**THE CIVIL SOCIETY FUND**

**SMALL-SCALE INTERVENTION**

**ENVIRONMENTAL EMPOWERMENT:**

**ENGAGING LOCAL COMMUNITIES IN**

**FREETOWN IN LAGOON WASTE MANAGEMENT AND IMPROVED LIVELIHOOD**



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# 1 Objective and relevance - the world around us

## 1.1 What we aim to achieve through the intervention

The aim of this intervention, is to empower and engage vulnerable communities in a local dialogue about the impact of waste on livelihood – specifically the significant amounts of waste compiled in the Lagoon of Freetown – the Aberdeen creek. On a longer perspective the initiative is connected to EWB-DKs vision of a strong community driven and locally owned waste collection system, restoration of the ecosystem functions as well as improvement of the surrounding livelihoods of Aberdeen creek in Freetown, Sierra Leone, which is heavy impacted by the waste from the lagoon (as can be seen on the front-page photo). Awareness raising at local level is initiated through a waste collection exercise in which the intervention applies a simple and low cost technical solution to catch the plastic waste and thereby prevent it from flowing from the lagoon into the ocean. The caught waste will be lifted for collection and sorting by community members and youth on the nearby banks and the dimensions/volumes and content of the waste is to form part of the platform from which the local dialogue about livelihood and waste is to revolve around The initiative is in line with the efforts currently led by the Freetown municipality promoting community driven solutions aiming to establish proper waste management, restore the environment, reduce environmental risk hazards and create green jobs. Due to urban logistical challenges and lack of urban planning community driven solutions is been promoted at the short and medio term.

This intervention is planned and conducted in a partnership between the NGO Green Scenery in Sierra Leone and Engineers Without Borders Denmark (EWB-DK). In order to ensure project sustainability (environmental, social and economically) in the long term, the awareness raising is combined with a value-chain approach. During the formulation of the initiative the partners have engaged with local authorities and production companies to manage the supply of plastic waste for its recycling into marketable products, as well as handle non-recyclable waste for waste-to-energy generation. On a long term the local supply and demand chain will finance continued waste collection by means of the lagoon waste collection system, which will create a resilient job market. To support these efforts in subsequent phases of the initiative EWB-DK through its membership of Ocean Plastic Forum has engaged Danish waste-specialised companies to assist with knowhow and capacity building. The short-term goal is to raise awareness on the issues of poor waste management and outline financial opportunities in proper waste management. Green Scenery has many years of successful experience in awareness raising, capacity building and community engagement, and they are already engaging local youth in environmental restoration activities and green jobs. Through this initiative, they will raise awareness in the local community about the negative impact of waste mismanagement and demonstrate that there are both financial and environmental benefits to the collection and recycling of waste. Green Scenery will engage with the local communities and integrate their perspectives, thereby ensuring local buy-in on the solution and value chain operations. Once the local communities are engaged a feasibility study will be conducted, after which and in subsequent phases the technical solution will be installed, tested and adjusted for long-term sustainable operation in line with the value chain set-up. The initiative will engage the community and the selected partners in the following elements:

* Establish a clear picture of the social and environmental context such as volumes and types of waste ending up in the lagoon, stakeholders involved, and potential bottlenecks;
* Raise awareness, engage local communities to be involved in the project, and provide training in collaboration with Green Scenery, company partners and the municipality;
* Plan and implement the solution in the defined hotspots and introduce and train the locals to undertake the operations and collaborate with the private recycling partners;
* Testing and adjusting the system and infrastructure functions through documentation;
* Community and participatory analysis of lessons learned and identification of economic viability of the value chain with assessment of feasibility for up-scaling and expansion.

## 1.2 Why the intervention is important Aberdeen Creek and the surrounding marine environment plays an essential role in the livelihood of Freetown’s citizens. The current lack of proper waste management in the city has direct negative impact on the health and income of the communities living near the banks, as they rely on the creek such as for drinking water, bathing and fishing. The waste currently dissolving in the water however means that the communities are drinking water polluted with various chemicals, fish cannot survive which force communities to cut down mangrove trees for income and the shores where people walk are both drenched with polluted water and waste flushed ashore. In addition, the waste in the creek flows out into the ocean, further polluting and damaging the shores and the wider ocean ecosystem. Thus, removing the waste in the creek will significantly improve the health and in time (when fish stocks replenish) economic quality of life in the communities and wider Freetown. The partners have identified that addressing the issues of livelihood and waste must be initiated through community awareness raising and mobilization.

Hence the present initiative has as specific focus on community awareness raising and subsequent mobilization and engagement through the knowledge obtained from the initial compositional analysis of the local waste, planning and organising of the collection and the recycling of the waste will be used in the further planning of a waste treatment system and infrastructure that after piloting can be scaled for the whole city.

