

Circular Bioeconomy Approaches for Resilient Livelihoods and Peacebuilding in Fragile and Conflict-Affected Settings

May 2026

Nature-positive and circular bioeconomy solutions for livelihoods and peacebuilding (C-PEACE)

Duration: January 2026 onwards

- Led by the International Water Management Institute (IWMI)
- Under the CGIAR Food Frontiers and Security Program
- Partners:
 - WorldFish
 - Norwegian Church Aid (NCA)
 - Ghana Refugee Board (GRB)
 - Center for International Forestry Research and World Agroforestry (CIFOR-ICRAF)
 - Lotus Kenya Action for Development Organization (LOKADO)
- Focus countries: Kenya, Ethiopia and Ghana (Figure 1)

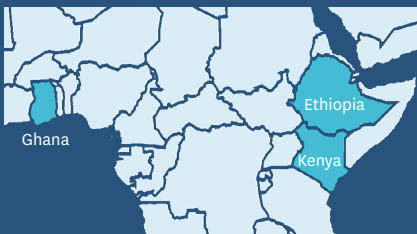


Figure 1. Map of C-PEACE focus countries.
Source: Authors (2026)

Background

Fragile and displacement-affected settings face interconnected pressures of environmental degradation, climate shocks, resource scarcity and social tensions. Refugee and host communities often experience limited livelihood opportunities, while competition over water, energy, forests and land intensifies environmental stress and weakens social cohesion.

The Nature-positive and circular bioeconomy solutions for livelihoods and peacebuilding (C-PEACE) initiative responds to these challenges by strengthening refugee and host community livelihoods, reducing resource-based tensions and restoring degraded environments through circular bioeconomy (CBE) solutions in Ethiopia, Kenya and Ghana, with potential for scaling across Africa.

C-PEACE works with refugees, host communities, governments and humanitarian agencies, including UNHCR and UN-Habitat, to co-design inclusive circular livelihood models that contribute to resilience and peacebuilding. It positions refugees and host communities as agents of environmental restoration rather than burdens on local resources.

Implemented through strong local partnerships, this work directly contributes to the 2030 CGIAR outcomes by enhancing the resilience, self-reliance and social cohesion of displacement-affected communities. Building on this foundation, C-PEACE applies an integrated approach to deliver environmental, livelihood and peacebuilding outcomes in fragile settings.

C-PEACE builds on IWMI's experience in **resource recovery and reuse (RRR)**, circular economy approaches and sustainable food-water-energy systems.



Runoff at water points used for irrigation in Kakuma Refugee Camp. *Credit: IWMI*

Delivering Value in Fragile Settings

C-PEACE delivers high value in fragile settings by combining circular bioeconomy innovation, ecosystem restoration and inclusive livelihood development to strengthen resilience and reduce resource-based tensions. By positioning refugees and host communities as active agents of restoration, the initiative contributes to self-reliance, environmental recovery and peacebuilding. The approach generates long-term environmental, economic and social benefits while supporting locally led resilience pathways.

The Approach

C-PEACE applies an integrated implementation approach that links stakeholder engagement, capacity strengthening, co-design of circular livelihood systems and policy engagement (Figure 2). Participatory training, locally adapted circular bioeconomy models and inclusive governance mechanisms support institutional uptake, scaling and replication across and complex humanitarian contexts.

