

Reduced plastic pollution for biodiversity conservation and improved communities' livelihoods.

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Introduction

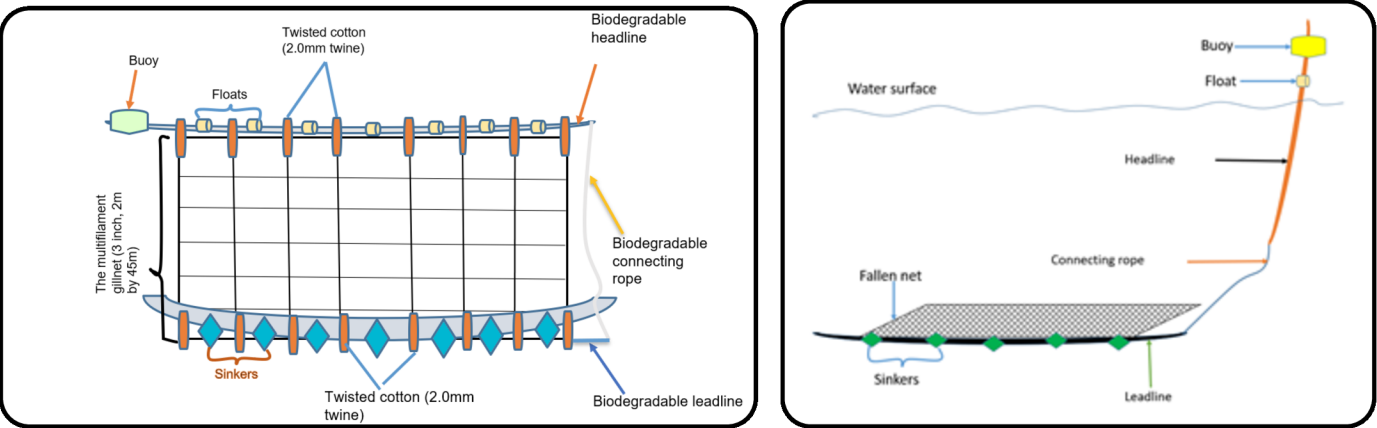
Plastic fishing and aquaculture gear is widely used along Kenya’s coast but becomes a major pollution source when lost or discarded, contributing to microplastics and ghost fishing that threaten marine ecosystems and local livelihoods.

The Catchgreen project, in partnership with KMFRI, tested biodegradable PBS ropes and twines as a sustainable alternative, offering comparable performance during use while degrading more safely in the marine environment.

