

## SUMMARY OF DOWN TO EARTH

[16–31 October, 2024]

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## DEBT RELIEF FOR CLIMATE-HIT NATIONS

### Context

- Recently, Australia has announced that it would start offering Pacific nations hit by climate change-induced disasters that would include climate-resilient debt clauses in sovereign loan deals by the end of 2025.

### About the Debt Relief for Climate-hit Nations

- Climate change is an escalating crisis that disproportionately affects developing nations. These countries often face severe weather events, rising sea levels, and other climate-related challenges that strain their economies.
- Compounding these issues is the burden of debt, which limits their ability to invest in climate resilience and sustainable development.

### Climate-Debt Trap

- Developing countries are caught in a **vicious cycle** known as the '**climate-debt trap**'.
- Frequent and severe climate disasters exacerbate economic hardships, reducing tax revenues and productivity, which in turn diminishes long-term growth prospects.
- As these nations struggle to repay their debts, their sovereign credit ratings fall, leading to higher borrowing costs and further limiting their ability to invest in climate action.

### Innovative Debt Relief Solutions

- **Debt-for-Nature and Debt-for-Climate Swaps:** These financial instruments

allow countries to reduce their debt in exchange for commitments to environmental conservation and climate adaptation projects.

- For example, Ecuador's landmark deal to protect the Galapagos Islands through a blue bond sale is a notable success.

- **Debt Cancellation and Restructuring:** Large-scale debt cancellation and restructuring can provide immediate relief to climate-hit nations.

- It involves renegotiating the terms of debt to make it more manageable, often including extended repayment periods, reduced interest rates, or partial debt forgiveness.

- The Climate and Community Project advocates for such measures as part of broader climate reparations.

- **Special Drawing Rights (SDRs):** Enhanced access to SDRs, a type of international reserve asset created by the International Monetary Fund (IMF), can provide additional liquidity to countries facing climate-induced financial stress.

- It can help stabilise economies and support investments in climate resilience.

### Case Studies and Success Stories

- **Belize:** Belize has successfully negotiated debt-for-nature swaps that have allowed it to invest in marine conservation while reducing its debt burden.

- These initiatives have not only protected biodiversity but also boosted tourism and local economies.
- **Ecuador:** As mentioned earlier, Ecuador's innovative use of blue bonds to protect the Galapagos Islands serves as a model for other nations.
- It has garnered international attention and support, demonstrating the potential of debt-for-climate swaps.

### Challenges and the Way Forward

- While these solutions offer hope, they are not without challenges. Implementing debt relief measures requires international cooperation and political will.
- Additionally, ensuring that funds freed up by debt relief are effectively used for climate action is crucial.
- Transparent governance and robust monitoring mechanisms are essential to ensure that these resources achieve their intended impact.

## PANCHAYATS IN INDIA AND UN'S SUSTAINABLE DEVELOPMENT GOALS (SDGS)

### Context

- Panchayats have potential to make a significant contribution to developmental goals, particularly those related to poverty alleviation and education.

### About

- Panchayats, the cornerstone of India's rural governance, play a pivotal role in achieving the United Nations' SDGs.
- These local self-government institutions are instrumental in implementing policies and programs that align with the SDGs, ensuring sustainable development at the grassroots level.

### Role of Panchayats in Sustainable Development

- The Panchayati Raj system, established under the **73rd Constitutional Amendment Act of 1992**, aims to decentralise power and promote local self-governance.
- Panchayats are responsible for the planning and execution of various development programs, which directly contribute to the SDGs.
- The 17 SDGs, adopted by all United Nations Member States in 2015, provide a shared blueprint for peace and prosperity for people and the planet, now and into the future.

