

## NBIRT

### PROBLEM:

The village of Korbongpara is a remote tribal village in Tripura. It was for a long time facing the problem of non-availability of safe drinking water due to the erratic nature and cost of electricity in the region.

The village was in need of a sustainable solution. ONGC supported NBIRT to provide safe drinking water to the village of 'Korbongpara' through the Solar route.

### INTERVENTION:

For this, NBIRT wanted to develop an operable submersible pumping system through solar PV power, develop an Iron removal filtration

system to address high iron content present in groundwater, develop an ultra filtration based solar water Purification system to provide safe drinking water and at last, install, demonstrate and commission the system at 'Korbongpara' Village.

NBIRT had previously developed a community model of the water purification system and had provided it to more than 30 schools and Institutions at Tripura, Assam and West Bengal.

In the project implementation phase, NBIRT:

- Installed 2kWp Solar PV power plant for groundwater pumping:
- Installed 2HP Solar Submersible pump:
- Installed 1.2kWp Solar PV power plant and Booster pumping system:
- Installed central water purification and storage unit:
- Installed water distribution system:
- Installed second water purification system:
- Provided Micro Solar Domes (MSD) of 'Korbongpara' Village.



### IMPACT:

The Demand of Drinking water in the village is about 519 litres per day. The installed system has been tested to purify about 1500 litres of water per day at optimal performance. Thus, not only the water demand of the village can be met by the intervention but a reserve for 2 days is also ensured.

There is a more than 50% decrease in health related problems arising due to consumption of impure water. Villagers have been trained on the operation and maintenance of the device. The system is now run by a SHG (Self-Help Group) in the village to ensure sustainability of the intervention.

As compared to burning firewood to boil water and using a grid for water purification, the Solar Water Purification system has led to reduction of 109 Tonnes of CO<sub>2</sub> annually. The Solar Pumping system has led to the reduction of 32.85 Tonnes of CO<sub>2</sub> annually.

### ABOUT THE ORGANIZATION:

NBIRT is a core support group of SEED Division, Department of Science and Technology, Govt. of India. NBIRT is known for interventions like the Micro Solar Dome, India's first floating solar power plant, Solar Water Purifier, Solar Sanitation systems, 'Solar Jacket', 'Janata ATM' and many other interventions, some of which are now under national programs in India.

NBIRT with headquarters at Tripura is active majorly in the Eastern and North Eastern parts of India. NBIRT has a research Centre at Kolkata and a Training Centre at Assam.

In addition to research programs, NBIRT also conducts frequent Training and capacity building programs related to Solar technologies. NBIRT is also associated with InSIC in promotion of Solar Energy in Middle-low-income countries.