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SoLAR
Solar Irrigation for Agricultural Resilience
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#### Dear Readers,

The International Water Management Institute (IWMI's) Annual Research Meeting (ARM) took place in Tashkent, Uzbekistan, from May 29, 2023, to June 1, 2023. This four-day event brought together researchers, policy makers and practitioners to share their latest work, discuss trends in water management and identify potential solutions to water-related challenges. The meeting was attended by more than 150 participants from all over the world and focused on the theme of Advancing CGIAR water system science. IWMI showcased the SoLAR-SDC work in a presentation titled **Harvesting the Sun: Understanding Solarization of Agriculture in Africa and Asia** which was given by Dr Alok Sikka, Country Representative, IWMI India and Shilp Verma, senior researcher, water-energy-food policies, IWMI-Anand. The session highlighted the solar journey of how it started small with a couple of field experiments and has now grown to engage researchers across disciplines engaged in examining different aspects of agri-solarization, such as business models, value chains, scaling drivers, bottlenecks, equitable distribution, sizing and other decision support tools and financing options, etc. This will lead to an IWMI-wide synthesis on 'Solar-led Food System Transformation' by capturing completed and on-going IWMI work and facilitating learning across IWMI geographies. This meeting ignited discussion on solar in the Central Asian region.



Annual Research Meeting (ARM) in Tashkent, Uzbekistan (Photo: IWMI)

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**Learnings from SDC SoLAR projects** were shared with the Ministry of National Food Security and Research to design the agri-solarization scheme launched by the Government of Pakistan. Pakistan **Prime Minister Shahbaz Sharif** announced the approval of a 10,000 MW solar energy project aimed at reducing.. Read more>>

### Highlights from the Quarter

# <u>Learnings for solarization in off-grid areas in Bangladesh presented at the SETI Annual workshop</u>

Archisman Mitra presented a paper titled **State of solar irrigation in Bangladesh: Learnings for solarization in off-grid areas** in the SETI 2023 Annual workshop held on June 16, 2023. The presentation highlighted the fact that diesel dependency creates energy insecurity and puts a financial burden on the country and that the diesel use.. **Read more>>** 

## IWMI-IRMA conduct Assessment Study of Mukhyamantri Saur Krishi Vahini Yojana (MSKVY)



The International Water Management Institute (IWMI), in collaboration with the Institute of Rural Management (IRMA), conducted a rapid assessment of the Mukhyamantri Saur Krishi Vahini Yojana (MSKVY) initiated by the Maharashtra State Government in June 2017. MSKVY is designed to promote tail-end solar plants near substations, with the ambitious target of achieving an installed capacity of 5000 MW by 2025, with the State's.. Read more>>

#### IWMI-ATREE Assess Farmer Responses to Solar Irrigation in Joint Study





The International Water Management Institute (IWMI), in collaboration with the Ashoka Trust for Research in Ecology and the Environment (ATREE), conducted a comprehensive study to assess farmer responses to solar irrigation. Combining insights from both agent-based modeling and expert consultations, the study suggests that sustainable transitions—alterations in crop selections that maximize profits while reducing irrigation water requirements..Read more>>

# <u>SoLAR Grid-connected SIP pilot presented in Asia Sector-specific Meet: Agriculture and Food Security</u>

Shisher Shrestha made a virtual presentation in the Asia Sector-specific Meet (Sustainable Agriculture and Food Security) on March 31, 2023. Titled Opportunities and Challenges for Grid-connected Solar Irrigation in Nepal – Lessons from SoLAR Pilot Project, he highlighted the emissions due to diesel irrigation pumps and mentioned the findings that say that diesel pump consumes 13,870 m<sup>3</sup> (kl). Shrestha presented the summary of findings from the impact evaluation studies conducted as part of the SoLAR-SA project.. Read more>>

#### Fourth Pakistan C-PMC Meeting held at CEWRI



The precision surface irrigation trials, capacity building trainings, results of choice experiments, in-situ instrumentation were presented at CPMC Meeting held at CEWRI..Read more>>

## **Country Highlights :** *From the Fields*

Bangladesh

#### IWMI team visits the Gazi Grid Integration Pilot Site in Dinajpur



Dr. Marie-Charlotte Buisson and Archisman Mitra visited the Grid integration pilot site done by Gazi in Dinajpur, Bangladesh from June 17<sup>th</sup> to 27<sup>th</sup> June. Also, Archisman Mitra visited the grid integration site of WAVE in the Kushtia region and interacted with BREL officials who will be starting a new grid pilot site. Read more>>

**Training Farmers on Integrated Crop and Water Management** 



A farmers' training was organised on June 13, 2023, in Kabilnagar Nasrul Ulum Fazil Madrasa, Upazila - Alamdanga, Chuadanga, district in Bangladesh. A total of 30 farmers benefitted from this training. The primary aim of the training was to enhance the capacity of SIP users in crop and water management to help boost their agricultural production. Read more>>

#### India

# <u>Farmers surveyed in Gujarat to evaluate the impact of the Suryashakti Kisan Yojana (SKY)</u>



A comprehensive survey of farmers was carried out in Gujarat to evaluate the impact of the Suryashakti Kisan Yojana (SKY) on the agriculture sector. The survey commenced in February 2023, and concluded in July 2023.