The long-term objective of the initiative is to collect and recycle the waste collected from the lagoon - thereby improving the state of the lagoon and preventing waste from reaching the ocean. An integrated waste treatment solution, such as recycling and waste-to-energy, will be beneficial for the local community. The tasks of collecting and handling the waste will create local jobs, while the emergence of products from recycling and incineration of waste will generate financial income. The project will strengthen local communities and initiatives and improve the environment in several ways:

**The removal of waste** will; **directly improve the health of the community members** by the creek, **The removal of waste** will directly improve and restore the marine environment, **Showcase** how the communities can – safely – take own action on improving their area by removing waste, **Establishing a value chain** from collection to inspire and incentivize the local community in Freetown to mobilise and engage in recycling of lagoon waste and to focus on **waste as a resource**, **Support the long-term financial sustainability** of **waste collection**, creating reliable green jobs, and indirectly create awareness on the value of waste through the use of those products, **Generate** **income and skills to currently unemployed young men and women** and will in particular demonstrate to the youth that there are alternative opportunities for income generation,  **work in synergy** with EWB-DK’s currently ongoing *Precious Plastic project* in Freetown in the waste handling phase.

## 1.3 Context of the intervention Based on the local partner Green Scenery ‘s context analysis combined with an initial desk-research and contextual knowledge from the current EWB-DK climate adaptation project, a climate risk assessment has been undertaken. The findings clearly identify four central risk elements: 1) High levels of poverty; 2) Severe risk of impacts of climate change; 3) Uncontrolled urbanisation; 4) The absence of government action and basic social services.

Extreme rainfalls occur more frequently and severely due to climate change. Central urban zones are already densely populated, slums are expanding into the once forest-covered hills surrounding Freetown, and residential areas are expanding into hazard prone zones. Government plans for addressing urbanisation are still insufficient and decades of civil unrest during the civil war has caused many state institutions to collapse. While the authorities are slowly reclaiming control, a backlash caused by the Ebola outbreak in 2015, financial limitations, corruption, and the absence of political power continue to incapacitate the government. Even though Freetown municipality with the present Mayor is engaged in addressing the impact of climate change and environmental issues, there is still a lack of required services and systems, for instance, waste collection and management. The specific geographical area of intervention (hot spots for wate collection) is to be identified by Green Scenery in dialogue with the communities and EWB-DK as the first participatory activity (Participatory community-based analysis). The selection of hot spots will be based on four overall criteria; 1) The areas on the banks of the lagoon that are most negatively impacted by the waste; 2) The volume of waste that can be collected from the lagoon at the spot to ensure the most impact; 3)Sorting and handling opportunities on shore, to minimize transportation; 4)Technical fit for implementation in relation to the field conditions, to ensure optimal design of the technical solution for waste collection from the lagoon in delivering the best expected impact.

The main technical element of the project design is to set up a physical waste-catch-system at the banks of the area where the Aberdeen creek and the open sea intersect. As this intersection is defined by a narrowing of the opposing banks, the waste tends to gather here, making it the ideal point for an initial cost-efficient solid waste collection. The collected waste will be extracted (i.e. lifted onshore) and dried, so that it can be sorted and managed. Overall, and on the long run (and beyond the scope) of this initial awareness and mobilizing intervention, the initiative will develop and implement a robust, simple-to-run, and affordable management system to ensure proper valorisation or at least safe disposal of the collected waste. This plan requires collaboration with local stakeholders, especially authorities and companies, as the waste-catch-system should be emptied at a constant rate and regular intervals, and the dried extracted waste should be sorted and transferred further to treatment. The advantages of this plan are that it is not intrusive and can be maintained with local resources.

**1.4 How the intervention will contribute to social justice** This intervention will empower some of the poorest and most adversely affected communities in Freetown by taking a community-based approach to addressing the waste pollution in their neighbouring creek and give them the understanding and concrete tools to address the issue in a manner that creates an income. By initiating the phase through involving the communities directly in an explorative workshop session, the project ensures that they communities are given a voice and agency in the forming of their own future and improvement of quality of life. Green Scenery, the local based NGO and partner, has several years of experience in awareness creation and community engagement, especially within youth groups. This is skills, community reach and cultural knowledge which the intervention will utilize in the local dialogue and in the selecting of hotspots with the communities affected. Community buy-in and actual need ensures both an impactful intervention as well as a socially and economically sustainable one. On the long run the project aims at directly supporting the SDG 8 through decent job creation, as well as SDG 1 on ending hunger and SDG 3 on improving the health of the communities in most need.

