

CASE STUDY //

ADDRESSING PLASTIC POLLUTION AND
PROMOTING SUSTAINABLE PRACTICES FOR
FOOD SECURITY AND THE BLUE ECONOMY IN
LIBERIA

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INTRODUCTION

The Blue Oceans Conference (BOC), held in March 2019 in Liberia, marked the beginning of a focused effort on marine pollution. The conference brought together key partners, including NGOs, the government of Liberia, and industry players, who collectively endorsed a call for action that included a ban on single-use plastic (SUP) in Liberia by 2020.

Unfortunately, the progress towards implementing the ban on SUP in Liberia was hindered by the COVID-19 pandemic. As a result, there is a need to reassess the approach to banning single-use plastics, by demonstrating the feasibility and effectiveness of alternative solutions to single-use plastics (the proof of concept), as well as integrating livelihoods into the approach.

WHY IT MATTERS?

It is crucial to address plastics in the ocean due to the alarming rate at which we are dumping plastic waste. Currently, we dump 11 million metric tons of plastic into the ocean each year, a figure projected to double by 2030 and nearly triple by 2040. The impacts of marine pollution, including costs associated with clean-ups, tourism, fisheries, and aquaculture, were estimated to be at least US\$6-19 billion globally in 2018 [5].

If the current trend continues, there will soon be more plastics than fish in our oceans // This poses a significant challenge considering the increasing per capita consumption, urbanization, and population growth, coupled with a lack of sufficient waste management infrastructure.

In Liberia, plastic waste is not just an environmental issue; it also poses a major socio-economic development challenge, impacting biodiversity, infrastructure, fisheries, and livelihoods.

Plastic pollution poses a significant threat to food security and the establishment of a vibrant and productive blue economy in African waters, where over 12 million people are engaged in the fisheries sector [5]. The reliance on fish for protein intake is high in many African countries, such as Mozambique, Sierra Leone, and Ghana, where it accounts for 50% to 60% [5]. The presence of marine debris not only jeopardizes marine ecosystems but also affects food security, economic development, and the overall viability of the blue economy.

ACTION IS REQUIRED

Addressing the mismanagement of plastic waste is crucial to mitigate the potential risks to human health, the environment, and the economy. If we continue with "business-as-usual" scenarios, the projected growth of mismanaged plastic waste becomes an alarming concern.



The impact of plastic pollution on marine species is evident, with at least 17% of species affected by entanglement and ingestion listed as threatened or near threatened on the IUCN Red List. Nearly 700 species are known to interact with anthropogenic debris [2, 9, 4, 3]. The consequences extend to nesting habitats for sea turtles, where debris obstructs nesting females from ascending and laying their eggs. Plastic fragments alter the physical properties of nesting beaches, affecting sediment permeability and temperature. Such alterations negatively impact sex ratios and nest success rates.

Plastic pollution threatens turtles, dolphins, cetaceans, and marine mammals, leading to lacerations, increased drag while swimming and potential drowning or starvation. Hatchlings face significant risks, as they rely on reaching the ocean for survival and recovery of endangered/threatened species populations.

Marine organisms, including sea birds, fish, dolphins, whales, and crabs, mistake plastic for food. Fish, dolphins, and whales often ingest plastic bags, mistaking them for jellyfish, while birds are attracted to algae growth on floating plastic. Microplastics are ingested by fish, leading to infections and blockages in their digestive systems affecting their lifespan.

Plastic pollution contains harmful chemicals, including carcinogens, neurotoxins, and hormone disruptors. Vinyl chloride, dioxins, benzene, phthalates, formaldehyde, bisphenol-A (BPA), and toxins like Diethylhexyl phthalate (DEHP) found in plastics have direct links to cancers, birth defects, immune system problems, and childhood developmental issues [10].

ADDRESSING MARINE PLASTIC POLLUTION

Globally // To address marine plastic pollution globally, United Nations (UN) member states endorsed a historic resolution at the UN Environmental Assembly (UNEA 5) in March 2022, aiming to end plastic pollution and establish an international legally binding agreement by 2024.

Africa // Africa's position on marine plastic pollution is to ban single-use plastic (SUP) and implement policies and restriction on marine litter and single – use plastic. In Africa, many countries have already adopted anti-plastic bag policies, with 34 out of 54 states either banning plastics or implementing laws with the intention to do so.¹

Liberia // Liberia faces a significant challenge in managing single-use plastics. Plastic waste, mainly generated from water sachets, bottles, and beverage packaging, poses a pressing issue due to limited awareness and inadequate management regulations. This has resulted in increased plastics in marine ecosystems. Monrovia, the capital city of Liberia, with its large population and concentration of plastic waste management stakeholders, presents an ideal area to demonstrate a marine plastic intervention such as the Blue Oceans Programme.

¹ Green peace Africa (2020) report on plastic ban in Africa indicates “Out of 54 states, 34 have either passed a law banning plastics and implemented it or have passed a law with the intention of implementation.”

² Monrovia has a population of 1.6 million people [11]. Monrovia was designed to accommodate a population of 350,000 individuals. However, due to civil crises and the pursuit of improved living conditions and educational prospects, the population has surpassed the intended capacity.

