



AN EXCEPTIONAL ENERGY CASE STUDY

The Role of LPG in Displacing Traditional Fuels within Refugee Camps



This Exceptional Energy case study examines the partnership between the UNHCR and WLPGA in bringing a clean, sustainable cooking energy to refugee camps in order to mitigate deforestation and to improve the relationship between the refugee and host communities.



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1. The Challenge

The United Nations High Commissioner for Refugees (UNHCR) report there were 79.5 million forcibly displaced people worldwide at the end of 2019¹ of which 26 million were refugees. Most of the refugees rely on traditional fuels such as wood and charcoal to cook their meals.

Early in 2017 the World LPG Association (WLPGA) held preliminary discussions with the UNHRC about the merits and possibilities of using LPG in refugee camps to displace traditional fuels.

In August 2017 over 700,000 Rohingya people fled to Bangladesh from Myanmar where the UNHCR established refugee camps in the southern part of the Cox's Bazar district, near the border with Myanmar in the south east of the country. The location of the camps are in an area with a high concentration of forest reserves. Ukhiya (total area 261.8km²) and Teknaf (total area 388.66km²) have 60% and 40% of forest lands respectively.

The massive influx of Rohingya people not only overturned the physical environment and demographic features of the land, but also caused severe impact to the forest ecosystem.

Within weeks of the camps being established, the countryside was suffering from the sudden increase in demand for firewood. Over 730MT/day of forest firewood was required to meet the demand for cooking fuel. The forest resources are shared with the local (host) communities and concern quickly grew over the demand for firewood.



Refugees at the Cox's Bazar camps with the countryside already denuded of vegetation



The same scene after the introduction of LPG

The UNHCR and WLPGA Partnership

In July 2018 the UNHCR agreed to become observer members of the WLPGA.

The discussions focussed on what both organisations are doing and how they can work more closely together in a collaborative manner, not only in Asia but in other regions including Africa, the Middle East and South America, where refugee populations are high.

A memorandum of understanding was agreed setting out the scope of cooperation between both parties.

2. The Project: Wood to LPG Transition Programme

The programme to transition the refugee population from firewood to LPG in Bangladesh was done to not only eliminate the need for firewood collection from forests and protected areas but also to improve air quality and kitchen safety in the shelters, increase cooking efficiency, and to improve social cohesion with the host communities.



The programme was officially launched on 16th August 2018 when the first families received their stove and LPG cylinder. Today, LPG is available to the entire refugee population supplied by WLPGA members Total and Omera.

The launch followed a pilot programme, conducted earlier in 2018 to test the concept. This followed a tender process to supply the equipment and LPG with the WLPGA providing advice during this process.

By 2018 Bangladesh had become the fastest growing LPG market in the world following the government's change of energy policy which favoured LPG to conserve the country's natural gas reserves. The use of LPG was encouraged initially in the residential and transport sectors, but that was later extended into some industrial and commercial sectors too.

The WLPGA currently has eight members in Bangladesh and many others are active in the fast-growing market. This ensured that an adequate LPG infrastructure and logistics platforms were in place to support the wood to LPG transition programme.

During 2020, the WLPGA continued to work closely with the UNHCR, and other NGO's, as an expert partner to facilitate the introduction of LPG into the Bangladesh refugee camps and to ensure it was done safely and in accordance with WLPGA Good Industry Practices Guidelines and the WLPGA Cooking For Life objectives. This was particularly challenging during the COVID-19 pandemic.

Cooking For Life

Cooking For Life is a campaign managed by WLPGA which aims to facilitate the transition of one billion people from cooking with traditional fuels, as well as other dirty and dangerous fuels, to cleaner-burning LPG by 2030. Since Cooking For Life was launched in 2012, there have been nearly 400 million conversions to LPG, mostly in very big conversion programmes in India and Indonesia, although Cooking For Life has been active in eleven countries. For more details visit the WLPGA website.



3. The Results: The International Union for Conservation of Nature (IUCN) Report - Impact of LPG Distribution Among the Rohingya and Host Communities of Cox's Bazar South Forest Division on Forest Resources

IUCN produced a report earlier this year to evaluate the impact of using LPG in the refugee camps.

