

Newsletter

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ISA Establishes its first STAR Centre in Ethiopia

ISA’s STAR Centres act as the technology, knowledge, and expertise hub on solar energy and a go-to place for Member Countries at regional and country levels. ISA’s STAR Centre initiative aims to meet ISA Member Countries’ capacity-building needs by building capable solar workforces, sensitising policymakers and financial institutions, incubating enterprises, standardising products and services, and creating a knowledge repository on solar energy. The STAR Centres also act as an interface between countries sharing solar energy development experiences, undertaking joint research, promoting development & demonstration, capacity building, and creating regional & global networks. ISA is working towards setting up several STAR Centres, which may serve as a shared facility within a particular region.

ISA has partnered with the Government of Ethiopia and established its first Solar Technology Application Resource Center (STAR C) at the Addis Ababa Institute of Technology at Addis Ababa University (AAiT-AAU). The STAR Centre at AAiT-AAU is a dedicated centre offering training to raise professional standards and skills among stakeholders at various levels; testing solar components and applications; providing early-stage assistance and incubation to enterprises, and creating a






S-T-A-R CENTER

SOLAR TECHNOLOGY APPLICATION RESOURCE CENTER-ETHIOPIA

Supported by International Solar Alliance (ISA) and Federal Government of Ethiopia



Solar Energy Potential in Ethiopia

- As Ethiopia is located near the Equator, the yearly mean average daily radiation is significant at around 5.2 kWh/m²/day.
- There are seasonal variations (4.55 kWh/m²/day in July to 5.55 kWh/m²/day in Feb/March) as well as variation with physical locations (from 4.25 kWh/m²/day for Southwest region to 6.25 kWh/m²/day in the north)
- Furthermore, throughout Ethiopia the distribution radiation around the yearly mean is quite narrow
- The average for Ethiopia as a whole indicates that

repository of information, including policies, regulations and standards.

The AAiT-AA organised the first online training session on 12 October 2022 for over 50 Ethiopian participants led by the Ethiopia STAR Centre. A work plan for the next two years is being worked out between the Ethiopia STAR Centre and ISA.

ISA is committed and working towards setting up 50 STAR Centres by 2030 globally.



Country Mission | Maldives



An ISA delegation led by the Director General of ISA, Dr Ajay Mathur, visited the Republic of Maldives from 30 to 31 October 2022. The Republic of Maldives is a committed proponent of clean energy sources for sustainable development and climate action and has supported ISA since joining as a Member Country in 2019.

ISA has been engaging actively with the Government of Maldives and other partner organisations, the Asian Development Bank (ADB), to collaborate under ISA's programmes to scale up various solar energy solutions, particularly in its outer islands and private resorts. One of the critical pillars of ISA's engagement with the government of Maldives has been ADB's USD 2 million Knowledge and Support Technical Assistance (KSTA) under the ISA-ADB partnership framework that supports the six South Asian countries, including Maldives.

As part of the Country Mission, a **Stakeholder Consultation Workshop** was hosted on 30 October 2022 by ISA in collaboration with the Ministry of Environment, Climate Change & Technology and ADB for relevant Maldivian ministries, renewable energy development agencies, power sector development agencies, financing institutions, and private sector representatives, including associations. Over 55 participants attended the workshop, which featured an opening session, energy sector presentations, a brief overview of the ISA, focused group discussions on four thematic areas, and a panel discussion. DG-ISA met with the Minister of State, H.E. Ms Khadeeja Naseem, Minister of State for Environment, Climate Change and Technology, honourable National Focal Point to ISA, Mr Ahmed Ali, Director General, Ministry of Environment, Climate Change and Technology and H. E. Mr Munu Mahawar, High Commissioner, Indian High Commission, Maldives as part of the proceedings.

In his keynote address, the Director General highlighted that ISA is committed to facilitating capacity building,



bringing to market a skilled workforce required to address the challenges of the 21st century in solar deployment at scale and financing risk mitigation. In the case of Maldives, he emphasised that the updated roadmap would guide the government towards transitioning to a clean energy future by 2030. Therefore, the energy sector's role is critical for an uninterrupted power supply. The Director General of ISA stressed that ISA seeks to support the essential energy ambitions laid out in the energy roadmap and support the Maldivian government in accelerating solar by leveraging private sector investment, strengthening the local capacity, and building partnerships with international communities. He underlined that the Government of Maldives is already making steady progress and hopes to undertake activities and achieve targets in the energy sector with better collaboration. He specifically highlighted collaborative efforts in scaling up solar deployment – under solar park projects such as floating solar, solarising industrial and commercial complexes, solar rooftops, and cross-cutting solar applications in the agriculture, transport, and tourism sectors. It is expected that all of these would help in meeting the goals of the energy sector roadmap to decarbonise the Maldives economy and help achieve the ambitious target set out towards a net zero by 2030.

