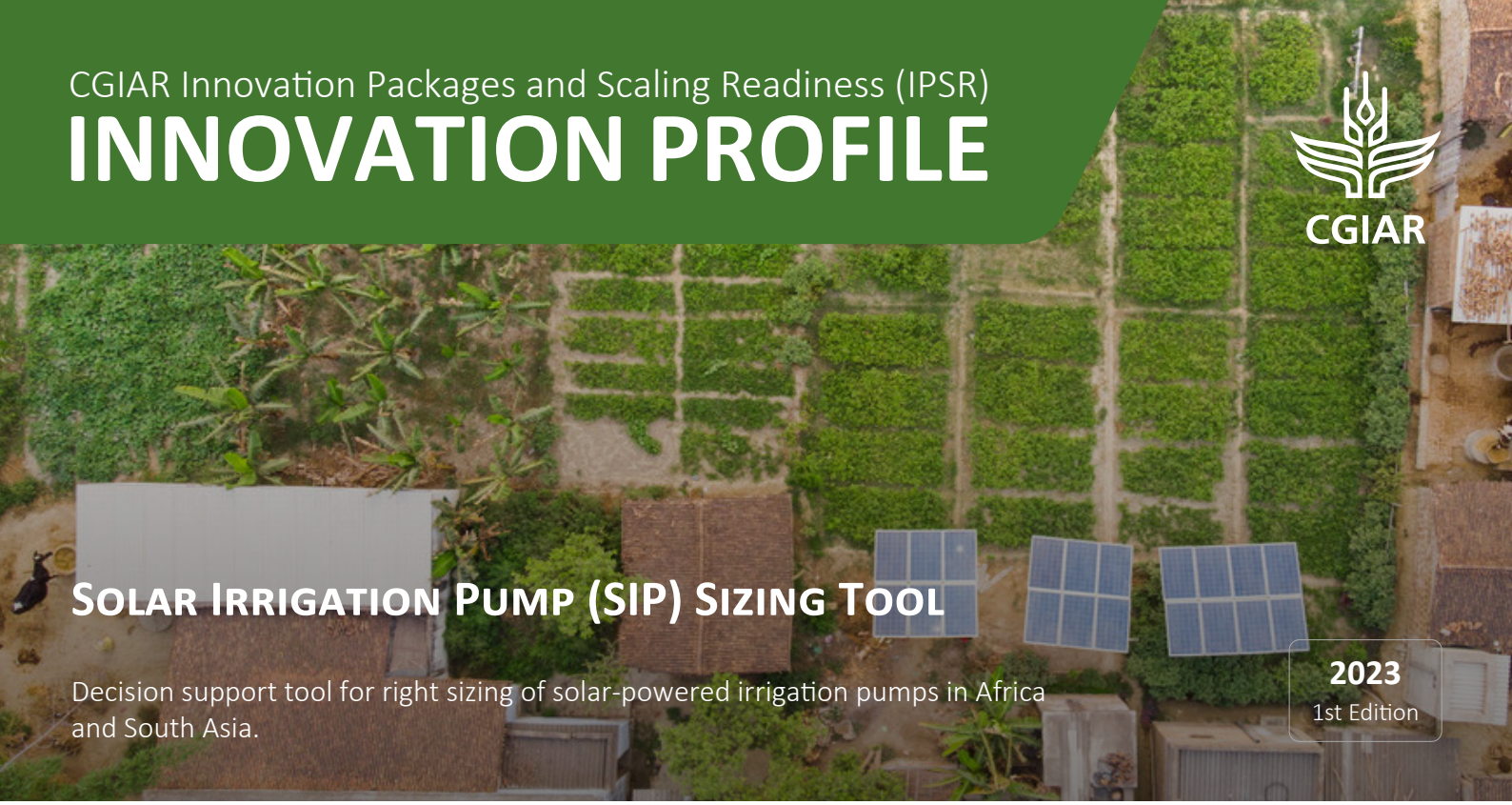
CGIAR Innovation Packages and Scaling Readiness (IPSR)

# INNOVATION PROFILE



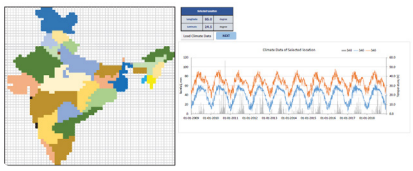
## Solar Irrigation Pump (SIP) Sizing Tool

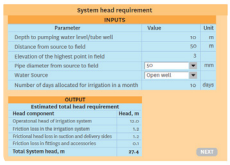
Decision support tool for right sizing of solar-powered irrigation pumps in Africa and South Asia.

