Designing effective and inclusive policies and policy tools for solar energy transitions

Scaling-up solar irrigation: Lessons from policy

Background

Solar pumping technology has emerged as an alternative to diesel and electric pumps. However, water professionals often express concerns that converting pumps to PV solar may result in indiscriminate pumping, potentially leading to further groundwater depletion. While many countries lack a specific policy on solar technology for groundwater pumping in agriculture, several other policies have implications for its use. Some countries have policies at the federal level while some follow the policies at the state level to govern their groundwater and surface water resources. There is also a competition among the states to provide subsidized solar powered pumps to promote green energy and bring down carbon emissions. All provincial/state governments have planned and/or launched subsidized solar irrigation pump schemes, often coupled with High Efficiency Irrigation Systems (HEIS). Although extensive groundwater use has provided protection against drought, addressed waterlogging issues, and increased cropping intensity, however, over abstraction of groundwater has led to aquifer depletion in some areas and salinity in others. This session aims to deliberate the viable options supported by the policy instruments to sustainably scale up solar irrigation.

Objectives of the session:

The objective of the session is to identify policy pathways for sustainably scaling up solar irrigation while protecting our groundwater aquifers. The session will have three keynote presentations highlighting government initiatives in Nepal, Pakistan and India followed by panel discussion of the learned delegates from multiple regions.

Moderator: Dr. Azeem Shah

Keynote Presentations

Presenter 1: Dr. Manohara Khadka (Country Representative, IWMI – Nepal)

Presentation Title: Scaling-up solar irrigation for inclusive livelihoods and food security: Lessons from GESI review of policies

Presenter 2: Mr. Kifayat Zaman (DG, Federal Water Management Cell, Ministry of National Food Security & Research, Pakistam)

Presentation Title: Prime Minister's National Programme for Solarization of Agriculture Tubewells in Pakistan

Presenter 3: Ms Suman Chandra (IAS - Deputy Secretary, MNRE, India)-Online (TBC)

Presentation Title: PM-KUSUM: Key achievements and lessons learnt.

Panelists:

Ms. Divya Kashyap Sharma (Deputy Head of Cooperation – SDC, India)

Mr. Sanjeeb Baral *(DG Deptt of Water Resource and Irrigation, Nepal)*

Dr. Muhammad Ashraf *(Ex-Chairperson, PCRWR, Pakistan)*

Dr. Priyabrata Santra, Head, ICAR CAZRI, India

Dr Frehiwot Woldehanna, ISA Focal Point for Ethiopia and Head, Center of Biomedical Engineering, AAiT-AAU, Ethiopia

Mr. KM Ali Azam, Deputy Director, Renewable Energy (SoLAR), Sustainable and Renewable Energy Development Authority (SREDA), Bangladesh

Questions to the Panelists:

Round 1:

Reflecting on the presentations from the three countries, what do you think whether we have an appropriate policy landscape in place to sustainably promote solar irrigation in our respective countries. (All panelists - 2 mins each)

Round 2: (4 mins each)

Mr. Sanjeeb Baral	Which policies do you think are favouring sustainable solar irrigation in Nepal and where do you think there is a requirement for the Government to provide policy support for SIP promotion in Nepal?
Dr. Muhammad Ashraf	We have seen in Pakistan that the groundwater share for irrigation has been increased to more than 50%. With Solar, it is further expected to increase. How can we sustainably promote Solar in Pakistan provided we have all off-grid pumps?
Dr. Priyabrata Santra	Looking at the rapid expansion of the SIP technology, how can India promote SIPs in sustainable manner?
Mr. KM Ali Azam	How do you see Bangladesh sustainably promoting solar based irrigation and which policy instruments are required to support this transition?
Dr Frehiwot Woldehanna	What is your experience of SIP adoption in Africa? Do you see any barriers and policy pathways to help promote SIPs?
Ms. Divya Kashyap Sharma	What are the major considerations from the donor perspective for supporting SIPs promotion in different regions? It will be important for our Government representatives sitting here who develop the policies.

Round 3: (1 mins each)

These deliberations have provided us great insights of the policy landscape in our regions. **If you were to identify the single most important policy intervention that the government could implement to scale-up solar irrigation in your respective countries**, **what would that be in your country/region**?

Session Custodian: Azeem Shah

Rapporteurs: Melissa and Mamata, IWMI