IWMI
International Water Management Institute

RRR in Refugee Settlements in Africa
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Scaling circular bio-economy solutions in refugee settings: A peer-to-peer capacity building approach

Africa hosts a significant portion of the global refugee population, notably in Ethiopia, Kenya and Uganda. Despite prolonged stays in host countries, refugees often struggle to establish self-reliant livelihoods due to legal restrictions on work permits and travel, hampering economic empowerment. Indeed, there is a need for livelihood models that do not undermine the economies of low- and middle-income countries where local populations are already struggling. As a result, food insecurity and cooking energy poverty are major challenges facing humanitarian work. Food rations, primarily cereals and pulses, require intensive cooking, while firewood provision is limited, leading to food-for-fuel exchanges or conflicts.

Participants are shown how to set up a vegetable nursery in Rhino Refugee Settlement, Uganda (*photo:* Danish Refugee Council).

CIFOR
World Agroforestry
Alliance
Bioversity International
CIAT International Center for Tropical Agriculture Since 1967 / Science to cultivate change
ADRA Adventist Development and Relief Agency Ethiopia
DRC Danish Refugee Council
PennState College of Agricultural Sciences
USDA
NIFA
Wollo University
german cooperation DEUTSCHE ZUSAMMENARBEIT
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CGIAR Research Program on Water, Land and Ecosystems
CGIAR Initiative on Nature-Positive Solutions

Empowering refugees and host communities through circular bio-economy approaches for producing nutritious food and alternative biomass energy can be transformative. The Resource Recovery and Reuse (RRR) in Refugee Settlements in Africa project is implemented in six refugee camps and settlements and their surrounding host communities in Ethiopia, Kenya and Uganda. The aim of the project is to enhance the resilience of these communities by introducing and implementing RRR solutions. Research on RRR conducted by CGIAR Centers, including the International Water Management Institute (IWMI), the Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF), and the Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT), offers innovative solutions for enhanced food and energy security. Adapted to the African refugee context, these approaches integrate local insights and experiences.

Using a gender-inclusive approach, IWMI and CIFOR-ICRAF, in partnership with the Alliance of Bioversity International and CIAT, Penn State University (PSU) and Danish Refugee Council (DRC), have conducted a series of hands-on capacity building activities in refugee camps and settlements and their surrounding host communities in Kenya (Kakuma Refugee Camp and Kalobeyei Settlement) and Uganda (Rhino and Imvepi Settlements). This has been achieved through Training of Trainers (ToT), a peer-to-peer capacity development model aimed at reaching 3,600 households directly and 200,000 people indirectly through various outreach channels.

Scaling: Concepts and principles

In the context of circular bio-economy solutions in a humanitarian setting, scaling refers to the ability to reach a large number of refugee camps and settlements and their surrounding host communities. In this project, scale is defined not solely by measuring the area cultivated or the amount of produce or cooking energy generated, but by the involvement of many participants. The circular bio-economy solutions being implemented include home gardens and agroforestry utilizing greywater from households, nutrient and energy recovery from available waste resources, and efficient cooking energy management.[1] It is important to note that none of these regenerative approaches are implemented in isolation. Instead, they are interconnected to form a nexus through a circular bio-economy approach. This approach involves recovering and reusing organic wastewater and greywater at the household level.

In the CGIAR scaling readiness tool,[2] innovations evolve from being an 'idea' (level 0) and progress towards being 'ready' (level 9) following a process of research, development, testing and validation in controlled and uncontrolled conditions. Based on this tool, the scaling readiness of these circular bio-economy approaches in a humanitarian context can be best described as being level 7 to 8, indicating that these innovations have been piloted and have the potential to have a positive impact on the lives of the refugee and host communities. By integrating these solutions and promoting a circular bio-economy approach, the project aims to create a sustainable and resilient system that addresses the specific needs and challenges faced by communities in refugee camps and their surrounding host communities while contributing positively to the environment.

Training scaling approach

The training scaling approach of the project involves a series of participatory approaches aimed at engaging stakeholders, developing training materials, and building capacity within the refugee and host communities (Figure 1). Details of each approach are given below:

i. ***Stakeholder engagement***: The project begins by engaging key stakeholders such as local government, authorities in charge of the refugee camps, refugee representatives, United Nations High Commissioner for Refugees (UNHCR) and UN-Habitat while also actively involving both refugee and host communities in the decision-making process. The input and feedback from these communities are sought to identify practical project activities that address their needs and challenges.

ii. ***Training manual development***: The insights gathered from the stakeholder engagement are used to inform the development of a comprehensive training manual. This manual serves as a guide for the training program, and ensures that it aligns with the specific requirements and context of the project.

iii. ***Training of Trainers (ToT)/Community facilitators***: To ensure effective dissemination of knowledge and skills, a network of local community facilitators is established. These facilitators undergo specialized training through a series of Training of Trainers (ToT) workshops. The purpose of these workshops is to equip the facilitators with the necessary expertise to deliver training to the wider refugee and host communities.

iv. ***Training of refugee and host communities***: The community facilitators, who have been trained through the ToT workshops, take on the role of training the refugee and host communities. They utilize various methods such as demonstrations, mentoring and peer-to-peer support to impart knowledge and skills related to circular bio-economy solutions. This hands-on approach enhances learning and encourages active participation.

v. ***Continuous technical backstopping***: Project partners provide ongoing technical support and guidance to the trainees. This support ensures that the trainees have access to expertise and resources whenever they encounter challenges or require further assistance. The continuous technical backstopping helps to reinforce the training outcomes, and enables the trainees to implement and sustain the circular bio-economy solutions effectively.