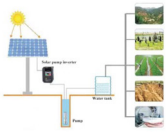
**2023**
1st Edition

In 2022, the International Water Management Institute (IWMI) partnered with the Indian Council of Agricultural Research (ICAR) and the Borlaug Institute for South Asia (BISA) to jointly develop the solar irrigation pump (SIP) sizing tool for India. The tool, developed with support from Deutsche Gesellschaft für Internationale Zusammenarbeit, was designed specifically for the Ministry of New and Renewable Energy, Government of India, for use in the ambitious agri-solarization initiative, PM-KUSUM (*Pradhan Mantri Kisan Urja Suraksha evam Uttham Mahabhiyan*). The Excel-based beta version of the tool and the user manual are available online. The tool has since been adopted by PM-KUSUM and web and mobile versions of the tool are being developed. IWMI and ICAR have committed to promote large-scale use and deployment of the tool and support future versions.

As part of NEXUS Gains, the SIP sizing tool has been identified as one of the innovations to be scaled, including by extending its use beyond India. Efforts are already underway to develop a similar tool in Nepal, in partnership with GIZ Nepal and the Alternative Energy Promotion Center (AEPC).



## INNOVATION TYPOLOGY

This innovation is characterized as

**Technological Innovation**

Innovations of technical/material nature, including varieties/breeds; crop and livestock management practices; machines; processing technologies; big data and information systems.

The nature of this innovation is

**Incremental Innovation**

Innovations that already exist and undergo constant, steady progress and improvement.

## THIS INNOVATION IS EXPECTED TO CONTRIBUTE TO THE FOLLOWING IMPACTS

### CGIAR Impact Areas and Collective Global Targets

- **Poverty reduction, livelihoods & jobs** — 2
- **Gender equality, youth & social inclusion** — 3
- **Climate adaptation & greenhouse gas reduction** — 4

Learn more: https://www.cgiar.org/how-we-work/strategy

### SDGs and SDG Targets

- **End poverty in all its forms everywhere** — 1
  Targets: **1.4**
- **Take urgent action to combat climate change and its impacts** — 13
  Targets: **13.1 | 13.b**
- **Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss** — 15
  Targets: **15.1 | 15.2 | 15.5**
- **Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels** — 16
  Targets: **16.7**
- **Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development** — 17
  Targets: **17.9 | 17.16**

Learn more: https://sdgs.un.org/goals

## CGIAR INITIATIVES, PARTNERS AND GEOSCOPE

### CGIAR Lead Initiative

**NEXUS Gains**

### Contributing bilateral projects funded by

**Tata Trust**

**GIZ** – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

### Partners involved

**BISA** – Borlaug Institute for South Asia - Innovation partner
**GI** – Government of India - Innovation partner
**GIZ** – Deutsche Gesellschaft für Internationale Zusammenarbeit - Innovation partner
**ICAR** – Indian Council of Agricultural Research - Innovation partner
**MNRE** – Ministry of New and Renewable Energy (India) - Demand and Innovation partner
**AEPC** – Alternative Energy Promotion Centre (Nepal) - Demand and Innovation partner

### This innovation is developed, tested and/or scaled for/in the following regions

## ACKNOWLEDGEMENTS

We would like to thank all Funders who support this innovation through their contributions to the **CGIAR Trust Fund** (https://www.cgiar.org/funders/). The SIP Sizing tool was initially developed for India with support from Tata Trusts and GIZ. IN partnership with GIZ and NEXUS Gains, the tool is now being scaled to Nepal.

## MORE INFORMATION

### Contact Person

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### Citation

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## CURRENT INNOVATION READINESS

9 **PROVEN INNOVATION**
The innovation is validated for its ability to achieve a specific impact under uncontrolled conditions

8 **UNCONTROLLED TESTING**
The innovation is being tested for its ability to achieve a specific impact under uncontrolled conditions

7 **PROTOTYPE**
The innovation is validated for its ability to achieve a specific impact under semi-controlled conditions

6 **SEMI-CONTROLLED TESTING**
The innovation is being tested for its ability to achieve a specific impact under semi-controlled conditions

5 **MODEL/EARLY PROTOTYPE**
The innovation is validated for its ability to achieve a specific impact under fully-controlled conditions

4 **CONTROLLED TESTING**
The innovation is being tested for its ability to achieve a specific impact under fully-controlled conditions

3 **PROOF OF CONCEPT**
The innovation's key concepts have been validated for their ability to achieve a specific impact

2 **FORMULATION**
The innovation's key concepts are being formulated or designed

1 **BASIC RESEARCH**
The innovation's basic principles are being researched for their ability to achieve a specific impact

0 **IDEA**
The innovation is at idea stage

### Innovation Readiness Justification

The beta version of the tool has been adopted by MNRE; IWMI and ICAR have provided training to state nodal agencies. GIZ and MNRE are developing web and mobile versions; IWMI has also received requests for development of similar tools for Nepal and elsewhere.

### Evidence supporting the Innovation Readiness Level

bit.ly/3PCF4iX | bit.ly/3NAs1Mu | bit.ly/3PO4BFU