SoLAR
Solar Irrigation for Agricultural Resilience

Schweizerische Eidgenossenschaft
Confédération suisse
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Confederaziun svizra

Swiss Agency for Development and Cooperation SDC

IWMI
International Water Management Institute

CGIAR

ICIMOD

INTERNATIONAL SOLAR ALLIANCE

Global Science-Policy Forum: Socially Inclusive Solar Irrigation Systems

24-26 April, 2024 | Kathmandu, Nepal

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Forum Agenda

International Water Management Institute (IWMI) and its partners are organizing a three-day Global Forum as a part of its Swiss Agency for Development and Cooperation (SDC) funded project titled Solar Irrigation for Agricultural Resilience in South Asia (SoLAR). This forum will bring together around 150 key stakeholders from across the world to discuss the growing body of work and evidence in South Asia on solar applications in agriculture, particularly bringing together key experiences, insights and promotion of south-south collaboration and scaling up of global ambitions around effective and sustainable use of solar energy in agriculture.

Using learnings from South Asia, this forum will present unique insights on the effectiveness of solar irrigation as a strategy to sustainably manage water, energy, food and climate (mitigation and adaptation) interlinkages. It will highlight how governments are using evidence from the field to develop and deploy ambitious policies and programs on solar irrigation to address nationally determined contributions (NDC) commitments while supporting climate-resilient, gender-equitable, and socially inclusive agrarian livelihoods.

Overview

Climate change is a major challenge globally, and countries in the Global South are facing large-scale climate variability and are exposed to high risk due to low levels of climate readiness and high levels of fragility. Agriculture, as a sector, is particularly vulnerable due to its dependence on weather and climatic conditions. Climate change affects crop yields, livestock, soil and water resources and in turn impacts food and livelihood security. Simultaneously, agriculture is a major source of Greenhouse Gas (GHG) emissions both directly (through on-farm emissions linked to production e.g. diesel irrigation) and indirectly (through land use change due to agricultural expansion).

Irrigation is a proven strategy to build resilience in many parts of the Global South, particularly in South Asia; it has reduced exposure to changing rainfall patterns, helped improve yields, and enabled diversification of livelihoods. However, access to irrigation particularly for women and marginalized farmers is constrained by several factors. In parts of East/West Africa and MENA, there is lack of accessible, clean and affordable energy for irrigation. In South Asia, irrigation is becoming increasingly energy-intensive; the proliferation of groundwater irrigation is responsible for 11-12% of the regions' agricultural emissions.

Solar energy, particularly the use of Solar Irrigation Pumps (SIPs), offers a reliable alternative to erratic power supply and costly and high emitting diesel pumps. There is emerging evidence to show the transformational potential of SIPs for livelihoods, agri-food systems and recognizing the agency of women and marginalized groups in climate resilient irrigation for harnessing livelihoods opportunities. Communities that have adopted these systems report higher crop yields, extended growing seasons, and increased income generation. With consistent water supply, farmers can diversify their crops, improve food security, and enhance their economic well-being.

However, the optimism is often truncated by questions around the actual impacts on mitigation and adaptation. Issues of equity and inclusion in access to and control over SIPs remain a systemic challenge to tackle, given the high cost and capacity needed to install and operate SIPs and limited understanding of SIPs from techno-social, institutional and political perspectives. Critically, concerns around the potential for over-extraction of groundwater in vulnerable areas remain high. The replicability and scalability of solar irrigation has therefore not achieved its full potential.

International Water Management Institute (IWMI) and its partners are organizing a three-day Global Forum as a part of its Swiss Agency for Development and Cooperation (SDC) funded project titled Solar Irrigation for Agricultural Resilience in South Asia (SoLAR). This forum will bring together around 150 key stakeholders from across the world to discuss the growing body of work and evidence in South Asia on solar applications in agriculture, particularly bringing together key experiences, insights and promotion of south-south collaboration and scaling up of global ambitions around effective and sustainable use of solar energy in agriculture.

