

04

International Solar Alliance: Bridging the Gap

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Abstract

This policy brief explores India’s engagement with a new, bespoke climate framework that focuses on solar energy—the International Solar Alliance (ISA). The ISA was envisaged as an alliance of “sunshine states”—a brand-new grouping of solar resource-rich countries that lie between the tropics. India’s role in the launch and operationalisation of the ISA is an indicator of how local interests and concerns—scaling up domestic renewable energy targets—get intertwined with international, transnational, and regional interests. This brief presents the ISA as a deliberate instrument of Indian economic statecraft that syncs its economic priorities (finance and technology for clean energy transition) with those of national security (energy security). It then goes on to highlight the gaps in the stated objectives of the new international organisation as well as implementation challenges. Based on the lessons emerging from the form and functioning of the ISA, this brief emphasises the need for India to refocus and deepen its engagement with this climate framework. Finally, it offers policy recommendations for India to leverage the ISA’s platform to secure its core negotiation interests of mobilising greater finance for climate action and, in turn, furthering its grand strategy of becoming a bigger power on the global stage.

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1. Introduction

On November 30, 2015, the first day of the Paris Climate Conference, India and France jointly launched the International Solar Alliance (ISA) to boost solar energy in developing countries (UNFCCC, 2015). India had been under intense scrutiny over its potential role in either securing or scuttling a global climate deal in Paris, and this announcement signalled a willingness on the part of India to be an active player in global climate cooperation. The ISA was initially conceived by India as a coalition of “solar-rich” countries that would work towards addressing their energy needs and collaborate on addressing the identified gaps in solar energy deployment (ISA, 2015). The solar-rich or prospective ISA member countries were identified as those located between the Tropic of Cancer and the Tropic of Capricorn—that is, countries that were ideally located geographically for optimal absorption of radiation from the sun. Crucially, most of these countries are developing countries with poor or no energy access, and the underlying motivation for the formation of the ISA was to address the gap in solar energy deployment in such countries. On December 6, 2017, a little over two years since its launch, the ISA—led by India and backed primarily by developing countries in Asia and Africa—became a legal entity. At present, 116 countries have signed the main legal text of the ISA—the Framework Agreement—and among them, 94 countries have ratified the treaty text to become full members.

India’s leadership role in the creation and operationalisation of the ISA cannot be viewed independently of the rapid rise in solar photovoltaic (PV) installations in India. Today, India ranks fifth in the world in terms of total installed renewable energy power capacity after China, the United States (US), Brazil, and Canada. It also ranks fifth in total installed solar energy power capacity after China, the US, Japan, and Germany (IRENA, 2023). The National Solar Mission—India’s flagship solar policy—was launched in 2010 to create an enabling policy framework for the deployment

of 22 GW of solar power by 2022. Leading up to the Paris climate talks in 2015, India ramped up its renewable energy targets and set a goal of achieving 175 GW of installed renewable energy capacity by 2022. Of this, the solar power capacity target was revised by almost five times to 100 GW of solar power by 2022 (PIB, 2015). India’s Nationally Determined Contributions (NDCs) submitted under the Paris Agreement underscore its renewable energy ambition, as it has set a goal of securing 50% of its total power capacity from non-fossil-fuel sources by 2030 (UNFCCC, 2022). Given the exponential rise of solar energy in India’s energy mix, this policy brief will explain India’s foreign policy motivation for the creation of the ISA. The first section details the strategic thinking behind leveraging a new geography of “sunshine states”. The next section goes on to analyse the functioning of the new international organisation, and brings out the gaps between the stated objectives and implementation of activities. Ultimately, it offers policy recommendations for India to refocus its engagement with this platform for global climate cooperation, and further its strategic interests of unlocking greater climate finance and becoming a global power.