### Thematic Integration

- The government has asked all villages to focus on one of the nine themes for **Localisation of Sustainable Development Goals (LSDGs)** that reflect UN's 17 SDGs
- LSDGs are aligned to UN's 17 SDGs and the **29 subjects under panchayats listed in the XIth Schedule** of Constitution of India;

- **Subjects Under Panchayat's Jurisdiction:** *Poverty alleviation programme; Agriculture including agricultural extension; Animal husbandry, dairying and poultry; Fisheries; Public distribution system; Technical training and vocational education; Markets and fairs; Khadi, village and cottage industries; Minor forest produce; Small scale industries, including food processing industries; Rural housing; Health and sanitation, including hospitals, primary health centres and dispensaries; Family welfare; Adult and non-formal education; Education, including primary and secondary schools; Women and child development; Minor irrigation, water management and watershed development; Drinking water; Non-conventional energy sources; Fuel and fodder; Social forestry and farm forestry; Land improvement, implementation of land reforms, land consolidation and soil conservation; Roads, culverts, bridges, ferries, waterways and other means of communication; Rural electrification, including distribution of electricity; Maintenance of community assets; Libraries; Social welfare, including welfare of the handicapped and mentally retarded; Welfare of the weaker sections, and in particular, of the Scheduled Castes and the Scheduled Tribes; Cultural activities; and Women and child development.*

### Key Areas of Contribution

- **Poverty Alleviation (SDG 1):** Panchayats implement schemes like the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which provides employment opportunities and helps reduce poverty in rural areas.
- **Zero Hunger (SDG 2):** Through initiatives like the Public Distribution System (PDS) and various agricultural schemes, Panchayats ensure food security and promote sustainable agriculture.
- **Good Health and Well-being (SDG 3):** Panchayats facilitate access to healthcare services, sanitation, and clean drinking water, contributing to improved health outcomes in rural communities.
- **Quality Education (SDG 4):** By managing local schools and promoting educational programs, Panchayats help ensure inclusive and equitable quality education for all.
- **Gender Equality (SDG 5):** Panchayats work towards empowering women through various schemes and ensuring their participation in local governance.
- **Clean Water and Sanitation (SDG 6):** Initiatives like the Swachh Bharat Mission are implemented at the Panchayat level to ensure access to clean water and sanitation facilities.
- **Affordable and Clean Energy (SDG 7):** Panchayats promote the use of renewable energy sources and energy-efficient practices in rural areas.

- **Decent Work and Economic Growth (SDG 8):** By fostering local industries and creating job opportunities, Panchayats contribute to sustained economic growth.
- **Industry, Innovation, and Infrastructure (SDG 9):** Panchayats play a role in developing rural infrastructure, including roads, schools, and healthcare facilities.
- **Reduced Inequalities (SDG 10):** Panchayats work towards reducing inequalities by ensuring that marginalised communities have access to resources and opportunities.
- **Sustainable Cities and Communities (SDG 11):** Panchayats are involved in planning and developing sustainable rural communities.
- **Responsible Consumption and Production (SDG 12):** Panchayats promote sustainable agricultural practices and waste management.
- **Climate Action (SDG 13):** Panchayats implement programs aimed at mitigating the effects of climate change and promoting environmental sustainability.
- **Life Below Water (SDG 14):** Coastal Panchayats are involved in the conservation of marine resources.
- **Life on Land (SDG 15):** Panchayats engage in activities that protect terrestrial ecosystems and promote biodiversity.
- **Peace, Justice, and Strong Institutions (SDG 16):** Panchayats work towards

building strong, transparent, and accountable local institutions.

- **Partnerships for the Goals (SDG 17):** Panchayats collaborate with various stakeholders, including government agencies, NGOs, and the private sector, to achieve the SDGs.

### Challenges and Opportunities

- While Panchayats have made significant strides in contributing to the SDGs, they face several challenges, including limited financial resources, capacity constraints, and governance issues.
- However, with proper support and capacity-building initiatives, Panchayats can overcome these challenges and play a more effective role in sustainable development.

### Conclusion

- Panchayats are crucial in translating the global vision of the SDGs into local realities. By leveraging their unique position at the grassroots level, Panchayats can ensure that development is inclusive, sustainable, and leaves no one behind.
- Strengthening Panchayats and enhancing their capacity to implement SDG-related initiatives will be key to achieving sustainable development in India.