Using learnings from South Asia, this forum will present unique insights on the effectiveness of solar irrigation as a strategy to sustainably manage water, energy, food and climate (mitigation and adaptation) interlinkages. It will highlight how governments are using evidence from the field to develop and deploy ambitious policies and programs on solar irrigation to address nationally determined contributions (NDC) commitments while supporting climate-resilient, gender-equitable, and socially inclusive agrarian livelihoods.

Scope and Objectives

The key objectives of the forum are to:

1. Demonstrate key lessons learned from South Asia on the effectiveness of solar irrigation as a viable strategy for sustainable agri-food systems.
2. Provide a platform for policymakers, public and private sector partners, and scientists to exchange ideas and experiences on key barriers and opportunities in the uptake of solar irrigation taking gender and social inclusion into consideration.
3. Share innovative ideas and strategies for supporting south-south collaboration to suitably scale equitable and inclusive solar irrigation globally, including ideas for future research.

The forum will be organized as a three-day conference covering plenary and parallel sessions with presentations and diverse panels under four key thematic areas.

1. Groundwater sustainability, adaptation and mitigation
2. Business models of SIPs and scaling up of solar irrigation
3. The role of communities: Capacity building and Gender, Equity and Social Inclusion
4. Designing effective and inclusive policies and policy tools for solar energy transitions

Each parallel session will have 2-3 presentations and a 45-minute panel.

AGENDA SNAPSHOT

24-26 APRIL, 2024

Day 1-24 April, 2024

09:00- 10:05	Inaugural Session
10:05-10:30	Group photo followed by Networking Tea Break
10:30-12:30	High- Level Plenary Session 1
12:30-13:30	Lunch
13:30- 15:00	Theme 1: Groundwater Sustainability, Adaptation and Mitigation - Parallel Sessions 1 & 2
15:00- 15:30	Networking Tea Break
15:30- 17:00	Theme 2: Business Models & Scaling Up (grid and off-grid) - Parallel Sessions 3 & 4
17:00- 17:15	Networking Tea Break
17:15- 18:00	Plenary Session- Day 1 Closing & Session briefings and Closing Remarks by the Dignitary
19:00 onwards	Special Networking Dinner at Hotel Himalaya

Day 2- 25 April, 2024

09:00- 10:45	Opening Session & High-Level Plenary Session 2
10:45- 11:00	Networking Tea Break
11:00- 12:30	Theme 3: The Role of Communities: Capacity building and GESI Compatible Strategies - Parallel Sessions 5 &6
12:30-13:30	Lunch
13:30- 15:00	Theme 4: Designing Effective & Inclusive Policies and Policy Tools for Solar Energy Transitions: Parallel Sessions 7 & 8
15:00- 15:30	Networking Tea Break
15:30- 16:45	High Level Plenary Session 3
16:45- 17:30	Session briefings and closing remarks by dignitary

Day 3- 26 April, 2024

09:00- 09:30	Reflections and Future of Solar Irrigation
09:30- 11:00	Panel discussion: Sector outlook - The future of SoLAR Irrigation
11:00-11:30	Formal Closing Session
12:00- 13:00	Lunch
13:00- 17:30	Field Visit: Site 1: Chhahari Agriculture Single Women Firm & Site 2: ICIMOD Knowledge Park

Day 1

24 April 2024

Inaugural Session

Time: 9:00 – 10:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Time	Topic	Speaker
09:00 – 09:05	National Anthem and inauguration of the Global Knowledge Forum by watering a plant	**Hon'ble Minister, Mr. Shakti Bahadur Basnet**, Ministry of Energy, Water Resource and Irrigation, Nepal
09:05 – 09:10	Welcome Remarks	**Dr. Manohara Khadka**, Country Representative IWMI Nepal
09:10 – 09:20	Presentation: Solarizing agriculture in a rapidly changing climate in South Asia	**Dr. Darshini Ravindranath,** Project Lead-SoLAR, IWMI
09:20 – 09:25	Remarks	**Mr. Shekhar Ghimire,** Director Administration, Finance & Operations (DAFO)
09:25 – 09:30	Remarks	**Er. Asghar Ali Halepoto,** Chief, Water Resource Section, Ministry Planning, Development & Special Initiatives, Pakistan
09:30 – 09:35	Remarks	**Dr. Sunil Kumar Ambast,** Chairman, Central Ground Water Board, Government of India
09:35 – 09:40	Remarks	**Ms. Munira Sultana,** Chairman, Sustainable and Renewable Energy Development Authority (SREDA), Government of Bangladesh
09:40 – 09:45	Special Remarks	**Dr. Danielle Meuwly,** Ambassador of Switzerland to Nepal, Embassy of Switzerland
09:45 – 09:55	Remarks	**Mr. Keshab Kumar Sharma,** Secretary, Water and Energy Commission Secretariat, Nepal
09:55 – 10:05	Special Address by the Chief Guest	**Hon'ble Minister, Mr. Shakti Bahadur Basnet**, Ministry of Energy, Water Resource and Irrigation, Nepal
10:05 – 10:30	Group photo followed by Networking Tea Break	