2. Leveraging a New Geography

The creation of the ISA reflects an important shift in India’s foreign policy, wherein climate change was used to further India’s strategic interests: one, to take a leadership role in a climate-adjacent space—solar energy—and reinforce its commitment to climate action, and two, to assert its global power by creating a new treaty-based international organisation (Jha, in press). By 2015, under the stewardship of Prime Minister (PM) Narendra Modi, there was a marked shift in the country’s foreign policy agenda as India started aiming for a leadership role in global governance and began staking its claim among other major powers in global politics (Narlikar, 2017). Its role in the global climate deal came under intense scrutiny, and the Paris climate talks provided an opportune moment for India to become an important player in the next international climate

agreement. India's diplomatic positioning in Paris marked a complete departure from its previously defensive, nay-saying outings at multilateral climate negotiations because it intended to advance its strategic interest of becoming a global leader. As a result of the change in political leadership, the negotiators came empowered to strike a deal and went on to quickly ratify the Paris Agreement, allaying concerns that India would insist on developed countries first fulfilling their pre-2020 commitments under the second phase of the Kyoto Protocol (Mohan, 2017). At the same time, the launch of the ISA was a diplomatic success for India as it aimed to capture an issue-specific governance area (Ghosh, 2019) and straddle the G77 and G20 blocs in enabling the formation of a new intergovernmental organisation (Mathur, 2019).

PM Modi's leadership on climate change-related issues, particularly with regard to solar energy, is the first instance of an Indian PM actively shaping India's position in multilateral climate negotiations. As the chief minister of Gujarat, he was an early proponent of solar energy and first expressed his vision for a new grouping of nations with high solar power potential: "There are different League of Nations like OPEC¹ and others. A league should be formed among the nations which get more sun rays. India should play a prominent role in the formation of such a league and step up its R&D² to lead those nations" (PTI, 2012). This early idea to bring such sunshine states together as a new bloc eventually took shape as the ISA. Buoyed by the falling prices of solar energy globally, India also witnessed great success with a new business model based on the aggregation of demand coupled with bulk procurement in two sectors: light-emitting diode (LED) bulbs and PV solar electricity. There was a realisation that the large Indian market could be leveraged to enhance the adoption of low-carbon technologies, while simultaneously reducing their prices and strengthening

the markets for these technologies in other developing countries. Therefore, the ISA was conceived as a "market-making" mechanism that could direct the flow of finance and technology towards solar-rich countries with enormous market potential for solar power deployment (Jha, 2021). India's steering of the ISA is an indicator of how local interests and concerns—the scaling up of its domestic renewable energy targets—get intertwined with international, transnational, and regional interests to make solar energy affordable for the poor in *all* ISA member countries.

At the first assembly of the ISA in October 2018, PM Modi laid down the vision for "One Sun, One World, One Grid" (OSOWOG), which will be a transnational electricity grid supplying solar power across the globe (PIB, 2018). As per a draft plan prepared by the Ministry of New and Renewable Energy (MNRE), OSOWOG will connect 140 countries through a common grid that will be used to transfer solar power and will be divided into three phases: the first phase will connect the Indian grid with the Middle East, South Asia, and South-East Asia grids to share solar and other renewable energy resources; the second phase will connect the countries in the first phase with the African pool of renewable sources; and finally, the third, concluding, phase will be one of global interconnection (Jai, 2020). At the Glasgow Climate Conference, India, the United Kingdom, and the ISA officially announced the Green Grids Initiative (GGI) to create an interconnected global grid for trading energy from the sun (UN Climate Change Conference, 2021).

The ISA's theory of change follows a three-pronged approach: first, facilitating energy access at the local level; second, ensuring energy security at the national level; and third, achieving an energy transition at a global level (ISA, 2022). Based on the geographies that the OSOWOG plan targets, the ISA clearly

¹ Organization of the Petroleum Exporting Countries.