THE BLUE OCEANS PROGRAMME

The Blue Oceans Programme (BOP), implemented by Conservation International and its partners, addresses marine pollution among its four key themes: blue economy, climate change, sustainable fisheries, and marine pollution. BOP aims to promote the conservation and restoration of marine and coastal ecosystems, alleviate poverty, manage biodiversity, and foster climate change adaptation.

The BOP works with national stakeholders to translate global targets and goals into localized actions. By collaborating with local governments, communities, and organizations, the program ensures that its interventions are contextually relevant and aligned with the specific needs and challenges of different regions within Liberia. This approach involves linking interventions with local enterprises and livelihoods, recognizing the importance of integrating sustainable practices into economic activities.

Under the marine pollution theme, BOP has provided in-kind grants to four Community-Based Enterprises (CBEs) to demonstrate proof of concept solutions across the plastic value and supply chain, while considering livelihoods (Trash to Cash). These CBEs focus on various aspects, including women inclusion (see Box 1) in plastic waste management, awareness raising, waste segregation, collection and transportation, and plastic recycling. They play a vital role in engaging communities, raising awareness, and cleaning up beaches.

Engaging multiple stakeholders, the BOP has initiated a national conversation on developing a policy to ban single-use plastics (SUPs) in Liberia, with ownership and compliance monitoring assigned to these stakeholders. Several organizations are actively involved, here are some of them:

1. Gehn Eco Services: Responsible for promoting women's inclusion in plastic waste management and raising awareness of proper waste management in Paynesville communities.
2. Evergreen Africa Conservation: Responsible for educating the community on waste segregation and collection of plastic waste at the community level in New Kru Town and West Point, Monrovia.
3. Devine Community Sanitation and Waste Management: Committed to raising awareness at the household level, collecting and transporting waste from households to waste transition centers.
4. Evergreen Recycling Institute: Responsible for the recycling of plastic waste.

Promoting gender equality and social inclusion in resource management and value chains //

BOP recognizes the importance of bridging the gender gap and is committed to enhancing women's participation in resource management, improving their socio-economic status, providing access to micro-credit and financial literacy, and exploring value addition opportunities along the fish and plastic waste value chains. Gender and social inclusion are key considerations for BOP, aiming to create conditions where both men and women can equitably access and benefit from natural resources.

Empowering women-led CBE for sustainable waste management: Devine Community Sanitation and Waste Management //

Devine Community Sanitation and Waste Management (DCSWMI) is a women-led CBE that emerged from the BOP beach clean-up and community awareness event held in April 2022 at Sophie and Catholic communities in Congo Town. DCSWMI received an in-kind grant worth \$15,000 to support awareness-raising and plastic waste collection from households. They also conduct monthly beach clean-up exercises and focus on proper waste management education.

With support from BOP, DCSWMI is now a registered and fully operational CBE, accredited by the Environmental Protection Agency and Monrovia City Corporation. They have employed eight youth, including six women and two men. DCSWMI currently charges \$10.00 per household per month for waste services and serves 75 households, representing 44% of their target of 500 households. They have implemented a waste segregation mechanism using used car tires and rice bags, which has proven effective in preventing pests that could pose health risks.

Driving plastic waste awareness and collection in Monrovia's communities: Evergreen Africa Conservation //

Evergreen Africa Conservation (EAC) is another CBE that received a \$25,000 in-kind grant from BOP. EAC is focused on raising awareness and collecting plastic waste in New Kru Town and West Point communities on Bushrod Island in Greater Monrovia, Montserrado County. They have employed 12 people, including four women and eight men.

Education and Awareness - Creating Ambassadors for behaviour change //

Education and awareness raising programs do correlate with reduced coastal debris [1]. Education and awareness are crucial components of BOP's efforts. By promoting education and understanding, BOP aims to foster behavioral changes and reduce waste inputs into the marine environment. They collaborate with high schools in Monrovia and have initiated an education program with tertiary institutions through their environmental clubs. BOP seeks to leverage resources and strategies such as online and in-school education, while working with manufacturers, distributors, and retailers to increase awareness of the environmental impacts of plastics and identify points of leakage for reduction, reuse, and recycling. To ensure synergy and consistency, BOP advocates for a unified approach, resource sharing, and consistent data collection, management, storage, dissemination, and exchange of experiences.

Scaling up // The BOP also emphasizes the launch and scaling up of pilot projects and proven solutions related to plastic production, design, and waste management. By mobilizing resources and engaging civil society, the program aims to implement and expand initiatives that effectively address plastic pollution. This includes advocating for policy dialogues and actions, such as advocating for the ban of single-use plastics, strengthening recycling infrastructure through community-based enterprises (CBEs), and improving waste collection systems in collaboration with grassroots organizations, local municipalities, and cities.

Globally, the BOP aims to join existing partnerships and initiatives to collaborate with other organizations and leverage their collective expertise. By providing scientific and cross-sector perspectives, the BOP contributes to shaping messaging and strategies to address plastic pollution on a global scale. The establishment of a global "safe plastics" certification scheme further demonstrates the program's commitment to promoting sustainable practices and setting agreed-upon standards for plastic production.

By highlighting the need for global action, acknowledging the pervasive presence of plastics in the environment, and emphasizing local solutions and synergies, the BOP recognizes that addressing plastic pollution requires a concerted effort at various levels. The program seeks to create partnerships, implement sustainable practices, and promote dialogue and action to tackle the complex and multifaceted challenges posed by plastics.



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