Day 1

24 April 2024

High Level Plenary Session 1

Time: 10:30 – 12:00
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Title: Solar Irrigation for Agri-food Systems & the Global Strategic Landscape

Description: Solar irrigation technologies are rapidly emerging as transformative solutions that hold immense promise for mitigation and adaptation, co-benefits in the Global South. As these technologies become increasingly affordable and accessible, they offer significant potential for addressing pressing challenges related to water scarcity, climate change, and food insecurity. This session will delve into the multifaceted dimensions of solar irrigation for agri-food systems and will aim to identify the key strategic interventions needed for an inclusive and sustainable pathway for scaling solar irrigation technologies.

Moderator: Dr. Alok Sikka, Country Representative, IWMI India & Bangladesh

Time	Panelists
10:30 – 11:45	• **Dr. Mohamed Mostafa Elkhayat,** Chairman, New and Renewable Energy Authority, Government of Egypt • **Mr. Kifayat Zaman,** Director General, Federal Water Management Cell, Government of Pakistan • **Ms Phuntshok Chhoden,** Board Member, Bhutan Network for Empowering Women • **Ms. Resha Piya,** Energy Adviser, British Embassy Kathmandu, Nepal • **Mr. Jeevan Kumar Jethani,** Scientist-F, Ministry of New and Renewable Energy, Government of India • **Mr. Md. Enamul Karim Pavel,** Head of Renewable Energy, Infrastructure Development Company Limited, Bangladesh • **Dr. Jonathan Demenge,** Head of Cooperation, Swiss Agency for Development and Cooperation, India
11:45 – 12:00	Q&A on plenary session
12:00 – 12:30	Briefing of the parallel sessions, logistics and the entire global forum
12:30 – 13.30	Lunch

Day 1

24 April 2024

Theme 1: Groundwater sustainability, adaptation and mitigation [Parallel Session 1]

Time: 13:30 – 15:00
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Title: Solar Irrigation and Groundwater Sustainability - Contributing to the Global Discourse

Description: This session will present evidence from multiple countries on the impact of solar irrigation on farmers' groundwater usage. This will be followed by a panel discussion with panelists deliberating on improvements needed for upscaling solar irrigation while ensuring groundwater sustainability.

Moderator: Dr. Sunil Kumar Ambast, Chairman, Central Ground Water Board (CGWB), India

Time	Presentation	Speaker
13:30 – 13:40	Impact of solar irrigation on groundwater sustainability: Evidence from India and Bangladesh	**Mr. Mohd Faiz Alam**, Regional Researcher, IWMI India
13:40 – 13:50	Groundwater vulnerability index	**Dr. Mohsin Hafeez,** Director of Water, Food and Ecosystem, IWMI Pakistan
13:50 - 14:00	Groundwater and Solar irrigation in Africa: Addressing the threats	**Dr. Paul Pavelic,** Senior Researcher – Hydrogeology IWMI Laos
14:00 – 14:10	Q&A on presentations	
14:10 – 14:50	**Panel Discussion** • **Dr. Ratan Jain,** Advisor, Gujarat Water Resources Development Corporation, India • **Dr. Anwar Zahid,** Director (Geology), Bangladesh Water Development Board, Bangladesh • **Prof. Dr. Netra Chettri, Chair,** Innovation in Global Development PhD Program, Arizona • **Dr. Marie-Charlotte Buisson,** Research Group Leader - Economics and Impact Assessment (EcIA), IWMI • **Dr. Phonevilay Sinavong,** Researcher, National Agriculture and Forestry Research Institute, Ministry of Agriculture and Forestry, Vientiane, Laos	
14:50 - 15:00	Q&A on panel discussion	