[1] https://hdl.handle.net/10568/122008
[2] https://www.scalingreadiness.org/

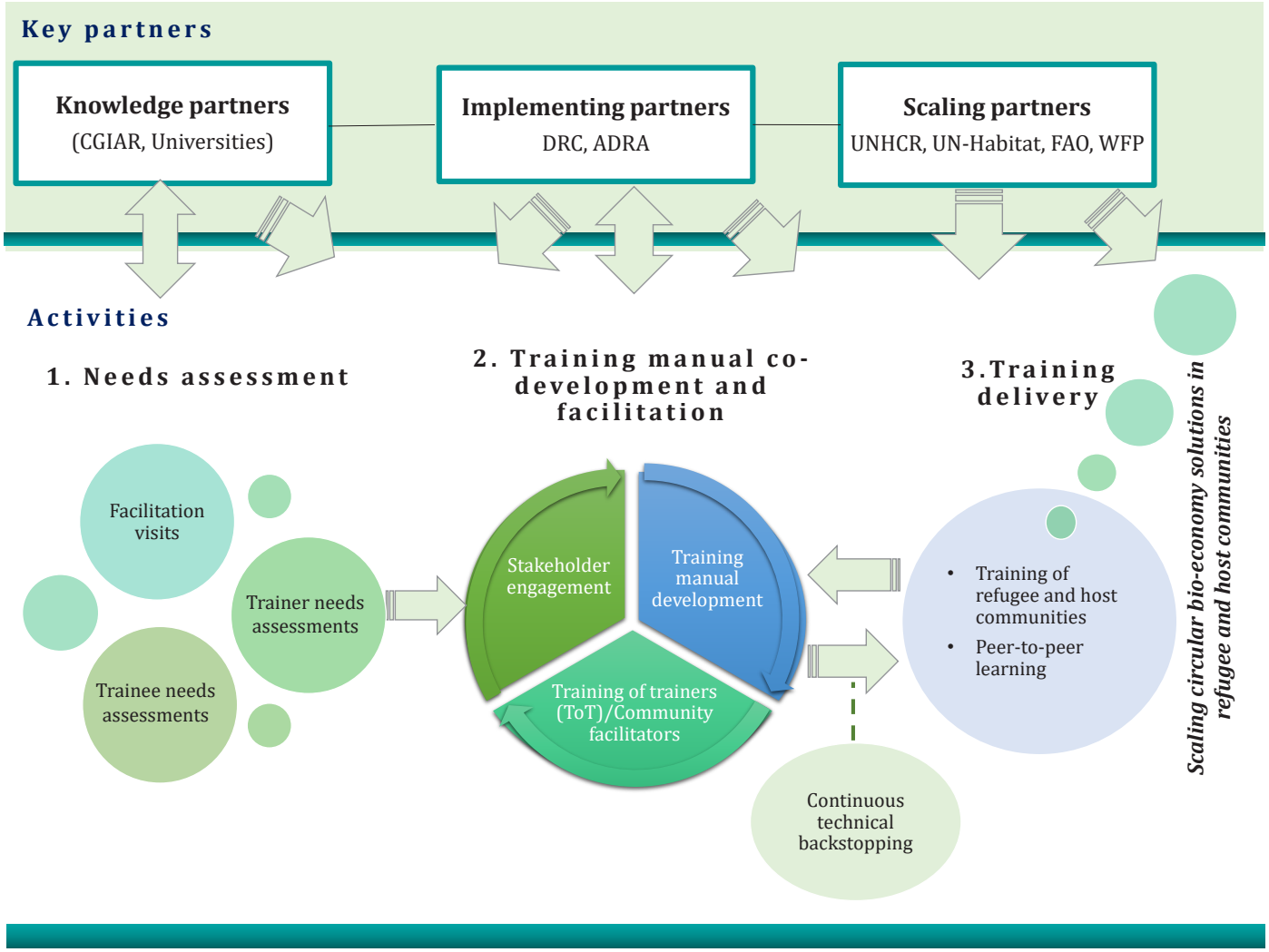

Figure 1. Capacity building and scaling framework.
Note: DRC – Danish Refugee Council; ADRA – Adventist Development and Relief Agency, Ethiopia; UNHCR – United Nations High Commissioner for Refugees; FAO – Food and Agriculture Organization of the United Nations; WFP – World Food Programme

Sesame crop residues which can be used to make char for briquettes and biochar in Rhino Refugee Settlement in Uganda (*photo*: CIFOR-ICRAF).