² Research & Development

appears to be a first step in India dominating the global conversation around solar energy. But the question remains as to whether the ISA is merely indicative of India's soft power or whether it will be successful in its ambitious efforts to promote the global diffusion of solar energy and consequently secure India's energy future. The next section will highlight some of the lessons emerging from the form and functioning of the ISA and presents the policy brief's main argument for a deeper and more strategic engagement by India with the climate cooperation framework under the ISA.

3. ISA, India, and Global Climate Cooperation

As a new international organisation that brings together states and non-state actors, the ISA is intricately connected to the energy transition not only in India, but also in other parts of Asia and Africa, which form the bulk of its membership. The making of the ISA illustrates how solar power became central to India's strategies for a clean energy future and the geoeconomic strategy underlying India's decision to take on a leadership role at the global level. I argue that the ISA is a deliberate instrument of Indian economic statecraft that syncs its economic (finance and technology for a clean energy transition) and national security (energy security) priorities. The treaty-making process—led primarily by India—illustrates a new kind of economic diplomacy, wherein India not only reached out to solar-rich developing countries with shared interests, but also actively sought to bring on board developed countries and other non-state actors with keen financial interests in these untapped markets.

3.1 Legal Form

The ISA's legal form and structure, heavily influenced by the hybrid architecture of the Paris Agreement, is best described as “soft law in a hard shell”—that is, it uses the legal infrastructure of a treaty while relying on the social structure of participating actors for its future implementation (Jha, 2021). India was motivated by the twin concerns of ensuring

legitimacy through legal status and flexibility by way of the legal terms used, which explains the design of the ISA: firstly, the “hard” legal form of a treaty and, secondly, the “soft” legal terms with opt-in and non-legally binding obligations. India also made a conscious effort to differentiate the ISA from other similarly situated organisations in the clean energy landscape, particularly the International Renewable Energy Agency (IRENA) and the International Energy Agency (IEA), by focusing solely on solar energy. The ISA emphasised its action-oriented profile as an important distinction from IRENA, which has a research-oriented profile and produces annual statistics on the state of renewable energy around the world.

Despite its characterisation as an action-oriented organisation, the ISA's functioning since becoming a legal entity has been limited to research-oriented activities, which are focused on three priority areas: advocacy and analysis, capacity-building, and programmatic support to least-developed countries (LDCs) and small island developing states (SIDS). It has developed nine comprehensive programmes, each focusing on a distinct application that could help scale the deployment of solar energy solutions: solar applications for agricultural use, affordable finance, solar minigrids, rooftop solar, solar e-mobility and storage, solar parks, solarising heating and cooling systems, solar PV battery and waste management, and solar power for green hydrogen (ISA, 2023a).

With varying levels of member country participation, ISA's programmes provide support on policy, regulatory and technical issues, and project preparation. In 2019, the ISA Secretariat conducted country missions to eight African countries—Benin, Guinea, Malawi, Congo, Mali, Togo, Uganda, and Niger—to carry out feasibility studies and prepare assessment reports for the deployment of various solar technologies in these countries (ISA, 2023b). Since 2019, the ISA's flagship publication has been a yearly report on the “Ease of Doing Solar in ISA Member

Countries” (ISA, 2023c). So far, it has been unable to fully exploit the flexibilities built into the treaty structure to rely on non-state actors for extensive solar energy deployment. The overall scope and implementation of ISA’s programmes are focused on off-grid solar applications rather than grid-connected solar power projects, which as I argue later, will be a big stumbling block to India’s strategic ambition of OSOWOG.