Day 1

24 April 2024

Theme 1: Groundwater sustainability, adaptation and mitigation [Parallel Session 2]

Time: 13:30 – 15:00
Venue: Skyline Hall, Hotel Himalaya
Join Virtually: Link

Title: Solar Irrigation and its co-benefits: Adaptation and Mitigation, including Hills and Mountains

Description: This session will highlight co-benefits of solar irrigation, including findings from South Asia and West Africa. It will include examples of lift irrigation in hilly and mountain regions. The panel discussion that follows will offer diverse perspectives on the impacts of solar on mitigation and adaptation.

Moderator: Mr. Mewang Gyeltshen, Senior Energy Specialist, ICIMOD

Time	Presentation	Speaker
13:30 – 13:40	SIPs' potential in mitigation and adaptation: Experience from South Asia	**Mr. Archisman Mitra,** Regional Researcher, IWMI India
13:40 – 13:50	Building mountain community resilience with renewable energy-powered irrigation	**Mr. Avishek Malla,** Energy Specialist, Intervention Manager, ICIMOD, Nepal
13:50 - 14:00	Q&A on presentations	
14:00 – 14:45	**Panel Discussion** • **Mr. Alinafe Kasinja (Malawi),** Department of Energy, Government of Malawi • **Ms. Harsha Meenawat,** World Resource Institute, India • **Dr. Muhammad Asif,** Pakistan Agricultural Research Council, Pakistan • **Mr. Mohammad Sarwar Hossain,** Additional Chief Engineer and focal person of Renewable energy, Bangladesh Agricultural Development Corporation (BADC), Bangladesh • **Mr. Rigzin Pelzang,** Ministry of Energy and Natural Resources, The Royal Government of Bhutan • **Ms. Ishita Sachdeva**, Senior Program officer, International Development Research Centre , India	
14:45- 15:00	Q&A on panel discussion	
15.00-15.30	Networking Tea/Coffee Break	

Day 1

24 April 2024

Theme 2: Business models and scaling up (grid and off-grid) [Parallel Session 3]

Time: 15:30 – 17:00
Venue: Himalaya Ballroom, Hotel Himalaya
Join Virtually: Link

Title: Effective Grid Integration Models for Solar Irrigation

Description: The session will delve into the various modalities of grid-connected solar irrigation, focusing on learning key lessons from South Asian grid-connected solar irrigation projects and identifying policy pathways for a sustainable and equitable business model.
The session aims to investigate the challenges and opportunities associated with various grid-connected solar irrigation models and recommend a more scalable, financially sustainable, and inclusive approach.

Moderator: Dr. Youssef Brouziyne, Country Representative, IWMI Mena Region

Time	Presentation	Speaker
15:30 – 15:40	Experiences from Grid-connected Solar Irrigation Pilots in South Asia	**Mr. Shisher Shrestha,** National Researcher, IWMI Nepal
15:40– 15:50	Lessons from Solar Photovoltaic Pumping for Agricultural Irrigation (SPPAI) Project in Bangladesh	**Mr. Md. Sakil Ibne Sayeed,** Project Director SPPAI Project, Bangladesh Rural Electrification Board (BREB), Bangladesh
	Lessons from Solar Photovoltaic Pumping for Agricultural Irrigation (SPPAI) Project in Bangladesh	**Mr. Suyesh Prajapati**, Team Leader BEEN Project - MinErgy
16:00 – 16:45	**Panel Discussion** • **Ms. Asha Khanal,** Engineer, Nepal Electricity Authority, Nepal • **Mr. Wakil Ahmed Arnob,** Senior Officer, IDCOL, Bangladesh • **Dr. Youssef Brouziyne –** IWMI Representative and CGIAR Water Systems Lead - MENA • **Ms. Elizabeth Kaijuka Okwenje,** Principal Energy Officer, Department of Renewable Energy, Uganda • **Dr. Sardar Mohazzam,** Managing Director, National Energy Efficiency and Conservation Authority, Government of Pakistan, Pakistan • **Dr. Deepak Varshney,** Regional Researcher, IWMI India	
16:45– 17:00	Q&A on panel discussion	
17:00 – 17:15	Networking Tea/Coffee Break	

