

1. International Solar Alliance – International Relation

The International Solar Alliance (ISA) stands as a monumental shift in global energy diplomacy, led by India to transition the world toward a sustainable, solar-powered future. Below is an elaborated breakdown of the ISA's framework, its strategic vision, and India's pivotal role in this movement.

1. What is the International Solar Alliance (ISA)?

The ISA is a collaborative, treaty-based intergovernmental organization dedicated to the massive deployment of solar energy technologies. It serves as a global platform to bring together countries with high solar potential (originally those between the Tropics of Cancer and Capricorn, now expanded globally) to harmonize policies, aggregate demand, and reduce the cost of solar technology.

The Genesis

Launch- It was co-launched by the Prime Minister of India and the President of France on November 30, 2015.

Context- The announcement took place during the 21st Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) in Paris.

HQ- The alliance is headquartered in Gurugram, Haryana, India, making it one of the few major international organizations based in India.

2. Core Organizational Framework

Membership and Governance

Global Reach- The alliance has grown to include over 120 member and signatory countries.

Inclusivity- While initially focused on "Sunshine Countries," membership is now open to all UN member states.

Primary Objective- To facilitate the rapid and massive deployment of solar energy to help member countries meet their Paris Agreement commitments while ensuring energy security.

Focus Areas for Development

Scaling Deployment- Reducing the cost of financing and technology for solar installations.

Energy Access- Prioritizing electricity for "last-mile" communities in developing nations.

Capacity Building- Training a skilled workforce and facilitating technology transfer between nations.

Priority Regions- Specific focus on Africa, Asia, Latin America, and Small Island Developing States (SIDS), which are most vulnerable to climate change.

3. Strategic Pillars and the "Towards 1000" Strategy

To achieve its goals, the ISA operates through four strategic pillars designed to remove barriers to solar adoption-

Catalytic Finance Hub- Acts as a bridge to mobilize large-scale private and public investments.

Global Capability Centre and Digitization- Creates digital platforms for knowledge sharing and innovation.

Regional and Country-Level Engagement- Tailors solar solutions to the specific geographic and economic needs of member states.

Technology Roadmap and Policy- Assists governments in drafting regulatory frameworks that favor solar energy.

The "Towards 1000" Mission

This is the ISA's guiding North Star for the year 2030, aiming for a "quadruple 1000" impact-

Investment- Mobilize USD 1,000 billion in solar energy investments.

Energy Access- Provide clean energy to 1,000 million (1 billion) people.

Capacity- Install 1,000 GW of solar power capacity globally.

Emissions- Mitigate 1,000 million tonnes of CO₂ emissions annually.

4. Key Global Initiatives

The ISA manages several flagship programs to turn policy into reality-

One Sun, One World, One Grid (OSOWOG)- A visionary project to connect different regional electricity grids into a single global grid, allowing solar power generated in one part of the world (where the sun is shining) to be used in another (where it is night).

STAR-C (Solar Technology Application Resource Centre)- A network of centres aimed at building institutional capacity and technical skills in member countries.

Global Solar Facility- A financial mechanism designed to provide insurance and payment guarantees to encourage private investment in underserved markets.

SolarX Startup Challenge- An initiative to identify and scale innovative solar startups across the globe.

ISA Solar Fellowship- Targeted at mid-career professionals to create a global network of solar policy experts.

5. 10th Foundation Day and New Frontiers (2026)

On March 11, 2026, the ISA celebrated its 10th anniversary in New Delhi. To mark a decade of progress, a significant new initiative was launched-

Green Hydrogen and Storage Start-up Challenge 2026- This initiative recognizes that solar power is intermittent. By supporting startups in Green Hydrogen and Battery Storage, the ISA aims to ensure that solar energy can be stored and used as a round-the-clock (RTC) power source.

6. India's Solar Progress- A National Case Study

India serves as the "laboratory" for many ISA concepts, showcasing rapid scaling of renewable energy.

Performance Metrics

Installed Capacity- India has reached approximately 136 GW of solar capacity.

Energy Mix- Solar now represents nearly 50% of India's total renewable energy capacity.

Global Standing- India is consistently ranked among the top five countries globally for solar power.

Flagship Domestic Schemes

PM Surya Ghar (Muft Bijli Yojana)- A massive push for residential rooftop solar, aiming to provide free electricity to households by subsidizing installation.

PM-KUSUM- Focused on the agricultural sector, replacing diesel pumps with solar pumps to decarbonize farming and provide extra income to farmers.

Future Targets

Metric	2030 Target
Total Non-Fossil Capacity	500 GW
Renewable Energy Share	50% of total energy requirements
Carbon Intensity Reduction	45% reduction from 2005 levels

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