Providing a snapshot of ISA, Mr Remesh Kumar, Chief of Programme and Project Implementation Cluster (PPIC), ISA, highlighted the issues in the solar sector's private investment. He stressed that without private investment, large-scale deployment of solar technologies and achievement of the country's target of net zero and the Paris Agreement (NDC targets) would be challenging. Concerning these, he emphasised that the payment securities and guarantees would be crucial, which will help leverage private sector investment. Along with that investment, he added that mobilisation of resources is the key to success

and, finally, the promotion of technologies. He also emphasised that solar technologies are fast changing and evolving in the market and require attention to move with the pace of changing technology so that the benefits can be reaped and channelled to countries.

Mr Nar Bahadur Khatiwora, Programme Specialist, ISA identified a range of possible solar programmes cross-cutting various Ministries for joint implementation, including capacity building under ISA's STAR C initiative, amongst others. He highlighted that, among different solar technologies and options, there exist opportunities to promote the solarisation of resorts, floating solar, solar ferries, solar cold storage, solar on the infrastructure and off-grid solar desalination. He added that the solarisation of resorts is critical, as almost half of the energy demand is concentrated in 160 resorts, which currently stands at about 140 MW and is projected to reach 200 MW by 2030. The solar infrastructure has the potential to address land constraint issues and support the development of solar car charging infrastructure, particularly addressing the emission reduction from the transport sector and, at the same time, promoting green tourism by bringing aesthetically sound solar walkways. The distributed off-grid solar-micro wind hybrid desalination units can bring down the energy demand, particularly from resorts and outer islands. Overall, leveraging private sector investment with the perceived financial risk mitigation options is essential.

The Panel Discussion on 'Strengthening Energy Sector Roadmap towards Net Zero by 2030' featured

representatives from ISA, government counterparts, utility companies, private sectors, associations, multilateral development banks, and ADB to share perspectives on promoting renewable energy supporting the energy sector roadmap. Understanding the nature of the Maldivian settlement and the overall geography of the islands, ISA emphasised that specific interventions based on three different segments of operations in terms of electricity access would be crucial. The State Electric Company Limited (STELCO), which owns 35 powerhouses and six water and sewerage networks in the Greater Male Region and six islands; FENAKA Corporation Limited, another state-owned electric company catering to the outer islands; and each private resort as an independent power producer for self-consumption. The Chief of PPIC, ISA, said that each of these requires separate interventions based on the nature of their operations; he added that the private resorts could be bundled up for an economy of scale and offered to the private sector through the RESCO model, which may bring down the cost and thereof increase savings substantially. However, this requires discussion and dialogue with the private resorts. Mr Remesh Kumar emphasised the need for capacity building, strengthening the local skilled workforce to help scale solar deployment. Finally, he added that standards, testing, and certification are essential to ensure quality material flow in solar technology, for strengthening market development, building the private sector's confidence in solar technologies and, overall, for sustainable development.





The following day on 31 October 2022, a high-level bilateral meeting was held with representatives from key government ministries and relevant organisations & institutions to understand their priority needs and possible ISA interventions. The key issues and challenges of each sector – the environment & energy, transport, tourism, and health were discussed. Her Excellency, Ms Khadeeja Naseem, Minister of State for Environment, Climate Change and Technology (MOECCT), highlighted that to address the challenges and issues faced, the Ministry of Planning is essential, which requires internal discussion. The ISA delegation emphasised that non-electricity sectors are equally important to address the energy challenges, particularly the transport sector, to achieve net zero by 2030. Therefore, require working in parallel on the electrification of the transport sector. During the

meeting, the ISA delegation expressed that, based on analysis, solar with battery storage seems cheaper than diesel-based electricity generation. The battery storage could help transition from diesel-based generation to renewable energy in the Maldives. Moreover, it was also discussed that ISA could support, in principle, bringing a group of experts working in the banking sector to develop a perceived risk mitigation facility to leverage private sector investment.

Later in the day, ISA, ADB, and MOECCT teams visited the Ozen Life Maadhoo island resort to see floating solar PV installed on the island by Swimsol. In total, 495 kWp of solar is installed, consisting of floating solar (200 kWp) and rooftop solar (295 kWp).

