



## **DEVELOPMENT RESPONSE TO DISPLACEMENT IMPACTS PROJECT (DRDIP)**

**ACCESS TO ENERGY SUB COMPONENT**

## About DRDIP Project

KRC-Uganda has an MOU with the Office of the Prime Minister (OPM) to implement selected projects under DRDIP Access to energy sub component in five Districts of Kyegegwa, Kamwenge, Isingiro, Kikuube and Hoima.

Access to energy is a sub component of Sustainable Environment Management (SEM) aimed at addressing environmental challenges in DRDIP host districts brought about by unsustainable exploitation and use of natural resources by host communities and high refugee populations.

KRC Uganda is majorly focused on the promotion of Briquettes for household use and for sale, Lorena and Jiko stoves for domestic use and for sale, and Institutional cook stoves.



# Process of establishing DRDIP Project in communities

## Kitchen garden management and sustainability

- Sensitization of the group members on nutrition Kitchen gardens: KRC created awareness for all group members on health diets and nutrition and how to manage kitchen gardens.
- Procurement of 11 varieties of vegetable gardens: KRC procured varieties for vegetable gardens that were recommended by nutrition experts. Each group was able to plant between 6-8 varieties of their choice.
- Training of group members in kitchen garden establishment and management: All group members were trained in kitchen garden establishment and management and participated in setting up of the vegetation nurseries.
- Providing of Kitchen Garden tools: KRC procured and support groups with assortment of garden tools like hoes, forks, spray pumps, pesticides amongst others to support the management of the gardens.
- Establishment of mother vegetable garden for each group: Group level /watershed level nurseries were established as part of equipping skills to group members but also to provide a central place for availing vegetable seedlings to members.
- Setting up of household gardens: Trained members were provided with mentorship support to establish their household gardens.
- Transplanting: After the maturity of vegetables in the mother gardens, members picked seedlings from the mother garden at watershed level and planted in the gardens at household level.
- Management of gardens: The watershed gardens were established on the piece of land for one of the members. All members were involved in the set-up, group leadership conducted monitoring and the host member provided daily oversight.
- Harvesting for home use and selling: Proceeds from the gardens used for home consumption to improve on the health diet of household members and also sold locally.