## EUTHANASIA

### Context

- Recently, a letter to the Union Health Minister demanded the 'Draft

Guidelines on Passive Euthanasia' exclude the interests of terminally ill patients

### About the Euthanasia

- It, often referred to as 'mercy killing', is a deeply complex and controversial issue that touches on ethical, legal, and emotional aspects of human life.
- In India, the debate around euthanasia has evolved significantly over the years, particularly with landmark judgments and evolving societal perspectives.

### Legal Framework in India

- In India, euthanasia is categorised into **two types: active and passive.**
- **Active euthanasia**, which involves the direct intervention to end a patient's life, **remains illegal in India.** However, **Passive euthanasia**, which entails withdrawing life support to allow a patient to die naturally, has been **legally recognised under stringent conditions.**
- The **Supreme Court of India**, in a historic decision in 2018, upheld the right to passive euthanasia and allowed individuals to create advance directives, also known as living wills.
  - It was seen as a significant step towards recognising the autonomy and dignity of terminally ill patients.
  - The court emphasised that the **right to life under Article 21 of the Constitution** includes the **right to die with dignity.**

### Guidelines and Implementation

- The implementation of passive euthanasia involves a detailed and cautious process.
- According to the guidelines issued by the Ministry of Health and Family Welfare, a primary medical board must be constituted to evaluate the patient's condition and certify the need for passive euthanasia.
- This board's decision must be endorsed by a secondary medical board, ensuring multiple layers of scrutiny to prevent misuse.
- In 2023, the Supreme Court further simplified the procedure for registering advance directives, making it more accessible for patients and their families.
- The new guidelines allow for the attestation of advance directives by a notary or a gazetted officer, rather than requiring a judicial magistrate's countersignature.

### Ethical Considerations

- The ethical debate around euthanasia is multifaceted. Proponents argue that it allows individuals to die with dignity, free from prolonged suffering and pain.
- They emphasise the importance of personal autonomy and the right to make decisions about one's own body and life.
- On the other hand, opponents raise concerns about the potential for abuse and the moral implications of ending a human life, even with consent.

### Social Considerations

- It challenges traditional views on life and death and raises questions about the role of medical professionals in end-of-life care.
- The Indian Society of Critical Care Medicine has highlighted the need for comprehensive guidelines to ensure that the interests of terminally ill patients are prioritised.

### Case Studies and Real-Life Implications

- The case of Aruna Shanbaug, a nurse who remained in a vegetative state for 42 years following a brutal assault, brought the issue of euthanasia to the forefront in India.
  - Her case led to the 2011 Supreme Court judgement that first recognized passive euthanasia under specific conditions.
  - This landmark case underscored the need for legal clarity and compassionate care for patients in similar conditions.
- Another poignant example is the story of Ritika Sinha, a young woman suffering from muscular dystrophy, who has repeatedly appealed for the right to end her life due to her debilitating condition.
  - Her case highlights the ongoing struggles faced by patients and their families in navigating the legal and medical systems to seek relief from unbearable suffering.

### Conclusion

- Euthanasia remains a contentious issue in India, balancing the fine line between ethical considerations, legal frameworks, and human compassion.
- While the legal recognition of passive euthanasia marks a significant step forward, ongoing dialogue and legislative efforts are essential to address the complexities and ensure that the rights and dignity of terminally ill patients are upheld.
- As India continues to grapple with this sensitive issue, it is crucial to foster a compassionate and informed approach that respects individual autonomy while safeguarding against potential abuses.

### FUTURE PANDEMIC PREPAREDNESS AND EMERGENCY RESPONSE

#### Context

- Recently, NITI Aayog released the 'Future Pandemic Preparedness and Emergency Response—a Framework for Action' focusing on public health emergencies or pandemics.

#### Background: Blueprint for Preparedness

- The expert group behind the 'Future Pandemic Preparedness and Emergency Response (PPER) — A Framework for Action' recognised that **COVID-19 wouldn't be the last pandemic** we face.

