Government of Nepal
Ministry of Energy, Water Resource and Irrigation
Alternative Energy Promotion Centre

Food Security Issues and Role of RETs

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Key Facts

- **Food systems currently consume 30%** of the world's available energy.

- **70% percent of the energy** consumed by food systems **occurs after food leaves farms**, in transportation, processing, packaging, shipping, storage, marketing, etc.

- Energy is responsible for about **35% of GHG emissions from agri-food chains** (excluding those from land use change).

- An estimated **one-third of the food we produce is lost or wasted**, and with it an estimated 38 percent of energy consumed in food systems.

- Modern agriculture/food systems are **heavily dependent on fossil fuels**.

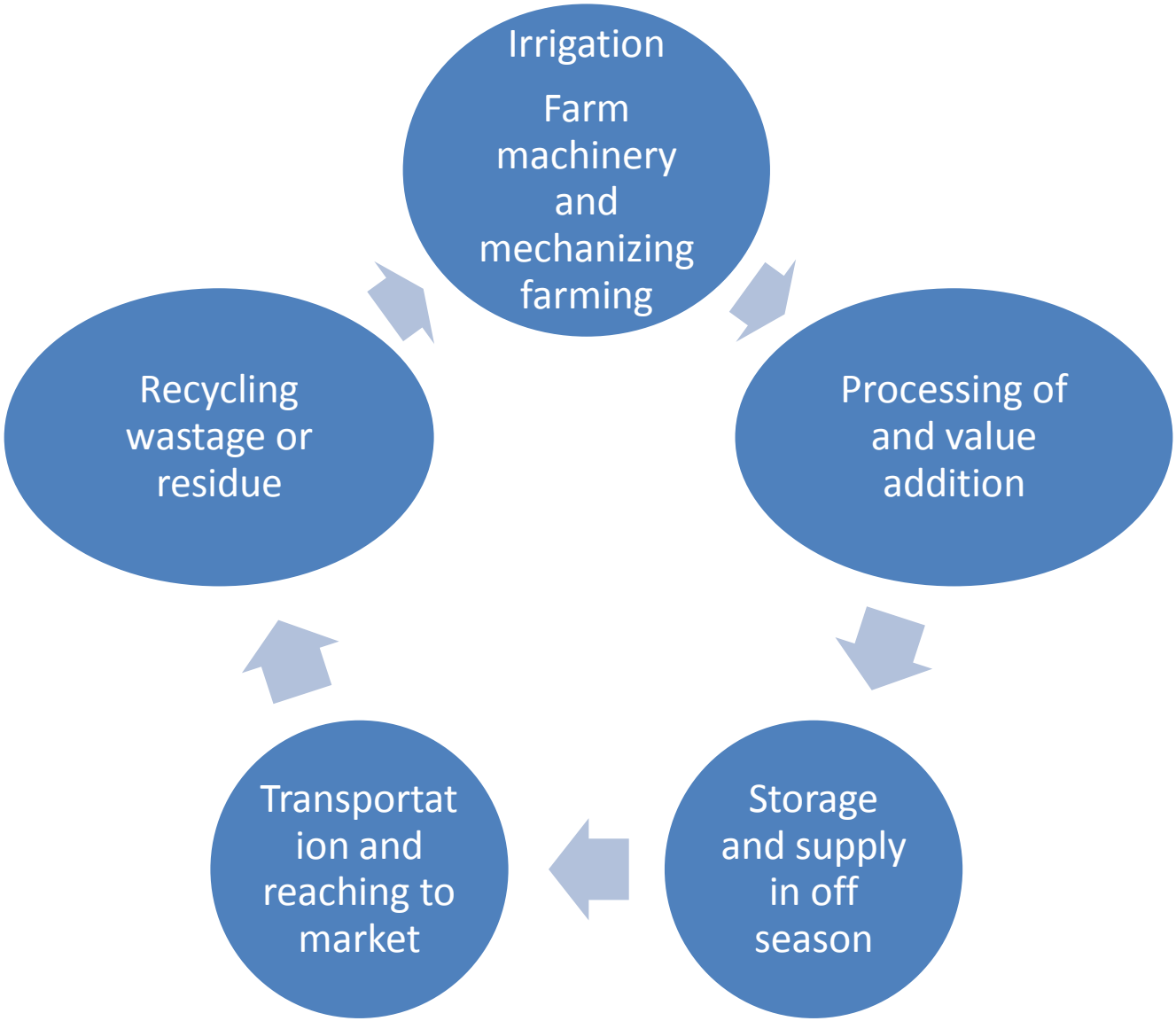
Source: energy@fao.org

Advantage of RE in food system

- **Renewable energy** systems have main advantages i.e.
  - reduce the food sector's dependence on fossil fuels
  - reduce greenhouse gas emissions.
  - Portable and modular quick to install and use.