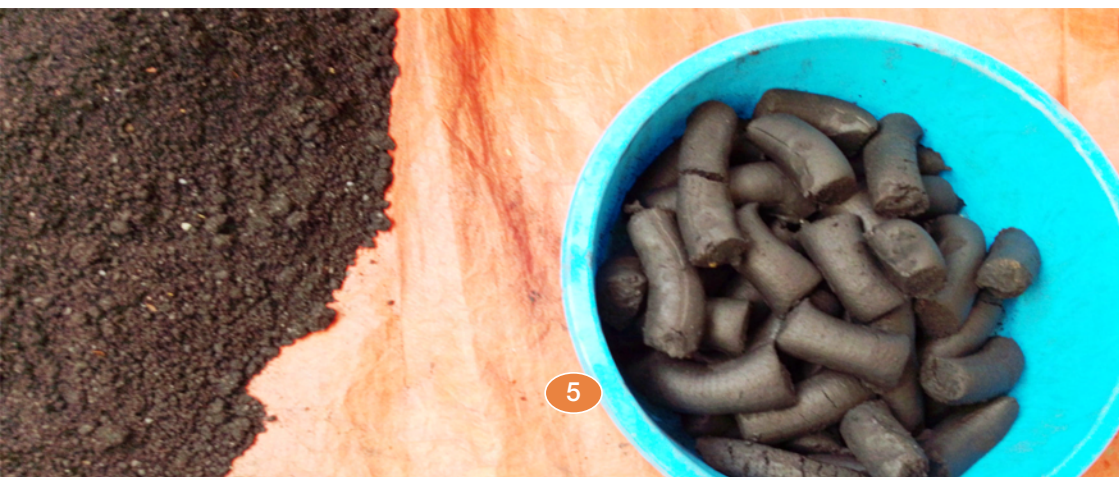


## Briquette technology management and sustainability

- **Knowledge building:** Group members are sensitized on the briquette production technologies, their importance, and briquette value chain right from production process to marketing. Information on the roles for each group member and how each member will access briquettes for cooking at household level at the same time selling to sustain the production process is shared.
- **Choice of Motorized and manual briquette machines:** Motorized and manual briquette machines are used by different DRDIP groups to match available financial resources for the group and existing manpower to run the production process. A motorized briquette machine would require fuel/electricity, technical maintenance and operational team, labour and raw materials to run it. While the manual machine would require labour and raw materials.
- **Securing Land for construction of DRDIP group structures:** All briquette and stove structures needed land and yet groups had no land. Advice was given to groups to have agreement or an understanding with land owners to allow group use land for a minimum of two years then after as the group starts earning income, the group can start paying rent from the profits from the existing businesses.
- **Briquette machine production and Storage House:** In order to ensure security and safety of the briquette machine and working space, the briquette machine storage house was constructed with a metallic door and lockable with a padlock. The house stores some of the ready raw materials (carbonized) and dried briquettes read for weighing and selling.
- **Solar Briquette drying shade for Briquettes:** In order to guarantee quality and quick drying process, a solar drier was constructed so that heat can be retained inside the structure to dry the freshly produced briquettes quickly. The solar drier would work non-stop through hot and wet seasons and would take a short time (roughly 4 days)



- **Multi-purpose roles of the Solar drier:** The solar drier can serve multi purposes including drying agricultural produce like maize, beans, sorghum, coffee, G.nuts etc. The group can attach a monetary value to dry produce for members and non-members and be able to earn extra income.
- **Training in Briquette production:** Each group is trained in mobilization of raw materials like agricultural waste, burning of materials in a drum and turning them into carbonized products, trained how to mix and crush the materials and finally produce the briquettes.
- **Training in Machine Operation and Maintenance:** Each Group nominates 3 members for training in the installation of the machines and equipped with skills on how to run and maintain the machines. The trained three members are also given a tool kit with spanner sets to always manage any maintenance issues for mortars and the machines.
- **Briquette packaging and transportation:** After drying, the briquettes are packed in sacks, weighed and ready for transportation to the markets. As business expands, the branding of the briquettes can be done in order to distinguish them from other producers and ensure quality and guaranteed market identity.
- **Briquette recording keep and marketing:** Each group keeps records of materials used, hours taken to produce, quantities of fresh briquettes produced, and quantities of dry briquettes, quantities used by members, quantities sold to the market, costs incurred and revenue generated. Money generated would be reinvested and also saved on the group bank account.
- **Briquette business planning and sustainability:** In order to guarantee market and sustain production, KRC-UGANDA signed an MOU with ECOMAK a private company dealing in waste management and briquette buying. In the MOU it was agreed that ECOMAK will provide extra carbonizing drums to expand on the production of raw materials, support groups with operational costs, train groups in business planning skills and buy the briquettes at 500/ per kilogram in the first 6 months and 700/ after 6 months. This will guarantee market for the briquettes and sustain the production chain.



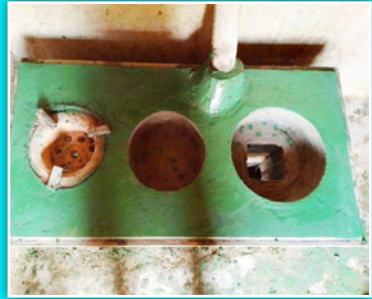


### Processes for establishment of stoves for business

- **Sensitization of group members:** Awareness creation is conducted on the production of stoves for business, emphasis is put on the roles of each member in the management and running of business for stoves.
- **Securing land:** Advice is given to groups which don't have land to have agreement or an understanding with land owners to allow group use land for a minimum of two years then after as the group starts earning income, the group can start paying rent from the profits from the existing businesses.
- **Construction of structure for stove working space and storage:** A house is constructed with a provision of space to provide working area for members while moulding stoves and a storage area to store ready stoves for selling.
- **Welding and fabrication of stove moulds to be used by members:** Sets of stove moulds are fabricated for two different sizes (small and big) to suit the market needs. Each group gets a combination of stove moulders to enable them produce enough for the market.
- **Construction of the Kiln shelter:** One shelter is constructed for each group. The shelter is made up of timber, poles and iron sheets.
- **Construction of the Kiln:** A kiln for each group is constructed to accommodate between 200-300 stoves per single burning.
- **Training of group members in stove moulding:** Members are given tools and trained in stove moulding which is a permanent skill used to produce stoves for sell.
- **Moulding and drying of stoves:** Members are able to mould stoves from the constructed structure and left stoves to dry for at least three weeks
- **Burning of stoves in the kiln:** This is the last stage for processing, stoves are burnt in the kiln after they are fully dried up.
- **Storage, distribution and marketing points for stoves:** The burnt stoves are ready for sale and are kept in the lockable storage structure.