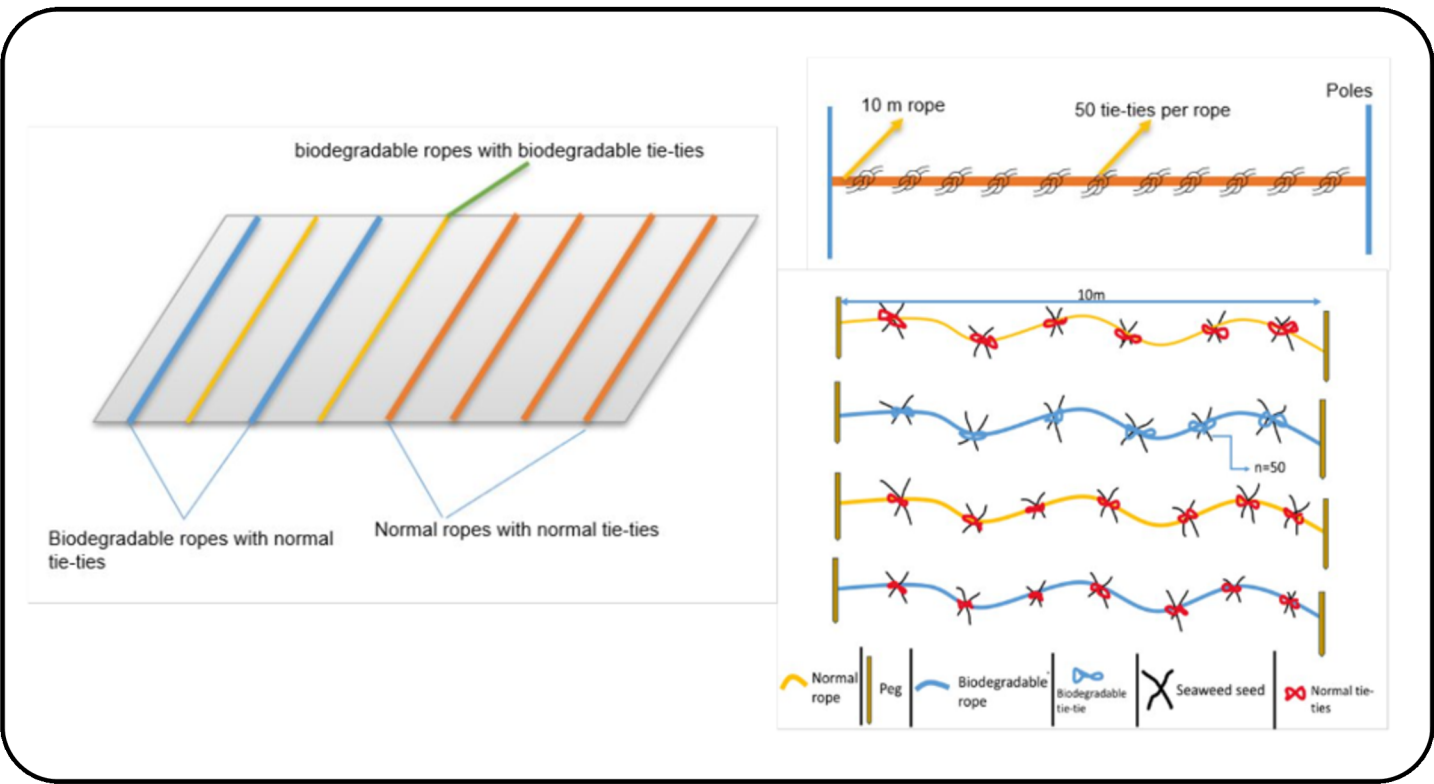
Approach & Methodology

This study pilots the use of biodegradable nets and ropes in artisanal fisheries with the Mikindani Beach Management Unit (BMU) in Mombasa County and seaweed farming by Kibuyuni seaweed farmers in Kwale County.

