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App to Monitor Rice Fields: Paddy Watch

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Why in News

Researchers from University of Sydney in collaboration with other partners have been developing an app i.e. **Paddy watch**, which will act as the **first real-time monitoring platform for rice fields**.

The project has been undertaken in collaboration with **Google Earth** and the **Group on Earth Observations (GEO)**.

Key Points

- **Development of the App:** The Paddy watch is being developed in partnership with **Indian Agricultural Research Institute**, India along with the research institutes from different countries i.e. China, Malaysia, Indonesia, and Vietnam.
 - These five countries hold the position of the largest rice-producing countries across the globe.
 - Among these, **India, China and Indonesia** are the world's three largest producers of rice and together account for about **60% of the total** world production.
- **Functioning:** The **real-time land-use data** will be generated using **Google Earth** and **cloud computing technology**, and will be verified by field operators in partner countries to ensure accuracy of rice production worldwide.

- **Significance:**

- **Digital Agriculture:** The app would work on **deep-learning techniques** (works on the idea of **Artificial Intelligence**) to forecast crop yields and water consumption.

This type of technology would enhance the world's confidence to feed the population in a sustainable way.
- **Accurate Information:** Accurate and up-to-date information on rice planted and harvested can be achieved through the app.
 - It would allow **farmers, agricultural scientists, non-government organisations and government planners** to manage land use to **ensure food security** in the world's rice bowls.

Therefore, helps in meeting the **United Nations**-mandated **sustainable development goal** No.2 – of **'Zero Hunger.'**
 - It would help in water management and **water security** by predicting the use of water for the rice fields.
- **GreenHouse Gas Emission:** As paddy fields release methane, a significant component to the **greenhouse gases**, the app would help in the estimation of the emission and impact of **global warming**.
- **Policy Formulation:** The information collected through the app would also help the associated partners to develop policies for education, economic growth, gender equity, and reduction of social inequality.

Group on Earth Observations

- GEO is a unique **global network** connecting government institutions, academic and research institutions, data providers and scientists to benefit the world by comprehensive and sustained Earth observations.
- It coordinates international efforts to build a **Global Earth Observation System of Systems (GEOSS)**.

It aims to produce a **global public infrastructure** that generates, near-real-time environmental data, information and analyses for a wide range of users and mitigation of global issues like climate change.

Source: DTE