## Processes for household stove construction

- **Sensitization of the group:** The groups are sensitized on stove construction process, TOT approach and the roles of each stakeholder.
- **Supply of materials by group members:** Group members are given the first priority to supply quality local materials like bricks, sand, clay, saw dust among others. In situations where there is no member with quality materials, then sourcing of materials is done within the community to buy materials that meet the quality and quantities. The group members are able to earn income but also felt part of the project process.
- **Identification of TOTs:** 3 members are identified in each group to be trained in stove construction. Priority is given to those members who have experience and skills in building in order to maintain quality and speed of construction of stoves. The nominated members are also expected to commit 100% time and presence to construct stoves for members until they are completed. The nominated members have to sign a contract with the group committing to construct stoves once they are trained.
- **Training of TOTs:** Nominated TOTs undergo a three to four days training by the stove technicians. The first day, the expert construct the stove while the TOTs are observing, the second day, joint construction is done and third day, TOTs construct stove on their own. Those who proved to have acquired skills are commissioned to construct for other households and those who need additional training are supported to perfect their skills.



## Stoves with tiles



- **Construction of stoves by TOTs:** Each TOT is expected to construct one stove per household per day. The trained TOTs can also agree to work in teams.
- **Households providing labour services during construction:** Because of the need for household or group members to earn some money, it was advised and agreed for some groups that labour costs would be shared with a member where the stove is being constructed. The member would provide porter services and some money be paid. This would help the member earn to meet basic household needs and possibly save some money to the group.
- **Payment for TOTs:** Money for payment of TOTs was handed over to group treasurer in the witness of the chairperson and secretary. This made it easy to pay TOTs members as soon as they finish construct and the stove is verified by members and supervisor. All trained TOTs were able to construct stoves and earned income from the constructed stoves.
- **Construction of stoves for other community members:** TOTs were providing a resident skill for stove construction in the community. Already some of the TOTs in Kyegegwa District have constructed for other community members at a cost and it earned them income.
- **Construction in other Districts:** TOTs who excelled well in construction were given opportunity to train other groups in the district and outside their district e.g. TOTs in Kikuube trained groups in Hoima, TOTs in Kyegegwa trained groups in Kamwenge while other moved to do construction of stoves as their specialization. This provided them with job opportunity and earning extra income. KRC-UGANDA has built a database for TOTs that will be used for all other stove construction projects.



## Opportunities and benefits from briquettes and stoves for local communities

Access to Energy integrated the local ecosystem markets in order to enhance safeguarding of ecosystem services through providing economic opportunities for local suppliers of raw materials and skilled labour to benefit from the energy technologies in the communities at the same time contributing to mitigation for impacts to ecosystems like deforestation and pollution.

- The promoted technologies under access to energy especially production of briquettes and cooking stoves have created a chain of opportunities for different actors in the community to generate income at the same time contribute towards realization of environmental conservation benefits. Key benefits include the following;
- The process of production and supply of Lorena and Jiko stoves have provided market opportunities and income for suppliers of clay, saw dust, brick, sand and cement. Members of the community generated income at the same time getting stoves that saves the use of a lot of firewood.
- The production of briquettes created opportunities for use of local agricultural waste like maize cobs, grass, potatoe veins, banana fibres etc to be used as raw materials to produce carbonized inputs for the briquettes. Farmers and household members have put to use waste that would otherwise be burnt to produce briquettes and reduce on dependence on firewood.
- Briquette production chain has provided opportunities and income to suppliers of machines, the fabricators, the transporters, whole sale and retail briquette sellers.
- The local mansions that were selected as TOTs and trained in stove construction within the beneficiary groups generated income through construction of lorena stoves. TOTs have developed more expertise and some of them already given contracts to train different groups in other districts.

Production of Jiko stoves has provided opportunities and income to suppliers of stove molds, the fabricators, the transporters, whole sale and retail briquette outlets.

