



Powering Agriculture for Post COVID Recovery with Distributed Renewable Energy

NREP

- DfID-funded
- 4.5-year programme
- Primary Public Sector Partner
 - AEPC under MoEWRI
 - Provincial and Local Governments
- Implementing Partners
 - DAI, Winrock, PEI, SP UK



Agriculture in Nepal

- Around 27% of the GDP
- Average land holding size – 0.8 hectare per family
- Subsistence based
- Human and animal power in the farm - Over 75%

In 2018/19 Nepal Agri import from India and China

- 1.7 M tons of vegetables,
- 383,000 ton of fruits,
- 1.4 M ton of cereals
- 303,000 tons of animal feed

NEED



- **Potential interruption in the food supply chain**
- **Reduced jobs in Nepal and outside**
- **Various sectors may be affected badly**
- **Migrant workers returning to Nepal**
- **Potential internal migration from cities to rural areas**

Powering agriculture value chains

PRODUCTION

- Solar, wind-powered water pumping
- Biofuel-powered machinery
- Solar Desalination, heating cooling
- Efficient machinery/maintenance
- Low-pressure, efficient irrigation
- Biomass residue energy generation

POST-HARVEST AND STORAGE

- Solar, geothermal food drying for storage
- Solar cooling and refrigeration
- Minimized/efficient packaging
- Food loss reductions
- Efficient drying
- Improved Insulation for cool storage

PROCESSING

- Solar, wind, hydro milling, pressing, cooking, drying, etc.
- Renewable electricity and heating application
- Modern biomass for cooking
- Efficient processing for cooking
- Smart Integration into existing fossil fuel-based power systems

COMMERCIALIZATIONS

- Biofuel for transportation and distribution
- Solar cooling and refrigeration (retail)
- Truck design and operation
- Improved efficient Infrastructure
- Efficient market Information through modern ICTs
- Capacity building for farmers, traders, etc. to improve understanding of value.



DRE Solutions for Powering Agriculture

- High-tech greenhouses
- Cold storage
- Irrigation pumps
- Agri based MSMEs

Expected outcomes



FOOD SECURITY



JOBS



LIVELIHOODS
OPPORTUNITIES



THANK YOU