**1.5 Climate- and environmental conditions to be addressed** The present intervention seeks to raise awareness and mobilize community buy-in regarding environmental degradation. Promoting a bottom up – community approach, the project will contribute to improving the local marine environment, including the land environment of the communities on the banks of the lagoon, as well as general environmental standing in Freetown due to a higher recycling rate. Despite the efforts of the current Mayor of Freetown in addressing environmental issues and climate change, improvements in the livelihood, especially for poorer communities, are envisaged only with behaviour changes and active participation of the population in implementing feasible and impactful solutions. Green Scenery’s affiliation with the communities is key to communicating the enhancement of the environmental issues to the communities and creating awareness about why and how they can handle the issues of waste to improve the environment.

# 2 Partnerships/collaborators - our starting point

## 2.1 Previous cooperation/experience to be used in the project

**About:** Green Scenery is a well-renowned local social-environmental NGO in Freetown established in 1989 with solid experience in awareness raising, training for empowerment and environmental advocacy. They have shown excellence in establishing a strong relationship and capacity to engage and motivate marginalized communities and the youth. Through their social-environmental activities they are currently employing around 50 local youths within environmental restoration and waste management. Green Scenery is the project key-partner and will be responsible for community mobilization, citizen engagement and selection of lagoon hot-spot sites as well as supporting the capacity building and training workshops.

**About:** EWB-DK is a technical-humanitarian organization of volunteer members with a large range of technical skills and backgrounds. EWB-DK bases activities on the delivery of strategic services and encompasses community development work with a strong focus on achieving sustainable changes in behaviour of targeted groups to improve their livelihood on a permanent basis. In doing so, EWB-DK collaborates with local and international NGOs. EWB-DK has been engaged in international development for almost 20 years and has worked in Sierra Leone with community engagement for close to 10 years. EWB-DK has been working in some of the poorest and most climate change affected communities, Pottor and Kaningo in Sierra Leone, since 2017. Dialogue between Green Scenery and EWB-DK has been initiated through EWB-DKs existing community engagement in the field of climate adaptation and plastic recycling. EWB-DK is at present cooperating with two local NGOs, World Hope International (WHI-SL) and NSP on implementing a large project in Freetown, *Climate resilience in suburban Sierra Leone: working towards more resilient communities through risk mitigation and climate change adaptation from a community-based perspective,* which is also supported by CISU. The project aims to develop community resilience in the suburban areas Kaningo and Pottor through self-organisation, with attention to knowledge sharing and learning; collaboration; social networks; leadership; and simple technical adaptation interventions. To secure sustainability, activities are based on participatory approaches with emphasis put on community mobilisation and awareness raising, while increasing partner capacity concerning climate risks. The experiences from this project, have provided valuable information while designing this project. One of the first activities the Climate resilience project conducted in the two communities was a baseline risk assessment based on interviews with almost 750 households, which provides unique insight into the communities including their perception and understanding of climate change and environmental issues. Another project in Freetown, which has close synergies with both the climate resilience project and this project, is the project *Engaging local communities in waste Innovation in Freetown,* which will also target the communities in Pottor and Kaningo. The aim of that project is to demonstrate a viable community based technical and economic approach to the recycling of plastic. The initiative will adapt and integrate a simple technical solution to address grooving climate change and environmental impacts in the participating community, integrating a focus on value-chain and circular economy. In the medium/long term perspective, the initiative is also to demonstrate forms of successful local business management and organization to manage community income generation; The project seeks to demonstrate the value of using local resources (waste) as a platform for income generation, hence thereby improve livelihoods and drive social and environmental change. While still in the early stages, the project has already established agreed partnerships with the following 5 entities; EWB-DK, Green Scenery (SL), Ocean Plastic Forum (OPF) (DK), DESMI (DK) and Shae Recycling (SL). In addition, partnership discussions and agreements are currently being discussed and finalized with Kangema Trading (SL), Environment Protection Agency Sierra Leone and Danish know-how companies ReSea, DeNova and Pack Tech.

**Roles of the parties:** The role of Green Scene through the technical and financial cooperation from EWB-DK a) create awareness and build motivation at community level on acting on the waste issue,

b) facilitate workshops with the communities and partners to ensure the communities are heard and actively involved, to build capacity and strengthen awareness and provide training for assisting with the data gathering and

c) engage local key stakeholders necessary to establish a viable and sustainable value chain for waste collection, recycling and selling of the end products.

**Enabling alliances:** EWB-DK is one of the founding members of OPF, which is a company/NGO/University-network that aims to combat the increased plastic pollution of the global marine environment. Using a value-chain approach they work towards developing technologies and business models for collecting and managing plastic waste. OPF supports the project through access to these members and its network. Several members of OPF are in initial dialogue with the partnership regarding their future involvement.

