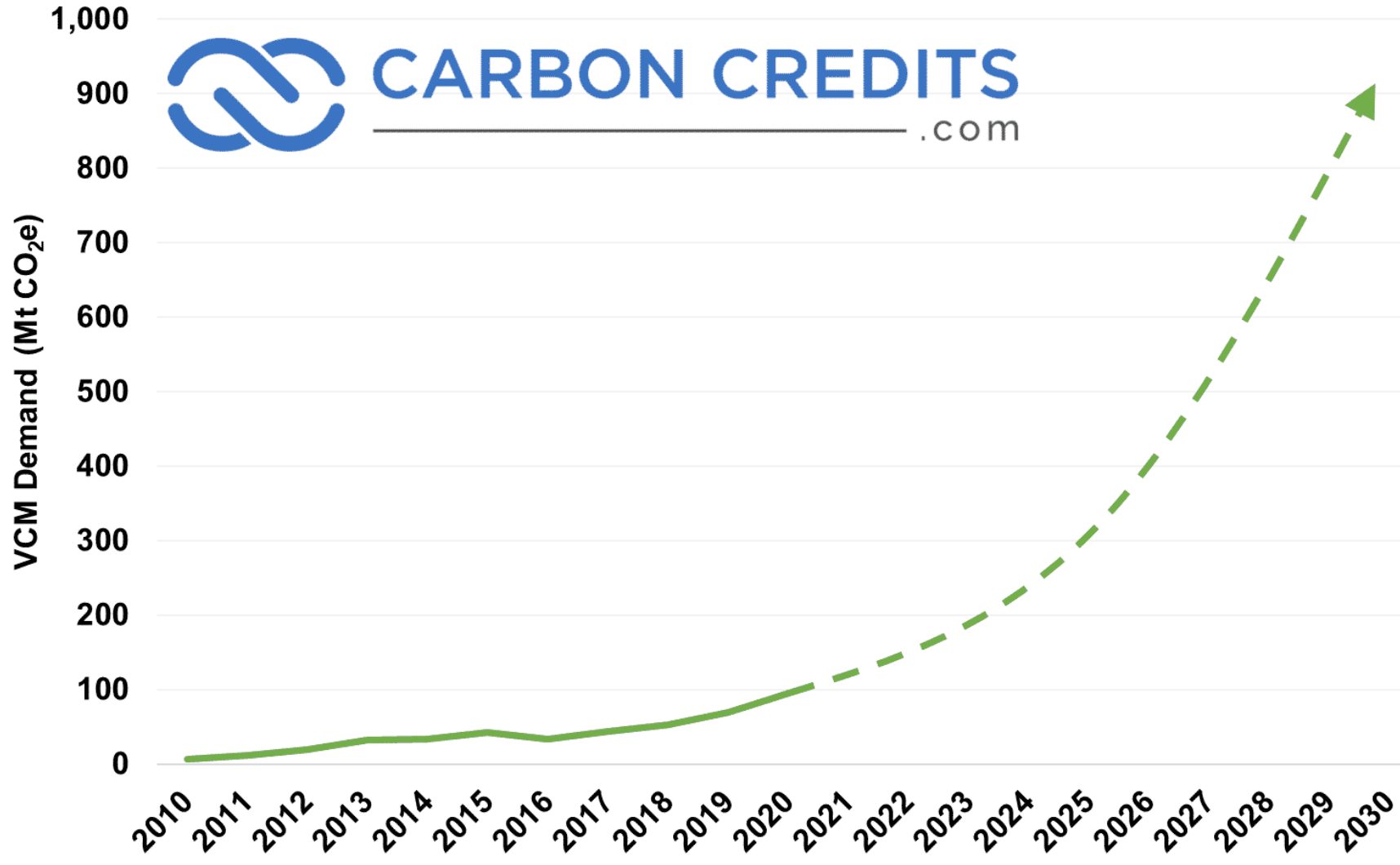
African  
Carbon  
Market  
Initiative



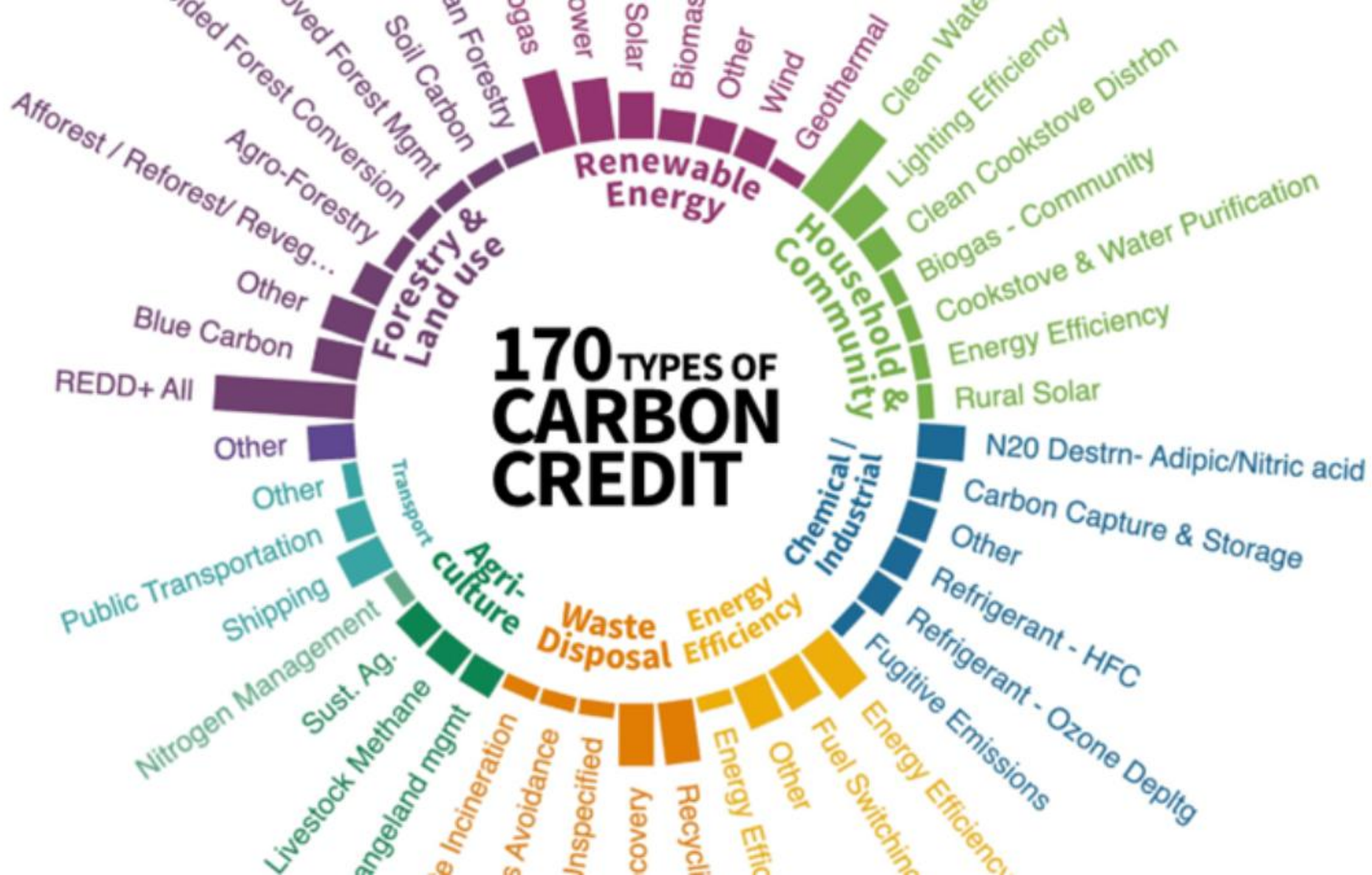
# Projected Growth of Carbon Offset Demand

