

Greening DRC

**A CATALOGUE OF SELECTED
GREEN INITIATIVES IN THE
DANISH REFUGEE COUNCIL**





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DRCs Climate and Environment Strategy

How do we take action on Climate Change and Environment?

Climate change is a global issue that increasingly intersects with the drivers of conflict and displacement, with a disproportionate impact on developing countries, where the majority of the world's refugees and displaced persons currently reside.

In several regions where the Danish Refugee Council (DRC) operates, the global climate crisis presents severe challenges for the populations DRC aims to assist. DRC has therefore committed to taking climate action across our response framework and organization. As a response, DRC is focusing on three key areas related to Climate and Environment:

- Adaptation in Programmatic Response
- Mitigating DRC's Environmental and Climate Footprint
- Advocacy for Displaced Persons in the Context of Climate Change

These three pillars guide DRC's approach to addressing climate and environmental issues in conjunction with forced displacement. Climate change increasingly impacts critical areas such as food, water, and economic security, intertwining with conflict dynamics and amplifying other drivers of conflict and fragility.



For more information on this read the Framework:
pro.drc.ngo/climate-and-environment-framework

Moreover, resilience to climate-related shocks, environmental degradation, and displacement is typically low in fragile and conflict-affected contexts, disproportionately affecting vulnerable populations. In this context, the relationship between climate change, conflict, poverty, and persecution complicates humanitarian crises, refugee emergencies, and protracted situations, making the climate perspective increasingly important for organizations like DRC. At the same time, DRC as an organization needs to green its operations, and strengthen our role in advocating for the rights of displacement affected populations affected by climate change.

DRC
Green pilot

DRC Green pilots

This catalogue includes some of DRC's Green innovation pilot projects, where we explore new and innovative solutions to green challenges. Look out for the 'Green corner' in this catalogue to find them and follow the links to learn more.



About the Catalogue

What to find here?

In this Catalogue we showcase some of the DRC's Green Initiatives in the fields of Adaptation, Mitigation, and Climate Advocacy, which encompass a wide array of projects with varying scope, duration, funding, and focus areas.

From a sprawling reforestation project in Tanzania including 16,000 households to an innovative Garment Recycling pilot project in Bangladesh. From strengthening Green Economic Recovery in Kenya by creating income possibilities for waste pickers to piloting Biogas production in partnership with a local private enterprise in Yemen.

These and the other initiatives presented in this catalogue serve various purposes and are at different stages of maturity and reach. Some focus on strengthening the resilience of host communities and refugees, some on mitigating DRCs negative climate and environmental footprint by phasing out fossil fuels and others on forecasting and anticipatory actions.

While we recognize the importance of scale in climate response and increasingly design programs with this in mind, we are equally convinced that we also need to develop innovative solutions and partnerships to address the climate crises and its impact on displacement affected populations and humanitarian organizations. This catalogue includes both large-scale initiatives and smaller pilots and innovation initiatives with the climate and environment field. It doesn't aim to encompass all of DRC's Green ambitions and initiatives. Instead, it brings together a selection that showcases the range of our commitment to the Green Transition, aligning with the evolving challenges posed by climate and environmental change.

We invite you to explore these initiatives included in this Catalogue, follow the QR codes and links for further information, and reach out to us to discuss possibilities to scope some of the pilot projects and expand on them in different contexts.

**Selection of
DRCs Greening
Initiatives**



**Various scopes
& focus areas**



**From all
around DRCs
countries &
regions**

Overview

DRC goes Green by region

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Adaptation

Strengthening Resilience

DRC is increasing its integration of climate change adaptation into our programmatic response across sectors and through adaptation-focused initiatives, such as resilience programming, disaster risk reduction and anticipatory action.



Boosting Resilience of people and the forest

Conserving the forest and providing alternative energy sources

Kigoma region, one of the poorest regions in Tanzania, hosts close to 240,000 refugees and asylum seekers coming mainly from the neighboring countries Burundi and DR Congo. The influx of people to the region has put pressure on host communities and local resources alike, namely the primary fuel for cooking which is firewood.

Due to limited livelihood opportunities and resources to purchase alternative cooking fuel, over **90% of households** across the two refugee camps in the Kigoma Region **rely on firewood for cooking**, which is collected within refugee camps and from nearby forests. Consequently, the increased population density in the camps and growing energy needs have **led to an over-exploitation of forest resources** and a scarcity of firewood for both refugee camps and surrounding host communities.



Tanzania, Kigoma region

2021 to 2024
DANIDA

-  16.000 households
-  40 community-led char production centers
-  Alternative and reusable cooking energy source
-  Afforestation and conservation of the forest by planting over 1.6 million tree seedlings



