Kargil Renewable Energy Development Agency (KREDA)

*5th Sep 2022*

# Solar Water Lifting Pump & Community Irrigation

*in*

## Kargil, Ladakh

# Basic Water Issues:

**In the District:**

-- **Droughts:** Almost 50 villages have been identified in the district facing acute shortage of water. While 10 to 12 villages have water crisis. The age old water sources have been dried up.

-- **Floods:** Almost every third village is affected by flood in the rainy season.

-- **Hard To Transport:** Water is available in abundance, but due to lack of canals and other means it cannot be transported to the needy.

-- **Wrong Location:** Not where the people are, etc

# Solving the Water Crisis With Solar Power:

## In the District:

I. It is estimated that almost 50% of the population living in the rural areas of Kargil do not have access to safe and sufficient irrigation water for their fields.

II. Furthermore, it is obvious and scientifically proven that droughts will become more frequent and severe in the upcoming years in the face of climate change.

III. Fortunately, we have now started a new era of providing water for irrigation through advanced technology based systems. KREDA has been researching and promoting solar based water pumping system throughout the region which could be one of the best solutions that will provide water for irrigation and also can be filtered for drinking purpose to even the most remote corners of the region.

IV. KREDA is supporting public participation in such projects thus promoting community irrigation.

# Solar Water Lifting Pump: Success Story

1. KREDA has been installing Solar Pumping Systems of different capacities for irrigation purpose. A symbolic project in this field is the 41 HP (50kWp) solar irrigation pump at Latoo Village in Kargil where under the agency has successfully made the villagers capable of lifting sufficient water to irrigate their fields without any DG set or Grid.

2. Followed by many more such projects have been commissioned in villages such Dargo, Santakchan, Adulgund, Chhanigund etc. The imperative prerequisite of the systems has come up because of the extreme drought like situation and economic loss facing by the people of the proposed villages, as all the crops, farms and fields are upto destroy for want of water.

3. It is important, for the sake of Ladakh's continued prosperity, to promote Technology, especially Renewable Energy Based Projects and Programmes with the given land resource and environmental circumstances, so as to encourage a sound and sustainable future for the people of Ladakh region.

# Solar Water Lifting Pump: Latoo Success Story

1. **Latoo is the last village on Indian Border side**, and is located just at the **LOC**. The project is meant for the purpose of developing a model water lifting project running on free energy, solar, which can also be used for an automatic micro irrigation system for supplying water at the proposed village. This scheme of solar pumping system installation has been one of the best and successful schemes for this region.