Day 1

24 April 2024

Theme 2: Business models and scaling up (grid and off-grid) [Parallel Session 4]

Time: 15:30 – 17:00
Venue: Skyline Hall, Hotel Himalaya
Join Virtually: Link

Title: Establishing Sustainable Business Models for Off-grid SIPs

Description: The objective of the session is to identify policy pathways for a sustainable and equitable business model to scale solar energy in off-grid areas. Panelists are expected to reflect on the presentations and share their experiences working with SIP business models from different parts of the world. The goal is to identify the challenges and opportunities of various business models and determine necessary improvements for an equitable, scalable, and financially sustainable mode.

Moderator: Mr. Shilp Verma, Deputy Country Representative, IWMI

Time	Presentation	Speaker
15:30 – 15:40	Off-grid business models in South Asia: Learnings from SoLAR	**Mr. Archisman Mitra,** Regional Researcher, IWMI India
15:40 – 15:50	Scaling solar pumps through viable business models – experience from West Africa	**Ms. Abena Ofosu,** Senior Research Officer, IWMI Ghana
15:50 – 16:00	Experience of off-grid solar models in India	**Mr. Siddharth Gahoi,** Program Manager, Social Alpha, India
16:00 – 16:10	Q&A on presentations	
16:10 – 16:50	**Panel Discussion** • **Ms. Sharon Yeti,** Co-founder & CEO, Powerlive, Zimbabwe • **Ms. Laxmi Sharma,** Research Consultant, IWMI India • **Mr. Shadman bin Zahir,** Manager (Investment), Renewable Energy, IDCOL, Bangladesh • **Mr. Hafiz Qaisar Yasin,** Directorate General Agriculture, Water Management, Pakistan • **Mr. Aklavya Sharan,** Director, Decentralised Energy Systems, DESI Power • **Ms. Resha Piya,** Energy Adviser, British Embassy Kathmandu, Nepal	
16:50 – 17:00	Q&A on panel discussion	
17:00 – 17:15	Networking Tea Break	

Day 1

24 April 2024

Plenary Session - Day 1 Closing

Time: 17:15 – 18:00
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Time	Topic	Speaker
17:15 – 17:35	Sessions briefing	Session Custodians
17:35 – 17:50	Day closing remarks	**Mr. Nawa Raj Dhakal,** Executive Director, Alternative Energy Promotion Centre (AEPC)
17:50 – 18:00	Q&A for plenary session	
19.00 onwards	Special Networking Dinner at Hotel Himalaya	

Day 2

25 April 2024

Opening Session

Time: 9:00 – 9:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Time	Speaker
09:00 – 09:15	**Dr. Govind Sharma,** Secretary, Ministry of Agriculture and Livestock Development, Nepal
09:15 – 09:30	**Mr. Jan Erik Studsrød**, Counsellor, Energy , Climate and Food security, Royal Norwegian Embassy Kathmandu

Day 2

25 April 2024

High Level Plenary Session 2

Time: 9:30 – 10:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Title: Barriers and Opportunities for Financing and Scaling Technology and Innovation for Promoting Solarized Agri-Food Systems

Description: The panel discussion aims to identify and address barriers hindering the financing and scaling of technology for solarized agri-food systems. It will explore financing mechanisms, assess technological innovations, and evaluate sustainability implications. The goal is to foster collaboration and knowledge sharing among stakeholders to promote scalable and efficient solar-powered solutions for agricultural sustainability and food security.