- Given the *ever-changing planetary dynamics—ecology, climate, and interactions between humans, animals, and plants*—there is a need to be **ready for new infectious threats**.
- In fact, the World Health Organization (WHO) has warned that **75% of future public health threats are likely to be zoonotic (originating from animals)**.
- **Data Management, Surveillance and Early Predictive Warning, Forecasting and Modelling:** Timely data collection, surveillance systems, and predictive models allow us to detect outbreaks early. This information is vital for swift decision-making.
- **Research and Innovation, Manufacturing, Infrastructure, Capacity building/Skilling:** Investing in research, innovation, and domestic manufacturing capacities is essential. We need to develop diagnostic tools, treatments, and vaccines swiftly.

### Key Objectives of Report

- NITI Aayog formed an Expert Group with a clear mission: create a robust framework for future pandemic preparedness and emergency response, to address the above emergencies.
- Their **task was to examine how COVID-19 was managed** both nationally and globally, learn from successes and challenges, and **identify key gaps** to enhance our readiness for any health crisis.
- **Partnership, Community engagement including risk communication, Private sector partnerships, and international collaborations:** Strengthening healthcare capacity, training healthcare workers, and engaging communities are vital. International collaboration ensures knowledge sharing and resource pooling.

### Key Recommendations (Four Pillars of Preparedness)

- **Governance, Legislation, Finance and Management:** Effective governance structures, legal frameworks, financial mechanisms, and management strategies are crucial.
  - A **well-defined SOP** manual for rapid response to be prepared
  - **Setting up** of a special PPER Fund for all activities of surveillance, data management, forecasting and modelling, research, innovation and manufacture, development of countermeasures, infrastructure and capacity building.

### Other Recommendations

- A separate **Public Health Emergency Management Act (PHEMA)** is proposed to facilitate the management of **any public health crisis beyond epidemics**, including non-communicable diseases, disasters, and bioterrorism, and should be in place for a developed country.
- **Indian Regulatory System:** There is a need for global harmonisation of regulatory norms to allow acceptance of regulatory data across the world's recognised regulatory authorities and a common framework for innovative technologies and accelerated response for emergency approval.



- The **regulatory authority in India (CDSCO)** needs special powers through legislation and requires technical competence strengthening and autonomy in functioning to meet these requirements.

**100-Day Action Plan**

- The report emphasises that the first 100 days of an outbreak are critical.

During this window, there is a need to have **strategies and countermeasures ready**.

- The report provides a detailed roadmap for preparedness, including how to track, test, treat, and manage outbreaks effectively.



**India’s Efforts and Lessons Learned**

- India’s response to the SARS-CoV-2 pandemic involved several key initiatives, like:
  - **Novel Counter-Measures:** Funding for industry and researchers, shared resources, and policy guidelines.
  - **Digital Tools:** Investments in pandemic response tools and vaccination data management.

- **Global Collaborations:** Partnerships with other countries and organisations.

**EVENT/OUTBREAK AND THEIR LEARNING**

**SARS in 2003**

- Need for International legally binding rules/ regulations.
- Detection of infection among exposed persons is a challenge during the initial phase.
- Need for core capacities for screening,

sample collection and quarantine facilities at international airports.

### Avian Flu (H5N1)

- An effective strategy of surveillance of at-risk populations and culling sick birds was developed as a coordinated surveillance and response plan for both human and animal sectors.
- A standing committee on zoonosis was established following avian influenza

### H1N1 Pandemic (pandemic declared as Public Health Emergency of International Concern)

- Countries were developing core capacities as per **International Health Regulations (IHR) 2005** at points of entry and inside the country for surveillance and response.
  - **IHR (2005)**, a **legally binding regulation**, was in place.
- Countries adopted **public health measures** like screening at POEs, early detection of suspects, quarantine, contact tracing of suspect surveillance and management of cases in isolation in dedicated wards.
  - Public health measures were helpful in mitigating and delaying the entry of infection.
- Need for coordinated surveillance between Points of entry and in country surveillance systems.

### Ebola Outbreaks (2014-16) and (2018-21)

- Efforts to control these outbreaks involved screening, surveillance of exposed, contact tracing, data management, laboratory testing, and

health education, including use of PPEs.

- Public health efforts were much more effective, limiting entry into the country.