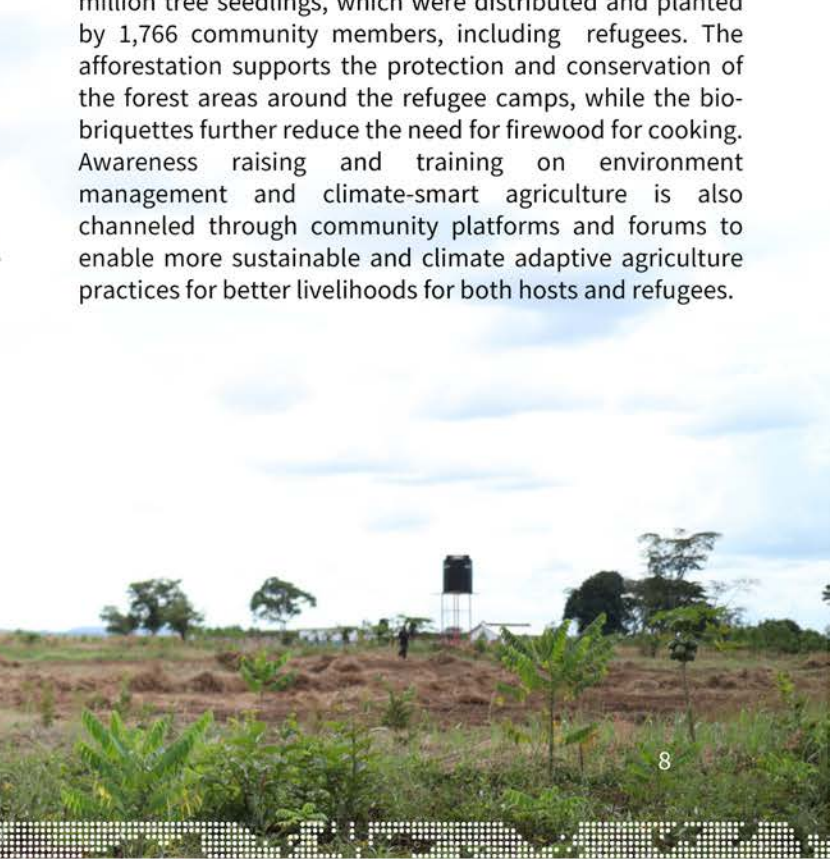
Alternative energy sources through bio-briquettes

Biomass briquettes are produced from green waste (biomass) and other organic materials, depending on what is available in the area. The biomass is collected and carbonized in almost 40 char production centres, which have been established in nearby host communities. The biomass is carbonized in small metal drums, which then turns into char (or charcoal) and is distributed to targeted refugees and host community members for them to manufacture into the briquettes at the household level using manual tools. While providing participants with a sustainable energy source and new skills, this activity seeks to **support 15,000 refugee households and 1,000 Tanzanian families**. The briquettes burn better, longer, and produce less smoke than firewood and provide an alternative to cutting down the forest to get firewood. A total of 16,000 vulnerable households have been selected, including female-headed households, persons with chronic diseases and elders for the programme. They receive training in bio-briquette production and energy-saving techniques and are supported with manual tools (e.g., manual extruder, mixing container) for bio-briquette production.



Restoring the forest

In addition, the project seeks to support **community-led** initiatives such as establishing tree nurseries for afforestation. The participants are given training in tree planting and forest harvesting techniques while being supplied with tools and seeds for establishing tree nurseries in anticipation of establishing or strengthening **17 tree nurseries** in the three districts Kakonko, Kibondo, and Kasulu. The greenhouses have already produced nearly 1.6 million tree seedlings, which were distributed and planted by 1,766 community members, including refugees. The afforestation supports the protection and conservation of the forest areas around the refugee camps, while the bio-briquettes further reduce the need for firewood for cooking. Awareness raising and training on environment management and climate-smart agriculture is also channeled through community platforms and forums to enable more sustainable and climate adaptive agriculture practices for better livelihoods for both hosts and refugees.



Learnings so far

- Provision of alternative cooking fuel improves the lives of the hosts and refugees as there is less need to spend long hours on collecting firewood, time that could be spent in other ways, the risk of sexual exploitation and abuse was reduced as women/girls no longer needed to collect firewood in remote areas, and the reduced smoke improved their respiratory health.
- The tree planting and biomass briquettes production are very well received by local authorities, environmental destruction was reduced and local employment was created. The Government of Tanzania has also used DRC successful intervention as inspiration to be replicated in other parts of the country.
- The skills obtained by participants in the briquette production programme are easily transferred and applied even when refugees return home.
- There has been a large interest from amongst the host community for tree seedlings, working as a catalyst for more trees to be planted.
- The project created a further interest in similar interventions by other donors as well as the private sector.



More information on this project via:
pro.drc.ngo/boosting-resilience-tanzania



NURI – Northern Uganda Resilience Initiative

Mitigating flood risks and improving economic development through resilience design

NURI (Northern Uganda Resilience Initiative) is one of eight development engagements under the DANIDA Denmark-Uganda Country Programme 2018–2022, implemented through the partners, one of them being DRC. The project aims to **enhance resilience and equitable economic development** in selected areas of Northern Uganda for refugees and refugee-hosting communities. To strive towards this, NURI's work is split up into three activity branches:

- Climate-smart agriculture (CSA),
- rural infrastructure (RI), and
- water resources management (WRM)

Under the NURI project, DRC's role is, among other things, to construct and repair market access roads, as well as enhance water security.

Partnership

DRC worked in partnership with AFARD, ARUDIFA, PICOT, The Republic of Uganda – Office of the Prime Minister, CARE, Republic of Uganda – Ministry of Works and Transport, UNFPA.

Uganda

2018 to 2023

DANIDA



-  Increase in average annual agricultural cash income of participating households
-  Decreasing the periods of food insecurity
-  Training on climate smart agriculture and VSLA practices
-  increasing water availability, by reducing the impact of climate change and extreme weather events, and countering environmental degradation, to improve yields and decrease incidents of crop failure



**More information
on this project via:
nuri.ag**



The Sponge Village of Atego

Resilience through Regenerative Design

In northern Uganda, extreme weather and climate-related conditions range from increased temperatures, rainwater volumes and wind gusts to significant soil erosion. These shocks and stresses negatively impact market systems, supply chains, land fertility, and food production. DRC East Africa’s resilience approach is based on the ideas of ecological health and regeneration. The Sponge village concept was piloted in Uganda, setting up the whole village according to these principles to increase resilience against climatic shocks, strive towards more food and seed security, and improve water as well as soil erosion management.

