



Kenya
Red Cross



CASE STUDY

GREEN BELTS FOR DROUGHT RECOVERY IN DADAAB REFUGEE COMPLEX, KENYA

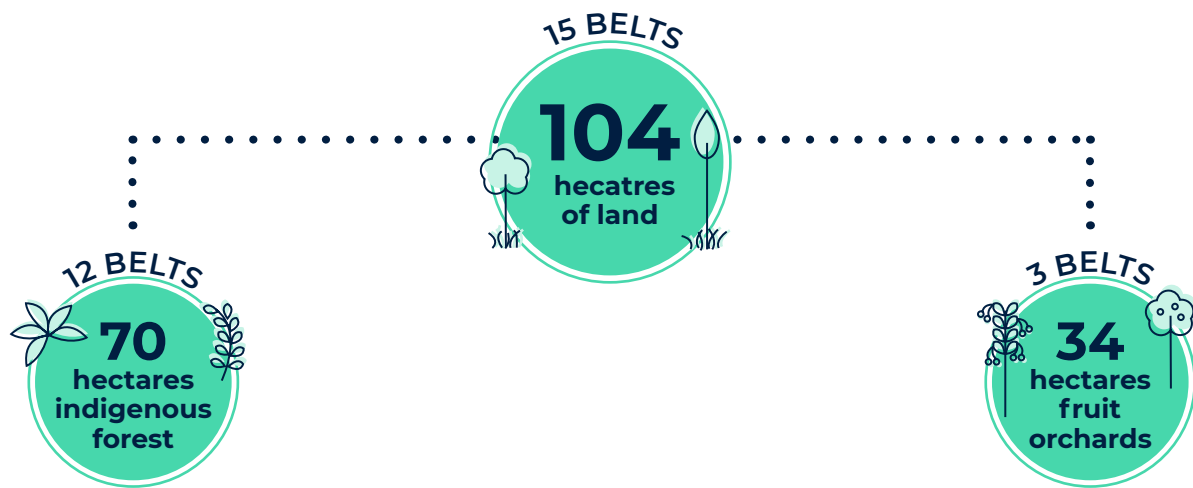
Nature in action: Nature-based solutions in humanitarian contexts

KENYA RED CROSS SOCIETY

BACKGROUND

The Dadaab refugee complex is one of the largest in the world. It is located in Garissa County, a semi-arid area in North-Eastern Kenya, prone to soil erosion and drought. The first camp was established in 1991, when refugees fleeing the civil war in Somalia started to cross the border into Kenya. A second large influx occurred in 2011, when some 130,000 refugees arrived, fleeing drought and famine in southern Somalia. The Dadaab complex hosts more than 200,000 refugees and asylum-seekers between three camps. Many of the crises that refugees in Dadaab have fled are protracted, with many people having grown up in the camp or even lived there their entire lives.

Kenya Red Cross has been active in the camp since its establishment over three decades ago. Due to increasing population pressure in the camp, land degradation has occurred, including through excessive firewood collection. The loss of trees and shrubs has resulted in more exposure to wind and dust leading to an increase in respiratory diseases in the camp. The situation was exacerbated during the drought of 2011/12 in Horn of Africa – impacting both the land around Dadaab, as well as leading to a stark influx of refugees. The need for land rehabilitation was identified as a priority. Specific land was set aside in the camp for this purpose, to both provide for livelihoods and protect the camp itself from the impact of drought. Dadaab refugee camp green belts were implemented in particular during 2012–2020, with funding from IFRC, Norwegian Red Cross, Iran Red Crescent, British Red Cross and UNHCR.



RESTORING LAND THROUGH GREEN BELTS

The project began with a feasibility study, undertaken with the Ministries of Agriculture, and Environment and Forestry, to identify tree varieties that were best suited for degraded land. Soil analyses were carried out to identify best varieties. Indigenous tree species that were adaptive to the local arid conditions were selected. The first two years of the project, which occurred during the recovery from drought, included the production, planting and management of tree seedlings. Community members were given a stipend to incentivize engagement and maintenance of the afforested and reforested areas. After two years, the green belts have continued through natural regeneration, without requiring management and irrigation.

Over time, Kenya Red Cross has been involved in land rehabilitation of 15 green belts, leading to an increase in indigenous forest cover over a total area of 70 hectares through 12 belts. Land has been restored sufficiently to enable some wild animals to return to the habitat. Further, 3 additional belts (covering 34ha) have been created as fruit orchards. These belts provide much needed protective functions from sandstorms and act as windbreaks, which has also reduced exposure of the local population to dust and respiratory diseases.

