Environment, Energy, and Climate in Uganda's Refugee Response

Uganda is a co-convener of the second Global Refugee Forum, 13-15 December 2023.

Learn more: www.unhcr.org/global-refugee-forum-2023

This outcome document summarises the main outputs from the Technical Roundtable on Environment, Energy, and Climate Change, including recommendations on pledges that could shape Uganda's refugee response for the next four years. The roundtable was held on 19 July 2023 and was chaired by the Hon. Minister of State for Relief, Disaster Preparedness and Refugees, the Hon. Minister of State for Water and Environment and the Hon. Minister for Energy and Mineral Development.

This technical roundtable is one of five thematic discussions that have taken place as part of preparations for the Global Refugee Forum (GRF). The meetings aim to assess the current refugee situation, identify the main challenges and opportunities, and provide recommendations on possible new policy pledges.

UGANDA:
The World's Model for Refugee Response
Let's make it sustainable

What are the environmental challenges in refugee-hosting districts?

Uganda's refugee-hosting districts are facing interlinked environmental, energy, and climatic challenges.

1 High reliance on woody biomass is accelerating deforestation.

- 99% of all refugee households rely on woody biomass. [iii]
- 73% of refugee household use firewood and 26% use charcoal for cooking.
- 8.5kg of firewood is consumed per day per household on average. [iv]
- 4-10km is the distance women and girls walk to collect firewood. [v]
- 4% of rainforests are lost each year from unsustainable use, increasing carbon emissions, and reducing carbon sinks. [vi]

Protection Risks

The environmental situation influences protection risks in refugee-hosting districts.

- **Sexual and gender-based violence (SGBV):** Women and girls are increasingly exposed to SGBV as they walk further to collect wood.
- **Lack of lighting:** Lack of lighting in key areas of the settlements, such as sanitation facilities, increase risks of GBV, crime and robbery.
- **Inter-communal conflict:** Competition for resources (land, wood, water) and inequalities in assistance increases tensions between refugee and host communities.
- **Indoor air pollution:** The use of firewood for cooking in poorly ventilated kitchens cause premature death respiratory problems among women and children.
- **Mental health:** Inability to meet basic needs increases risk of mental health issues. Nearly a quarter (22.5%) of refugees surveyed reported him or herself or a family member in need of mental health support. [i]
- **Persons with Specific Needs:** More than half of refugee households (54%) [ii] have a member with a disability, increasing challenges in accessing resources.

2 Households lack access to sustainable, clean energy options to meet basic needs and reduce reliance on biomass.

- Only 18% of households have energy-efficient stoves that use less biomass. [vii]
- No refugee households report cooking with electricity. [viii]
- 1% of refugee households and 2% of host households are connected to the national electricity grid. [ix]
- 4 of 13 settlements have recently installed solar-powered mini-grids, improving electricity access to 23% of households.
- 20% of refugee households have no energy source for lighting; 37% of households use battery-powered torches; 23% use solar energy (solar lanterns or solar home systems), and 10% use firewood. [x]

3 Households have limited access to clean water, which is exacerbated by climate change.

- 67% of refugee households across settlements face difficulties accessing water for drinking and cooking. [xi]
- 50.6% of households reported barriers accessing water, including quality, distance, queues, fees, and security to/from the source. [xii]
- 33.5 minutes is the average time to fetch water (roundtrip), with highs of 83 in Imvepi and 77 in Kiryandongo. [xiii]
- 90% of households in Bidibidi and Lobule have difficulties with low volume and quality of water.
- 10 of 13 settlements have experienced drought and dry spells.
- 1-1.5°C projected temperature will increase the duration and frequency of dry spells and droughts, raising the risk of water scarcity, crop failure, and food insecurity.

Opportunities

There are opportunities to address the inter-linked environmental challenges in Uganda's refugee response. This includes increasing refugee and host community's access to sustainable, clean energy sources, improved cooking fuels and technologies to reduce biomass use, and better management of natural resources, which also increases resilience to climate change. These are in line with Uganda's Comprehensive Refugee Response Framework, which has a key focus area of environmental protection, and are further reinforced by the Sustainable Energy Response Plan for Refugees and Host Communities and the Water and Environment Sector Response Plan for Refugees and Host Communities in Uganda.

1 Sustainable Energy

- Install mini-grids in settlements that generate electricity from renewable sources (solar photovoltaic, bio-gas, hydro-powered).
- Promote the productive use of energy to generate income through improved productivity or the creation of a new business. This will increase the ability of refugee and host households to pay for electricity use.
- Support the adoption of standalone solar-powered products, such as solar lanterns and solar home systems, for household lighting and phone charging, as well as productive uses.
- Facilitate access to solar-powered products and PUE technologies by improving refugee's access to finance and strengthening the supply chain.
- Support the installation, operation, and regular maintenance of solar streetlights in refugee settlements.
- Train refugees on the repair and maintenance of solar products. Develop a plan to manage e-waste.

Productive Use of Energy (PUE): Uses of energy (electrical, thermal, mechanical) that increase income or productivity.

Examples of PUE technologies with potential use in refugee-hosting districts are:

- Solar-powered water pumps for irrigation
- Solar-powered refrigerators
- Solar dryers (for vegetables)
- Cold storage for dairy products
- Solar-powered milling machines
- Solar-powered hatcheries
- Solar home systems to power "energy kiosks", refrigerators, entertainment halls, printing, and other services.