The ISA delegation also called on H.E. Mr Munu Mahawar, the High Commissioner of India to Maldives.

DG ISA address at the Energy Transition Asia Pacific 2022 Conference addressing 'Supply Chain Impacts: Stabilising the Route to Transition' on 30 November 2022

DG ISA shared insights at the Reuters Events: Energy Transition Asia Pacific 2022 hosted over two days, 30 November – 1 December 2022, addressing the 'Supply Chain Impacts: Stabilising the Route to Transition' plenary. The event provided APAC energy leaders with a forum to turn rhetoric into action and deliver clean and affordable energy for all, with key insights and learnings on securing energy security, financing and regulation strategies.

Key highlights of the event:

- At the Green Finance, Technology Funding and Transition Economics session, discussions were based on the strategic imperatives which must be considered to capitalise on future growth.
- The session on Transition Technologies: Scaling Innovation highlighted the latest developments in geographical sub-regions of APAC and identified the technologies with the most potential to deliver decarbonisation goals.
- The Security & Supply session focussed on case studies of resource-poor areas securing stable energy supplies whilst generating economic profits and provided insights on how organisations can source profit-generating opportunities through energy supply.



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DG-ISA, Dr Ajay Mathur's message to the ABSOLAR National Meeting, a national hybrid event organised in Sao Paulo, Brazil, on 7 & 8 December 2022



Founded in 2013, the Brazilian Solar Photovoltaic Energy Association (ABSOLAR) is a private, not-for-profit, trade association which gathers companies from the entire value chain of the solar photovoltaic (PV) sector with operations in Brazil. The entity coordinates, represents and defends the interests of its associate members regarding the development of the market and the sector, promoting and disseminating solar PV energy in the country.

I look forward to welcoming Brazil as a member of the International Solar Alliance. I'm sorry I'm not with you in person, but I hope I will be with you soon. We in India are amid the G20, of which India is the President this year, and Brazil will be the president next year. We look forward to working with all of you to see how solar can become the mainstream energy source and the energy source of preference in your country, in mine, and across the world. As we move ahead, it is important that the International Solar Alliance supports the actions of its Member Countries in enabling solar to become a mainstream energy source.

We work through providing information. This year, for example, we have produced annual source books on the progress in solar technology, markets, and investments. We are sure that they would greatly benefit countries and companies as you move ahead in your work. We also support capacity building. We have fully realised that as you set up projects, there is a problem in sourcing technically competent people. We work with you, the associations, to identify the

needs and the kind of training programmes that would help train people how you want and certify them so they can be used in the programmes and projects you carry out. We also work in many third countries, typically the Least Developed Countries and in the Small Island Developing States, in helping do projects. Using ISA money and the goal in these projects is that it shows the benefits of solar to these countries and makes them much more amenable to make therefore the changes in their policies that enable investment to come in for a second project, a fifth project, a hundredth project and so on. In all, we seek to create an ecosystem for a difference. In doing so, we also support countries and companies with various issues. For example, something that we are deeply working on right now is how do we enhance the global supply chains. We have seen the price of solar panels increase in the last two years from decades of decline that had occurred earlier.

We notice that this is because of delays in shipment. It is because of the kinds of logistics choke points that are occurring across the world. As we look forward to expanding the amount of solar, and we expect that the demand in 2030 will be at least three times more, if not five times more than what it is today, then we will need to ensure that manufacturing capacities are also globally dispersed. However, this is challenging. We need to see what it is that countries can do. So that manufacturing occurs within their geographical boundaries.

We have seen the Inflation Reduction Act in the US pull in manufacturing in green technologies towards the US. Similarly, in India, the Production Linked Incentive (PLI) programme is pulling in manufacturing both in solar and batteries into the country. The problem is that there is a difference in the international prices and the new companies' prices; there is a need to meet this differential, at least for the first few years. This is an area where we are deeply interacting with our Member Countries to see how policies can make them more conducive and more amenable to attracting international investment for manufacturing. We are extremely delighted to hear the news that the ratification process in Brazil is now in its final step. It's in Parliament, and we look forward to welcoming you to the International Solar Alliance and our Corporate Advisory Group membership.

Many, many thanks. And as I said, I look forward to visiting all of you soon.

