

UN CLIMATE CHANGE CONFERENCE – UNITED ARAB EMIRATES

30 NOVEMBER – 12 DECEMBER 2023

THE SOLAR HUB



SOLAR IRRIGATION FOR AGRICULTURAL RESILIENCE (SoLAR) IN SOUTH ASIA: LEARNINGS AND EXPERIENCE SHARING

In Collaboration with



Thematic Arena 3, TA3-190, Opportunity District, Expo City, Dubai

10 DECEMBER, 2023 | 15:00 PM – 16:30 PM

Background & Rationale

In a rapidly warming world with increasing extremes such as drought, heatwaves, and flooding, irrigated agriculture is becoming the norm for sustaining livelihoods. Irrigation already supports about 40 percent of global food production on just 20 percent of arable land, of which 35-40 percent is now groundwater-fed. This contributes significantly to GHG emissions. In South Asia, for example, groundwater irrigation is responsible for an estimated 8-11 percent of total emissions.

Solar irrigation pumps (SIPs) are considered an attractive mitigation strategy in the agricultural sector to replace conventional diesel and electric pumps. Unlike many other mitigation approaches in agriculture, solar pumps do not entail a yield or income penalty for farmers. Instead, they offer valuable adaptation benefits through improved irrigation access. Solar irrigation can be an effective strategy to reduce the government's financial burden from existing subsidies on diesel and electricity for irrigation. Nonetheless, the effective scaling of solar pumps anywhere would necessitate addressing some key challenges – developing SIP models that are economically and institutionally sustainable, ensuring groundwater sustainability, and promoting equitable access. South Asia, as an early adopter of solar irrigation, presents a unique opportunity to draw insights from the experiences with both on-grid and off-grid SIP systems in addressing these challenges. These insights will not only facilitate the expansion of solar irrigation in South Asia but also offer valuable lessons for other regions worldwide.

The Solar Irrigation for Agricultural Resilience in South Asia (SoLAR-SA) project, funded by the Swiss Agency for Development and Cooperation (SDC) and implemented by the International Water Management Institute (IWMI) across Bangladesh, India, Nepal, and Pakistan, is at the forefront of this effort. The primary objective of this initiative is to conduct research on these critical issues and thus support government initiatives to promote solar irrigation in a manner that contributes to climate-resilient and socially inclusive agrarian livelihoods. In this session, we will delve into the learnings from SoLAR to shed light on the socio-institutional models necessary for scaling up solar irrigation in both on-grid and off-grid areas. We will also explore the findings regarding the impact of expanding solar irrigation on groundwater sustainability and the facilitation of equitable and gender-inclusive SIP access.

Session Objectives	Using learnings from South Asia, this session will present unique insights on the effectiveness of solar irrigation as a strategy to sustainably manage water, energy, food and climate interlinkages. It will highlight how governments in South Asia are using evidence from the field to develop and deploy ambitious policies and programs on Solar Irrigation Pumps (SIPs) to address NDC commitments while supporting climate-resilient, gender-equitable, and socially inclusive agrarian livelihoods.
Agenda	
15:00 - 15:05 PM	Welcome & Introduction Alok Sikka (IWMI)
15:05 - 15:08 PM	Special Address Falvien P Joubert , Minister of Agriculture, Climate Change and the Environment, Seychelles
15:05 - 15:08 PM	Opening Remarks Hanna Capeder , (Embassy of Switzerland)
15:08 - 15:18 PM Q&A: 15:18 - 15:21 PM	Solar irrigation in South Asia: evidence from science and policy Darshini Ravindranath , (IWMI)
15:21 - 15:31 PM Q&A: 15:31 - 15:34 PM	Learnings from Different Business Models for Scaling Off-Grid SIPs Shilp Verma , (IWMI)
16:00 - 16:25 PM	Panel discussion: Accelerating clean and resilient energy transition through solar Moderator ▪ Darshini Ravindranath , (IWMI) Panellists ▪ Wills Agricole (Principal Secretary, Govt. of Seychelles) ▪ Avishek Malla (ICIMOD)
16:25 - 16:30 PM	Concluding Remarks ISA Secretariat