### MERS-CoV

- Zoonotic diseases, particularly highly infectious diseases that spread via respiratory/ droplets route could be challenging to prevent.
- Most of the threats leading to pandemics were due to novel viruses of zoonotic origin, possibly transmitted through the human animal interface.
- Infectious diseases having a respiratory mode of transmission are dangerous.

### Zika Virus Disease

- It is a disease with **over 80% asymptomatic cases** and mild clinical symptoms with full recovery cannot be prevented using public health measures directed towards travellers.
- Effective vector surveillance and control is essential to prevent entry and transmission of vector-transmitted diseases.
- Need for multi-sectoral collaborative surveillance

### Conclusion

- In a world where pandemics are no longer rare events, 'Future Pandemic Preparedness and Emergency Response (PPER) — A Framework for Action' serves as a beacon—a roadmap to navigate the challenges ahead.

- It's a reminder that preparedness isn't just about reacting; it's about **proactive planning, collaboration, and resilience.**

## 'PANDEMIC PREVENTION, PREPAREDNESS, AND RESPONSE ACCORD' AKA PANDEMIC TREATY

### Context

- In response to the COVID-19 pandemic, the World Health Organization (WHO) has been working towards a groundbreaking Pandemic Treaty, a comprehensive agreement aimed at strengthening global defences against pandemics.

### About the Pandemic Treaty

- **Background and Development:** The call for a pandemic treaty was first issued in 2021 by 25 heads of government and international agencies that marked a pivotal moment in global health governance, emphasising the necessity for a unified approach to pandemic preparedness and response.
- The ninth meeting of the **Intergovernmental Negotiating Body (INB)** in early 2024 was a critical step in finalising the 30-page WHO Pandemic Agreement.

### Key Features of the Pandemic Treaty

- **Strengthening Pandemic Prevention, Preparedness, and Response:** The treaty seeks to enhance global surveillance for pathogens with pandemic potential, improve health-care workforce capacity, and ensure robust supply chains for medical products.

- **Equity as a Core Principle:** One of the treaty's fundamental objectives is to rectify the inequities witnessed during the COVID-19 pandemic.

- It includes ensuring equitable access to vaccines, diagnostics, and treatments, particularly for low- and middle-income countries.

- **Pathogen Access and Benefit Sharing (PABS):** Article 12 of the treaty, often seen as its 'heart,' focuses on the equitable sharing of benefits arising from the use of pathogens.

- It aims to ensure that all countries, regardless of their economic status, can access critical medical resources during a pandemic.

- **Technology Transfer and Intellectual Property:** The treaty emphasises the importance of technology transfer and local production of medical products.

- It seeks to facilitate the sharing of knowledge and technology to support the production of vaccines and treatments globally.

- **One Health Approach:** Recognizing the interconnectedness of human, animal, and environmental health, the treaty promotes coordinated public health measures across these domains to prevent and respond to pandemics.

### Challenges and Controversies

- Despite its ambitious goals, the Pandemic Treaty faces significant challenges. Geopolitical discord and competing interests between higher- and lower-income countries have stalled progress on key provisions, such

as the PABS mechanism and technology transfer.

- Additionally, the treaty's emphasis on equity has sparked debates over intellectual property rights and the distribution of medical resources.

### Road Ahead

- The 77th World Health Assembly (WHA) in May 2024 extended the mandate of the INB, stipulating that the proposed WHO Pandemic Agreement must be completed as soon as possible.
- The final draft is expected to be presented at the 78th WHA in May 2025, or earlier if possible, at a Special Session of the WHA.

## NO BOOST TO FARMER INCOME

### Context

- Despite high food inflation, poultry meat and vegetable farmers do not get a decent share of consumers' spending.

### About

- Despite the rising food prices in India, farmers are not experiencing a corresponding increase in their incomes.
- A recent study by the **International Food Policy Research Institute (IFPRI)** and insights from the **Reserve Bank of India (RBI)** highlight the disparity between consumer spending and farmer earnings.

### High Prices, Low Returns

- High food prices often lead to government interventions aimed at

controlling inflation to protect consumers.

