



Sustainable Development in Bihar

Why in News?

According to the **Tata-Cornell Institute for Agriculture and Nutrition (TCI)** at Cornell University, Bihar can make significant progress towards **sustainable development** by implementing three transformative technologies in the **agricultural sector**.

Key Points

- In a policy brief it is emphasised that Bihar can reduce the **Greenhouse Gas (GHG) emissions** associated with **rice and livestock production** while maintaining or even improving productivity.
- The policy brief discusses a study carried out within TCI's Zero-Hunger, **Zero-Carbon Food Systems project**, which seeks to develop a strategy to decrease agricultural emissions in Bihar while maintaining productivity levels.
 - Agriculture accounts for 20% of India's GHG emissions nationally, with Bihar being one of the states significantly affected by **malnutrition**, especially among young children.
- According to TCI research, Bihar could reduce emissions by 9.4-11.2 metric tons each year by **adopting alternate wetting and drying for paddy cultivation**, advanced artificial insemination for cattle breeding, and anti-methanogenic feed supplements in its **livestock sector**.
- Research shows that alternate wetting and drying, advanced breeding techniques, and **anti-methanogenic feeds** can help Bihar to lower its agricultural emissions without damaging productivity.
 - The policy presented a breakdown of emissions reductions for each of Bihar's four agroclimatic zones. For alternate wetting and drying, Bihar's southwest and northwest zones have the highest potential mitigation levels.
 - **Bihar's Four Agroclimatic Zones:** Zone-I, North Alluvial Plain, Zone-II, north East Alluvial Plain, Zone-III A South East Alluvial Plain and Zone-III B, South West Alluvial Plain

Note

Indian Council of Agricultural Research (ICAR) has developed an anti-methanogenic feed supplement '**Harit Dhara**' (HD), which can **cut down cattle methane emissions by 17-20%** and can also result in higher milk production.