Sustainable Aviation Fuel Manufacturing Policy-2025

Why in News?

The Uttar Pradesh government **has unveiled plans for the Sustainable Aviation Fuel (SAF) Manufacturing Policy-2025,** aimed at converting agricultural waste into jet fuel.

- A **high-level roundtable conference was organized by Invest UP in Lucknow** to discuss the policy framework.

Key Points

- **About the SAF:** It is produced from **renewable sources** such as agricultural waste, municipal solid waste, and forestry residues.
  - It has the potential to reduce **greenhouse gas emissions** by up to 80% compared to conventional jet fuel.
  - Indigenous feedstock like sugarcane molasses and **Make in India** technology are being used to produce SAF.
- **About the Policy:** The policy targets the production of sustainable aviation fuel from **agricultural residues** like sugarcane bagasse, rice husk, and wheat straw.
  - It aims to establish industrial units within Uttar Pradesh for bio-jet fuel manufacturing.
  - This initiative **will directly benefit around 2.5 crore farmers** by creating new markets for their crop waste.
- **Significance of the Policy:**
  - **First of Its Kind in India:** Marks a pioneering step towards integrating agricultural waste-based biofuels into India's aviation fuel mix.
  - **Climate Change Mitigation:** Supports India's commitment under the **Paris Agreement** to reduce carbon intensity and promote renewable energy.
  - **Agricultural Waste Management:** It can reduce **stubble burning**, a major cause of **air pollution and smog** in northern India, improving public health and ecological balance.
  - **Rural Economy Upliftment:** Creates new markets and value chains for agricultural residues, generating additional income sources for farmers.
  - **Industrial Growth:** Promotes establishment of SAF manufacturing units, leveraging UP's strategic logistics and agro-industrial base.
- **Related Challenges:**
  - **Technological Viability:** Developing reliable and scalable processes to convert varied agricultural wastes into aviation fuel efficiently remains a major hurdle.
  - **Price Competitiveness:** Producing SAF at a cost close to conventional jet fuel is necessary to encourage adoption without heavy subsidies.
  - **Infrastructure Development:** Effective collection, transport, and storage of dispersed crop residues need robust logistics to maintain a steady supply.
  - **Policy Integration:** Aligning state and central policies on **biofuels** and aviation is essential to streamline approvals and incentives.
- **Way Forward:**
  - **Incorporate Stakeholder Feedback:** Engaging farmers, industry, and experts will help tailor the policy to real-world challenges.
  - **Facilitate Research & Development:** Investment in R&D can improve technology efficiency and reduce production costs.

- **Create Incentives:** Financial benefits for SAF producers and users will promote market growth.
- **Strengthen Farmer Outreach:** Educating farmers and ensuring fair prices will secure reliable feedstock supply.
- **Promote Public-Private Partnerships:** Collaboration between government and private sector can drive large-scale, sustainable SAF production.