What is a Sponge Village?

The idea of a Sponge Village is that it soaks up the nutrient-rich water flowing through the land and stores it deep into the soil. This technique creates more fertility while mitigating extreme water events and drought, reinforcing the resilience of land, livestock, and people. For the pilot project in Atego, DRC provided a practical “work-hard-shop” for community members, DRC staff and district technical engineers. Together, a system of water harvesting, earthworks and dams were created. The project aims to retain water and nutrients in Atego’s soil, supporting the community’s resilience to natural disasters, food insecurity and conflict.

Uganda

2021
DANIDA, USAID, SCALE



- Increasing community resilience to shocks and stresses
- Increased water holding capacity, reduction in water use and extended growing seasons
- Installation of hand and machine dug dams, road water harvesting, a food forest, Farmer managed natural regeneration and permagarden



More information
DRC Uganda via:
pro.drc.ngo/uganda



SAHURI

The Sahel Urban Regeneration Initiative for Displaced People

Prolonged crisis characterized by massive forced displacement is the setting for DRC Burkina Faso’s ‘Sahel Urban Regeneration Initiative for Displaced People’ (SAHURI) project. The project adopted recovery strategies adapted to climate change in accordance with regenerative circular economy principles that aim to reduce environmental degradation.

Through targeted **capacity building of municipal authorities and popularization of the government, the SAHURI project supported internally displaced persons (IDPs) and host communities** in Burkina Faso’s main provincial urban center hosting IDPs.

At the community level, the SAHURI project sensitized and trained municipal staff, managers and leaders, as well as extension agents, in the **adoption of bio-circular economic principles and the integration of circular regenerative practices** into the community. The SAHURI project also trained municipal staff, managers and leaders in participatory and inclusive urban zoning and land use planning practices. DRC aimed to ensure that municipalities hosting people of concern, in particular displaced people, have the resources to effectively obtain the support they need, even under stressful and difficult conditions.



Burkina Faso, Kaya

2020 to 2021
DANIDA

- 2.100 people reached
- Solar-driven well
- Village Savings and Loan Associations
- Training on peri-urban agriculture



More information on this project via: pro.drc.ngo/sahuri



Strengthening natural resource management

Addressing climate vulnerability by focusing on water and soil management

Yemen

Since 2016

DANIDA


Yemen Humanitarian Fund




...


Yemen is one of the countries facing the most **severe water crisis**. The annual water demand is 5.1 billion cubic meters, but renewable water resources are only 2.5 billion, thus leading to a 2.6 billion cubic meters water gap yearly covered by pumping groundwater. So, the water table falls 1 to 8 meters per year, forcing ever deeper wells. The current conflict has further pushed this water shortage down on the government's priority list. At the same time, climate change leads to rising temperatures, further water demand and droughts. As more than 75% of the population is rural and relies on a favorable climate for farming and pastoralism, the people living in Yemen are **highly vulnerable to the consequences of climate change**.


Since 2016, DRC Yemen has explicitly focused on **livelihood interventions that promote the self-reliance and resilience** of individuals, households and broader communities. The community has identified **natural resource management, especially water, soil and vegetation, as the top priority** through the participatory planning process. Therefore, the great focus has been on restoring and maintaining natural resources through integrated management of water resources and watershed management interventions. These interventions have been implemented as an integrated package starting from the top of the mountains to the end of the valleys, including maintaining agricultural terraces, restoring traditional water basins and building new water tanks, and constructing check dams to conserve soil, water and vegetation. DRC has also implemented several earthen dams to recharge groundwater and as flood mitigation measures.

 200,468 square meters of agricultural terraces rehabilitated for the purpose of soil protection, flood mitigation, water saving, restoration of agriculture lands to enhance agriculture production

 Implemented 26,000 Sq check dams, stone chains, valley banks production walls to reduce soil erosion and protect the agriculture lands.

 Rehabilitated and constructed 18,735, square meter of roads

 Constructed 11 earthen ponds/swales with 148,000 cubic meters storage capacity, for the purpose of underground water recharge, absorbing huge quantities of floods and reducing its risk on agriculture land and infrastructure

 Rehabilitated traditional rain water harvesting schemes with a total of 25,367 cubic meter storage capacity for the purpose of domestic use and animal drinking, crop irrigation

 Rehabilitated two water channels

 Rehabilitated two spate irrigation schemes

 Established 8 community tree nurseries

 Established 8 seeds banks.



**More information on
DRC Yemen via:
pro.drc.ngo/yemen**



Food security through seed security - Collecting, preserving, storing and multiplying traditional seed stock

- 14,244 people reached
- 2 established seed banks
- 2 community seedling nurseries
- Small business grants & training in business skills & micro-finance for farmers
- Supporting restoration of Perma Gardens to store seeds & increase food security

Yemen, Sa'dah Governorate

2021
DANIDA



More information on this project via: pro.drc.ngo/seed-security

DRC Yemen has partnered with local farmer communities in the Sa'dah Governorate in the north-west of the country, to collect, preserve, store and multiply traditional seed stock to **increase food security**. Living in an extremely fragile state, Yemenis and displaced people heavily depend on humanitarian aid for food. Reclamation of seed security is key to build resilience and protect and improve livelihoods for both displaced people and local communities.