HYBRID AGRICULTURE APPROACHES FOR FOOD SECURITY

Livelihood and food security needs were also rapidly identified as an important priority for the communities. Agroforestry was explored, including in the green belts, as a means to achieve both land rehabilitation and food production, by combining indigenous trees with fruit trees and vegetable crops. A market analysis was done to identify which produce would provide best income. The vegetable crops provided sustainable food within the year. Fruit trees, however, take an average of 18 months to grow. In addition to the fruit orchard belts (see above), these were also planted in homesteads and in a fenced-off section of the school compound, which provided school children with the opportunity to care for the trees and learn about them.

The produce has been used for local food, with surplus sold on the market, thereby providing an additional income for families and strengthening their livelihoods. Produce has also been sold to the local hospital, tying to health activities supported by the Kenya Red Cross (KRC). The production of fruit trees has further led to an improvement in the local diet and associated health benefits, thereby contributing to nutrition programmes of KRC.

In addition, fodder grass has been planted, to provide fodder for community livestock. The orchards and fodder have required on-going irrigation, through the use of drip irrigation, solar-powered boreholes and water pans. While the agriculture methods used and mechanical irrigation needed are not all “nature- based” these hybrid approaches to agriculture and forestry have been critical in ensuring local food security and buy-in for the nature-based solutions (i.e. land rehabilitation and agroforestry methods).

This initiative worked closely with government authorities to select the sites and varieties of trees to be reforested, as part of the overall planning process in Dadaab camp. Both refugees and host communities were engaged in the activities, as a means of sharing benefits. Local environmental groups, in both schools and communities, were created to maintain activities. Communities were trained in nurseries, planting and management of trees and vegetables.



LESSONS LEARNED

1 The project showcases the relevance of nature-based solutions for recovery from drought, as well as in the context of protracted crises.

2 Land regeneration takes time (two years for natural regeneration in this case), but when combined with agriculture activities (notably vegetable growing) can provide needed short-term livelihood benefits.

3 Adding a livelihoods component to the project ensured community commitment, addressing their immediate food security and livelihood needs.

4 Engaging both refugees and host communities in the activities is key to ensure sustainability, along with the creation of environmental groups.

5 Engaging local authorities is key to ensure activities are part of broader programmes and plans and aligned with these. This enables sustainability and government support.

6 Engaging schools and having a model orchard has enhanced learning and awareness raising.



CONCLUSION

The work in Dadaab shows the potential of NbS in protracted crises. It provides lessons on the role of nature in protecting livelihoods and reducing disaster risks in such settings, as well as on the importance of ensuring shorter term livelihood benefits and of engaging multiple stakeholders. Such elements are critical in ensuring nature-based solutions can contribute to increasing the resilience of the most vulnerable populations.

The International Federation of Red Cross and Red Crescent Societies (IFRC) is the world's largest humanitarian network, with 192 National Red Cross and Red Crescent Societies and around 14 million volunteers. Our volunteers are present in communities before, during and after a crisis or disaster. We work in the most hard to reach and complex settings in the world, saving lives and promoting human dignity. We support communities to become stronger and more resilient places where people can live safe and healthy lives, and have opportunities to thrive.

Nature-based Solutions

Nature-based Solutions (NbS) are actions to protect, sustainably manage and restore natural or modified ecosystems that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits (IUCN, 2020). NbS are an institutional priority for the IFRC network – recognized in its Plan and Budget 2021–2025; the Global Climate Resilience Programme of the IFRC; and the Climate and Environment Charter for Humanitarian Organizations. IFRC builds on its decades of expertise in community-based disaster risk reduction as a unique entry point for community-led NbS, focused on disaster risk reduction and climate change adaptation. IFRC has already applied NbS in various contexts, as showcased in this case study – and is actively capturing lessons learned as a basis for scaling up its work and partnerships in this area.

Acknowledgements

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Background information and documents

Information on Dadaab refugee camp <https://www.unhcr.org/ke/dadaab-refugee-complex>

Garissa country Development Plan 2030 <https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/GARISSA%20COUNTY%20GOVERNMENT%20CIDP.1.pdf>

For further information on nature-based solutions

<https://preparecenter.org/site/nbs/>