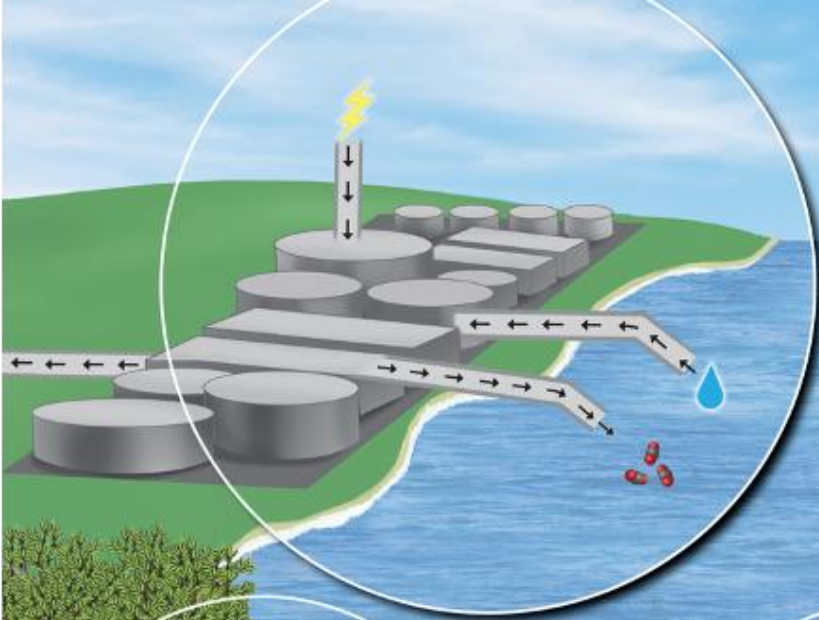


CARBON CREDITS  
\_\_\_\_\_ .com

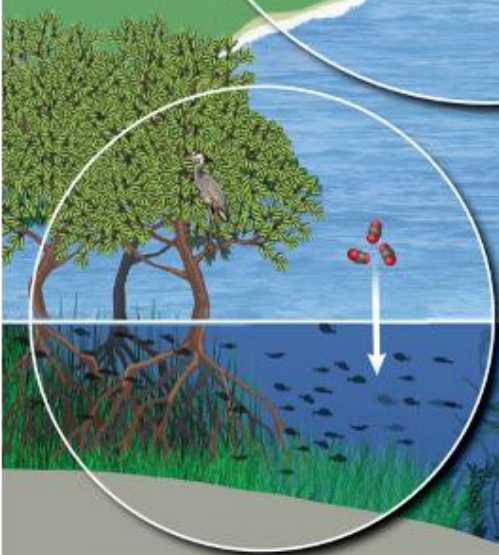
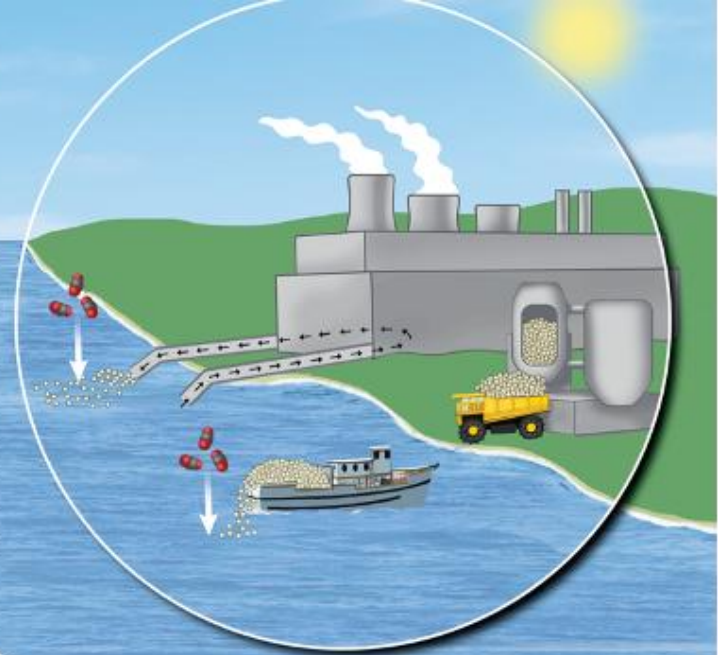


