

CLEANER, SAFER FUEL IN BENTIU



Year after year, flooding continues to devastate the lives of many families in Bentiu. Approximately 83,000 people have been displaced from their homesteads and now live in IDPs camps in the town. The impact has been especially difficult on women who have had to travel increasingly long distances to fetch firewood. In addition to the extra effort needed to get fuel for cooking, the long walks put women at risk of sexual assault. DRC has been working with women to come up with a better solution.

Background

Unity State is currently experiencing unprecedented flooding that started in 2021, resulting in the large-scale displacement of people who need emergency support. DRC participated in a GBV risk assessment in Rubkona which identified several GBV risks for women and girls in current flooding context. The assessment identified that flooding has disrupted the livelihoods of women and girls who are reliant on the collection and sale of firewood. It was reported that the lack of income has resulted in an increase in early marriages as well as an increase in the school dropout rate for young girls since their parents/guardians are unable to pay school fees.

Most of the women do not have alternative sources of income and many of them are now forced to travel long distances within the water flooded areas to collect “wet firewood” for their livelihood as well as household needs. As a result of this, women and girls are facing unknown GBV & protection risk walking long distance in the water. High demands of firewood in this waterlogging context also resulted in massive deforestation in the surrounding areas.

Women transforming their lives through the power of knowledge and innovation. At DRC training center in Bentiu, we empower them with the expertise to produce briquettes, fostering economic independence and environmental sustainability.

To reduce such humanitarian suffering of the community and to explore environment friendly durable solution of the problem, **Danish Refugee Council (DRC) with the support of World Food Program (WFP)** came up with an innovative bio-energy production initiative from locally available resources like water hyacinth.

Sector



Economic
Recovery



World Food Programme

The Initiative

- DRC and WFP technical team trained 20 local women in clean energy/bio-fuel preparation using water hyacinth.
- The experiment was divided into four phases: (1) Carbonization of water hyacinth (2) Preparation of the water hyacinth- molasses blends using different charcoal/binder ratios (3) Densification/Briquetting (4) Characterization of the three most well-formed briquettes by proximate analysis, calorific value.
- The experimentation succeeded with trial and error and beneficiaries were able to produce briquettes during the experimentation phase. DRC and WFP team also conducted efficiency test and made needed adjustment to enhance efficiency.
- With the support of WHH, DRC also provided training to those women on Energy efficient stove making.
- The women were later given training on Business development and Village Saving and Loans Association (VSLA) concept for sustainability.

DRC, in partnership with the World Food Programme, has innovated a unique method of making fuel briquettes from water hyacinth and soil. It is a form of clean energy that reduces the demand for charcoal and the resulting deforestation. Women see it as a mitigation strategy for vulnerable community members.

Five members of the Mai Women's Group work from a center that was constructed by DRC in Mankuai, Rubkona. They received equipment like compressors to make the briquettes and were trained on to make them and to tell other women about the benefits. Women also learned to be cautious as they gather the water hyacinth to make sure they don't injure themselves from objects in the water.

According to the women, they only need six pieces of briquettes to prepare a meal for their family. It's a much better alternative to charcoal and firewood because it saves them money from buying charcoal or reduces the time and vulnerability that they may face as they walk long distances in search of firewood. An additional benefit is that they are cleaning up the water hyacinth that blocks the flow of the water on the river.

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"Now, since we have been trained about this, we don't have to go to the market to buy charcoal." The pilot works well, and they enjoy using them in their homes. They plan on scaling up, selling the briquettes to other women and supporting their families with the profits." Mai Women's Group leader in Mankuai, Rubkona.

The briquettes make better use of natural resources, which is a priority for the entire community that has been affected by flooding. This is an initiative that is led by entrepreneurial women who have a vision for a safer community for them and their families.

DRC is trying to scale-up this initiative to go beyond household need and create income generating opportunities. DRC is also exploring the opportunity to introduce this bio-Briquettes in Charcoal business /Cooking fuel market system in long run for environmental protection as well as durable solution.

