

Challenges in Tripling Global Renewable Energy Capacity

Why in News?

G20 countries have committed to work towards tripling global renewable energy capacity by 2030 but there are several challenges in achieving the target.

To know about the key outcomes of the G20 Summit, click [here](#)

What are the climate actions taken in G20 meet 2023?

The G20 nations collectively contribute to approximately 80% of global emissions.

- **Delhi Declaration on Climate Action (G20 2023)** - The only new and clear deliverable is tripling global renewable energy capacity by 2030.
- It recognised the need to accelerate efforts towards phase down of unabated coal power in line with national circumstances.
- For the 1st time, G20 nations agreed on requirements of \$5.9 trillion funds by 2030 to meet their climate goals.
 - According to IAEA, this could prevent 7 billion tonnes of carbon dioxide emissions by 2030.
- UK PM Rishi Sunak has announced \$2 billion to Green Climate Fund (GCF) to tackle climate change at G20 Meet.

The GCF, established by 194 countries (Copenhagen Accord at COP15) is the largest global fund dedicated to supporting developing countries to reduce global emissions and helping communities adapt to the effects of climate change.

- **Issues unaddressed** - The Summit avoided most of the contentious issues like greater emission cuts, phase-out of fossil fuels, and massive mobilisation of financial resources.
- It also did not provide any plan to amend existing policies and targets in order to achieve the target of ramping of renewables.

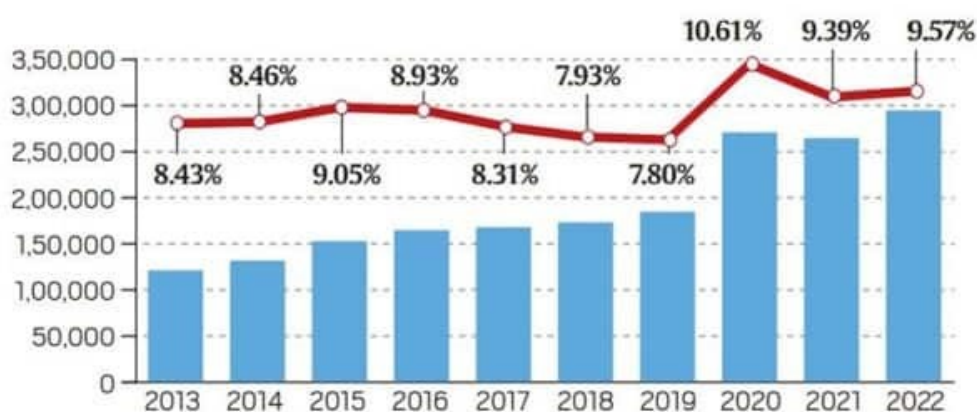
Status of Renewable Energy Production

- **Global status** - The current global installed capacity of renewable energy is just short of 3,400 GW.
- Annual capacity additions of renewable energy is growing by around 10% every

year.

- India and China together account for more than 50% of global capacity additions in each of the last five years.
- **India's status** - India is the 3rd largest energy consuming country in the world.
- As per Renewables 2022 Global Status Report, India stands
 - 4th globally in renewable energy installed capacity
 - 4th in wind power capacity
 - 4th in solar power capacity
- India has already achieved its target of 40% installed electric capacity from non-fossil fuels.
- India's installed non-fossil fuel capacity stands at more than 179.322 Giga Watts (including large Hydro and nuclear), about 43% of the country's total capacity (as of July 2023).
- Up to 100% FDI is allowed under the automatic route for renewable energy generation and distribution projects subject to provisions of The Electricity Act 2003.

RENEWABLE CAPACITY ADDITION GLOBALLY (IN MW)



What are the challenges in tripling renewable energy capacity by 2030?

- **Capacity additions** - Annual capacity additions have more than doubled from 2015 to 2022, rising by about 11% per year on average.
- But, higher annual growth rate is required to put renewables on track to meet the 2030 capacity target.
 - To triple the total capacity by 2030, the world would have to add nearly 1,000 GW of new capacity every year.
- **Policy push** - A higher annual growth rate would require much stronger policy push from governments.
- **Availability of financial resources** - According to an IRENA outlook, investments of about 5.3 trillion USD would be required per year, till 2050, for energy transition to limit the global rise in temperatures to within 1.5 degree Celsius from pre-industrial times.
- **Achieving 1.5 degree Celsius goal**- Even if the tripling target is achieved by 2030, it alone would not be sufficient for the 1.5 degree Celsius goal.

- Renewable energy, if tripled, would be able to avoid only 7 billion tonnes of CO2 equivalent, or less than one third of what is required.

Role of ISA in tripling Renewable Energy capacity

Solar energy constitutes more than 50% of new renewable energy capacity additions every year.

- **International Solar Alliance (ISA)** - It was a joint effort by *India and France* to mobilize efforts against climate change through deployment of solar energy solutions.
- It was conceptualized in *COP21 to the United Nations Framework Convention on Climate Change (UNFCCC)* held in Paris in *2015*.
- Currently, all member states of the United Nations are eligible to join the ISA.
- At present, *116 countries are signatories* to the ISA Framework Agreement and 94 countries have ratified.
- **Role of ISA** - The ISA was created specifically for the purpose of rapidly scaling up solar energy across the world.
- ISA has launched the *Green Hydrogen Innovation Centre* to produce, transport and use low and zero-carbon hydrogen.
- It provides *guarantees in crowding-in private sector investment* into solar mini-grids in Africa.
- ISA is *strengthening 20 solar startups in Africa* which is to be expanded in other regions.

References

1. [IE| G20 Climate Action](#)
2. [IE| Challenges in Tripling RE targets](#)
3. [Invest India | India's Renewable Data](#)