Moderator: Dr. Mohsin Hafeez, Director of Water, Food and Ecosystems, IWMI Pakistan

Time	Panelists
09:30 – 10:30	• **Dr. Ram P. Dhital,** Former Executive Director, Alternative Energy Promotion Center (AEPC), Nepal • **Mr. Omrane Derhy,** R&D Electrical Engineer, Institut de Recherche en Énergie Solaire et Énergies Nouvelles (IRESEN), Morocco • **Dr. Nazmun Nahar Karim,** Member Director (CC) (Livestock) and Chief Scientific Officer (Agri. Eng.), Bangladesh Agricultural Research Council (BARC), Bangladesh • **Ms. Khusbu Bisen**, Executive at Professional Assistance for Development Action (PRADAN), India • **Ms. Ghazala Channar**, Deputy Chief, Water Resources Section, Ministry Planning, Development and Special Initiatives, Pakistan
10:30 – 10:45	Q&A on plenary session
10.45 - 11.00	Networking Tea/Coffee Break

Day 2

25 April 2024

Theme 3: The role of communities: Capacity building and GESI compatible strategies [Parallel Session 5]

Time: 11:00 – 12:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Title: Designing Effective Capacity Building Strategies for Solarizing Agriculture

Description: The objective of this session is to gather insights on designing effective capacity-building strategies for solarizing agriculture across three key domains. Firstly, discussions will focus on capacity-building interventions for implementation agencies, exploring strategies to enhance knowledge, skills, and resources of entities responsible for executing solar irrigation pump projects. Secondly, attention will shift to capacity-building interventions for the adopters of solar irrigation pumps, with a focus on smallholder and women farmers to adopt and utilize these technologies. Lastly, the session will delve into the implementation of innovative technologies for better governance in solar irrigation projects.

Moderator: Atul Dhir, Objective Lead - South Asia Regional Energy Partnership (SAREP), USAID

Time	Presentation	Speaker
11:00 - 11:10	Design and Impact of Gender-Inclusive Capacity Building Interventions for solar farmers and technicians	**Dr. Deepak Varshney,** Regional Researcher, IWMI India
11:10 - 11:20	Constraints in the capacity of the Government sector professionals to initiate effective public sector programs/schemes	**Dr. Muhammad Ashraf,** Assistant Professor, KFUEIT University, Pakistan
11:20 - 11:30	Institutional and human capacity development for renewable energy programs	**Mr. Seth Agbeve Mahu,** Deputy Director, Renewable Energy, Ministry of Energy, National Focal Point (NFP) to ISA Ghana
11:30 - 11:45	Q&A on presentations	
11:45 – 12:15	**Panel Discussion** • **Dr. Biswajit Roy Chowdhary,** Director General, Gujarat Energy Research and Management Institute (GERMI), India • **Mr. Surat Kumar Bam,** Secretary, Ministry of Physical Infrastructure Development, Sudurpaschim Province, Nepal • **Dr. Ruchi Badola**, School of Ecodevelopment Planning and Participatory Management, Wildlife Institute of India • **Ms. Marwa Mejdoub,** Energy Climate and Environment Lead, North Africa, Foreign Commonwealth and Development Office (FCDO), UK Government, Tunisia • **Mr. Ashok Kumar Biswas,** Deputy Project Director (SIP), Department of Agricultural Extension, Bangladesh	
12:15 – 12:30	Q&A on panel discussion	
12:30 – 13:30	Networking Lunch	

Day 2

25 April 2024

Theme 3: The role of communities: Capacity building and GESI compatible strategies [Parallel Session 6]

Time: 11:00 – 12:30
Venue: Skyline Hall, Hotel Himalaya
Join Virtually: Link

Title: The Challenges of Considering Gender Equity and Social Inclusion

Description: To take stock of challenges encountered in policy and dissemination of alternative energy models (solar in particular) in the region. And to identify ways forward. Reflect on generic policy and methodology issues around GESI and Solar, as well as include a thought model for future solar work South Asia.

Moderator: Dr Darshan Karki/Dr Marlene Buchy, IWMI

Time	Presentation	Speaker
11:00 - 11:20	Building capacity for GESI, but whose capacity?	**Dr. Marlene Buchy,** IWMI Nepal and **Ms. Angel Konthoujam,** IWMI India
11:20 – 11:30	Q&A on presentations	
11:30 – 12:15	**Panel Discussion** • **Ms. Shula Kasongamulilo,** GESI and WASH expert, EU's Nexus Energy Water Programme, Zambia • **Dr. Bharat Pokharel,** GREAT International, Nepal • **Dr. Seira Tamang,** Independent Researcher & Political Economist, Nepal • **Ms. Shreya Chakraborty**, Researcher, IWMI India • **Dr. Novaira Junaid,** Economist, IWMI Pakistan • **Mr. William Ponela,** CEO, Zonful Energy, Zimbabwe • **Mr. Md. Jahangir Alam Khan**, Additional Chief Engineer, Barind Multipurpose Development Authority, Bangladesh (TBC)	
12:15 – 12:30	Q&A on panel discussion	
12:30 – 13:30	Networking Lunch	