Restoring the Colline

Partnering with Nature and People to Find the Solutions

Burundi is a small and densely populated nation in East Africa which has suffered decades of conflict and remains one of the world's poorest countries. Over 200,000 Burundian refugees have returned with many more still in neighboring countries. Though people are beginning to return, their socioeconomic reintegration in local communities poses challenges. Over 90% of the population relies on subsistence agriculture, but these livelihoods are under threat due to climate change and environmental degradation caused by poor land use management and unsustainable farming practices. This leads to deforestation, loss of biodiversity, soil erosion, drought and flash flooding which in particular affect displaced people and the poorest (host) communities.

In collaboration with two local partners REMA and PELUM, this DRC Burundi green pilot project focused on **one hill** (colline) and **the community living and working on that hill**. The programme was set up to work on three levels: the landscape level, the household level and the cooperation level. The three levels were designed to work in harmony with each other, creating synchronicity across the entire programme and making sure that **all parts of the environment worked together** to improve lives of those living on the hill, as well as the ecology of the hill - not just through the project's duration, but long after its completion.

Burundi, Rutana Province

2019 to 2020

Funded by DANIDA

In partnership with REMA and PELUM

-  1109 beneficiaries
-  Local government recognized improvements and similar projects got initiated at other collines
-  All 176 participating households have at least one permagarden on their property as a result of the project
-  Two-week training course on resilience design for the community
-  Positive change reported by the community on reduction of flood risk, improved soil fertility and higher agricultural yields



Strengthening resilience on the household, landscape and co-op level

Starting at the household level, it was demonstrated that household waste (such as food waste, grey water, and plant debris) can be used to make **household permagardens** which create favorable conditions for agricultural production even during the dry season. Farms were then redesigned using earth and stone works - techniques which aim to **harvest rainwater** in the soil and build nutrients fostering healthy and resilient land.

Another focus was to **diversify crops** by integrating trees, shrubs, and perennial vines alongside annual crops to ensure enduring stability.

The project was designed to have a cascading effect: people who were trained by DRC become community trainers – to foster community engagement and empowerment and allow the project to continue and grow long after its initial implementation.

Learnings and Take-aways:

- Importance of introducing adaptable low-tech agricultural techniques focusing at strengthening the natural environment to both local communities and authorities to ensure acceptance and self-reliance.
- Duration of projects need to be longer in order to ensure sustainability of interventions and that trainers can continue receiving support.
- Combining climate resilience and social cohesion programming is key to ensuring reintegration of returnees and contributing to positive change.



More information on this project via:
pro.drc.ngo/resilient-colline



Boresha

Building Opportunities for Resilience in the Horn of Africa

The BORESHA project is implemented in the area commonly known as the Mandera Triangle, located in the cross-border region of Ethiopia, Kenya and Somalia. The region has a history of political and economic marginalisation, experiences various forms of recurrent conflict and is highly susceptible to the impacts of climate change, including recurring droughts that undermine the population's farming and livestock livelihoods.

BORESHA invested over 22 million euros in promoting economic development and greater resilience of vulnerable populations in this border region, reaching 350,000 men, women, children, and youths. The project employed a community-driven approach that recognised the need for cross-border solutions, and focused on 3 outcomes: 1) communities are more resilient and better prepared to withstand and respond more effectively to shocks; 2) individuals and communities become more self-reliant through increased skills and opportunities for cross-border employment, diversified enterprise and livelihoods; and 3) cross-border rangeland and other shared natural resources are more equitably and sustainably managed



Horn of Africa

2017 to 2023

Funded by the EU

In partnership with CARE International and World Vision International

-  350 000 people targeted
-  95% of targeted communities continue to have access to water despite an ongoing drought in the region, and none of the 197 project locations have needed emergency water trucking
-  Increased average monthly incomes from \$35 to \$87
-  Knowledge of shocks, decision making to respond when shocks occur, and avoidance of common negative coping mechanisms have all significantly improved



More information on this project via: boreshahoa.org



Strengthening resilience against climate-related shocks

Among Rohingya refugees and their host communities

Bangladesh is one of the top five most disaster-prone countries in the Asia-Pacific. Almost every year, severe storms, cyclones and monsoon rains have caused serious damage to the entire country, exacerbating vulnerabilities specifically in the Cox's Bazar district. Therefore, the goal of this project was to strengthen resilience against the effects of climate change, environmental degradation and natural hazard-related shocks and stresses among Rohingya refugees and host community members by adopting regenerative circular economy solutions.

Through the implementation of regenerative circular economy activities and cash-based interventions, this project managed to **secure water abundance** during the dry season **improving the livelihoods** of the communities. The project included waste management, water harvesting, dam constructions and establishments of home gardening creating alternative income and a more healthy environment.

