World Environment Week
Geneva, Oct 2022

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RM Specialist
International Solar Alliance

Catalysing Global Solar Growth

World Environment Week
17th - 20th October 2022.
Agenda

1. About ISA
   1a. Programmatic Support
   1b. Resource Mobilization
   1c. Capacity Building

2. Impact with Synergy and Trade
1. About ISA

• The vision for the **International Solar Alliance (ISA)** was put forth by the Hon’ble Prime Minister of India Shri Narendra Modi, **at the United Nations COP 21 in Paris in October 2015**.

• ISA was co-founded by the French President- President Macron and  the Hon’ble Prime Minister of India Shri Narendra Modi.
Who are we

- Inter-governmental treaty-based international organization.
- Global mandate to catalyse global solar growth by helping to reduce the cost of financing and technology for solar.
- **110** Signatories including **90** Member Countries.
- Universal and Affordable last-mile electricity connectivity towards facilitating economic development and environmental impact.
- Recently concluded ISA’s 5\(^{th}\) general assembly, yesterday on 18\(^{th}\) October 2022.
GOVERNANCE STRUCTURE

ISA Assembly

8 Vice Presidents representing 4 regions

 ISA Committees

5 Committees (Standing Committee and 4 Regional Committees)
To provide strategic advice and guidance on functioning of the ISA and support in facilitating implementation of various ISA programmes, projects and activities

ISA Secretariat

Providing programmatic support to Member Countries for promotion of solar solutions

Support in strategic decision making and advocacy

Facilitate capacity building for Solar applications

Current Membership Status

Prospective Member Countries

193

No. of countries signed ISA framework agreement

110
ISA’s mandate

Mobilize USD 1000 billion in solar investments till 2030

a) Enable 1000 GW of new capacity
b) Helping 1000 million people with enhanced access to electricity and consequently reducing 1000 million tons of carbon emissions.

Policy
- Political Commitments
- Analytics & Advocacy
- Partnership Frameworks
- Robust, bankable solar project pipelines

People
- Training & Job Creation
- Institutional capacity-building
- Knowledge dissemination

Process
- Needs & Viability Assessment
- Business Model Innovation, Testing & Scale-Up Strategy
- Market Creation
- Risk Mitigation

Country contributions  Philanthropic capital  Membership fee
Facilitate the attainment of SDG 7 (universal energy access), SDG 13 (combating climate change) and SDG 8 (Decent Work & Economic Growth) goals through the following programmes:

1a. Programmatic Support

- Scaling Solar Applications for Agriculture Use
- Affordable Financing at Scale
- Scaling Solar Rooftop
- Scaling Solar Mini-Grids
- Scaling Solar E-Mobility and Storage
- Solar Parks
- Solarizing Heating and Cooling Systems
- Solar PV and Battery Waste Management
- Solar for Green Hydrogen

Implementation of Pilot Projects in LDC & SIDS
• Countries join one or more of ISA’s Programmes by indicating interest through an Expression of Interest (EoI).

• ISA Secretariat support the countries to prepare a Road map for scaling of solar applications.

• Prepare Guidelines based on the best practices for the benefit of the Countries.

• Support the countries to identify the projects and carry out pre-feasibility studies.

• Support Pilot Project implementation in LDCs & SiDs

• Help the countries to create pipeline of Solar Projects and attract the investments
Aggregated Projects Concept Proposals (9.5 GW+) Received from Member Countries

- **Solar Water Pumps**: 276,229 Nos.
- **Solar Rooftop**: 1,059 MW
- **Solar Mini-Grids**: 785.6 MW
- **Solar Parks**: 7,652 MW
Demonstration projects in the pipeline in 27 LDC & SIDS Member Countries

- **Solarisation**: 12 projects
- **Water Pumping**: 9 projects
- **Cold Storage**: 4 projects
- **Solar Streetlights**: 1 project
- **Solar RO Water System**: 1 project