Day 2

25 April 2024

Theme 4: Designing effective and inclusive policies and policy tools for solar energy transitions [Parallel Session 7]

Time: 13:30 – 15:00
Venue: Himalaya Ballroom, Hotel Himalaya
Join Virtually: Link

Title: Scaling-up Solar Irrigation: Lessons from Policy

Description: 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, International Researcher, IWMI Pakistan

Time	Presentation	Speaker
13:30 – 13:40	Prime Minister's National Programme for Solarization of Agriculture Tubewells in Pakistan	**Mr. Kifayat Zaman** , Director General, Federal Water Management Cell, Pakistan
13:40 – 13:50	Scaling-up solar irrigation for inclusive livelihoods and food security: Lessons from GESI review of policies	**Dr. Manohara Khadka**, Country Representative, IWMI Nepal
13:50- 14:00	PM-KUSUM: Key achievements and lessons learnt	**Ms. Suman Chandra IAS,** Director, Ministry of New & Renewable Energy (MNRE), Government of India (Online)
11:20 – 11:30	Q&A on presentations	
14:10- 14:50	**Panel Discussion** • **Mr. Sanjeeb Baral,** Director General, Department of Water Resource and Irrigation, Nepal • **Dr. Muhammad Ashraf,** Ex-Chairperson, Pakistan Council of Research in Water Resources (PCRWR), Pakistan • **Dr. Rajarsh Roy Burman,** Additional Director General, Indian Council of Agricultural Research (ICAR), 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 • **Ms. Divya Sharma**, Deputy Head of Cooperation, Swiss Agency for Development & Cooperation (SDC)	
14:50- 15:00	Q&A on panel discussion	
15:00 - 15.30	Networking Tea/Coffee Break	

Day 2

25 April 2024

Theme 4: Designing effective and inclusive policies and policy tools for solar energy transitions [Parallel Session 8]

Time: 13:30 – 15:00
Venue: Skyline Hall, Hotel Himalaya
Join Virtually: Link

Title: Sizing Solar Irrigation Pumps – A Simple Tool for Nepal

This session will launch a new solar irrigation pump sizing tool jointly developed by IWMI and the Indian Council for Agricultural Research (ICAR) with support from the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and as part of the collaborative initiative SE4RL (Solar Energy for Rural Livelihoods). The new tool, designed specifically for use by the Alternative Energy Promotion Centre (AEPC) and provincial governments in Nepal will be presented and demonstrated.

Moderator: Shilp Verma, Deputy Country Representative, IWMI India

Time	Presentation	Speaker
13:30 – 13:40	Opening Remarks	**IWMI**
13:40 – 14:00	An IWMI-ICAR-GIZ collaborative effort for developing an SIP Sizing Tool for Nepal	**GIZ Nepal**
14:00 - 14:45	Live Demo of SIP Sizing Tool with Q&A	**ICAR**
14:45 - 15:00	Concluding Remarks	**AEPC**
15:00 - 15.30	Networking Tea/Coffee Break	

Day 2

25 April 2024

High Level Plenary Session 3

Time: 15:30 – 16-45
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Title: Opportunities South-South Learning and Cooperation