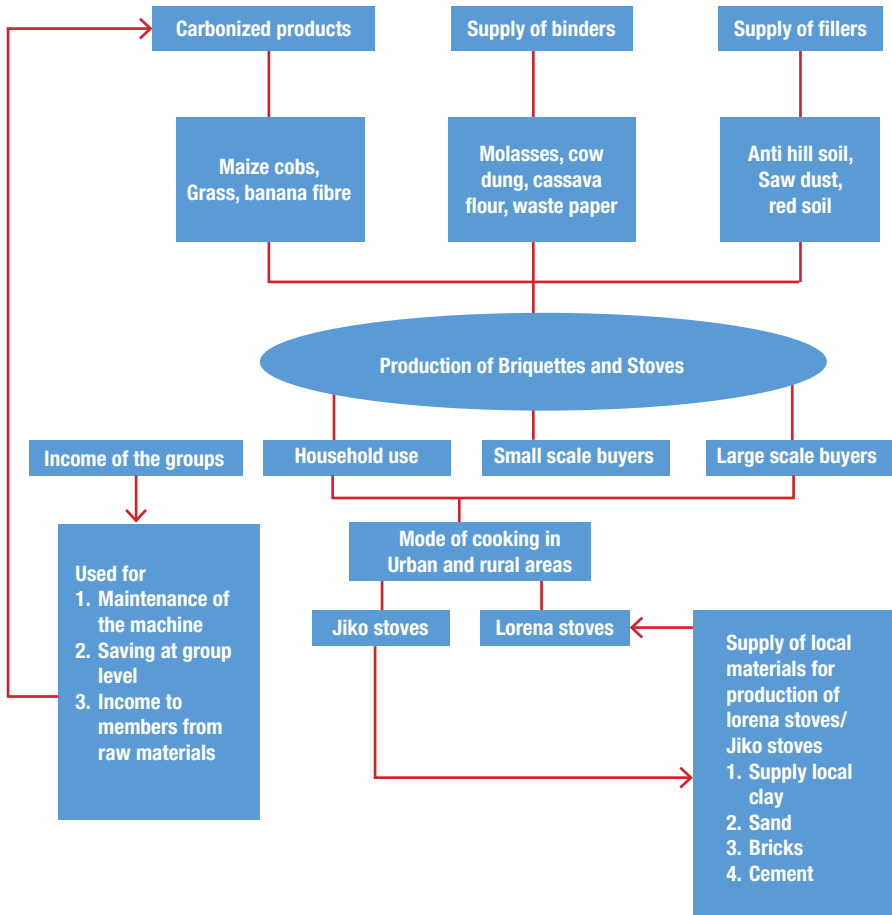
GENDER BASED  
VIOLENCE IS BAD

SAY NO TO  
DEFILEMENT  
AND RAPE

USE FACE MASK  
COVID KILLS

HIV KILLS USE  
CONDOMS, ABSTAIN

SAY NO TO  
GUNS



## About KRC

Kabarole Research and Resource Centre (KRC Uganda) is a well-established NGO operating in Uganda. Founded in 1996, with a research mission and a long-term commitment to understanding the measures and drivers of poverty and its solutions. KRC-Uganda has accumulated substantial experience in research and created numerous development programs based on community analyses of the activities which would be most helpful in achieving sustainable and equitable socio-economic development. Key areas of focus for KRC include; Natural resources management, access to energy, Entrepreneurship development, Market and value chain development, Rural Credit Access and Management, Humanitarian response to food security and economic needs, Gender Based Violence in the refugee and host communities, Climate Change adaptation and mitigation, Civic Education, Leadership and governance, Social accountability, Peace and conflict resolution, Research and Policy Advocacy, Youth and Gender, Agency of minority and vulnerable communities, Institutional Capacity Building and Disease prevention and management.

**Vision:** A leading Research, Advocacy and Community Development Organization in Uganda

**Mission:** Building a dynamically strong research, advocacy and community development organization that enables policy makers, academia, CSOs, private sector and rural communities respond to development needs for a peaceful, equitable and economically sustainable development.

### Strategic objectives:

1. To generate and share knowledge/information through evidence-based research that contribute to sustainable, pluralistic, accountable and equitable socio-economic development.
2. To facilitate the smallholder farmers to engage in sustainable market-oriented production, exploit market opportunities, access affordable financial services and actively influence policies that have a direct bearing on their wellbeing.
3. To support and promote inclusive food systems and nutritional practices at household and community levels.
4. To enhance the participation and influence of policies and decisions by vulnerable women and youths in marginalized and minority communities against abuse, exploitation and violence for delivery of quality public services.
5. To strengthen local initiatives and innovative conflict resolution mechanisms that promote harmonious peaceful co-existence in Mid-Western Uganda and across the border.
6. To strengthen platforms that stimulate citizen participation, accountable leadership and citizens to demand their rights at local and national level.




**For more information about the project**

## **Contact**

### **KRC Uganda**

P. O. Box 782, Fort Portal City-Uganda

Tel: +256 0393 274 438/+256 772 583938

 [krcuganda@krcug.org](mailto:krcuganda@krcug.org)

 [www.krcuganda.org](http://www.krcuganda.org)

 [@krcuganda](https://twitter.com/krcuganda)

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