[Map not to scale]
## 1b. Resource Mobilization for solar

### Contributions from Member countries for core funding

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Country</th>
<th>Amount</th>
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<tbody>
<tr>
<td>1.</td>
<td>Republic of India</td>
<td>USD 40 million (approx.) pledged as core funding</td>
</tr>
<tr>
<td>2.</td>
<td>Republic of France</td>
<td>USD 1.08 million for the STAR-C initiative</td>
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<tr>
<td>3.</td>
<td>United Kingdom</td>
<td>GBP about 1 million for GGI-OSOWOG initiative implementation</td>
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<tr>
<td>4.</td>
<td>United States of America</td>
<td>USD 0.9 million for programmatic support to member countries</td>
</tr>
<tr>
<td>5.</td>
<td>Sweden</td>
<td>USD 50K for capacity building</td>
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<tr>
<td>6.</td>
<td>Japan</td>
<td>USD 36K programmatic support for mini grid projects</td>
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<tr>
<td>7.</td>
<td>Australia</td>
<td>AUD 92,000 for capacity building</td>
</tr>
<tr>
<td>8.</td>
<td>European Commission</td>
<td>EUR 1 million (in-kind)</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>USD 44 million (approx.)</strong></td>
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Additionally, the Secretariat has also received positive signals and in-kind contributions from the following countries regarding their intention to strengthen the ISA Secretariat for implementation of priorities identified in the Strategic Plan:

- Kingdom of Denmark
- Republic of France
- Germany
- Kingdom of the Netherlands
1b. Resource mobilization for solar

<table>
<thead>
<tr>
<th>Sl. No.</th>
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| 1.     | Global Energy Alliance for People and Planet (with contributions from Rockefeller Foundation; Bezos Earth Fund; and IKEA Foundation (for strategic priorities of ISA including programmatic support, capacity building and analytics and advocacy)) | **Part A: USD 10 million** (Including OD Grant – 1.5 million)  
**Part B: USD 15 million** |
| 2.     | Children’s Investment Fund Foundation (CIFF) (for strategic priorities of ISA including programmatic support, capacity building and analytics and advocacy) | **Grant III - USD 8 million** (including OD Grant - USD 0.4 million) |
| 3.     | Bloomberg Philanthropies (for strategic priorities of ISA including programmatic support, capacity building and analytics and advocacy) | **USD 6 million** |
| 4.     | Sequoia Climate Fund (implementation of strategic plan) | **USD 0.5 million** |
| 5.     | The John D. and Catherine T. MacArthur Foundation | **USD 0.4 million** |

Total | **USD 40 million (approx.)** |

Additionally, in-kind contributions have also been received from the following organisations for implementation of various projects and activities in ISA member countries over the years:

- European Commission
- World Bank
- Asian Development Bank
- United Nations Development Programme
- United Nations Environment Programme
- Shakti Sustainable Energy Foundation
Global initiative: One Sun, One World, One Grid

- The OSOWOG initiative will aim to connect different regional grids through a common grid that will be used to transfer renewable energy power and, thus, realize the potential of renewable energy sources.

- The initiative, through the developed interconnected regional grids, would also help in addressing the risk associated with intermittency of sources by allowing flow of power from a region with excess generation to a region with increased demand.
## 1c. Capacity Building

<table>
<thead>
<tr>
<th>Readiness and Enabling Activities</th>
<th>Risk Mitigation &amp; Innovative Financing Instruments</th>
<th>Investment Mobilization</th>
<th>Promotion of Technologies</th>
</tr>
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<tr>
<td>EIB</td>
<td>World Bank</td>
<td>GGGI</td>
<td>WB Lighthouse</td>
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<td>Enhancing energy access through Solar Home Systems</td>
<td>Sustainable Renewables Risk Mitigation Initiative for mobilizing USD 850 million in 20 countries</td>
<td>Joint fund raising for deployment of 1 Million Solar Irrigation Systems</td>
<td>Transfer of best practices and innovative business models</td>
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<td>UNIDO</td>
<td>BP-WRI</td>
<td>IBSA and UNDP</td>
<td>UNEP</td>
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<td>Creating a network of Solar Technology and Application Resource Centres</td>
<td>Developing roadmap for mobilizing USD 1 trillion in solar sector</td>
<td>Solar Water Pumps in 10 countries with IBSA fund</td>
<td>Solar Waste Recycling Study</td>
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<td>Rockefeller</td>
<td>CIF</td>
<td>UNAIDS</td>
<td>SDF and ADB</td>
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<td>Technical Assistance for developing DRE markets</td>
<td>Investment Series to engage Institutional Investors</td>
<td>Joint Fund Raising for Solarizing Health Centres</td>
<td>Programmatic Support for solar applications</td>
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<tr>
<td>WAPP</td>
<td>IRENA</td>
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<td>European Union</td>
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- **European Union**
  - Development of knowledge products
- **UNAIDS**
  - Joint Fund Raising for Solarizing Health Centres
- **IBSA and UNDP**
  - Solar Water Pumps in 10 countries with IBSA fund
- **BP-WRI**
  - Developing roadmap for mobilizing USD 1 trillion in solar sector
- **World Bank**
  - Sustainable Renewables Risk Mitigation Initiative for mobilizing USD 850 million in 20 countries
- **GGGI**
  - Joint fund raising for deployment of 1 Million Solar Irrigation Systems
- **EIB**
  - Enhancing energy access through Solar Home Systems
- **UNIDO**
  - Creating a network of Solar Technology and Application Resource Centres
- **Rockefeller**
  - Technical Assistance for developing DRE markets
- **WAPP**
  - Scaling Up Utility-Scale Solar Projects

