



## Fourth Assembly

October 2021



### GGGI-ISA Trust Fund for 1 million Solar Irrigation Pumping Systems in Africa, Asia, and Asia-Pacific Countries

October 21, 2021  
14:00-15:00 IST

#### Overview

Solar Irrigation Pumping Systems (SIPS) has the potential to address the challenges of Water-Food-Energy Nexus by offering a sustainable solution to the key issues of ground and surface water depletion, energy security concerns, climate change challenges, provide localized sustainable and resilient solutions as well as mobilize employment opportunities in communities. Despite multiple interventions and efforts by different development organizations in various countries, it's still evident and reported that deployment of SIPS has many institutional roadblocks and implementation challenges. Absence of dedicated policy framework, limited infrastructural and organizational setup, lack of technical standards and quality control, affordable/innovative business model and access to finance, limited awareness and knowledge, and concerns regarding groundwater exploitation are some of the challenges associated with the large-scale deployment of SIPS, among others.

#### GGGI-ISA collaboration

GGGI and ISA have collaborated with a target to deploy 1 million Solar Irrigation Pumping Systems (SIPS) across thirteen countries while addressing the associated challenges and creating an enabling ecosystem. GGGI and ISA have synergies across the SIPS value chain and the collaboration will result in designing and delivering tailor made solutions to member countries. To increase the effectiveness of this initiative, GGGI & ISA will establish a multi-donor trust fund "GGGI-ISA Trust Fund for Solar Pump Initiative" (GITF-SIPS)". GITF-SIPS through pooling of resources i) increases strategic coherence, ii) reduces the fragmentation of aid financing, ii) facilitates the mitigation of shared risks, increases the visibility and transparency for all development partners, iv) reduces the high transactional costs, thereby improving the value-for-money proposition for donors.

## GITF-SIPS Program

GITF-SIPS aims to contribute to strategic engagement in common developing member and operation countries in the Africa, Asia and the Asia Pacific region in supporting the region's efforts towards food, energy and water security. The program will initially support 13 countries with an option to include other member countries subject to availability of addition funds and expression of interest from member country(ies).

The selection of countries is based on the alignment of country needs and objectives of the program. The proposed GITF-SIPS will look to strengthen food, water and energy security and will create climate resilience in the agriculture sector of the target vulnerable economies.

## GGGI-ISA Session

SIPS implementation despite being a smart solution with multiple benefits to different stakeholders, faces several challenges and barriers that include:

- Absence of dedicated policy framework: Existing policy and regulations on energy subsidies for fossil fuels and electricity for irrigation, grid and off grid energy supplies and agricultural markets are some of the crucial policy impediments for scaling up of solar energy systems.
- Affordable business model and access to finance: Different technical designs are required for different agricultural contexts i.e., off-grid and on-grid. Technical designs should also be backed by respective business models. Given the relatively high capital investment costs for SIPS, access to finance is crucial. Banks often do not have specific credit lines and lack information on SIPS to design adequate credit lines.
- Lack of technical standards and quality control: The long-term sustainability of solar irrigation systems depends on well-designed products and quality of installation. This linked to credibility of solar PV as a reliable energy source for irrigation, therefore, a standard quality control mechanism is critical along with post installation maintenance for deployment at scale. There is no specific standards and quality specifications in target countries.
- Limited awareness and knowledge: The technology is comparatively new, and the end-users are specially not aware of the entire benefits. Other stakeholders including the government officials at national and sub-national level, financial institutions, private sector need awareness to warm up to the potential of SIPS. Many commercial and national banks will require capacity building in due diligence of such projects.
- Limited availability of local expertise for Operations & Maintenance of SIPS – Solar irrigation for long term sustainability requires operations and maintenance on-site (in most cases). This is an area which has not been addressed adequately in most of the target countries but is of prime importance for successful intervention. Supporting local institutions which can train and develop local expertise in O&M of SIPS, can also serve as means of employment opportunity.

GGGI-ISA session during the fourth assembly will delve deeper into the above challenges and look at potential solutions based on the learnings in India and across the world. The session will deliberate on policy, financial models and technology related aspects of SIPS that will be useful for GITF-SIPS to achieve its objectives in the 13 target countries.

# GGGI-ISA Trust Fund for Solar Irrigation Pumping Systems: Creating an enabling Ecosystem

21 October 2021, 14:00-15:00 IST

## Agenda

(Moderator: Mr. Rajeev Gyani, Additional Director (RE), ISA)

14:00-14:05 (05 minutes)	<b>Welcome Remarks and Introduction to GGGI</b> <b>Dr. Frank Rijsberman</b> , Director-General, Global Green Growth Institute (GGGI)
14:05-14:10 (05 minutes) 14:10-14:12 (02 minutes)	<b>Opening Remarks</b> <b>Dr. Ajay Mathur</b> , Director-General, International Solar Alliance (ISA) Launch of ISA E-Handbook for Solar Water Pumping Systems (version 1) by <b>Dr Ajay Mathur</b>
14:12-14:42 (40 minutes)	<b>Panel session moderated by Mr Nishant Bhardwaj</b> , GGGI India Country Representative <ul style="list-style-type: none"><li>GGGI-ISA Trust Fund: Scaling up Solar Pumping in developing countries - <b>Mr. Nishant Bhardwaj</b>, GGGI India Country Representative (10 minutes)</li><li>Policy and regulatory enablers: Learnings from KUSUM - <b>Mr. Jeevan Kumar Jethani</b>, Director/Scientist-E, MNRE, GoI (5 minutes)</li><li>Business models and financing Solar Irrigation: Case Study - <b>Mr. Muhammad Azhar Rauf</b>, IFC (5 minutes)</li><li>Technology options: Operations and maintenance - <b>Mr. George Rajkumar</b>, Grundfos India Country President, (5 minutes)</li><li>Solar Solution for Irrigation - <b>Mr Pratik Singhal</b>, Ecozen Solutions (5 minutes)</li><li>Q &amp; A (10 minutes)</li></ul>
14:42-15:00 (08 minutes)	<b>Closing Remarks and Vote of Thanks by Mr. Amit K Kaushik</b> , Chief of Unit, PPIC, ISA ISA Secretariat

### About ISA

ISA was launched at (UNFCCC CoP21) on November 30, 2015. The ISA has been conceived as an action-oriented, member-driven, collaborative platform for increased deployment of solar energy technologies to enhance energy security and sustainable development, and to improve access to energy in developing member countries. To date, 98 countries have signed the Framework Agreement.



### About GGGI

Founded to support and promote the mainstreaming of green growth, GGGI programs and projects target economic growth that is environmentally sustainable and socially inclusive. Headquartered in Seoul, Republic of Korea, GGGI has 40 members with operations in over 35 countries.