# 170 TYPES OF CARBON CREDIT

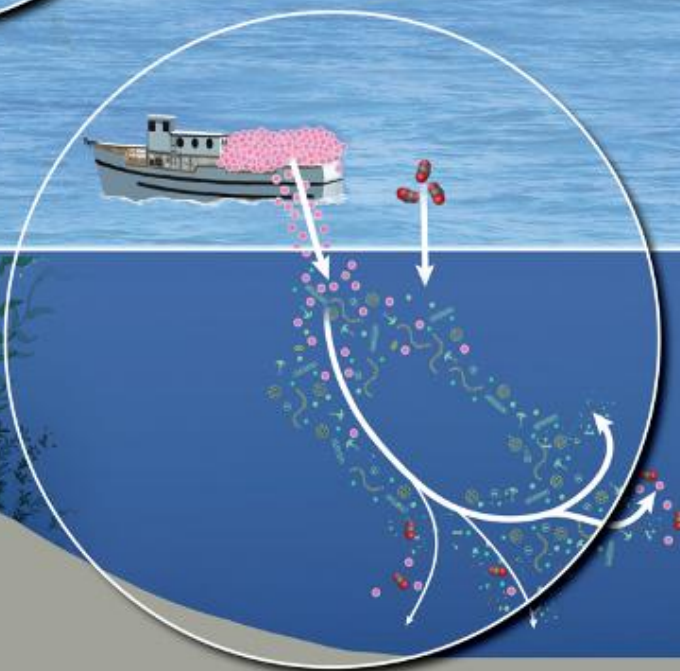




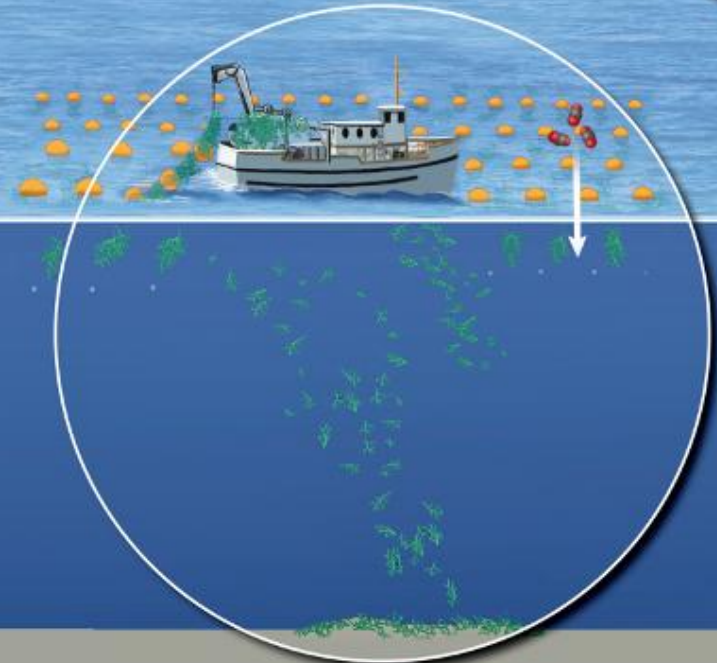
**DEEP SEA STORAGE**



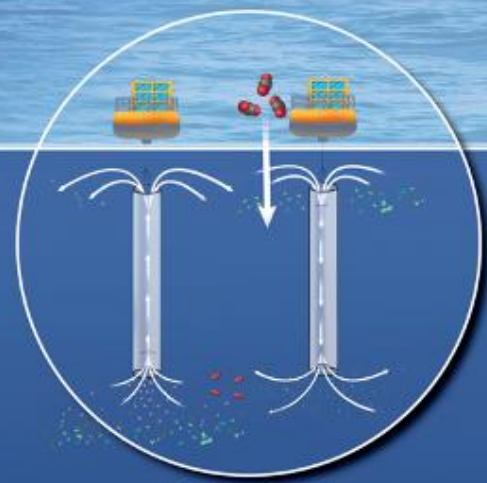
**RESTORING LIVING BLUE CARBON**



**MICROALGAE CULTIVATION**

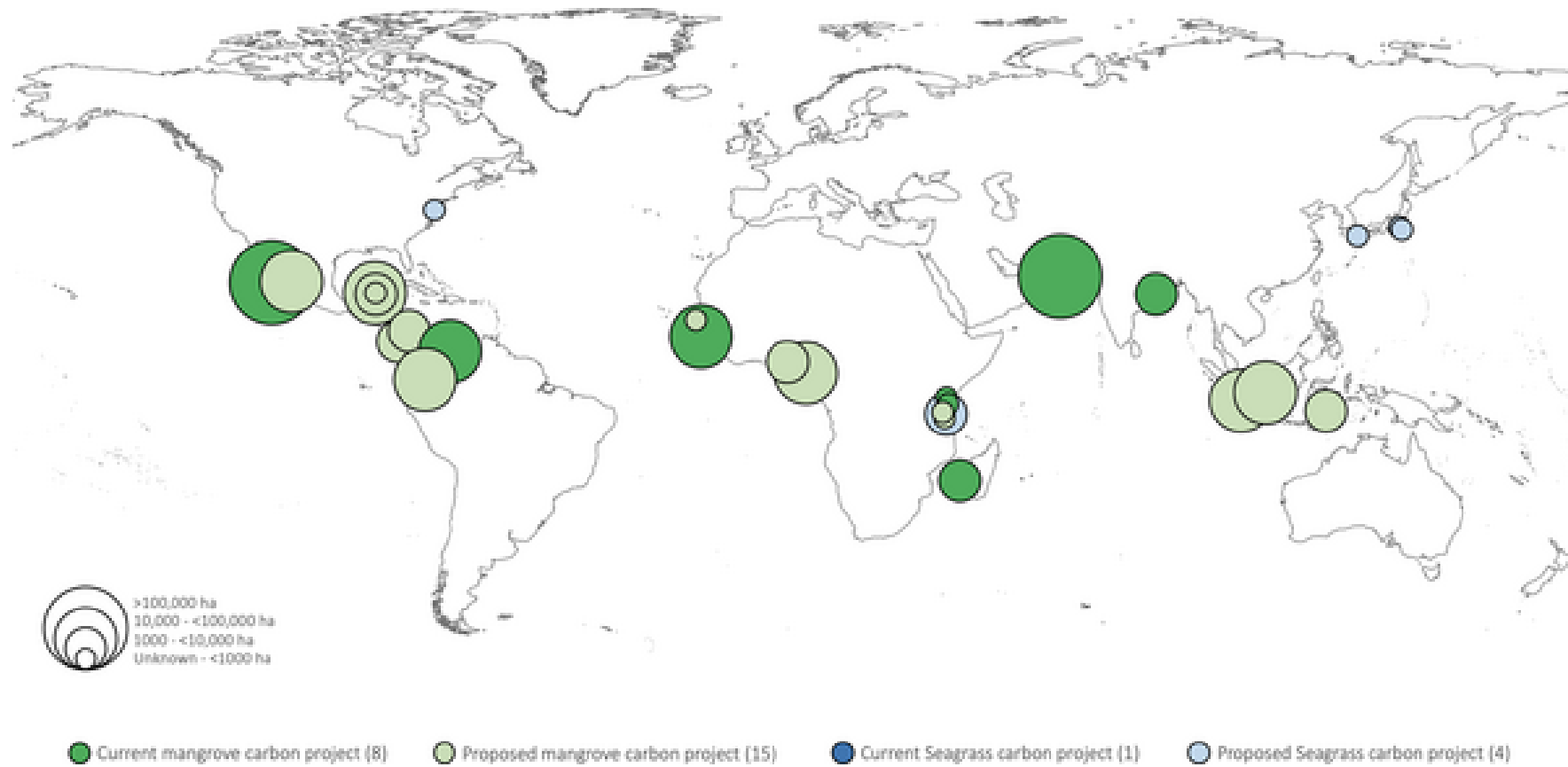


**MACROALGAE CULTIVATION AND CARBON SEQUESTRATION**



**ARTIFICIAL UPWELLING AND DOWNWELLING**

## Global distribution of current and proposed blue carbon projects.



Friess DA, Howard J, Huxham M, Macreadie PI, Ross F (2022) Capitalizing on the global financial interest in blue carbon. PLOS Climate 1(8): e0000061. <https://doi.org/10.1371/journal.pclm.0000061>  
<https://journals.plos.org/climate/article?id=10.1371/journal.pclm.0000061>

# Preconditions

## Additionality

- It must be demonstrated that the reduction in carbon emissions would not have happened without the project. Need good baseline info.

## Minimize leakage

- The risk that the decrease in emissions by the entity selling the offset causes an equivalent increase in emissions by another entity.

## Permanence

- the need to minimize the risk that carbon dioxide emissions occur after the carbon offset has been sold.



## Mikoko Pamoja



📍 Gazi Bay, Kenya

- Protects 117 ha of mangroves
- Comprised of 2 villages ~ 9000 people
- The first mangrove PES project in the world
- **Objective: Restoration and protection of mangroves through sale of carbon credits**