Moderator: Dr. Henry Roman, Country Representative, IWMI -Southern Africa

Time	Presentation	Speaker
15:30 – 15:45	Solarization of agriculture: A global synthesis on progress, lessons, and opportunities	**Mr. Shilp Verma,** Deputy Country Representative, IWMI India
15:45 – 16:30	**Panelists** • **Ms. Divya Sharma,** Deputy Head of Cooperation, Swiss Agency for Development & Cooperation (SDC) • **Ms. Prerna Sharma,** Energy Advisor, GIZ India • **Ms. Soulivanh Voravon,** Deputy Director, Planning and Cooperation Division, Government of Laos -TBC • **Eng. Mohamed Ramadan El Sayed,** Director, Ministry of Electricity & Renewable Energy, Government of Egypt • **Eng. Elizabeth Kaijuka Okwenje**, Principal Energy Officer in the Department of Renewable Energy, Uganda • **Dr. Kebede Teshome,** Director Irrigation and Drainage ACC, Ethiopian Agricultural Transformation Institute (ATI)	
16:30 – 16:45	Q&A on plenary session	

Day 2

25 April 2024

Plenary Session - Day 2 Closing

Time: 16:45 – 17:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Time	Topic	Speaker
16:45 – 17:10	Sessions briefing	Session Custodians
17:10 – 17:20	Day closing remarks	
17:20 – 17:30	Q&A	

Day 3

26 April 2024

Reflections and Future of Solar Irrigation

Time: 09:00- 09:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Time	Activity
09:00 – 09:05	Final Day logistics and information

Day 3

26 April 2024

High Level Plenary Session 4

Time: 09:30- 11:00
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Title: Sector Outlook - The Future of SoLAR Irrigation

Description: This session will summarize discussions from the forum thus far and look towards the future of solar irrigation in South Asia and beyond. The focus will be on exploring key opportunities and challenges, and addressing barriers to adoption in different contexts.

Moderator: Dr. Jonathan Demenge, Head of Cooperation, Swiss Agency for Development & Cooperation (SDC)

Time	Panelists
09:05- 10:20	• **Ms. Marwa Majdoub,** Energy, Climate and Environment Lead for North Africa, FCDO, Tunisia • **Dr. Stephan Russek,** Head of Development, German Embassy Kathmandu • **Mr. Tazmilur Rahman,** Deputy Director, KfW Development Bank, Bangladesh • **Dr. Sunil Kumar Ambast,** Chairman, Central Ground Water Board (CGWB), India • **Dr. Muhammad Ashraf,** Ex-Chairperson, Pakistan Council of Research in Water Resources (PCRWR), Pakistan • **Mr. Bishal Thapa,** Senior Director, CLASP, India • **Ms. Sharon Yeti, CEO,** Powerlive, Zimbabwe
10:20- 10:30	Q & A

Day 3

26 April 2024

Forum Closing Session

Time: 09:00- 09:30
Venue: Himalaya Ball Room, Hotel Himalaya
Join Virtually: Link

Time	Speaker
10:30- 10:40	**Dr. Mark Smith,** Director General, IWMI
10:40- 10:50	**Dr. Jonathan Demenge,** Head of Cooperation**,** Swiss Agency for Development & Cooperation (SDC)
10:50- 11:00	**Mr. P C Sharma**, Director, International Solar Alliance (ISA)
11:00- 11:10	**Mr. Nawa Raj Dhakal,** Executive Director, Alternative Energy Promotion Centre (AEPC), Nepal
11:10- 11:15	**Logistics for Field Visit**
11:15- 12:00	**Tea/Coffee**

Day 3

26 April 2024

Half day field visit

Time: 13:00 – 17:30

Site 1: Chhahari Agriculture Single Women Firm, Coordinator: Ms. Ashika Adhikari and Ms. Amrita Rauniyar

Time	Activities	Remarks
12:00 – 12:30	Lunch at Hotel Himalaya	
12:30 - 13:00	Travel from Hotel Himalaya to Sunakothi	**Bus**
13:00 - 16:00	Site Exploration	
16:00 -17:00	Tea break	

Site 2: Living Mountain Lab at Godavari ICIMOD Knowledge Park, Coordinator: Anuj Mishra, IWMI

Time	Activities	Remarks
12:00 onwards	Lunch at Hotel Himalaya	
12:30 - 13:00	Travel from Hotel Himalaya to ICIMOD	**Bus**
13:00- 15:00	Guided tour to the Demonstration Areas	
15:00 -16:00	Tea break and Reflections on the visit on the learnings of the day and discussing potential applications of the demonstrated technologies in your own context.	**ICIMOD**

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IWMI is a CGIAR Research Center

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