Bangladesh, Ukhiya Upazila sub-districts of Cox's Bazaar

2021
DANIDA

-  61% increase of household level income
-  2 Zero Waste Management Committees formed
-  2 Water User Groups formed and 2 earthen dams constructed through Cash for Work
-  50 tanks were installed for rainwater harvesting
-  10,000 local species planted
-  161 individuals trained on home gardening and land stabilization with soil conservation techniques and biochar production through waste management



More information on this project via:
pro.drc.ngo/resilience-rohingya



Flood-adaptive Agriculture in South Sudan






South Sudan, a nation already facing a multitude of challenges and ongoing conflict, grapples with severe climate change impacts such as recurring floods and droughts. In 2021-22 South Sudan witnessed the most severe flooding in six decades, affecting nearly a million people and in affected areas ruining nearly 90% of agricultural and forest lands. In response to the challenges faced by displaced people and local communities, DRC launched innovative climate-resilient agriculture initiatives to address immediate household needs relating to food security, energy and environmental preservation. These initiatives include floating gardens, climate-smart farming and water hyacinth bio-briquettes for clean energy.



South Sudan
DANIDA
Bureau for Humanitarian Affairs (USAID)



More information on this project via:
pro.drc.ngo/farming-in-the-flood-waters-drc-s-chinampa-gardens-in-bentiu

-  20 Floating Garden plots created
-  100 flood-affected women working to establish an additional 50 floating garden plots
-  100 women trained in water hyacinth biofuel preparation and joined VSLA groups
-  26 Chinampas established benefiting 148 farmers
-  Food security & access to clean energy for vulnerable communities



Floating gardens and climate-smart farming

Floating agriculture offers farmers a means to maintain or boost agricultural productivity during flooding. The approach involves weaving together aquatic plants to create floating beds that rise and fall with water levels, allowing crops to evade waterlogging and benefit from nutrient-rich decomposing matter.

DRC also engaged youth, men and women through cash-for-work in **Chinampa farming** on raised soil-beds that consist of organic layers created from dried grasses, manure, water plants and fish waste, creating beds packed with fertile material and moisture.



Clean energy

In addition, to address community need for energy as firewood sources were ruined by floods, DRC trained women in clean energy and biofuel preparation using water hyacinth, producing **briquettes** as well as **energy-efficient stoves** that are then marketed by the women via village savings and loans associations (VSLA).





Fair recycling: A plastic recycling ecosystem in Kenya

Creating dignified jobs for urban refugees

Plastic waste constitutes a significant problem across East Africa, including in Kenya. The greater Nairobi area alone generates 641 tones of plastic waste a day. In addition, Kenya faces **unprecedented impacts of climate change** and challenges related to **finding durable solutions to decades of displacement** across the region, with Kenya today still hosting over 650,000 refugees. In partnership with Unilever and Mr. Green Africa, DRC is working on the Fair Recycling Project to create dignified jobs, higher income and better work conditions for refugees.

The DRC works on **integrating** informal workers and marginalized refugees in Kenya into a **formalized plastic recycling value chain**. Together with Mr. Green Africa, refugees are enrolled in employment programs as waste-pickers, where afterwards Unilever buys the pellets produced from the recycled plastic. The value chain stays where refugees and local communities work and plastic is getting recycled into new consumer products, contributing to Kenya's fair and formal recycling ecosystem.



More information
on this project via:
pro.drc.ngo/fair-recycling







Kenya, Nairobi

2022 to 2024

DANIDA

In partnership with Mr. Green Africa and Unilever

So far:


-  3944 waste pickers registered of which 903 are refugees
-  2202 waste pickers have received basic training
-  1913 waste pickers are trading with Mr. Green Africa, earning approximately KES 4M
-  2 pilot "Impact boosters" packages designed
-  Contributing to Kenya's localized circular plastic economy



Creating Green employment: Textile recycling

Income generation for vulnerable women by training in Circular Bedding Manufacturing from Garment Waste

 Training of women, especially vulnerable to climate change, in recycling used garment to produce household level usable items

 Income generation of vulnerable households through garment recycling

 Strengthening of local partner capacities

Bangladesh, the second-largest exporter of readymade garments after China, faces a major **issue of solid waste from its garment factories**, producing around 600,000 tons of textile leftovers annually. While the textile industry contributes significantly to Bangladesh's GDP (10%), it also generates negative environmental impacts, releasing greenhouse gases and toxic effluents into rivers. Interestingly, about 300,000 tons of this waste is recyclable cotton, but managing it sustainably is still a challenge. To address this, the project aims to **collect textile leftovers, recycle them, and empower** vulnerable women groups through local partnerships to produce various products like mattresses, blankets, pillows, and floormats within a circular economy framework.



Bangladesh
Thakurgaon and Gopalgon

2022 to 2023

DANIDA

In partnership with Eco Social
Development Organization

More information
on this project via:
pro.drc.ngo/garment-recycling



Currently, there is a significant knowledge gap on management of used garments. The project seeks to enhance economic and environmental wellbeing of the affected groups in the conflict displacement areas of Bangladesh by **reducing the environmental impacts through recycling** of the recyclable solid leftovers for producing households' level usable items. Furthermore, local partners capacities and developed entrepreneurship will be **strengthened for future sustainability** with innovative skill and knowledge along with employment generation of the women living in the areas most affected by climate change in Bangladesh.



Exploring Green Economic Recovery

Biogas production to address energy needs and produce fertilizer - A Green private sector partnership

DRC Yemen is piloting **biogas production** to address both the energy needs of farming communities, to introduce a **renewable energy source** and **access to fertilizer** for increased fodder production. Biogas is an environmentally friendly, renewable energy source which is produced from organic matter in absence of oxygen. The initiative seeks to pilot the use of biogas production technology with households in Yemen in partnership with a Yemeni private sector partner, Bio-Treasure.