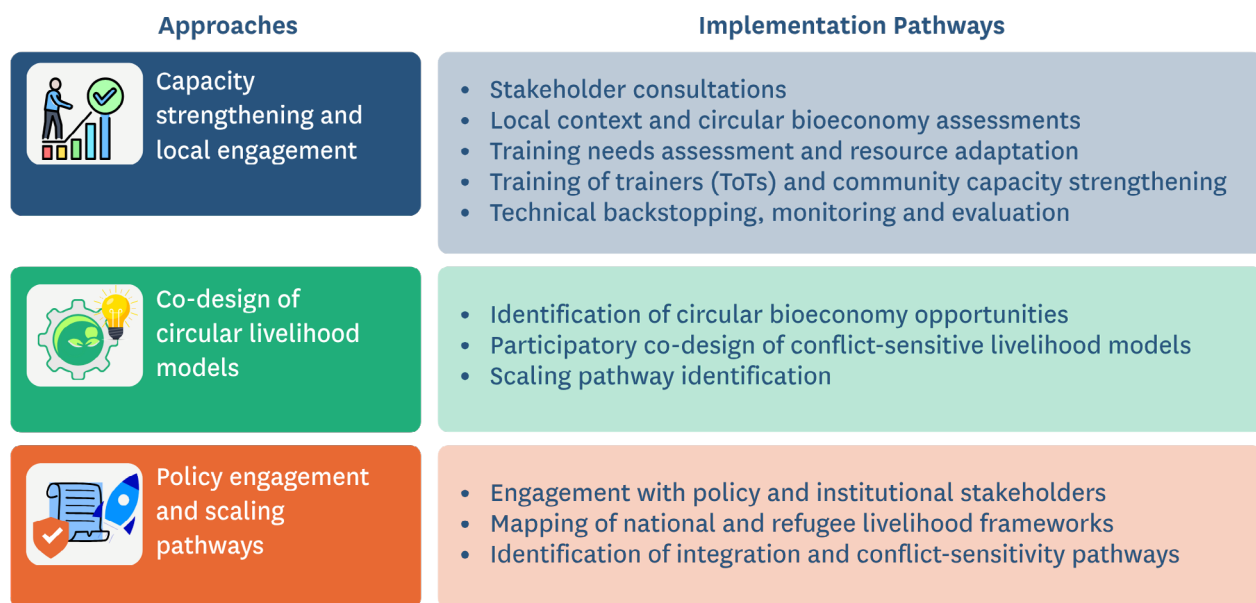


Figure 2. The C-PEACE approach and implementation pathways. *Source: Authors (2026)*

The Workplan

The C-PEACE initiative aims to strengthen inclusive and conflict-sensitive circular bioeconomy approaches in refugee-hosting communities through local engagement, capacity strengthening and co-design processes. The project will support training, technical assessments and locally adapted resources, while co-designing circular livelihood models to strengthen resilience,

social cohesion and sustainable livelihoods. A guidance note on scaling and conflict sensitivity will be developed to support wider uptake and long-term impact. This work plan is outlined in Figure 3.

Beyond early implementation achievements, the initiative will also create pathways for longer-term institutional uptake and scaling.

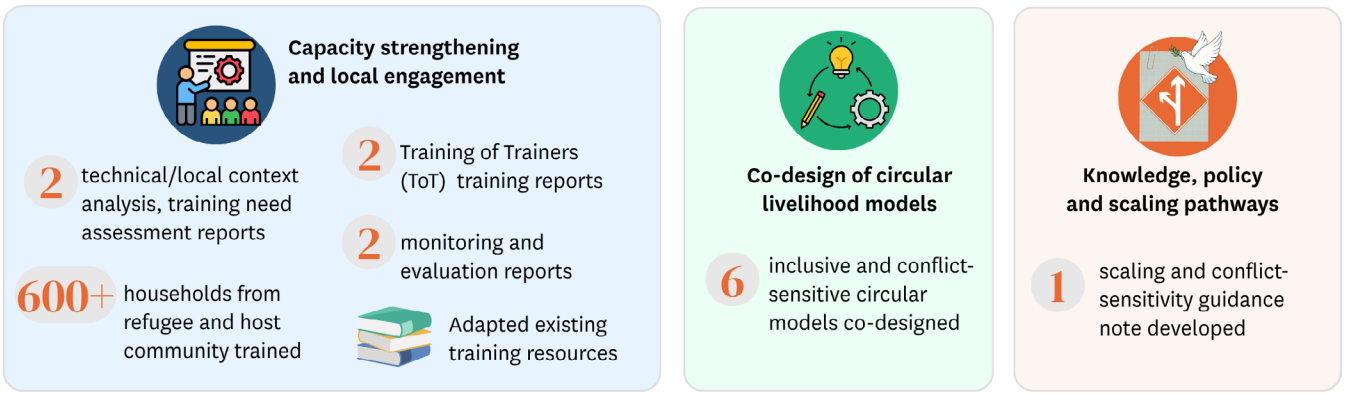


Figure 3. C-PEACE work plan for 2026. Source: Authors (2026)

Scaling and Policy Pathways

C-PEACE advances the scaling of inclusive circular livelihood approaches through policy engagement, institutional coordination and evidence generation. The initiative supports integration into refugee livelihood frameworks while promoting locally adapted models that strengthen environmental restoration, resilience and social cohesion.

Building on these early achievements, C-PEACE demonstrates the potential of locally led circular bioeconomy solutions to support sustainable livelihoods and strengthen community resilience in fragile settings.

The initiative aims to support scalable, locally grounded solutions that contribute to long-term resilience and environmental recovery.



Harvesting amaranth leaves from a safe greywater-irrigated home garden in Kalobeyei Settlement in Kenya. Credit: IWMI



Communal Garden with individually managed plots irrigated using greywater from a watering point at Kalobeyei Settlement in Kenya. Credit: ICRAF

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CGIAR Food Frontiers and Security Program

The CGIAR Food Frontiers and Security Program focuses on strengthening fragile, urban and island food systems by catalyzing innovative policies, investments and local capacities to improve food and water security, nutrition and climate resilience for the world's most vulnerable communities. <https://www.cgiar.org/cgiar-research-portfolio-2025-2030/food-frontiers-and-security/>

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