## Vanga Blue Forest

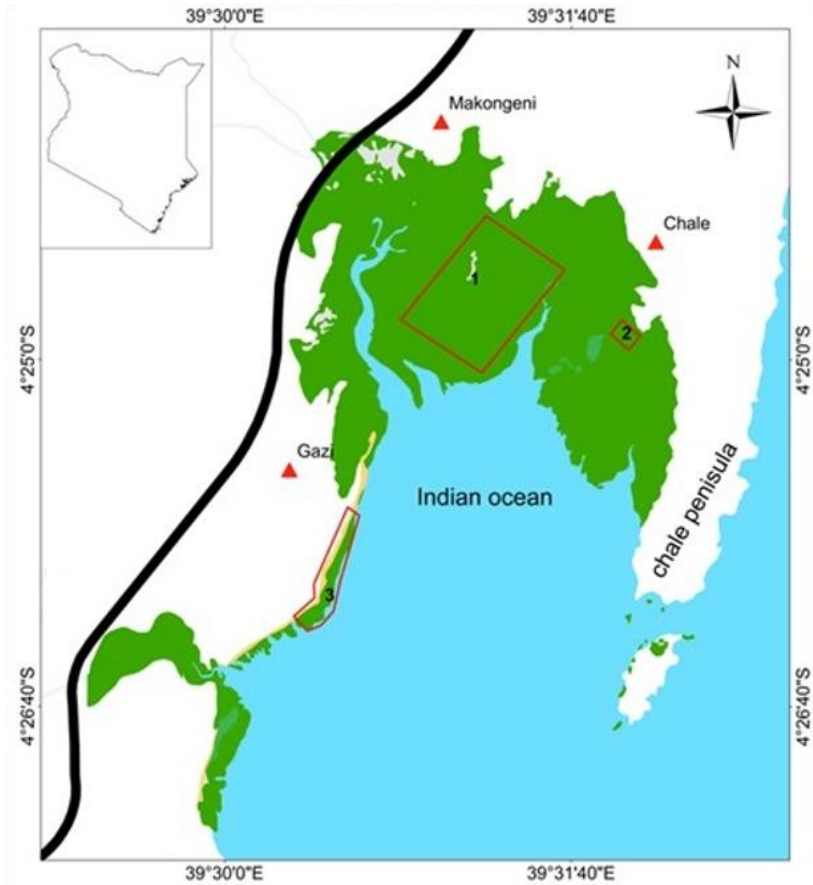


📍 Vanga Bay, Kenya

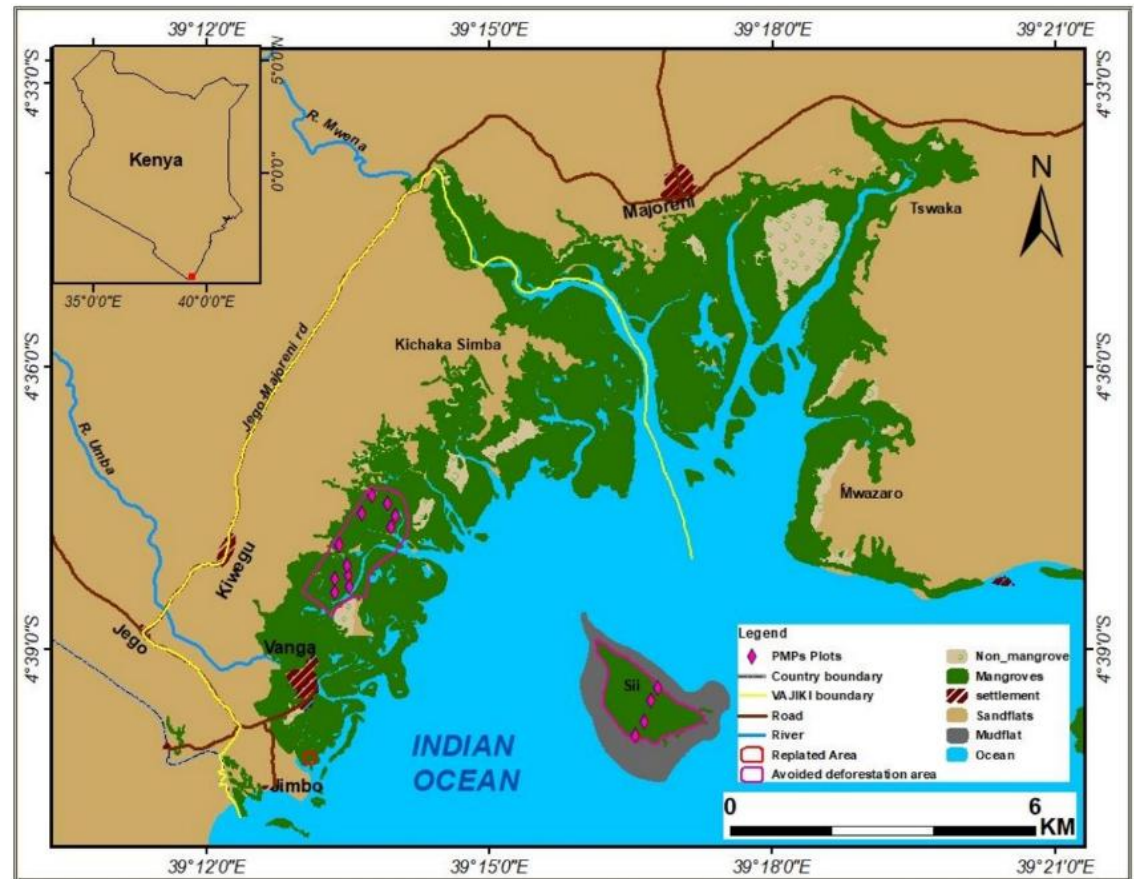
- Protects 460 ha of mangroves and 225 ha of seagrasses
- Comprised of 4 villages ~17,000 people
- Upscale of Mikoko Pamoja
- **Aim: To sustain flow of mangrove and seagrass goods and services by halting deforestation and degradation**



# Gazi Bay



# Vanga Bay



# Project activities

- Reforestation of degraded mangrove areas
- Avoided deforestation
  - Surveillance of the forest against illegal activities
- Education and awareness
- Forest monitoring