More information on this project via:
pro.drc.ngo/piloting-biogas



Yemen, Southern Yemen

2023 to 2024

DANIDA

In partnership with
BIO-Treasure

Agri-Tech Solutions for better Climate Resilience

In response to the emerging climate crisis and to improve resilience within the context of climate induced migration and displacement, DRC intends to explore opportunities to make use of **digital technologies in the agricultural sector for promoting climate resilient agriculture**.

For this purpose, DRC explores within an initial technical research of digital ecosystem in Iraq with the aim of designing program and providing support to develop climate resilient agriculture practices.

A produced research report with detailed findings and program recommendations feeds into DRCs wider programmatic work.

Iraq

2023 to 2024

DANIDA



More information on this project via:
pro.drc.ngo/agri-tech-solutions





Slow-Onset Drought-Related Displacement (SODRD) Model

Forecasting droughts to inform anticipatory response

- Model maps historic droughts and enables predictions about future ones
- Enabling anticipatory actions of local communities to minimize and prepare for drought impacts



Somalia and Ethiopia

March, 2022 to March, 2024
ECHO, SIDA, DANIDA
In partnership with IDMC



More information on this project via: pro.drc.ngo/sodrd

Based on a predictive data model developed together with IBM, the slow-onset drought-related displacement (SODRD) model explains the interdependencies between rainfall, livestock, land structure, population movements (with a focus on pastoralists) and socioeconomic parameters. Thereby, the model covers livelihood zones in Ethiopia and Somalia.

To predict, the model quantifies the relationship between rainfall and pasture, impacting livestock. This can, in turn, influence the market prices for livestock and, therefore, the pastoralists' income. The **gathered insights are used to prepare Anticipatory Action with the affected communities** to prepare for upcoming droughts and to prevent drought-induced displacement.

More of DRCs forecasting work

WACAFI - Forecasting of displacement trends

Every 3 months, the WACAFI model forecasts the number of individuals forced into displacement in 15 regions of 3 countries of the Central Sahel (Burkina Faso, Mali, and Niger). A holistic approach using Foresight's methodology helped to build a machine-learning model that uses historical data from key displacement drivers in these three countries. The model is populated with open-source data on conflict, health, environment, food insecurity, number of IDPs, and income.



Mitigation

Reducing our negative climate and Environmental impact

DRC has high ambitions regarding carbon accounting and reducing the greenhouse gas emissions produced by the organization. The 2021 Climate and Environmental Performance Report sets the baseline and starts the process towards reducing the carbon footprint around all of DRCs work.



Carbon accounting

A solid foundation for systematic reduction of carbon emissions at organizational level

In 2020, DRC embarked on a global carbon reduction initiative through our participation in the Global Focus' Climate Responsibility Project. This project, led by a Danish umbrella organization for civil society actors, marked the beginning of our strategic journey to achieve DRC's organizational goal of a 50% reduction in carbon emissions by 2030.

During this period, DRC also played a significant role in the development of the Humanitarian Carbon Calculator, led by the International Committee of the Red Cross (ICRC). This tool aims to standardize the calculation of carbon emissions within the humanitarian sector, emphasizing our commitment to a unified approach in addressing carbon emissions.

Since then DRC offices worldwide have undertaken the task of establishing carbon baselines, with half of our country offices expected to complete this process by the end of 2023. Additionally, they are actively developing reduction action plans to align with our environmental objectives.

Our specific initiatives, such as the adoption of solar energy or phasing out fossil fuels in our Supply Chain are all integral components of the DRC Climate and Environmental Action Framework. This framework guides our efforts to minimize our carbon footprint.

Objective

Reducing DRC's environmental and climate footprint

Improve the Climate and Environment footprint of DRC's practices by reducing greenhouse gas emissions and minimizing the negative impacts on the environment.



Reducing DRC's carbon emissions by 2030 with minimum 50%

By 2025: Each country operation elaborated a carbon baseline, updated carbon footprints and developed their own specific roadmap to reach the organizational target.



Greening DRC on our own premises

Flood protection at the DRC offices

- 📍 Understanding the flow of the water to reshape the landscape to control the flooding
- 🌿 Using the water for the installation of rooftop gardens to create shadow and garden fresh fruits



More information on DRCs mitigation efforts via: pro.drc.ngo/mitigation

South Sudan



Solarizing the DRC office in Yemen

- 📍 DRC country office and the guest house are running fully on solar power systems
- ☀️ Further installation of solar systems planned to reduce carbon footprint

Yemen



WREC

Greening Humanitarian Logistics

Global

Since 2021

Hosted by the Logistic Cluster

DRC in partnership with Save the Children, WFP and IFRC



-  Centralized platform on environmentally sustainable logistics for the humanitarian Logistics Community with updated and consolidated guidance on sustainable logistics
-  Strengthening local capacities to reduce negative environmental impacts on humanitarian logistics and providing technical support to the community
-  Applying circular economy principles throughout the supply chain
-  Raising awareness and facilitating coordination platforms on Circular economy, Green procurement, Reverse Logistics, Waste management and Decarbonization

Humanitarian logistics have been identified as a critical stage for the humanitarian sector's environmental impact. At the same time, the need for environmental expertise to support the identification of scalable solutions and to further increase the knowledge base for humanitarian practitioners is high.