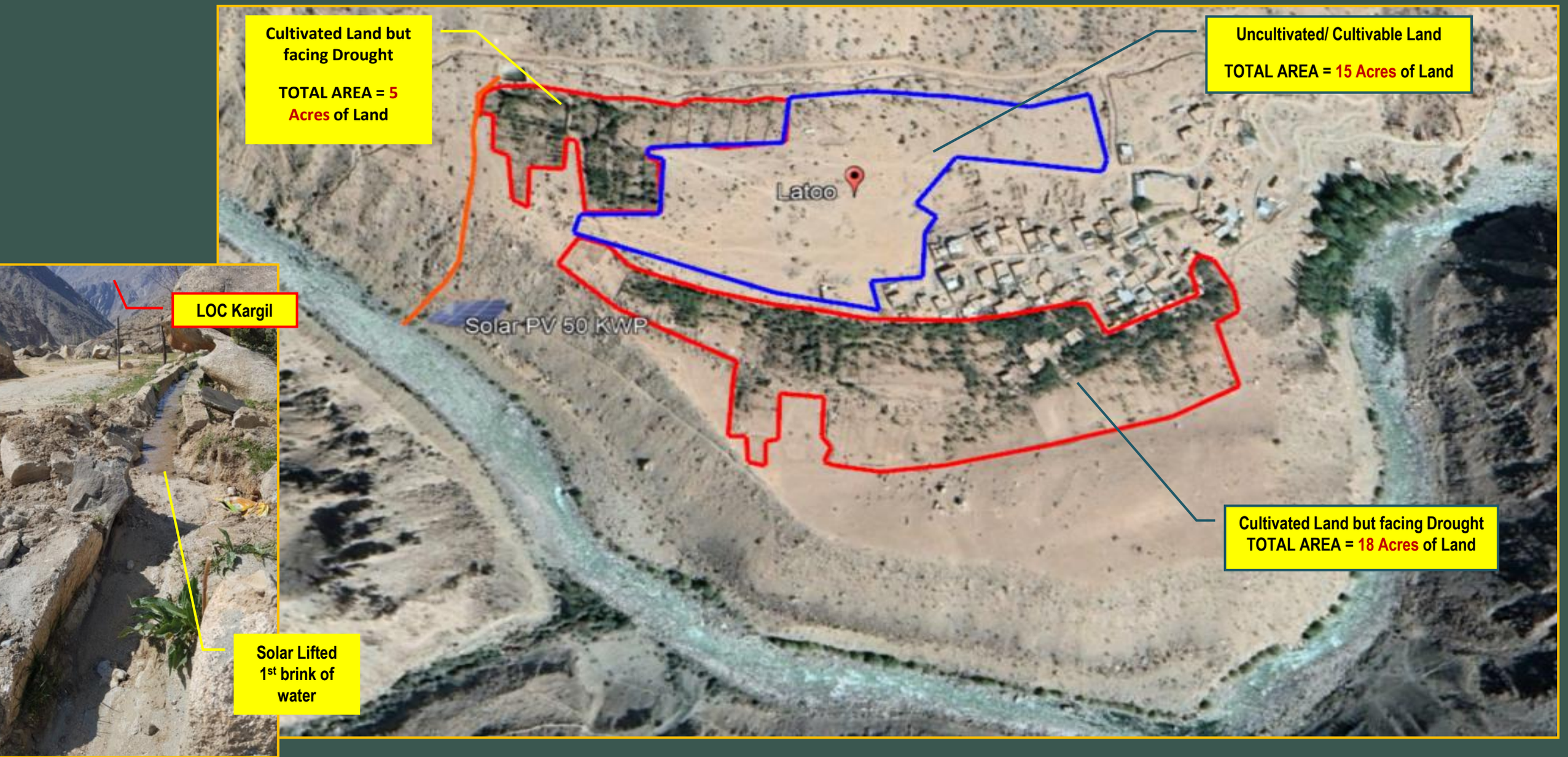
2. **Necessary requirement of the system here raised because of the drought like condition in the LOC village of Latoo**, all the apricot trees and fields had been facing shortage of water. Under this project, a solar water lifting system has been installed which will help in irrigating the ever parched land parcels of Latoo.

# Solar Water Lifting Pump: Latoo Success Story

1. The pumping system, installed by Kargil Renewable Energy Development Agency (KREDA) is completely solar based submersible pump of 41Hp power. **The system has a head range of 130-160 meter** and will help in **lifting 54 cum of water per hour**. A **solar plant of capacity 50kWp has been installed to run the pumping system** with all its energy for the whole day time. The pump is kept in a jack well, of size ***3.35m x 2.10m x 3.65m,*** at the river bank and water is lifted through the delivery pipe of dia 140mm. The length of the pipe is about 360 meter.

2. Considering the inherent advantages of such systems, development of such projects seems to be very effective and efficient way of distributing water at such drought facing places.


# Solar Water Lifting Pump: Latoo Success Story



# Solar Water Lifting Pump: Dargo & Santakchan Success Story

1. The solar water pumping systems, installed by Kargil Renewable Energy Development Agency (KREDA) at Dargo & Santakchan are completely solar based submersible pump of 7.5Hp power each. **The systems have head ranges of 37-55 meter** and will help in **lifting nearly 15000 litres of water per hour**. A **solar plant of capacity 7kWp has been installed at each site to run the pumping systems** with all its energy for the whole day time. The length of the pipe is about 480 meter at Dargo and 350 meter at Santakchan.

2. Both the villages of Dargo & Santakchan are located in the Chiktan area. This scheme of solar pumping system installation has been one of the best and successful schemes for this area. Necessary requirement of the system again has raised because of the drought like condition in the area of Chiktan especially in these villages.


Inauguration of 7.5Hp Solar Submersible Pump at Dargo for irrigation


Inauguration of 7.5Hp Solar Submersible Pump at Santakchan for irrigation

# THANK YOU

Ali Naqi
Project Coordinator, KREDA Kargil, UTL
sahilsheen@gmail.com