# Approach and Methodology



**Vegetation monitoring**



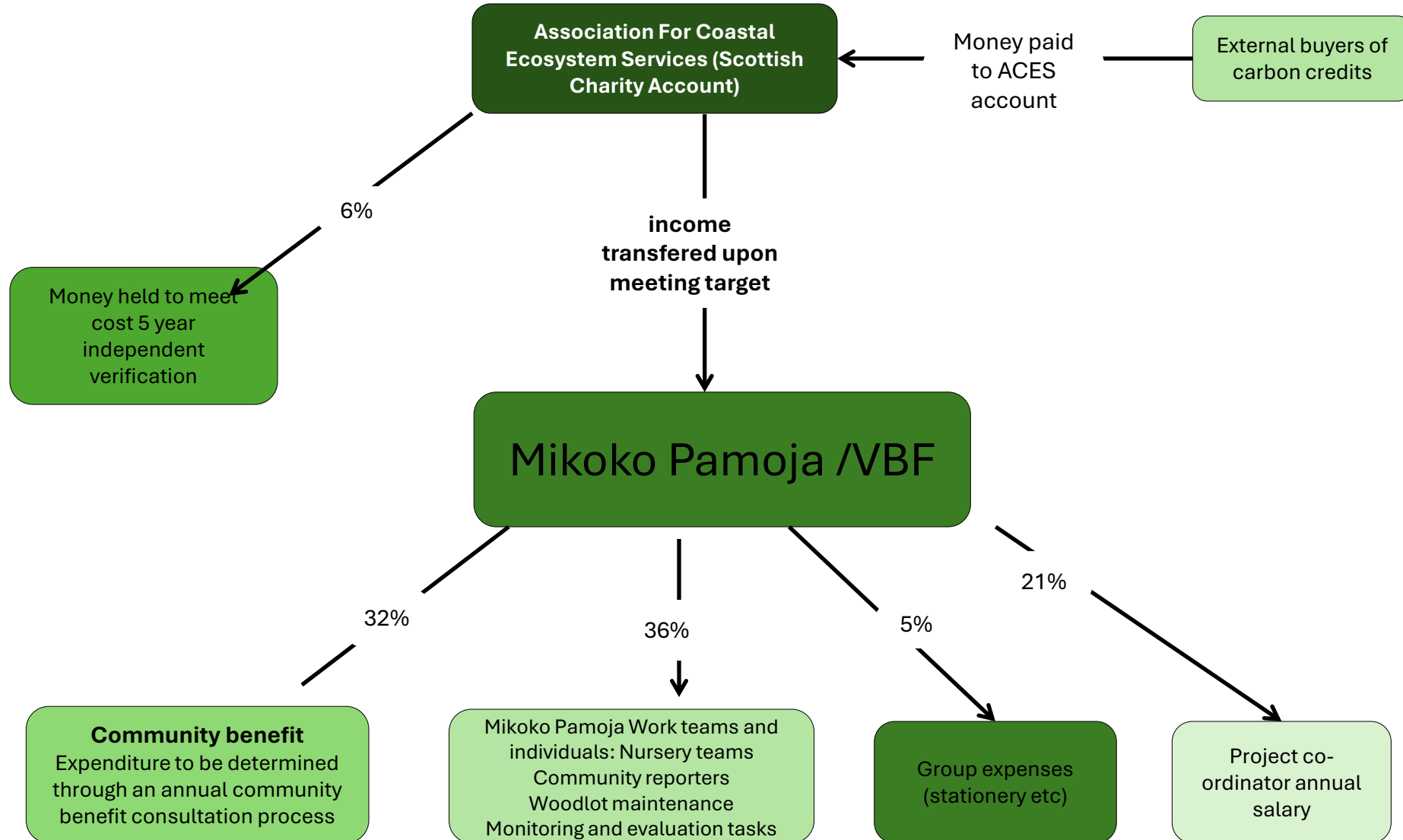
**Biodiversity baselines**



**Impact assessment**



# BENEFIT SHARING SCHEME



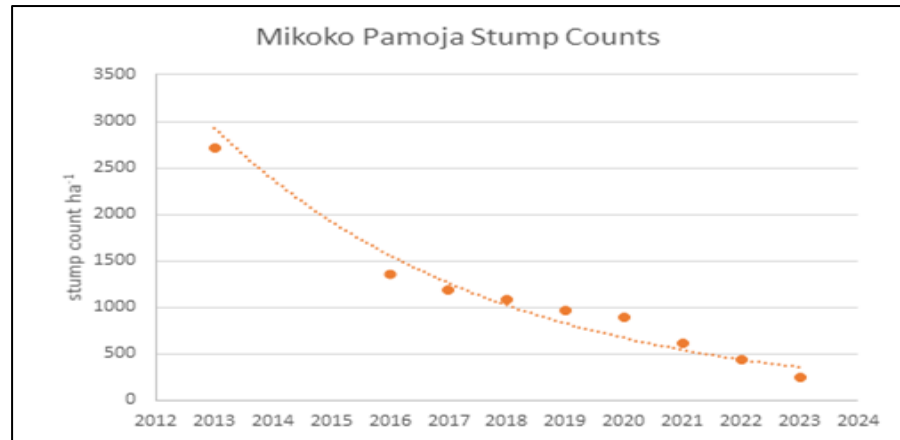
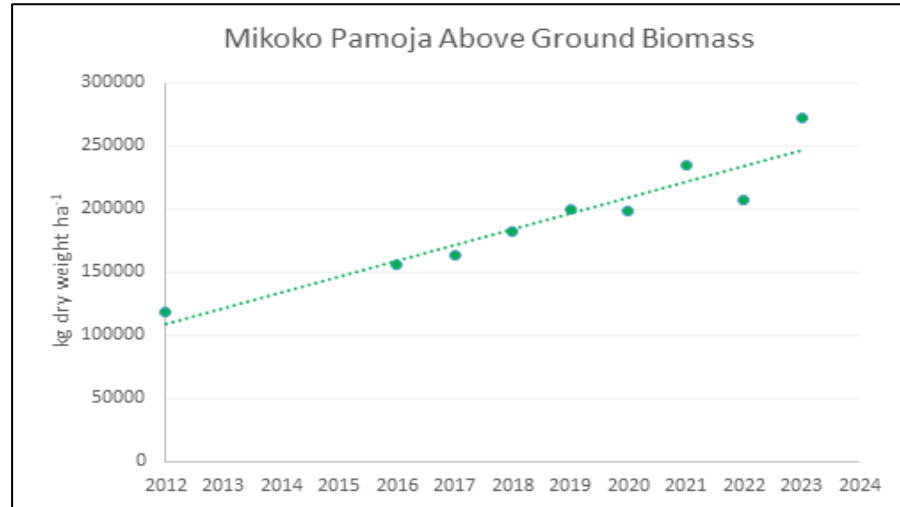
# Project impacts

- Job creations
- Enhanced Livelihood
- Community services
  - Education
  - Water & Sanitation
  - health
- Mangrove reforestation
- Disaster Risk Reductions
- Food security project-orchards