The WREC project, which is short for **W**aste management and measuring, **R**everse logistics, **E**nvironmentally sustainable procurement and transport, and **C**ircular economy, aims to create a knowledge base to reduce and manage the harmful consequences of humanitarian logistics and supply chain-induced waste and pollution in a focused and sustained manner. This is done through raising awareness, providing practical guidance, and real-time environmental expertise. The project is coordinated by the Global Logistics Cluster and supported by a coalition of humanitarian organizations - DRC, the International Federation of Red Cross and Red Crescent Societies (IFRC), Save the Children International and the World Food Programme of the United Nations.



**More information
on this project via:**
logcluster.org/wrec/green-logistics



Joint Initiative for Sustainable Humanitarian Packaging Waste Management

Packing our goods the green way

The Joint Initiative is bringing together a broad consortium of humanitarian stakeholders to reduce the negative environmental impact of humanitarian action, particularly by tackling the issue of packaging waste.

-  25 packaging sustainability criteria
-  Split into 3 categories: technical, administrative and transport
-  Used for tender contracts

Global



Partner: Save the Children, UNHCR, ICRC, BHA



More information on this project via: bit.ly/humanitarian-packaging

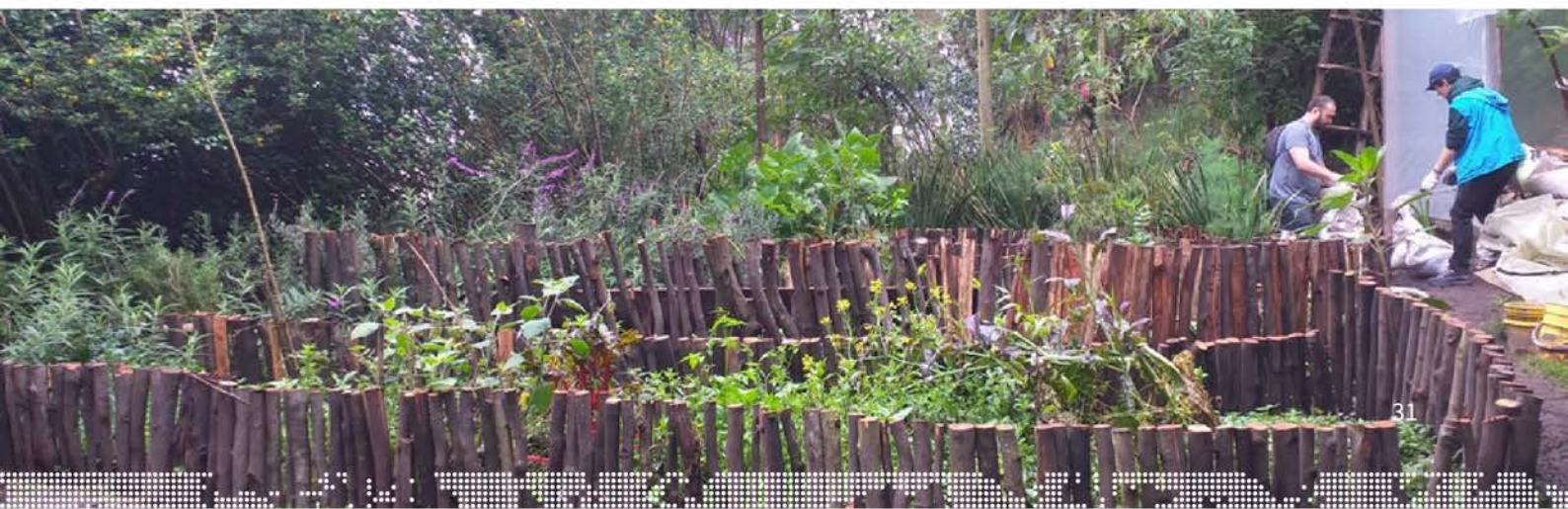
Carbon compensation for ground and air travelling

Planting trees to compensate for DRC's carbon emissions from transportation

-  Carbon compensation of all ground and air travelling
-  Tree planting activity to receive a compensation certificate corresponding to the CO2 generated by the trips taken 2021 at the national level

Colombia

Since 2021



GIS solutions for real-time forest cover monitoring

Testing new technology to support reforestation



Tanzania, Kigoma region

since 2021
GIS-pilot since 2023
DANIDA

Globally, the influx of a concentrated number of people (such as refugees) in an area puts substantial pressure on host communities and local natural resources to meet their needs, such as firewood extraction, which is the primary cooking fuel, especially in the Kigoma Region in Tanzania. The population density in the camps intensifies the scarcity of firewood, causing over-exploitation of nearby forest resources, resulting in a high deficiency in supply.

Already since 2021, the DRC project in the Kigoma region has been producing bio-briquettes as an alternative energy source and planting trees for afforestation and conservation of the forest. Within the community-led 17 nurseries, more than 600,000 seedlings have been grown and cultivated. Now, the pilot project of **GIS (Geographic information system) solutions for real-time forest cover monitoring** aims to find solutions to **track the forest more effectively than through on-site visits**.

So far:

-  5 GIS system centers established
-  Forestry government officials and DRC national staff trained in GIS skills
-  Already a 25% improvement in forest cover monitoring from the baseline scenario

Until now, the only way to conduct forest monitoring is by direct observation visits to forest sites, which is a time-consuming, inefficient and partial approach. Therefore, with this project, DRC is piloting a new technique for forest monitoring that is more efficient and, at the same time, builds the capacities of the government. With the technical support from the ARICA consortia (including NORCE - Norwegian Research Centre on Climate and Environment, UNEP-GRID, etc.), DRC will train and equip the government of Tanzania and Burundi Forestry officers to set up an assessment of forest temporal trends in the Kigoma region (particularly in the refugee camps and peripheries) and at least one area of return in Burundi.