Modified Gillnet

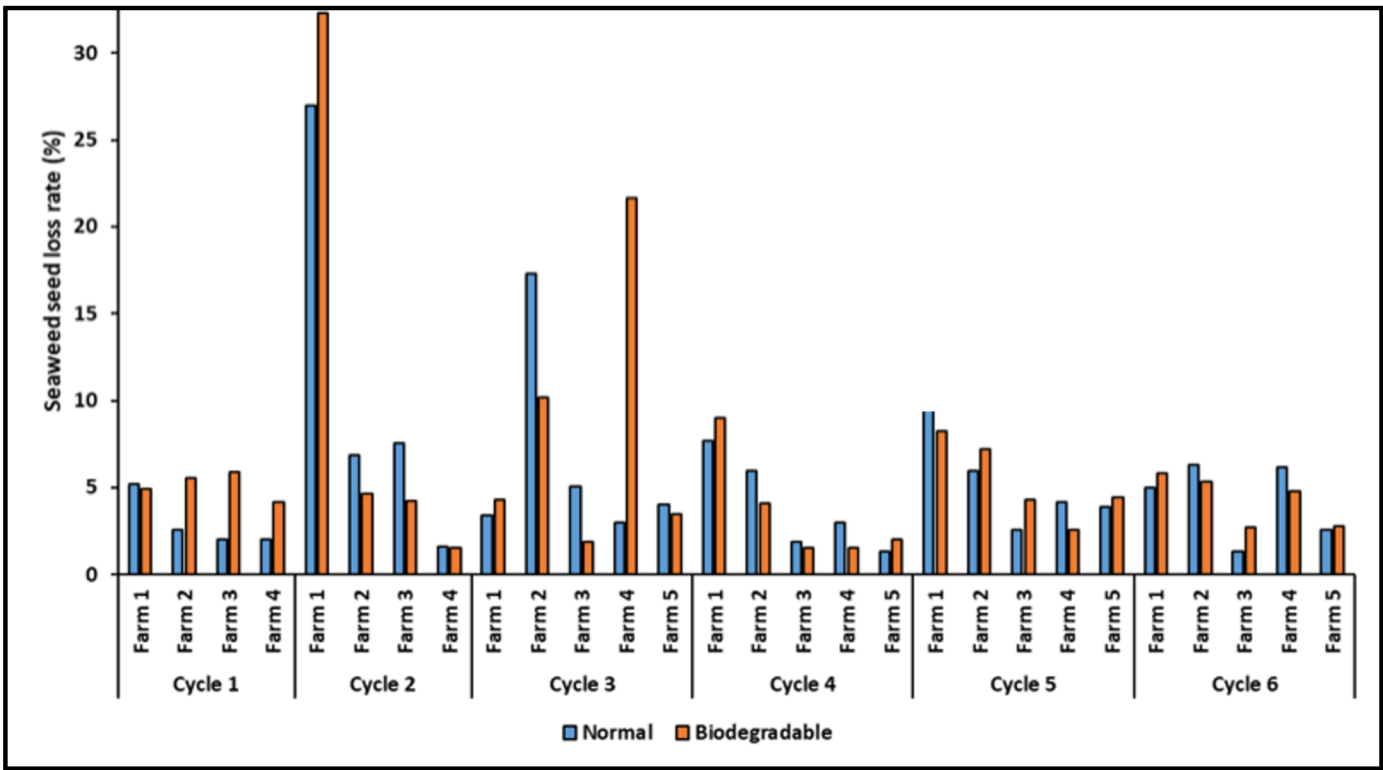
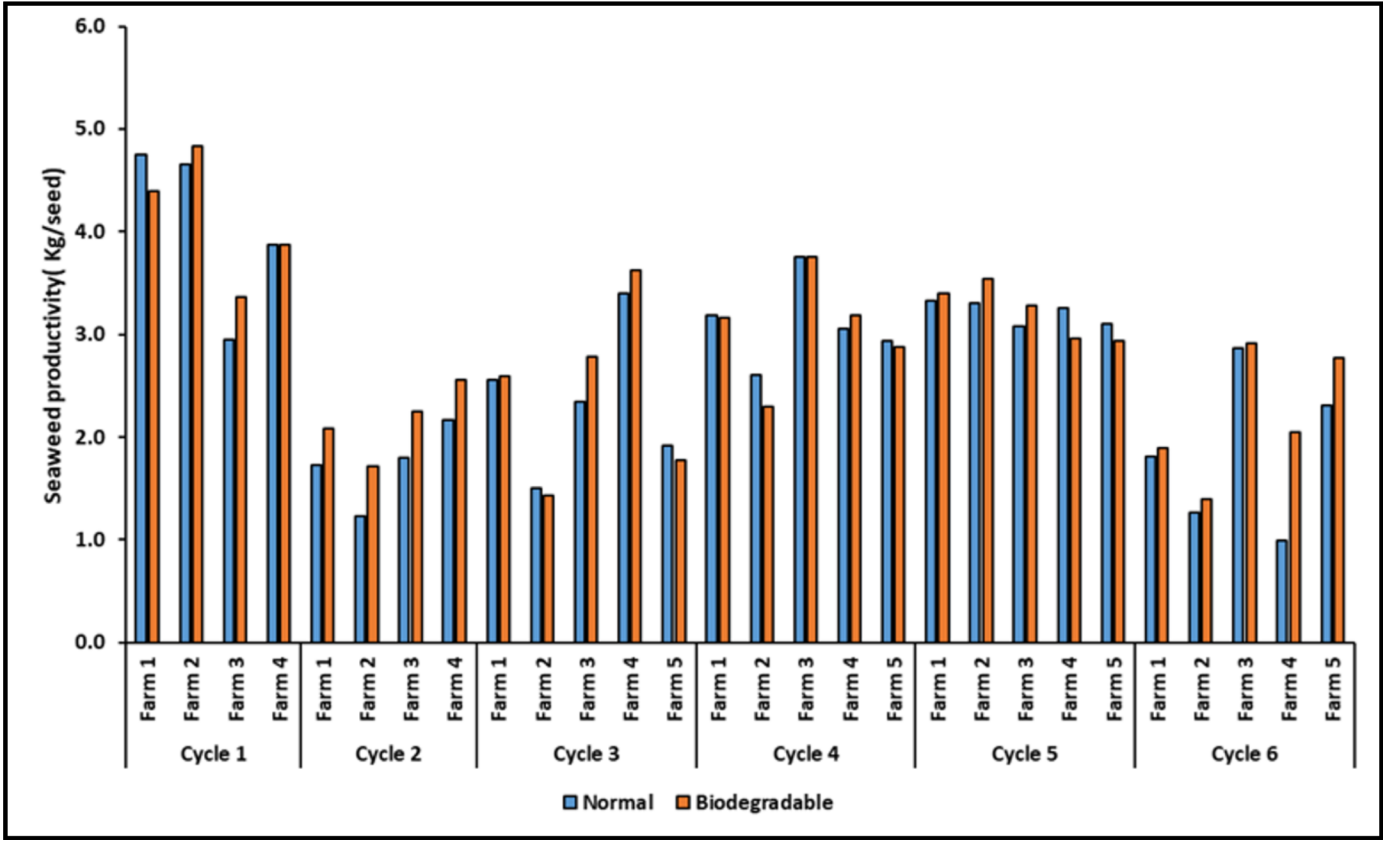


Seaweed farms set up



Key Findings

Metric	Modified Nets	Unmodified Nets
Number caught	72	58
Length range	17–53 cm	17–63 cm
Mean length	31.4±1.97 cm	30.8±1.46 cm
Mean weight	0.40±0.17 kg	0.520±0.10 kg
Species composition	Similar	Similar



Conclusion	Recommendation
Biodegradable PBS gear performs effectively across fisheries and aquaculture.	Improve material design and mechanical properties.
Environmental benefits are significant.	Expand long-term and multi-environment testing.
Adoption is feasible but requires continued optimisation.	Strengthen policy support and user engagement.

