



## CHAKRI SOAN RIVER BASIN PAKISTAN

# SOLAR PUMPING IRRIGATION SYSTEM AND CLIMATE SMART AGRICULTURE PACKAGES

PARC is piloting 'Solar Pumping Irrigation Systems coupled with Climate Smart Agriculture Packages' in Chakri in Rawalpindi district of Punjab. This piloting site is in the rain-fed Soan River Basin of the Potohar region, where various climate smart interventions to improve farm productivity and enhance resilience are being practiced and piloted with farmers' participation

*Expected Outcome: Upscaling this pilot will improve integrated water resource management practices resulting in food security and improved livelihoods in dry and arid situations in Pakistan*

## WHY?

Agriculture in the Soan Basin, which is located in the midstream of the Indus River basin, is heavily dependent on rainfall and ground water resource.



Factors such as underutilized potential of water sources due to undulating terrain, and erratic rainfall of varying intensity impacts crop productivity.



Lack of diversity in crops means mono-cropping is the dominant pattern of agriculture and farmers' well-being remains at the mercy of the rains.



Such communities are especially vulnerable to the impacts of climate change that will only bring more unpredictability in the time to come.

The pilot is being tested to address water management, to improve livelihoods, and to improve farmers' resilience to potential climate change impacts.

# WHAT

These packages will include:

- Fixed Solar Irrigation Systems
- Portable Solar Irrigation Systems
- Agriculture Diversification
- Integrated Water Resource Management
- Alternate Energy Application

High Value  
Fruit Orchards



# HOW?

Based on the situational analysis and discussions with local farmers in Chakri, a medium sized farm up to 15 acres that is distributed on both sides of the Soan river has been selected. This was based on the farmer's willingness to accept the introduction of new technology and agriculture production practices on his farm. He is willing to collect data in partnership with the project team, make investments in innovative farm practices (i.e., tunnel farming, sprinkler system, drip irrigation etc) and use the pilot farm as a training site for other farmers in the nearby village for practitioners, researchers, and media to see.

Since the pilot is being implemented on a single farm, it can be categorized as a "Developmental On-farm Research Pilot (DOFRP)". The piloting will also include training for farmers, professionals, and students and demonstrations/ visits by the media.

Knowledge dissemination via local consortium partners and communication through print and electronic media is a continuous process throughout the piloting.