3.2 The Missing Finance Link

One of the stated goals of the ISA is to mobilise USD 1 trillion till 2030 for a large-scale deployment of affordable solar energy in the developing world, especially in the poorest regions of the world that still lack energy access. Despite highlighting the tremendous potential for market growth in solar-rich member countries, the ISA’s efforts to coalesce global finance and technologies in areas that need it the most have not yielded any significant results. Since its creation, India and France are the only two countries that have made financial contributions to the ISA: India has committed to extending nearly USD 1.4 billion worth of lines of credit, and the French Agency for Development has committed approximately EUR 1 billion for solar projects (France in India, 2018). In addition, the budget and financial resources of the ISA are dependent on voluntary contributions from member countries and partner organisations. India is the only country extending financial support for ISA’s corpus and recurring expenses—an initial corpus of USD 27 million was provided by India for a five-year period, with additional contributions of USD 1 million each by the Solar Energy Corporation of India (SECI) and Indian Renewable Energy Development Agency (IREDA). However, with membership fees being voluntary, the future of ISA’s functioning appears to be uncertain as the initial five-year period of the ISA corpus draws to a close.

At multilateral climate negotiations, India has maintained its long-standing position on the “differentiated responsibility” of developing and developed countries, and particularly that

climate action in the developing world hinges on adequate funding and technology transfer. In Glasgow, PM Modi called out the hollow promises of the developed world to provide climate finance, insisting that the global ambition on climate finance cannot remain the same as it was in Paris (PIB, 2021). Given the already fractured nature of multilateral climate negotiations on finance, the ISA provides a new, alternative venue to mobilise finance and technology for solar energy deployment in the developing world.

I argue that this ties back into India’s historic stance on differentiated responsibility and provides an opportunity to demand greater accountability from the developed world with regard to finance and technology transfer commitments. Mobilisation of funds, including from the private sector, will be key to the successful implementation of the ISA in the coming years, and Indian climate negotiators should draw a clear, explicit link between the ISA and India’s core strategic interest during climate negotiations—finance for climate action. At the same time, India should leverage its own innovation and research landscape, as well as the enormous market potential in ISA member countries, to drive more private and philanthropic investment in solar energy deployment.

3.3 A Grand Climate Strategy?

In recent years, India has sought geostrategic gains from climate change issues and is choosing to highlight its responsibility through diplomacy and sustainable energy investments (Hakala, 2019). The creation of the ISA as a new international organisation demonstrates India’s willingness to be a more responsible power on the global public good—the sun. The expansion of the ISA with the OSOWOG plan could be of high strategic importance for India’s energy security. However, the ambitious plan is not immune to splintered implementation.

The MNRE is currently tasked with preparing the road map and implementation plan for OSOWOG (Bhaskar, 2020) and is the

nodal ministry for all ISA-related activities. The Ministry of Environment, Forests and Climate Change (MoEFCC) remains the nodal ministry for all multilateral climate negotiations. Given the cross-border energy trade and connection of electricity grids under the proposed plan, any bilateral or minilateral engagement between countries is expected to fall within the ambit of several ministries, such as the Ministry of External Affairs (MEA), Ministry of Power, and Ministry of Commerce and Industry. Until the ISA is able to demonstrate actual gains from extensive solar energy deployment in the energy-poor regions of the world, shifting the focus towards the OSOWOG plan will merely obfuscate the organisational vision of mobilising investments for solar energy solutions.

The OSOWOG plan, touted as a counter to China's Belt and Road Initiative, leaves many questions unanswered—for example, the mechanism for cost sharing, the high

transmission losses that would occur when connecting grids between countries, issues concerning grid stability in different regions, and incompatible laws and policies on renewable electricity (Jhavar, 2020). Moreover, the ISA's overwhelming focus on off-grid solar applications raises concerns regarding the ability of the organisation to shoulder the weight of connecting electricity grids across borders. For India, the OSOWOG plan will have significant implications for future climate and energy partnerships as it would necessitate better strategic planning and coordination, not only between the relevant ministries in India, but also between Indian diplomats and their counterparts in other countries. Going forward, India should refocus its engagement with the ISA and leverage the in-built flexibilities to meet the primary goal of promoting extensive deployment of solar energy in the developing world. Unmet promises on that front will only dent India's grand strategy of using the ISA to supply solar energy across borders.

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