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#### Nepal

#### Field visit in Terai region of Nepal by Dr Mark Smith IWMI

Led by Dr Mark Smith IWMI Director General (DG) along with <u>Dr Manohara Khadka</u> (IWMI Nepal CR) and <u>Mr Shisher Shrestha</u> (National Researcher) and with the provincial authorities. The delegation visited the SoLAR Pilot site and interacted with the Local Government Chair and Farmer User groups. A meeting was held with the Chairperson and Chief Administrative Officer (CAO) of Chhipaharmai Rural Municipality on water challenges for local development. The team met with 8 farmers, 2 local government staff, and 1 person from the private sector during the field visit at Chhipaharmai Rural Municipality. <u>Read more>></u>

#### Bilingual Training Manual to Capacitate Solar Irrigation Pump Technicians



On 18 May 2023, <u>Dr. Manohara Khadka</u>, Country Representative, Nepal, Dr. Marlene Buchy, Senior Researcher, IWMI Nepal and <u>Shisher Shrestha</u>, Country Lead, SoLAR-SA, IWMI Nepal paid a courtesy visit to the newly appointed Executive Director (ED) of Alternative Energy Promotion Centre (AEPC), Mr. Nawaraj Dhakal. IWMI officials handed over the Bilingual Training Manual for the Solar Irrigation Pump (SIP) technicians developed under the SoLAR-SDC Project. This <u>manual</u> has been listed in the AEPC website as a knowledge product.

Photo: (left to right) - Dr. Laxman Prasad Ghimire (AEPC), Shisher Shrestha (IWMI), Nawa Raj Dhakal (AEPC), Dr. Manohara Khadka (IWMI), Dr. Marlene Buchy (IWMI)

#### Pakistan

#### Solar Country Project Lead visits NUST Energy Centre Team in Islamabad



A meeting with the department Chair Dr. Adeel Waqas for the Centre of Advanced Studies in Energy, National University of Science and Technology (NUST) was held in Islamabad on May 23, 2023. NUST Energy Centre has been engaged by the Swiss Development Cooperation and Agency (SDC) for the review of the Pak component of the SoLAR-SDC project. Read more>>



#### Muhammad Zain Bin Akbar

Research Officer for Policy and Water Governance, IWMI Pakistan

#### What is your role in the project?

I have been working on the Pakistan component of the project as Research Officer – Policy and Water Governance since July 2020. I am based in IWMI's Lahore office, Pakistan. My project activities are not confined to a specific component rather I am involved in several tasks. From designing surveys,..

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### **Ahsan Habib**

NGO Forum for Public Health Head of Research Monitoring & Evaluation, NGO Forum for Public Health

#### How does IWMI's SoLAR project contribute to your organization's mission?

Being a learning national rights-based, networking and service delivery organization, NGO Forum for Public Health utilizes its proven experiences of working with other development partners and strives to establish an enabling inclusive healthy society by complementing the implementation of all required national and international policies. The SoLAR project contributes to the NGO Forum's mission

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Mr. Zain Akbar and Dr. Claudia Ringler wrote a blog on "Groundbreaking but not a Universal Solution: Renewable Energy in Irrigation." for Welternährung. The blog writes about the role of solar pumps in irrigation, specifically Punjab, Pakistan and its potential negative impact on groundwater depletion



<u>Six months in a year, solar pumps remain idle in Bundelkhand. Why not connect them to the grid?</u>



Shilp Verma quoted in <u>Gaon Connection</u> "in Gujarat, farmers not only got solar pumps but are also organised into cooperatives that can feed surplus power to the Grid and earn an income out of it." Read how round-the-year utilisation of solar pumps provides a much-needed extra source of income to farmers.



OPINION: Grid-connected solar irrigation
Nepal must diversify its energy sources to meet the nationally determined contributions.

### On the Reading List

Varshney, Deepak; Meenakshi, J. V. 2023. Employment effects of an emergency assistance package for migrants displaced by COVID-19 in India. Applied Economic Perspectives and Policy, 19p. (Online first) [doi: <a href="https://doi.org/10.1002/aepp.13364">https://doi.org/10.1002/aepp.13364</a>]

### In partnership with













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For further information, please get in touch with our Communications Team, SoLAR Project, IWMI at iwmi-solar@cgiar.org

Images courtesy: IWMI -SDC-SoLAR Project

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