# 3 The intervention: Target groups, objectives and expected results

## 3.1 Beneficiaries The people living in the communities near the chosen lagoon hotspots will be the overall main target group for awareness raising and mobilization and in the future benefitting from a cleaner and healthier environment, as a result of the project. The communities near the lagoon are today some of the poorest in the city but through the solution they will be the main target for the creation of green jobs, thereby further contributing to improving their quality of life. Depending on the hot spots selected, in collaboration with the communities and Green Scenery, around 2000 – 3000 people are expected to directly benefit from the project. In addition, many more people in also surrounding communities will be able to benefit from the awareness raising activities to be broadcasted through local radio stations.

## 3.2 Implementation of the intervention – activities to be carried out A central part of the project is local ownership and improvement of livelihoods. To ensure this a community-based approach is taken throughout all phases, starting with including community leaders in the first of two workshops where they can share their perspectives regarding community needs and unique understanding of the area, the people and the origins of the surrounding waste and issues. This ensures buy-in in the project. The first workshop will also act as a platform for the selecting participants to be employed in undertaking the information collection for the pre-feasibility study. For the pre-feasibility phase, approximate 10 locals will be employed to assist with the waste analysis and will participate in the capacity building and training workshops where they will receive detailed information about the inherent value in recycling waste, safe waste handling, and lastly how to register data on the assessed waste and areas. Throughout the first phase, general awareness about the current issues of waste and the health and economic benefits of collecting for recycling will be created within these communities in collaboration between Green Scenery, the participants and the engaged community leaders. This will create a strong foundation for engagement when the technical solution is to be implemented and the waste collection and recycling value chain established. As the project envisions close collaboration with local private waste management companies during the operation, this will create a platform of opportunity for wider green jobs for the community members as they can network with these companies and directly work with them. In all activities, attention will be paid to ensure equal representation of genders.

**The outputs and activities of the project is shown in the table below:**

|  |  |  |
| --- | --- | --- |
| Objective: Community awareness raising and livelihood impact assessment of establishing a low-cost sustainable system and infrastructure for local collection and recycling of waste from the lagoon | | |
| Outputs | Activities | Est. Timeline |
| 1.Community is mobilized and engaged in collection and recycling of waste | 1.1 Online kick-off/planning meeting with Green Scenery | Week 1 |
| 1.2 Engagement: Introduction of the project in the communities, assessing needs and selecting hot spots of intervention | Week 2 – 5 |
| 1.3 Identification and selection of specific local resource persons to be involved in the project from community level. The partners will hold on site community meetings in Freetown for engaging local community and supporting partners for wider advocacy and assessment on social sustainability of the project | Week 3 – 4 |
| 1.4 Conduct a 1-day analysing/capacity building workshop planning for fact finding and documentation support, attended by selected participants | Week 7 – 8 |
|  | 1.5 Awareness raising through local radio stations on the initiative | Week 2 – 20 |
| 2. Feasibility of concept for treatment of waste from the lagoon | 2.1 Community driven fact finding: Collect and analyse types and amounts of waste in the lagoon and assess local treatment options | Week 9 – 15 |
| 2.2 Prepare and conduct feasibility study on; technical, infrastructural and community capacity for continues engagement in the issue /subsequent | Week 13 – 18 |
| 2.3 Participatory assessment of initiative and its future viability | Week 18 – 20 |
| 2.4. Documentation of lessons learned and potential for project continuation/scale up | Week 20 – 23 |

## 3.3 Expected results

1. Communities around Aberdeen creek aware of the volume of waste and impact on livelihood through awareness raising efforts;
2. Communities have identified hotspots regarding waste accumulation;
3. Communities have conducted and documented an analysis of the composition of waste and through technical assistance of Green Scenery and EWB-Dk the communities have conducted an initial analysis of wate composition and the possible value of the wate;
4. The communities in collaboration with the partners have assessed, lessons learned derived and recommendations regarding requirements for a continuation of the containment of waste and treatment of waste will be prepared, in the hope of initiating a plan to collect and treat lagoon waste;
5. Ultimately the community can conduct an analysis of the problem identified, the solutions possible and if it based on this informed platform wishes to engage further.

## 3.4 Risk assessment: Possible risks and mitigating efforts

*Lack of local engagement:* Through the local knowledge by the partner Green Scenery the initiative will be able to identify the local resource persons to enable community engagement and commitment. *Prolonged impact of COVID in the region/globally:* The initiative will not be initiated before the travel ban has been lifted, hence implementation is foreseen in Q2. It is found that it is necessary to have EWB-DK present on site due to the however relatively small technical instructions needed in order to conduct waste extraction and classification. Hence flexibility in the implementation period will mitigate prolonged impact of COVID travel restrictions. *Inadequate technical solutions*: EWB-DK has initiated a scoping of technical solution with a base criterion of low cost and simple technical handling. Spare parts and assembly must be supported by local sourcing - securing availability of spare parts and repair if needed.