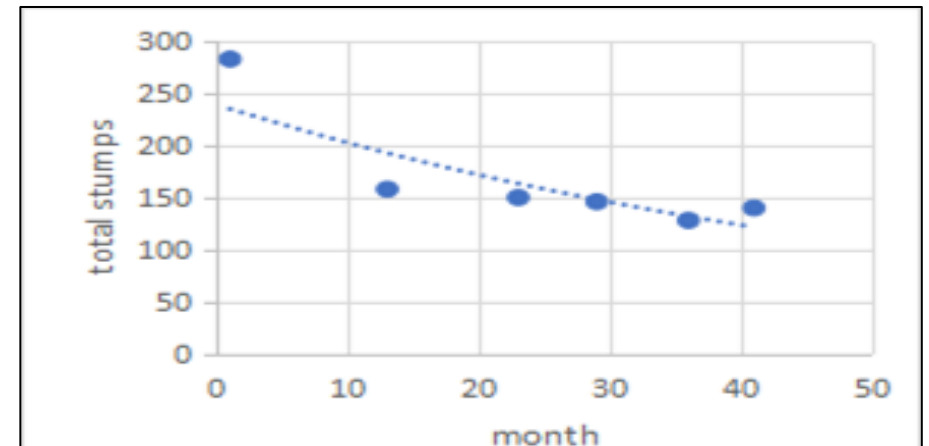
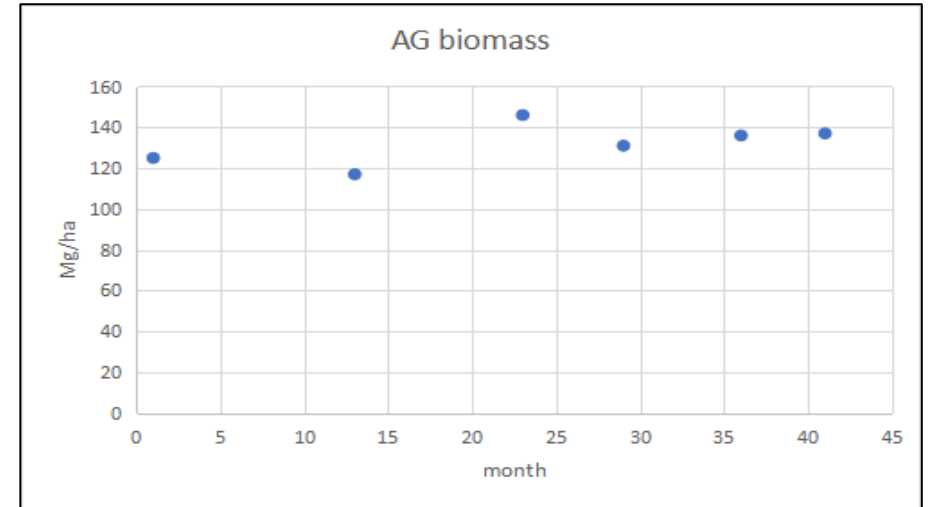


