ISARC: Development of Rice with Low Methane Emission

Why in News?

Recently, Senior agriculture officials from India, Bangladesh, Sri Lanka, and Nepal gathered at **International Rice Research Institute (IRRI), South Asia Regional Centre (ISARC)**, Varanasi for the **7th ISARC Coordination Committee (ICC)** meeting.

Key Points

- Presiding over the meeting, IRRI interim director general said ISARC is emerging as an **evidence-based research hub** for all research related to **transforming the rice-based agri-food system** in the **South Asian Region.**
    - In 2024, the focus is to work on **development of rice varieties with low methane emissions and enhancing the productivity of premium quality nutritious rice.**
    - To achieve the goals, ISARC is working on propagation of best agronomic and management practices such as Dry Seeded Rice (DSR) **and Alternate Wet and Drying (AWD).**
- **DSR, one of the major flagship research programmes of IRRI,** delivers faster planting and maturing, conserves scarce resources like water and labor.
    - It is more conducive to mechanization and **reduces** emissions of greenhouse gases **that contribute to** climate change in comparison to the conventional puddled transplanted rice technique.
- ISARC has showcased its capabilities in research, extension, capacity development, and technology dissemination, bringing tangible solutions to address pressing challenges facing our agricultural landscape.
- A **few achievements like** release of **ultra-low** Glycemic Index **rice varieties, Speed breeding protocol, Direct Seeded rice and Seeds Without Border,** and urged the national partners to replicate the innovations in their respective regions through technical support from ISARC.

International Rice Research Institute (IRRI)

- IRRI is an **independent, non-profit, research and educational institute, founded in 1960 by the Ford and Rockefeller Foundations** with support from the Philippine government.
- The institute, **headquartered in Los Baños, Philippines,** has offices in 17 rice-growing countries in Asia and Africa.
- The **IRRI South Asia Regional Centre is located at Varanasi** (Uttar Pradesh).
- It aims to improve the health and welfare of rice farmers and consumers and protect the rice-growing environment for future generations.

Direct Seeded Rice (DSR)

- It is a **viable option to reduce the unproductive water flows.**
- DSR refers to the process of **establishing a rice crop from seeds sown in the field** rather than by transplanting seedlings from the nursery.
- Conventional rice establishment system requires a substantial amount of water.

Alternate Wetting and Drying (AWD)

- It is a **water-saving technology** that farmers can apply to reduce their irrigation water consumption in rice fields without decreasing its yield.
- In AWD, irrigation water is applied a few days after the disappearance of the ponded water. Hence, the **field gets alternately flooded and non-flooded.**