The transition programme was intended to reduce the dependency of the Rohingya households on the use of firewood which was blamed for the degradation of the local forest reserves. The forests also housed many different species of flora and fauna, including elephants and snakes.

The IUCN report collected household level information from 1,399 Rohingya and local (host community) households together with data from ten markets surrounding the camps.

The study found that there was an almost four-fold increase in firewood demand after the refugee camps had been established. After LPG had been introduced the annual demand for firewood fell from 462,000MT/year to 37,000MT/year. This figure was below the sustainable collection limit from the forests.

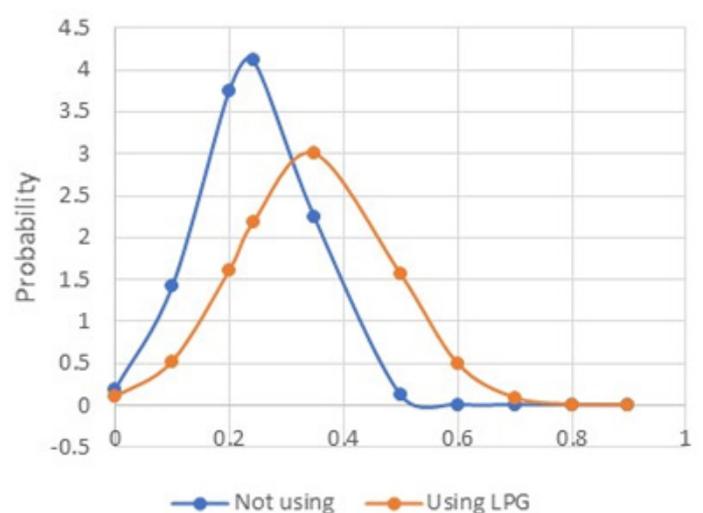
The transition programme not only contributed to a reduction in demand for firewood among households, but there was also an increased usage of LPG in neighbouring restaurants, food shops, and other outlets, including local bazaars.

Apart from the expected improvement in air quality inside the refugee kitchens by using LPG (elimination of indoor smoke and its cause of respiratory issues), there have been other health benefits for the Rohingya people.

LPG has had a beneficial impact on the food habits of the families due to the ease of cooking with LPG. Data also reveals that, when using LPG, the number of food items consumed by the household have increased. The Food Diversity Index (the number of food items consumed) rose from 0.24 to 0.34 for Rohingya households and from 0.34 to 0.48 among the host community households. In terms of nutritional balance, LPG users are found to be consuming more vitamins as their intake of vegetables have increased in the daily diet.

With the need for walking outside of the camps to collect firewood removed, there was a drop in human-animal conflicts recorded in the region. Typically, this would have been encounters with snakes or wild elephants.

Finally, the global benefits from carbon savings, by using LPG instead of wood, is estimated to be US\$69 million a year, when the social cost of carbon emissions is counted.



Food Diversity Index of Rohingya Families

4. Key Learnings

- Personal contacts and good relationships were critical for the success of the project. Despite challenges in the past to introduce LPG into the refugee camps both parties had a determination to succeed
- Having, or creating, a LPG champion in UNHCR not only facilitated the partnership it also enabled a positive message about LPG to be spread within the organisation
- Site visits to the refugee camps, to fully understand the challenges, proved to be invaluable. Not only the logistical challenges but the human challenges of transitioning away from wood to LPG
- The importance of all stakeholders to understand the basic properties of LPG and how they impact on the safe storage, handling, distribution and use of the product
- Commitment by all parties to make the project succeed
- Engagement with local members of the WLPGA to secure their involvement and support
- Securing UNHCR as a member of WLPGA made the partnership more inclusive and helped engage other members in support
- Identifying simple, fit for purpose and cost competitive LPG equipment facilitated the adoption of LPG and answered critics who claimed it was an unaffordable option
- Having a long-term plan, involving other countries, ensures the project can be rolled out.



5. Acknowledgements

WLPGA would like to thank UNHCR for their support and data to help write this case study.

6. Source

¹ <http://www.unhcr.org/figures-at-a-glance.html>