# Improved Forest Conditions

## Mikoko Pamoja Project

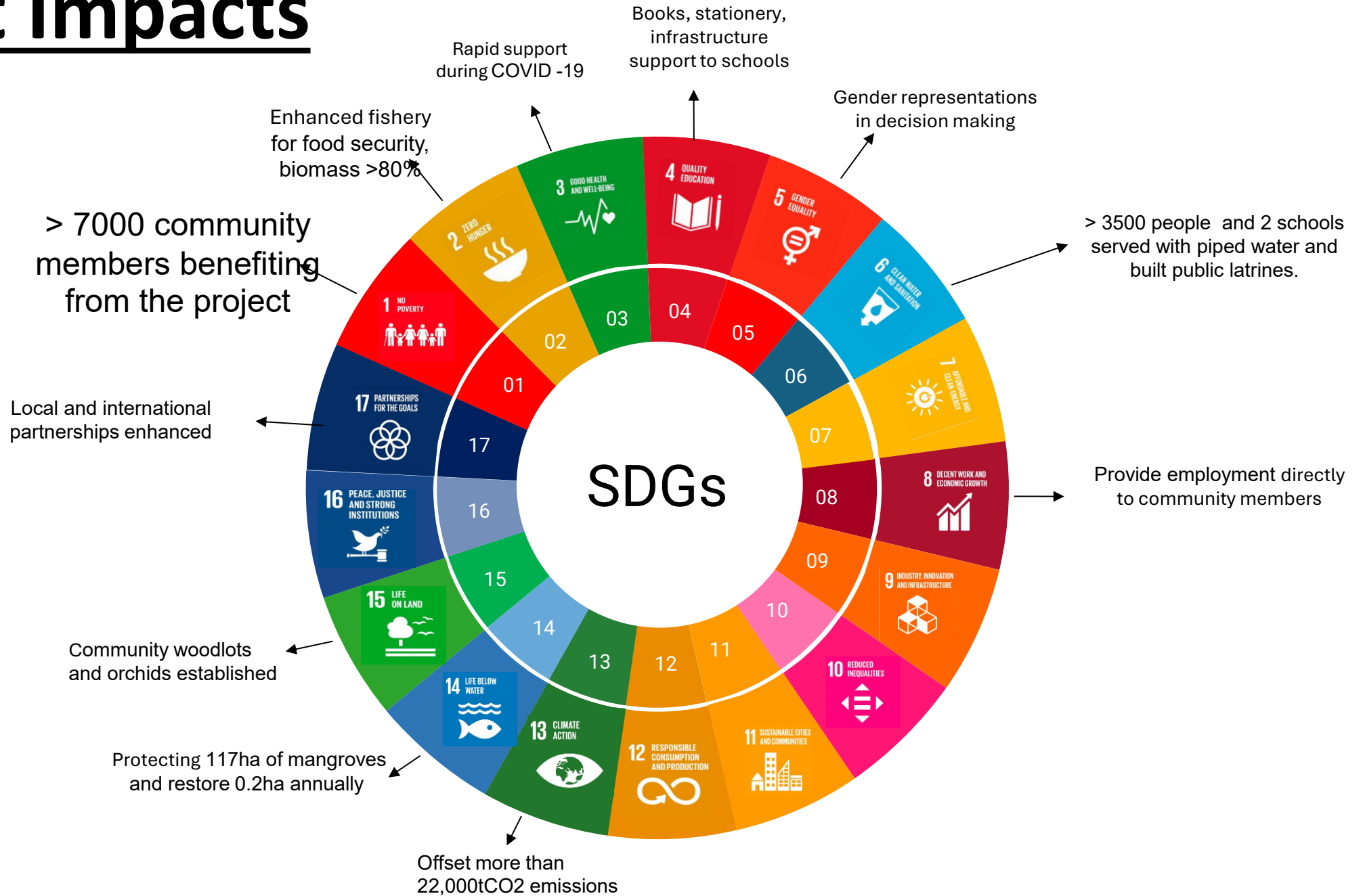


## Vanga Blue Forest Project



Increased biomass, reduced stump counts -in both systems

# Project Impacts



# Global Recognition



199  
7

Here are the 12 top innovators working to increase the supply of high-quality blue-carbon projects and credits:



Top Innovators  
**Blue Carbon Challenge**

- Distant Imagery
- Friendship Bangladesh
- Africa Conservation Initiative
- Kelp Forest Foundation
- The Ocean Foundation
- Mikoko Pamoja Community Based Organization
- Yayasan IKAMaT: Mangrove Tag
- Reforest'Action
- Blue Ventures
- Silvestrum Climate Associate
- The Nature Conservancy in Latin America
- Distributed Additive Manufacturing

<https://ocean.economist.com/innovation/articles/12-organisations-delivering-on-the-promise-of-blue-carbon>

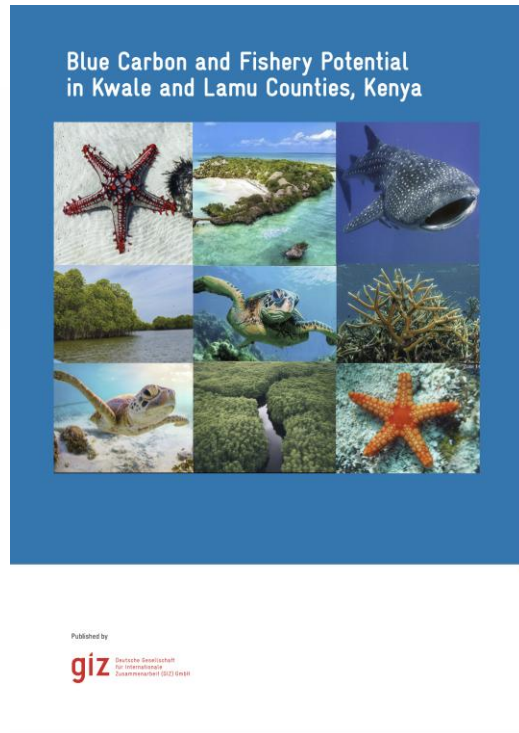
2/8

2022



2022

# Expanding Mikoko Pamoja and VBF



Before Expansion	Description	Mikoko Pamoja	Vanga Blue Forest
	Area under management (ha) <b>(where PES agreements are in place)</b>	117.4ha	460ha
	Removals and emission reductions	2,500 tCO2	5,500 tCO2
	Annual revenue	\$16,000	\$47,000