DG opening remarks at Lighthouse Webinar – Scaling Solar in Africa: Sharing India's Experience on 29 November 2022

- I extend a warm welcome to all of you. At the recently concluded COP27, India has established itself as a climate leader. We are gathered here today to scope the opportunities available to us for replication of learnings from India's success in the solar sector to aid the energy transition journey of the developing world.
- It has been a pleasure for us at the International Solar Alliance to partner with the World Bank on this Lighthouse Initiative and work with the Ministry of New and Renewable Energy, Government of India to enable knowledge sharing and transfer of experience, technology, and investments in the solar energy sector from India to countries in Africa.
- Solar energy is increasingly becoming a crucial part of energy access initiatives while also contributing to reduction in the carbon footprint of the power generation sector, to achieve their ambitious NDC and Net Zero commitments. However, its adoption continues to be at a nascent stage in many African countries. The abundant solar resource available in Africa ought to be explored and developed to increase the share of clean energy in power generation and to provide access to the underserved populations.
- The Lighthouse Initiative is a critical part of ISA's efforts in enabling solar energy development in many of its member countries. The promise shown by the African continent for developing its solar energy potential makes it a favorable destination for taking the solar sector learnings from India.
- Development of a sustainable ecosystem for solar energy deployment could be a daunting challenge for developing countries that struggle with technical and financial resources. It is vital that analysis, learnings, and inferences be drawn from success stories of countries such as India with similar economic and power sector context.
- India is an excellent example of a cohesive ecosystem along with institutional resolve that have been largely responsible in developing its solar sector. While solar parks have made solar power affordable, rooftop solar has provided clean energy to commercial and industrial segments.
- At the same time, schemes such as PM-KUSUM for solar pumps continue to revolutionize the agriculture space. These initiatives, supported by all stakeholders have been critical in India's solar success.
- The suite of activities under the Lighthouse Initiative provides for knowledge management and dissemination of best practices, policies, investments, and business models from the Indian solar sector and their replication in African countries. The conditions necessary for contextualization of these practices have been identified to prepare a roadmap for deployment in Africa.
- This also paves the way for further replication of India's success story across other developing countries, and amplification of India's role as a leader in the solar sector while leveraging its experience to enable international solar development.
- The initiative furthers the agenda of developing countries of providing clean energy access to millions living in underserved regions. Meanwhile, the development of large-scale grid-connected solar parks helps countries integrate clean energy sources for energy transition and augment their grid power capacity to ensure energy security to the masses.
- I hope that the Lighthouse Initiative in its forthcoming analysis not only spotlights the favourable elements required for scaling up solar but also provides a lesson in institutional solidity as it brings together the Ministry of New and Renewable Energy, The World Bank, FCDO, ISA, and the private sector.
- I would also take this opportunity to acknowledge the partner organisations of ISA, such as the Global Energy Alliance for People and Planet that has extended a grant of USD 10 million during COP27 to help push the activity in the solar energy space.
- Given the potential held by this platform and the industry stalwarts gathered here today, I hope we put out best foot forward to devise solutions to scale up solar that will build the roadmap for increased solar deployment and pave way for accelerated economic development in countries across the world.
- I once again welcome you all to this august gathering.



Third Conference of the South Asia Women in Power Sector Professional Network (WePOWER) | December 6-8, 2022 | Bangkok, Thailand



ISA participated in the Third Regional Conference of the South Asia Women in Power Sector Professional Network (WePOWER) in Bangkok, Thailand, from 6-8 December, jointly organised by the World Bank South Asia Gender and Energy Facility (SAGE) and the Asian Development Bank (ADB). Over 35+ organisations, including all significant power utilities in South Asia, participated in the conference.

The opening plenary at the conference focused on just transition and achieving gender equity in infrastructure and green jobs – challenges and solutions. The deliberations engaged a diverse group of experts from all major power utilities in South Asia. Next was the Group brainstorming exercise, followed by a technical workshop where the participants discussed the successes and challenges of implementing gender activities. Day two started with the technical sessions focused on Institutional solutions for improving gender equity. They ended with a Solve-a-thon challenge where the participants worked in groups to

understand key gender concepts, identify common challenges, and determine solutions and immediate actions/steps to promote gender diversity in their companies. The conference's closing was marked by group meetings to discuss and seek consensus on how to use evidence and consensus to take practical actions to increase women's workforce participation in the energy sector. Participants will explore the next steps for replicating the WePOWER approach globally and for cross-regional coordination, resource sharing, and learning.

The conference was an opportunity to strengthen the dialogue and cross-regional knowledge-sharing towards increasing women's workforce participation in the energy sector, to stimulate and encourage networking, knowledge exchange and consensus, and to develop practical, immediate, and innovative solutions to problems specific to the workforce management and gender diversity.

Calling entries for the SolarX Grand Challenge