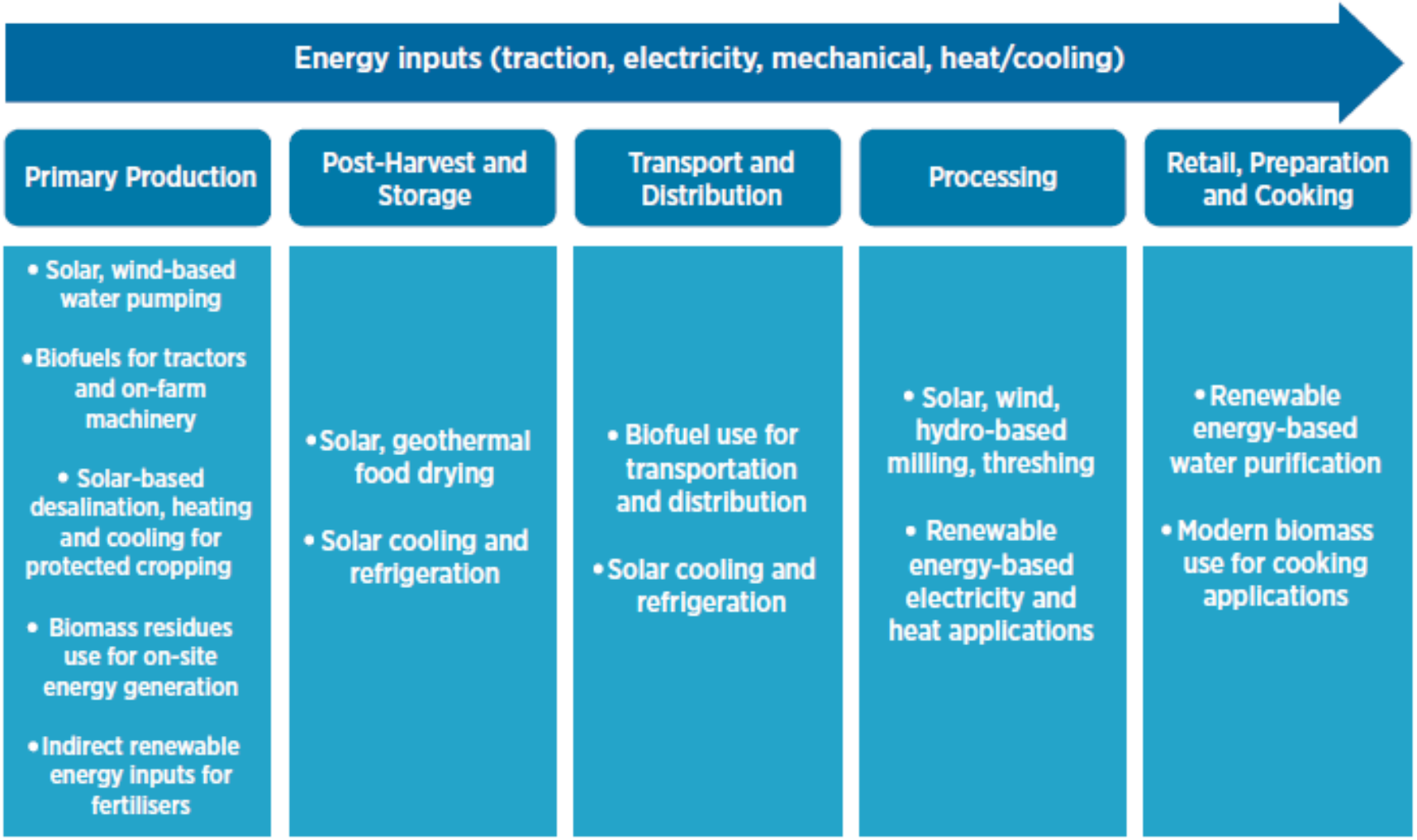
- AEPC has supported through subsidy on following RETs
  - More than 3000 MHPs and PHPs- only used 25% of energy gen.
  - 450,000 Domestic biogas – mainly for biogas
  - More than 200 large biogas – Organic manure should get priority.
  - Small farmer solar irrigation around 1300 systems
  - Dryers cookers about 500 – good for high value product dryer
  - IWMs 10,000 – Remote areas technology
  - Inprove ICS/MICS – save time and firewood and healthy cooking
  - More than 9 lakh SHS – can work longer hours save farm products from damage.

Use of Energy in Agri-product production nad value addition



Role of RETs for Food Security

Figure 2.16 Illustration of different entry points for renewable energy into conventional energy supply systems

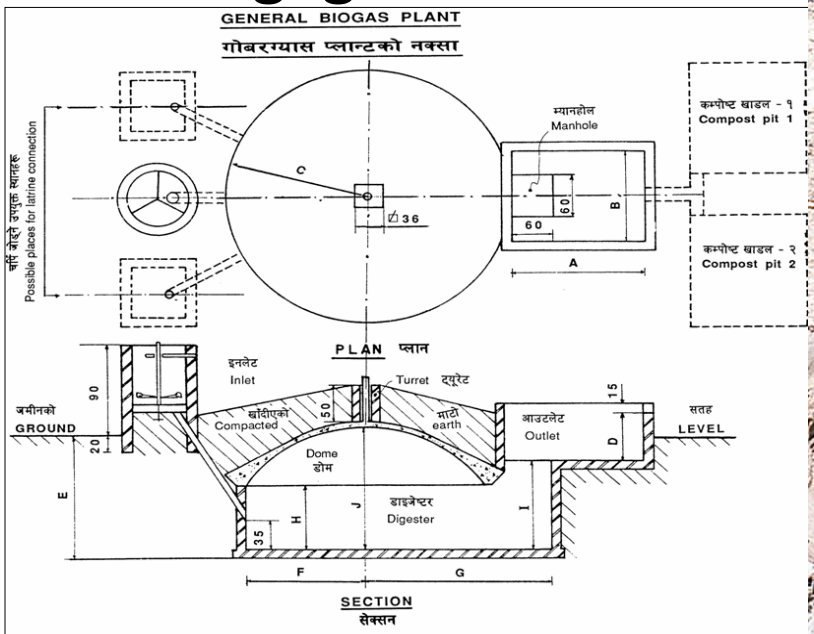


Source: Based on FAO, 2011b; Practical Action, 2012

Domestic Biogas and Agriculture

- More than 4,27,000 plants installed.
- More than 10,000 people employed.
- About 130 companie engaged in the secto

- Bio-slurry a boom for the farmers.



Envipower Selling 8 Metric Tons of Fertilizer Each Day! Waste2Energy

Organic Fertilizer Unit at Khilung kalika Biogas plant

Thank you