	Annual community development funds	\$3000	\$14,000
After Expansion	Area under management (ha) <b>(where PES agreements are in place)</b>	300ha	800ha
	Removals and emission reductions	7,000 tCO2	8,700 tCO2
	Annual revenue	\$44,800	\$81,000
	Community development funds	\$13,800	\$28,000

# Take home messages...

- **Blue carbon Projects** are transforming lives in Kenya
- All carbon credits are **owned by the community**
- **Each credit** is equal to one tonne of avoided, reduced, or removed carbon.
- Blue carbon Projects are ***triple win* to climate, community and biodiversity**
- Tools and capacity for expanding Mikoko Pamoja and Vanga Blue Forest projects exists ...
- **There is need to enhance understanding**, at all levels, of the true values of blue carbon ecosystems and need to protect them.... For climate, community and biodiversity benefits

# Blue Carbon and Fishery Potential in Kwale and Lamu Counties, Kenya



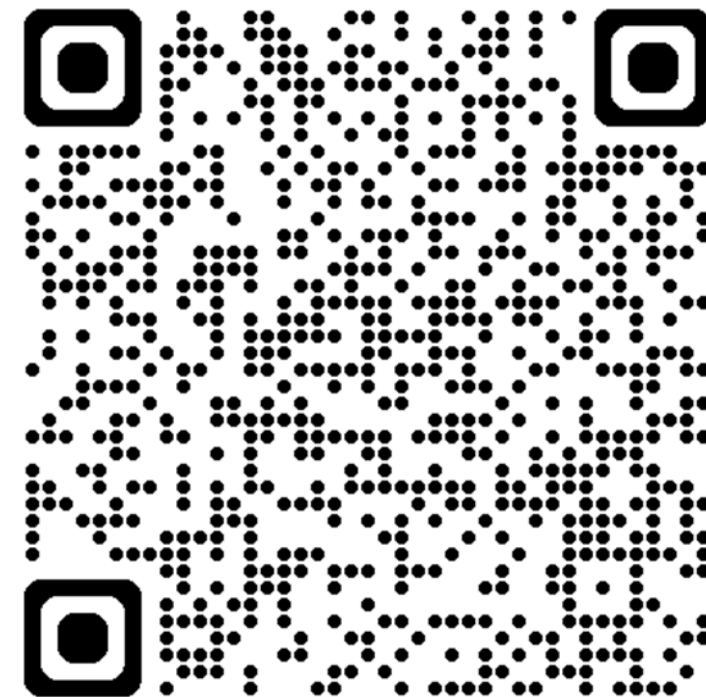
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# Thanks to our partners & supporters



“  
Mangroves  
are life.

“  
Mikoko  
ni maisha.

Changare John,  
Member, Mikoko Pamoja