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**Promotion of Technologies**

**WB Lighthouse**
- Transfer of best practices and innovative business models

**UNEP**
- Solar Waste Recycling Study

**SDF and ADB**
- Programmatic Support for solar applications

**European Union**
- Development of knowledge products

**Olade**
- Facilitate development and implementation of policies and regulations
ISA’s Capacity Building Initiatives For Various Stakeholders

Total People Trained (September 2022)

- **Training of Master Trainers**: 215
- **Bankers Training**: 1226
- **Technical - Solar Rooftop**: 161
- **Technical - Solar Mini-grids**: 252
- **Technical - Solar Parks**: 461
- **Technical – Solar Water Pumping System**: 293

Total: **2608**
### 2. ISA’s Impact and Synergy with Trade

<table>
<thead>
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<th>Solar Facility (The Blended Finance Risk Mitigation Facility Program)</th>
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<tr>
<td>Star Centres</td>
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<tr>
<td>Global Supply Chain and Manufacturing Support Program</td>
</tr>
<tr>
<td>Investments for Solar Affordability</td>
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</table>
2a. Solar facility

The **Solar facility** aims to catalyze solar investments in the underserved segments and geographies of Africa, thereby unlocking commercial capital. The facility would focus on investing across solar technologies – off-grid solar, rooftop solar, productive use solar, utility scale solar – across Africa through a country specific intervention approach.

The Solar Facility would comprise of 2 funds and one mini-sub component:

**Solar Payment Guarantee Fund**

The **Solar Payment Guarantee Fund** will support projects at the time of default and reduce risk of early closures/bankruptcy of solar energy projects.

**Solar Insurance Fund**

The **Solar Insurance fund** would accelerate solar project development in Africa via offsetting insurance premium related expenses (during construction and pre-revenue stages).

**Solar Investment fund**

The **Solar Investment fund** would provide the core investment upto 10% of project costs in projects that are participating in the Solar payment guarantee fund and/or solar insurance fund.
2b. Mobilizing private and donor monies

- Provides TA assistance (About 10M+)
- Provides a bankable project pipeline
- Comes in as an investor

Purpose

**Financial** - Create a financially conducive environment for investors to invest in solar projects

**Technical** - Create a bankable pipeline of investible projects

**Macro** - Create a natural environment to mobilize investments in solar

Procure a credible private sector fund manager

Possible GCF International accredited entities

Anchor investor

General Partner/Fund manager

Investors/Limited partners

National Governments (NfPs) for projects

Possible GCF International accredited entities
# More than 700 Million people without access to electricity.

# The import cost of energy is a big burden for majority of the ISA member countries.

# High coal and fossil gas prices profoundly making solar energy more attractive.

# Lack of country capacity poses huge risk to investments.

# The import cost of energy is a big burden for majority of the ISA member countries.

# More and more under-developed and developing countries are seeing solar as one of the major energy sources.

# Transition towards solar energy is a powerful engine for growth, trade, creating jobs and contributing to climate action.