- However, the assumption that higher consumer spending translates to higher farmer incomes does not hold true.
- The IFPRI study, published in Nature in 2023, examined the correlation between food prices and poverty rates across 33 middle-income countries from 2000 to 2019.
  - In a study published in Nature in 2023, researchers from the IFPRI, Colombo, Sri Lanka found a correlation: 'year-on-year increases in the real price of food predict reductions in the US \$3.20-per-day poverty headcount, except in more urban or non-agrarian countries'.
- The findings suggest that while food price increases can reduce poverty in some contexts, this does not necessarily apply to Indian farmers.

### Sector-Specific Insights

- The RBI's recent working papers on inflation in livestock, poultry, vegetables, and pulses provide a detailed look at how much of the consumer's spending actually reaches the farmers.
- For instance, in the livestock segment, dairy and egg farmers receive 70-75% of the consumer price, while poultry meat farmers get only 56%.
- In the vegetable segment, farmers receive 33-37% of the consumer price for tomatoes, onions, and potatoes.

For pulses, the share ranges from 65-75% depending on the type.

### Challenges Faced by Farmers

- Despite significant consumer demand, farmers in the poultry and vegetable sectors are not seeing adequate returns.
- The costs of production often exceed the earnings, leaving farmers in a precarious financial situation. It is particularly concerning given the high inflation rates in these segments.

### Conclusion

- The disparity between high food prices and farmer incomes underscores the need for more equitable distribution mechanisms within the agricultural value chain.
- Ensuring that farmers receive a fair share of consumer spending is crucial for their financial stability and the overall health of the agricultural sector.

## Prelims

### SILICOSIS

#### Context

- Working at diamond mines and sandstone quarries in Panna district of Madhya Pradesh exposes the workers to excess levels of silica dust, which leads to a debilitating and potentially fatal lung disease called silicosis.

#### About the Silicosis

- Silicosis is a form of pneumoconiosis, a group of lung diseases caused by inhaling certain dusts.

- It primarily affects workers in industries such as mining, construction, and stone cutting, where silica dust is prevalent.
- When inhaled, these fine particles lodge in the lungs, causing inflammation and scarring, which impairs the lungs' ability to function.
- Its symptoms are **similar to those of tuberculosis (TB)**—persistent cough, fever and fatigue.
- Despite being preventable, it remains a significant occupational health issue, particularly in developing countries like India.

#### Causes and Risk Factors

- The primary cause of silicosis is prolonged exposure to respirable crystalline silica dust.
- **Mining and Quarrying:** Extraction processes release large amounts of silica dust.
- **Construction:** Activities like drilling, cutting, and grinding concrete and masonry materials.
- **Stone Cutting and Sandblasting:** These processes generate significant silica dust.

#### Health Impact

- **Chronic Silicosis:** Develops after 10-20 years of low to moderate exposure. Symptoms include shortness of breath, cough, and fatigue.
- **Accelerated Silicosis:** Occurs within 5-10 years of high exposure. Symptoms are similar but progress more rapidly.
- **Acute Silicosis:** Develops within weeks to a few years of extremely high

exposure. It leads to severe respiratory issues and is often fatal.

### Government and Policy Response

- **National Policy on Safety, Health, and Environment at Workplace:** Aims to improve occupational health standards.
- **Compensation Schemes:** Some states offer compensation to affected workers, but implementation is inconsistent.

## MULTIPLE DISEASE OUTBREAKS IN AFRICA

### Context

- Reeling under the impacts of extreme weather events, conflicts and a weakened healthcare infrastructure, African countries see a rise in disease outbreaks.

### Marburg Disease

- Rwanda reported its **first-ever outbreak of Marburg disease**, a severe and highly fatal **viral zoonotic infection** that causes **hemorrhagic fever and bleeding**.
- It is caused by the **Marburg virus**, a **member of the Filoviridae family**, which also includes the **Ebola virus**.

### Origins and Transmission

- Marburg disease was **first identified in 1967** when outbreaks occurred simultaneously in Marburg and Frankfurt, Germany, and in Belgrade, Serbia.
- The outbreaks were linked to laboratory work using African green monkeys imported from Uganda.

