NITI Aayog releases report on harnessing Green Hydrogen

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[GS Paper 3 – Environment Degradation, Conservation]

Context – In a bid to boost green hydrogen production in the country, government think tank NITI Aayog has recommended tax breaks like reduction or exemption of GST and custom duties on green hydrogen production.

It has also proposed setting up green hydrogen corridors and offering grants to startups working on green hydrogen solutions domestically.

Key Highlights

- The Aayog, in its report titled 'Harnessing Green Hydrogen — Opportunities for Deep Decarbonisation in India', said the government should focus on enabling a cost reduction pathway for green hydrogen production in India.
- Green hydrogen is hydrogen gas produced through electrolysis of water — an energy intensive process for splitting water into hydrogen and oxygen — using renewable power to achieve this.

- The Aayog also suggested there is a need to facilitate investment through demand aggregation and dollar-based bidding for green hydrogen.

- The report predicted that hydrogen demand in India could grow more than four-fold by 2050, representing almost 10 percent of global hydrogen demand.

- In the longer term, steel and heavy-duty trucking are likely to drive the majority of demand growth, accounting for almost 52 per cent of total demand by 2050, it said.
- The NITI Aayog also recommended setting up green hydrogen corridors in participation with states, starting with three such corridors, and funding startups working in the space.
- In February 2022, the Centre had notified the green hydrogen and green ammonia policy aimed at boosting the domestic production of green hydrogen to 5 million tonnes by 2030 and making India an export hub for the clean fuel.
- It offers 25 years of free power transmission for any new renewable energy plants set up to supply power for green hydrogen production before July 2025.
- The policy also states that energy plants set up to produce green hydrogen/ammonia would be given connectivity to the grid on a priority basis.