Sustainability in export of agricultural commodities

Why in news?

Increasing exports of key commodities like tea, sugar, and millets poses multiple challenges to the sustainability of production, processing, and distribution systems.

What is the recent trend of agricultural exports in India?

- **Indian agriculture -** India has a vast domestic consumption base that supports a variety of agricultural sectors, including tea, sugar, and millets.
- **Agri export growth -** India's agricultural export value surged from 8.7 billion dollars in 2004-2005 to ***53.1 billion dollars*** in 2022-2023, reflecting the expanding demand for Indian agricultural products globally.

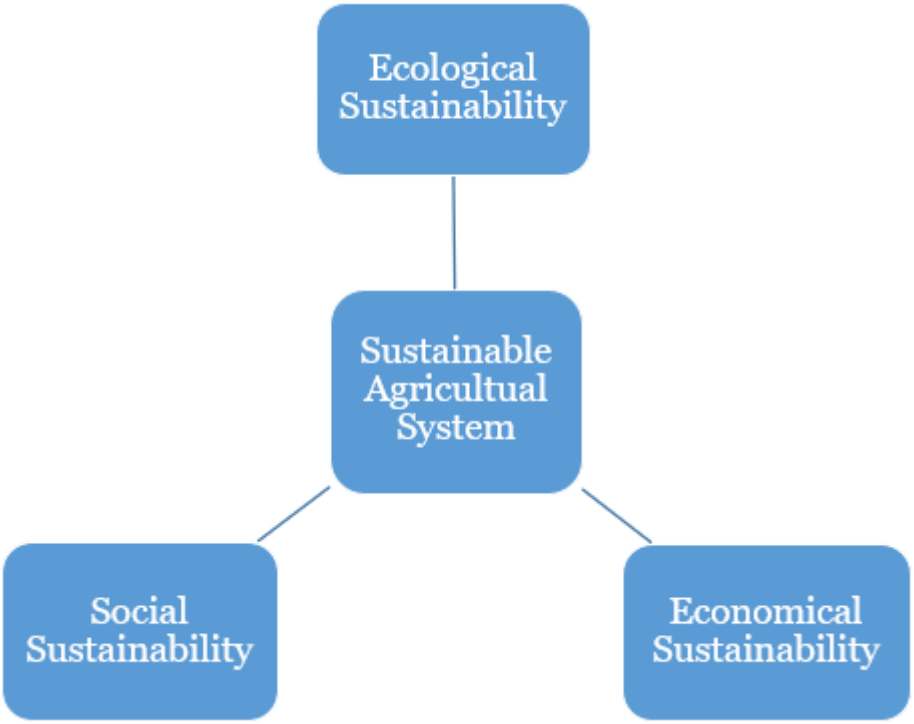
India is in 8th position in global agriculture exports in 2023 as per WTO report.

- **Surge in sugar exports -** India is the world's 2nd -largest sugar producer, with 34 million metric tonnes of production, about a fifth of the global production.
  - Sugar exports values at 4,600 million dollars in FY 2021-2022 which by 291% from 2013.

About 50 million farmers depend on sugarcane cultivation in India.

- **Increased tea exports -** India is the 2nd largest tea producer and *4th -largest tea exporter*.
  - In 2022-2023, tea exports reached 793.78 million dollars.
  - The top export destinations of Indian tea are the United Arab Emirates, Russia, Iran, the U.S. and the U.K.
- **Millets export growth -** Millets are gaining importance to reduce malnutrition and balance diet.
  - In 2022-2023, millet exports were valued at 75.45 million dollars.

What are the sustainability issues in Indian agricultural system?



- **Ecological factors**
    - **Biodiversity loss** - The expansion of monoculture crops like sugarcane and tea replaces diverse ecosystems, leading to significant biodiversity loss.
    - **Human-wildlife interactions** - 70% of tea plantations are situated at the periphery of forests and migratory routes of elephants which results in frequent interactions with humans and human property.
    - **Synthetic pesticides usage -** Synthetic pesticides constitute up to 85% of total pesticide use in tea plantations and increase in the incidence of DDT, Endosulfan 35 EC, Dicofol 18.5 EC, and Cypermethrin 10 EC in tea.
    - **Pressure on water resources** - Intensive water use for crops like sugarcane depletes groundwater levels, creating stress on water resources and limiting availability for other crops and communities.

On average, 1 kg of sugar requires between 1,500 and 2,000 kg of water and Sugarcane and paddy occupy around 25% of the gross cropped area in India and consume 60% of the country's total irrigation water.

- **Economic aspects**
    - **Vicious debt cycles** - Many farmers remain trapped in debt cycles due to low income and high production costs.
    - This restricts their ability to invest in sustainable practices or adopt new technologies that could improve crop resilience and productivity.
    - **Supply chain issues-** With a complex supply chain, farmers and small-scale producers become vulnerable to market fluctuations.
    - Any disruption in the supply chain can have significant impacts on their livelihoods and the consistency of export.
- **Social aspects**
    - **Labor rights** - Laborers in the tea and sugar industries often lack access to fair wages, health benefits, and safe working conditions.

- **Hazardous working conditions** - Workers in these industries are exposed to pesticides without protective gears.

What are the potential solutions to ensure sustainability?

- **Sustainable farming practices -** Promote long-term ecological and socio-economic sustainability.
- **Enhance social equity** – Address wage gaps and labor concerns such as hazardous working conditions and skilling labors.
- **Millets a sustainable option -** Promote millet cultivation can help reduce the environmental footprint of agricultural exports.

Millets require minimal water and are resilient to harsh conditions, making them an ideal sustainable crop for both domestic use and export.

- **Better management practices -** Implement efficient management practices in tea and sugar plantations can improve resource use, reduce chemical dependency, and mitigate environmental impact.
- **Monitoring pesticides usage -** Monitor maximum residue limits for pesticides to improve the quality and safety of agricultural exports.
- **Enforcement of existing labor regulations -** Strengthen and enforce labor regulations is critical to protect workers' rights and ensure safer working conditions.
- **Ensuring sustainability -** Encompass sustainability at pre-sowing, on-farm production, and post-harvest stages.
- **Efficiency in water use** - Implement drip irrigation in water intensive crops could lower water consumption by 40-50%.
- **Alternate cropping patterns –** Reduce stress on land degradation and Improve soil management.

Reference

[The Hindu |Agriculture Exports Raise Sustainability Concern]

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