2 Clean Cooking

- Improve access to energy-efficient cookstoves that use less wood biomass and that have improved ventilation.
- Promote the use of alternative cooking fuels, such as non-woody biomass briquettes (e.g., from bamboo, crop residues like straws, stems, leaves, husks, shells).
- Promote the use of electricity for cooking, powered by mini-grids, solar home systems, or solar-powered electric cookers.
- Strengthen the supply chain and local production of improved cook stoves and cooking fuels like briquettes.
- Improve the affordability and quality of briquettes by moving from a manual to mechanized briquetting process.[xiv]

Challenges

There are many challenges to transitioning to sustainable energy, cooking, and environmental practices in refugee-hosting districts. There are factors at the household level that influence demand and adoption. There are also factors relating to supply, operation and maintenance, and the enabling environment that can hinder the transition to sustainable practices.

1 Household demand

- **Awareness:** Limited knowledge of the existence and benefits of the clean technologies and cooking fuels.
- **Affordability:** High initial cost of renewable energy products, improved cookstoves, and electricity tariffs.
- **Ability to pay:** Low and variable household incomes.
- **Willingness to pay:** Many are not willing to pay for improved cookstoves or solar products.
- **Availability:** Solar products, improved cookstoves, and alternative fuels are not available in many settlements.
- **Culture:** Preference for flavour and tradition of cooking with firewood.
- **Decision-making:** Women are likely to adopt clean cooking options, but men make the financial decisions.[xv]
- **Practice:** Low adoption of climate-smart practices and technologies.

3 Environmental Management

- Increase the supply of wood through agroforestry, afforestation, and reforestation.
- Promote rainwater harvesting as a source of water for non-drinking purposes.
- Increase the number of water points to reduce the distance travelled to get water.
- Enhance water management through the use of solar-powered water pumps.
- Mainstream environment and climate change in development programs and projects.
- Explore carbon credit opportunities to finance initiatives that reduce emissions (e.g., improved cookstoves).
- Develop plans to better anticipate, respond, and adapt to climate risks, such as droughts.

In addition, there is a need to increase global interest and support from international community, and to examine existing policies, strategies, and institutional framework to enable an integrated response.

2 Supply, operation, and maintenance

- **Supply chain:** Suppliers, distributers, and vendors are not established in or near settlements. Some renewable energy technologies and alternative fuels (e.g., LPG) are imported and only available in urban markets.[xvi]
- **Quality:** Low-quality counterfeit solar products are in the market. Handmade briquettes are of low quality and are less competitive than charcoal.
- **Technical support:** Few solar technicians nearby to support with after sale services of installation, operation, and maintenance.
- **Maintenance:** No programs to repair or recycle renewable energy products or to maintain streetlights.
- **Land:** Limited availability of land in settlements and limited plot sizes (30-50m^2) for tree growing.
- **Insufficient supply:** Increased demand from population growth is outpacing regeneration rates of forest and the gains made from transitioning to energy-efficient cookstoves.
- **Ownership:** Lack of clear ownership of established woodlots.
- **Tree care:** Low survival of trees due to damage and lack of aftercare. No immediate benefits of tree planting.
- **Water:** Low groundwater potential or poor water quality in some areas.

3 Enabling environment

- Enforcement: Weak enforcement of policies, legal frameworks, and natural resource management by-laws.
- Coordination: Limited cooperation and coordination amongst agencies and other actors.
- Capacity: Limited capacities and awareness amongst stakeholders at national, district, and local levels.
- Data: Partial data collection and information management.
- Planning: Energy issues are not prioritised in refugee response plans and projects.
- Access to finance: Lack of flexible financing options to support the adoption of clean energy and cover up-front cost of renewable energy technologies.
- Local management: Local environment committees are inactive or ineffective.
- Approaches: Current interventions only cover 'distribution' of energy systems, not the 'generation'.' Energy projects do not integrate considerations of PUE.
- Funding: Limited and inadequate funding of mitigation and adaptation interventions.

Pledge matching

Pledges and contributions are commitments by States and other stakeholders, including organizations, development actors, cities, parliamentarians, businesses, academics, and refugees themselves, to achieve tangible benefits for refugees and host communities. These commitments can be financial, technical, or material contributions in nature.

Partners planning to pledge in support of the Uganda refugee response can refer to the pledge development document or reach out to the following contacts:

- Ms. Helen Bugaari Director, CRRF Secretariat, Office of the Prime Minister: helen.bugaari@opm.go.ug
- Ms. Carol Sparks, Senior External Engagement Coordinator, UNHCR: sparks@unhcr.org

The Government of Uganda invites partners and stakeholders to match its pledges and create better outcomes for refugees and host communities.

Links to further reading

Details on current pledges: globalcompactrefugees.org/pledges-contributions/matching-pledges

Infographic on how to match pledges: globalcompactrefugees.org/sites/default/files/2020-11/Matching_Infographic_v07.pdf

References

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x *International Finance Corporation (IFC). 2022. Energy Access Baseline Study in Uganda's Refugee-Hosting Areas. Washington, DC. November 2022.*

xi *UNHCR. 2023. Uganda Global Refugee Forum 2023 – Situation Analysis: Access to Services*

xii *UNHCR. 2022. Participatory Assessment.*

xiii *UNHCR. 2023. Uganda Global Refugee Forum 2023 – Situation Analysis: Access to Services*

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xv *UNHCR. 2022. Participatory Assessment*

xvi *Owen, M., Quigley, P. Ntananga, E., Behrens-Shah, P. 2022. Potentials of Biomass Cooking Fuel Production in Displacement Settings. GIZ. Germany.*

xvii *Price, R. 2017. "Clean" Cooking Energy in Uganda – technologies, impacts, and key barriers and enablers to market acceleration. K4D. Knowledge, evidence and learning for development.*

xviii *Price, R. 2017. "Clean" Cooking Energy in Uganda – technologies, impacts, and key barriers and enablers to market acceleration. K4D. Knowledge, evidence and learning for development.*