# Low awareness level with insufficient data and knowledge.

# Weak government policies and regulations.

# Building the necessary human capacity and skills within member countries for them to undertake energy transitions on their own while also boosting economic growth, trade and job creation.

# Establishing technical facilities undertaking testing/standardisation, demonstrate and upscale replicable solar energy applications.

# Undertaking training and skills development for better-qualified solar professionals, decision makers, financial institutions etc. supporting accelerated solar deployment.

# Creating a global network for exchange of knowledge and expertise.

## Need

- High coal and fossil gas prices profoundly makes solar energy more attractive.
- More and more under-developed and developing countries are seeing solar as one of the major energy sources.
- Transition towards solar energy is a powerful engine for growth, trade, creating jobs and contributing to climate action.
- Lack of country capacity poses huge risk to investments.

## Opportunities

- High coal and fossil gas prices profoundly makes solar energy more attractive.
- More and more under-developed and developing countries are seeing solar as one of the major energy sources.
- Transition towards solar energy is a powerful engine for growth, trade, creating jobs and contributing to climate action.

## Gaps

- Private capital does not yet see the right balance of risk and reward in clean energy projects in Africa.
- Quality infrastructure and standards for solar products and services often missing.
- Technical capacities and skills are inadequate.
- Low awareness level with insufficient data and knowledge.
- Weak government policies and regulations.

## Strategy

- Building the necessary human capacity and skills within member countries for them to undertake energy transitions on their own while also boosting economic growth, trade and job creation.

## Star C

- Establishing technical facilities undertaking testing/standardisation, demonstrate and upscale replicable solar energy applications.
- Undertaking training and skills development for better-qualified solar professionals, decision makers, financial institutions etc. supporting accelerated solar deployment.
- Creating a global network for exchange of knowledge and expertise.
Solar PV supply chains have become increasingly globalized with key goods being traded include, machines to manufacture PV wafers, cells, modules and panels, and select PV components, such as generators, inverters, cells

Project Planning
- Pyranometers, pyrheliometers, solar energy simulators

Procurement & Manufacturing
- PV panels, inverters, glass, polymers, cells, batteries, aluminium, steel, silicon, electronic & IT tools

Transport
- Transport of solar PV plant components

Installation & Grid Connection
- Glass, steel, aluminum, concrete, silicon, copper, plastic, electrical & electronic instrument and control systems

Operation & Maintenance
- Taking place over 20+ years; involves preventive & corrective maintenance

Global Trade in Solar PV
- USD 300 billion in 2019
- Increase from USD 111 billion in 2005

Global Trade in Machines Manufacturing Solar PV
- USD 136 billion in 2019
- Increase from USD 52 billion in 2005

Source: IRENA – Trading into a Bright Energy Future
The International Solar Alliance (ISA) looks forward to collaborate with WTO’s Committee on Trade and Environment (CTE) for accelerating the trade activities in Solar sustainable solutions with a prime focus on sustainability & environment.
Our team has significant experience across renewables, multilaterals and organisation building.

Dr Ajay Mathur
Director General

Prior Work Experience
• Director General, The Energy and Resources Institute (TERI)
• Director General, Bureau of Energy Efficiency

Mr Joshua Wycliffe
Chief of Operations

Prior Work Experience
• Permanent Secretary, Ministry of Environment, Republic of Fiji

Ms Pragya Gupta
Resource Mobilisation Specialist

Prior Work Experience
• Country programming, Green Climate Fund
• Financial Management Specialist, Asian Development Bank

Onyi Iyizoba
Legal Specialist

Prior Work Experience
• Senior Legal and Regulatory Consultant Nextier Power, The Nextier Group

Dr Ugochukwu Ugbor
Chief of Unit, Knowledge Management

Prior Work Experience
• Senior Knowledge Specialist, Sustainable Energy for All (SEforALL)

Mr Philippe Malbranch
Assistant Director General

Prior Work Experience
• Director General, INES (French Solar Energy Research Institute)

Mr Remesh Kumar
Acting Chief of Unit PPIC (Secondment from NTPC)

Prior Work Experience
• General Manager: (Project Planning and Monitoring), NTPC

Mr Nikhil Kumar
Senior Consultant, Advocacy

Prior Work Experience
• Associate Vice President, Edelman
Thank You