LONO offers two models for the Kubeko biodigester:

1. a domestic model of 1 m³ designed able to service 1 or 2 households
2. a community model of 16 m³ able to service up to 30 households

For up to 4 hours of cooking as well as enough liquid fertilizer to cover an area of 2 ha. Meanwhile, the community model can produce up to 50 hours of cooking gas and enough fertilizer to cover up to 30 ha.

What is the KubeKo?

- A mobile biodigester, designed by the company LONO, that converts organic solid and liquid waste from households, farms and SMEs into biogas and liquid fertilizer.
- Composed of an airtight container where organic waste such as agricultural waste or animal manure is added.
- It functions without any external electricity source. The technology is based on the activity of bacteria that break down the agriculture waste in three different steps.

Biogas and organic liquid fertilizer production

1. chamber: the microorganisms present in the waste break down the agricultural waste or animal manure into simpler organic molecules like sugars and alcohols. The solid matter is trapped in the first chamber until fully broken down.
2. chamber: once the first chamber is full, the liquid overflows to the second chamber where the sugars and alcohols are converted into organic acids such as acetic acid (one of the main components of vinegar).
3. chamber: once there is an overflow again, the liquid circulates to the third chamber where the acids are converted into combustible methane and CO² mix called biogas. The liquid left after this step is an organic fertilizer.

The biogas is then collected through a pipe with a shut-off valve into a bag which can be detached and transported to another place for cooking. As for the liquid fertilizer, it is collected in a bucket and can be stored for up to 2 weeks.

Main features of the KubeKo

- LONO offers two models for the Kubeko biodigester:
  1) a domestic model of 1 m³ designed able to service 1 or 2 households
  2) a community model of 16 m³ able to service up to 30 households
- With the input of 10 kg of organic waste per day, the domestic KubeKo biodigester produces enough gas for up to 4 hours of cooking as well as enough liquid fertilizer to cover an area of 2 ha. Meanwhile, the community model can produce up to 50 hours of cooking gas and enough fertilizer to cover up to 30 ha.