

SUMMARY OF DOWN TO EARTH

[01–15 September, 2024]

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SUBJECTIVE QUESTIONS

MCQS

Factors contributing to GLOFs

- **Glacial Retreat:** Accelerated melting of glaciers increases the volume of water in glacial lakes.
- **Seismic Activity:** Earthquakes can destabilise moraine dams.
- **Heavy Rainfall:** Intense precipitation can raise water levels, increasing pressure on the dam.
- **Ice Avalanches:** Falling ice can displace large volumes of water, triggering a breach.

E-CHASA

Context

- Recently, **Odisha** has launched **e-Chasa**, a mobile application and portal to conduct digital crop surveys across the state.

About the e-Chasa

- It is designed to conduct digital crop surveys, providing farmers with a comprehensive, single-window access to crop-related data and information, regardless of weather conditions.
- It aims to **deliver technology-driven agricultural services** to approximately 48 lakh farmers across the state.
- It represents a significant advancement in agriculture, offering precise data on crops grown in remote and inaccessible hilly areas.

Comprehensive Coverage

- The digital crop survey was **initially piloted** in a few districts in 2023, successfully surveying about 30 lakh plots.
- Following this success, the project has been **expanded to cover the entire state**, encompassing approximately 3 crore agricultural plots across 48 lakh hectares of farmland.

SALVINIA MOLESTA (CHINESE JHALAAR)

Context

- In a remarkable breakthrough in **biological control**, foreign insects have emerged as

effective allies in the fight against invasive aquatic weeds.

About

- **Salvinia molesta**, commonly known as ‘Chinese Jhalaar’ in India, is an **invasive aquatic fern** that poses a significant threat to water ecosystems.
- Under high-nitrogen levels and a temperature of 30°C, the plant area can double every eight days and biomass every 2.2 days, forming mats up to 1 m deep spread across waterways.
- It thus impedes water transport and hydro-electricity generation, blocks irrigation channels and depletes the waterbody of oxygen and nutrients, resulting in death of fish and other organisms.
- Traditional methods of weed control, such as manual removal and chemical treatments, have proven to be costly and often ineffective in the long term.

Biological Control with Exotic Insects

- In a pioneering effort, scientists from ICAR - Directorate of Weed Research (DWR) introduced an **exotic beetle, Cyrtobagus Salviniae**, into the **Sarani reservoir in Betul district, Madhya Pradesh**.
- This beetle, **native to Brazil**, specifically targets *Salvinia molesta* and has been used successfully in other parts of the world for **biological control**.
 - Biological control is a smarter way to weed out invasive plants, with minimal impact on biodiversity

DHANGAR COMMUNITY

Context

- Recently, the Dhangar community of Maharashtra held a demonstration to demand for designated grazing lands in forests.

About the Dhangars

- They are a community of shepherds with a rich cultural heritage, and reside in **Maharashtra, Gujarat, Karnataka, and Andhra Pradesh**.

- Historically, Dhangars have followed specific routes for grazing their animals. These routes are deeply ingrained in their way of life, and they've herded their flocks along them since time immemorial.
 - These paths are not just about sustenance; they're part of their cultural identity.
- **Quest for Scheduled Tribe (ST) Status:** The Dhangars are currently listed under **Maharashtra's Vimukta Jati and Nomadic Tribes (VJNT) category.**
 - However, they've been persistently seeking Scheduled Tribe (ST) status for decades.
 - Interestingly, in other parts of the country, they are recognized as "Dhangad" and enjoy reservation benefits as an ST community.

Subjective Questions

1. What do you believe are the most effective strategies to reduce the impact of single-use plastic on our environment, considering both individual actions and government policies?
2. How has the rising incidence of cancer in India impacted its healthcare system, socioeconomic conditions, and overall quality of life?
3. Despite the ambitious goals of the PM-KUSUM Yojana, its implementation has been relatively slow. What are the key factors hindering the participation of farmers in the scheme?
4. How can we balance the global demand for food and nutrition with the urgent need to mitigate climate change, and what are the ethical implications of prioritising one over the other?
5. To what extent are human activities responsible for the increasing frequency and severity of Glacial Lake Outburst Floods (GLOFs)? Discuss with reference to specific case studies from India.

MCQs

1. Which one of the following is associated with the 'NASA's InSight Lander'?
 - (a) Moon Surface
 - (b) Mars Atmosphere
 - (c) Venus Crater
 - (d) Sun's Lagrange Point
2. Recently, 'e-Chasa, a mobile application and portal' was in news, is in the context of:
 - (a) Vocational Training
 - (b) Diagnosis of Mpox
 - (c) Crop Survey
 - (d) Monitoring Tuberculosis
3. With reference to 'Mpox disease', consider the following statements:
 1. It is a viral illness caused by a member of the Orthopoxvirus Genus, closely related to the viruses that cause smallpox and cowpox.
 2. It was first identified in humans in the Democratic Republic of the Congo (DRC).
 Which of the statements given above is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
4. The term 'Salvinia Molesta' sometimes appeared in the news, is related to:
 - (a) Soil fungus
 - (b) Infestans fungus
 - (c) Wheat blast
 - (d) Invasive aquatic fern
5. Recently, the Dhangar community held a demonstration to demand for designated grazing lands in forests, belonging to which of the following states of India?
 - (a) Maharashtra
 - (b) Odisha
 - (c) Uttarakhand
 - (d) Rajasthan

Answer Key: _____

1. (b) 2. (c) 3. (c) 4. (d) 5. (a)