More information on this project via:

pro.drc.ngo/gis-forest-monitoring





Advocacy

for Displaced Persons in the Context of Climate Change

DRC aims to act as a voice of displaced people, with a focus on supporting and encouraging duty-bearers to protect displaced people's rights.



DRC

DRC's Global Event 2020 and DRC's Global Innovation Forum 2022

A platform for exchange and knowledge sharing on refugee perspectives

DRC's Global Event 2020 – Climate Change and Forced Displacement

-  9 sessions
-  45 speakers
-  More than 270 participants
-  Topics covered Green Economy, Natural resources, conflict and climate, Protection and Legal aid, Data and Predictive Analytics, Regenerative and Circular Practices

The DRC Global Event 2020 focused on climate change and environmental degradation's impact on the humanitarian sector. It brought together experts from various fields to explore this intersection, covering topics like Green Economy, Natural Resources, Conflict, Climate, Protection, Legal Aid, Data Analytics, and Circular Practices. Notable speakers included Nobel laureate Dr. Adil Najam, Dr. Britt Wray, and Mary Robinson.

Sharing knowledge and innovations

DRC's Global Events

DRC's annual flagship events create a platform to explore purposeful collaboration with partners and exchange innovations on the migration nexus. These events take place as online events joined by speakers from all around the world.



More information on this the Global Events via: forum.drc.ngo/

DRC's Global Forum 2022 on Local Innovation in Displacement Contexts






-  12 sessions
-  29 speakers
-  More than 240 participants

The DRC Global Event 2022 focused on climate adaptation in displacement areas across Turkey, Afghanistan, and the EAGL region. It promoted locally-led innovation through workshops and Deep Dive sessions. Turkey aimed at sustainable textiles and green jobs, Afghanistan tackled water scarcity through alternative use of technology, and EAGL emphasized community-led climate solutions.



Selected Papers and Reports on climate, displacement and mixed migration

Some of MMC's latest work on climate and migration

-  Climate and mobility case studies - Perceptions, attitudes and decision-making
-  Climate change, environmental stressors, and mixed migration - Insights and key messages drawn from a decade of MMC research and 4Mi data collection
-  "We left after losing everything" - The impact of drought on climate-related displacement in Ethiopia and Somalia
-  Climate mobility in Khartoum Process countries - an exploration of interventions
-  Climate-related events and environmental stressors' roles in driving migration in West and North Africa

Mixed Migration Center

MMC

Mixed Migration Centre (MMC) is a global network engaged in data collection, research, analysis, and policy and programmatic development on mixed migration, with regional hubs hosted in DRC Danish Refugee Council regional offices in West and North Africa, East Africa, and Great Lakes, Asia, Europe and Americas, and a global team based across Geneva and Brussels.



More information on DRC's Green evidence via: pro.drc.ngo/climate-advocacy

DRC's latest reports on climate change and displacement

SEI report

Exploring the Environment Conflict-Migration Nexus in Asia






ODI report

Addressing protection risks in a climate-changed world: Challenges and opportunities



COP 27 – MMC and DRC side events

Representing refugee perspectives at the UN-Climate Conferences

-  2 side events at COP27
-  Anticipatory Action in Land, Water, and Food Systems for Peace, by DRC
-  Stories of climate mobility: Understanding the impacts, informing effective response, by MMC



More information on DRC's Climate Advocacy work:
pro.drc.ngo/climate-advocacy

Raising awareness for refugee perspectives in the climate discussion

Connecting at the Turin Climate Social Camp and raising awareness through an Instagram Column

-  Connecting with international movements and organizations
-  Advocate for the importance of supporting and protecting people who are increasingly affected by the effects of climate change
-  Raise awareness for the complex relationship between climate change and displacement

Italy
 2022



More information on this project via:
pro.drc.ngo/climate-camp



Glossary

List of abbreviations

AFARD - Agency for Accelerated Regional Development
ARUDIFA - Arua District Farmers' Association (Arua DFA)
BHA - USAID Bureau for Humanitarian Assistance
COP – Conference of Parties
DANIDA - Danish International Development Agency
ECHO - European Civil Protection and Humanitarian Aid Operations
HCR - UN Refugee Agency
HH - Household
IBM - International Business Machines Corporation
ICRC - International Committee of the Red Cross
IDMC - Internal Displacement Monitoring Centre
IRC - International Red Cross
MMC - Mixed Migration Center
NRC - Norwegian Refugee Council
NURI - North Ugandan Resilience Initiative
ODI - Open Data Institute
PELUM - Participatory Ecological Land Use Management Association
PICOT - Partners in Development and Center for Holistic Transformation
SCALE - Strengthening Capacity in Agriculture, Livelihoods, and Environment
SEI - Stockholm Environment Institute
SIDA - Swedish International Development Cooperation Agency
SODRD - Slow-Onset Drought-Related Displacement Model
UNFPA - United Nations Population Fund
USAID - United States Agency for International Development
WACAFI - West Africa Context Analysis and Foresight Initiative
WFP – World Food Programme
WREC - Waste management and measuring, Reverse logistics, Environmentally sustainable procurement and transport, and Circular economy

**DANISH
REFUGEE
COUNCIL**