- The **natural reservoir** of the Marburg virus is the **African fruit bat (*Rousettus Aegyptiacus*)**, which can transmit the virus to humans through **direct contact with bat excreta or saliva**.
- **Human-to-human transmission** occurs through direct contact with the blood, secretions, organs, or other bodily fluids of infected individuals, as well as through contaminated surfaces and materials.

### Symptoms and Progression

- The incubation period for Marburg disease ranges from 2 to 21 days.
- Symptoms typically begin abruptly with high fever, severe headache, and muscle pain, followed by severe watery diarrhoea, abdominal pain, cramping, nausea, and vomiting.
- Many patients develop severe hemorrhagic manifestations, including bleeding from the gums, nose, and gastrointestinal tract.

### Prevention and Control Measures

- **Avoiding Contact with Bats:** Limiting exposure to fruit bats and their habitats.
- **Safe Burial Practices:** Ensuring safe and dignified burial practices to prevent the spread of the virus from deceased individuals.
- **Protective Equipment:** Using personal protective equipment (PPE) for healthcare workers and caregivers.
- **Community Engagement:** Educating communities about the risks and

prevention methods to reduce transmission.

## EU'S DEFORESTATION REGULATION

### Context

- Recently, the European Commission said it intends to propose a one-year delay in implementing the Deforestation Regulation that would ban imports of commodities linked to deforestation.

### About

- The European Union (EU) has taken a significant step in combating global deforestation and forest degradation with the introduction of the Regulation on Deforestation-free Products.
- It aims to ensure that products consumed within the EU do not contribute to deforestation or forest degradation worldwide.

### Background and Objectives

- The primary driver of deforestation is the expansion of agricultural land for commodities such as cattle, wood, cocoa, soy, palm oil, coffee, and rubber.
- These commodities, and their derived products like leather, chocolate, and furniture, are integral to global trade and consumption.
- As a major consumer of these commodities, the EU recognises its role in contributing to deforestation and seeks to lead by example in addressing this issue.

### Objectives

- **Preventing Deforestation:** Ensuring that products placed on the EU market or exported from it do not originate from recently deforested land.
- **Reducing Carbon Emissions:** Aiming to cut carbon emissions caused by EU consumption and production of relevant commodities by at least 32 million metric tonnes annually.
- **Protecting Biodiversity:** Addressing all deforestation driven by agricultural expansion and forest degradation.

### Broader Impact and Future Prospects

- The Regulation on Deforestation-free Products is part of a broader EU strategy to protect and restore the world's forests, as outlined in the 2019 Commission Communication and reinforced by the European Green Deal, the EU Biodiversity Strategy for 2030, and the Farm to Fork Strategy.
- By promoting the consumption of deforestation-free products, the EU aims to set a global standard and encourage other regions to adopt similar measures.

## AVIAN INFLUENZA

### Context

- Recently, some 47 **captive tigers in Vietnam** have died because of an outbreak of avian influenza.

### About The Avian Influenza

- It is caused by influenza viruses that primarily infect birds. These viruses are

divided into various subtypes, such as **H5N1, H5N3, and H5N8**.

- The genetic characteristics of these viruses evolve rapidly, making them a complex and ever-changing threat.
- Avian influenza occurs worldwide, but the prevalence of different subtypes varies across regions.

### Severity in Poultry

- **Low Pathogenicity Avian Influenza (LPAI):** This subtype typically causes little or no clinical signs in birds.
- **High Pathogenicity Avian Influenza (HPAI):** HPAI can lead to severe clinical signs and high mortality rates in infected poultry.

### Transmission and Spread

- **Movement of Infected Birds:** Birds shed the virus in their faeces and respiratory secretions. Direct contact with these secretions, contaminated feed, or water can lead to transmission.
- **Live Bird Markets:** Farming and sale of live birds in markets can facilitate virus transmission.
- **Wild Birds and Migratory Routes:** Migratory waterfowl, in particular, serve as natural reservoirs for avian influenza viruses.
  - Changes in ecology and epidemiology have led to infections in various wild bird species, which then spread the virus along established migratory routes.