Demonstration of seed planting in pots in Rhino Refugee Settlement in Uganda (*photo*: CIFOR-ICRAF).

Co-designing a practical training manual

Project partners co-developed a practical training manual on home gardening, agroforestry and cooking energy in the refugee context. This is a living document that is continuously updated using feedback received from field experiences. The training manual uses simple illustrations and language to guide community trainers, who are locals among refugee and host communities and staff of local organizations. The training is aimed at enhancing and scaling adaptable circular bio-economy solutions for enhanced food and cooking energy security while addressing environmental degradation.

Peer-to-peer capacity development model

The technical team of the project, comprising scientists from CGIAR Research Centers and academia, led the trainings to build the capacity of implementing partners and community trainers. The trainings utilized face-to-face presentations and hands-on demonstrations.

The community trainers, known as ToTs, are members of the refugee and host communities. They undergo theory and practical sessions which are held in the homes of participating households. ToTs conduct community mobilization, train household members and provide technical support in their local areas. Their familiarity with the local context, ability to communicate in the local language, and proximity to the community make them valuable resources.

The initial training session lasts approximately 3 days with about 20-30 participants. Each ToT has a monthly target for training households, including a specific number of households per week. After training household representatives, ToTs visit their homes to provide assistance. This cycle is repeated until all trained participants have been visited. If the trained households encounter challenges beyond the expertise of ToTs, the DRC technical team provides assistance. This follow-up, quasi-extension function is critically important because it allows small knowledge gaps to be filled and encourages participants even when outcomes take some time. It is important to note that the RRR concept is a relatively new model to many of the target beneficiaries who have no previous experience with fuel briquettes, composting and biochar application, hence requiring close follow-up and provision of technical support during implementation of the skills they have acquired.

Strengthening entrepreneurial abilities in a refugee context

Project participants from the refugee and host communities are provided with training in business skills and financial literacy. This equips them with the skills needed to establish business ventures using the RRR innovation skills they have acquired. Some of the participating households who adopted the RRR innovations have shown interest in establishing a business venture around production and selling of vegetables from home gardens and/or fuel briquettes. To respond to this need, training on business skills and financial literacy has been provided to the participating households. By incorporating business skills training, there is potential for beneficiaries to create livelihoods through RRR business ventures. The training covers record keeping, business planning, market analysis and financial management. The business skills trainings are expected to help refugee and host communities to create livelihoods and build resilience.

A training session on business skills for the host community in Kakuma Refugee Camp, Kenya (*photo*: Danish Refugee Council).

Pruning a tree for firewood in Rhino Refugee Settlement in Uganda (*photo*: CIFOR-ICRAF).

Educational and outreach videos

The RRR in Refugee Settlements in Africa project created educational videos to enhance its reach. These videos were designed to provide a systematic guide for implementing home gardening, agroforestry and energy sources within the RRR approach. The aim of the videos is to educate and raise awareness about the procedures involved in setting up the different RRR interventions. Additionally, a comprehensive video showcasing the project's initiatives among the targeted participants is utilized to advocate for the scaling out of circular bio-economy solutions within the refugee and host communities.

Lessons learned

- Incorporating stakeholder engagement, training manual development, training of trainers, training of the refugee and host communities, and continuous technical backstopping are key to scaling the training efforts and building capacity within the targeted communities, ultimately fostering the adoption of circular bio-economy solutions.

- Continuous stakeholder engagement with local government, authorities in charge of refugee camps, UNHCR, UN-Habitat and refugee representatives is key to successful implementation of project activities.

- Development of circular bio-economy training materials requires input from experts including development and humanitarian practitioners working on the ground with knowledge on the subject matter and working as a team promotes co-learning.

- Many of the intended beneficiaries are unfamiliar with the circular bio-economy approach, including fuel briquettes, composting and biochar application. This necessitates thorough monitoring and the provision of technical assistance when implementing the skills they have learned.

- Mobilization of Training of Trainers (ToT) or community facilitators is important to ensure the participation of men, women and youth in project implementation as well as in increasing the transfer of knowledge and skills at local level.

- Circular bio-economy solutions have the potential to be viable livelihood strategies within humanitarian contexts, particularly in refugee and host community settlements.

Participants trained on briquette making in Kenya (*photo*: IWMI).

Girls and women carrying loads of firewood at Imvepi Refugee Settlement, Uganda (*photo*: CIFOR-ICRAF).

Source

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Project

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http://rrr-refugee.iwmi.org/
https://worldagroforestry.org/project/gender-responsive-innovations-soil-rehabilitation-alternative-fuel-and-agriculture

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