### Impact on Humans

- While avian influenza primarily affects birds, sporadic cases in humans have been identified.
- When avian influenza viruses circulate in poultry, there's a risk of transmission to humans.
- However, human infections are relatively rare and often associated with close contact with infected birds.

### Economic Consequences

- Outbreaks of avian influenza have devastating consequences for the poultry industry. When outbreaks occur in domestic birds, the policy often involves culling all poultry—whether infected or healthy—to contain the spread.
- Unfortunately, this results in heavy economic losses for farmers and long-lasting impacts on their livelihoods.

## INTERNATIONAL WHALING COMMISSION

### Context

- Recently, the International Whaling Commission has rejected proposals to overturn a four-decade-old moratorium on commercial whaling and declare the practice a source of food security as it provides access to meat.

### About the International Whaling Commission (IWC)

- It was **established in 1946** under the **International Convention for the Regulation of Whaling**, with the



primary goal of ensuring the proper conservation of whale stocks and thus making possible the orderly development of the whaling industry.

- It has evolved to address a myriad of conservation challenges, reflecting the changing dynamics of marine ecosystems and human impacts on them.
- Initially, the **focus** was on managing whaling to prevent over-exploitation. However, as whale populations declined and public awareness of environmental issues grew, the IWC's role expanded significantly.

### Conservation Efforts and Achievements

- Conservation initiatives and efforts are not limited to regulating whaling but also encompass addressing threats such as bycatch, entanglement, ship strikes, ocean noise, pollution, and debris.
- The IWC promotes sustainable whale watching as an alternative to whaling, highlighting the economic and ecological benefits of preserving these majestic creatures.
- One of the IWC's notable achievements is the **implementation of Conservation Management Plans (CMPs)** for critically endangered whale populations.
- These plans are tailored to specific species and regions, aiming to mitigate threats and promote recovery.

## PRADHAN MANTRI RASHTRIYA KRISHI VIKAS YOJANA & KRISHONNATI YOJANA

### Context

- Recently, the Union Cabinet merged all centrally sponsored schemes for the agriculture sector into two umbrella schemes — the Pradhan Mantri Rashtriya Krishi Vikas Yojana and the Krishonnati Yojana.

### The Pradhan Mantri Rashtriya Krishi Vikas Yojana (PM-RKVY)

- It is a flagship initiative, launched under the Ministry of Agriculture and Farmers Welfare, aimed at promoting sustainable agriculture and ensuring food security.
- It has undergone several iterations and enhancements to address the evolving needs of the agricultural sector.

### Historical Context and Evolution

- Initially launched in 2007 as the **Rashtriya Krishi Vikas Yojana (RKVY)**, the scheme was designed to incentivise states to increase public investment in agriculture and allied sectors.
- Over the years, it has evolved to include various components aimed at making farming a remunerative economic activity.
- In 2017, it was rebranded as **RKVY-RAFTAAR (Remunerative Approaches for Agriculture and Allied Sector Rejuvenation)**, focusing on risk mitigation, strengthening farmers' efforts, and promoting agri-business entrepreneurship.

### Objectives and Components

- **Promote sustainable agriculture:** Encourage practices that ensure long-term agricultural productivity and environmental health.
- **Enhance food security:** Achieve self-sufficiency in food production.
- **Support state-specific needs:** Provide flexibility to states to tailor the scheme according to their unique agricultural challenges and opportunities.

### Key Components

- **National Mission for Edible Oil-Oil Palm (NMEO-OP) and National Mission for Edible Oil-Oil Seeds (NMEO-OS):** Focus on increasing the production of edible oils to reduce dependency on imports.
- **Digital Agriculture:** Leverage technology for efficient and effective implementation of agricultural practices.
- **Mission Organic Value Chain Development for North Eastern Region (MOVCDNER):** Promote organic farming in the North Eastern states.

### Implementation and Funding

- The scheme is implemented through state governments, which are given the flexibility to reallocate funds based on their specific requirements.
- This approach ensures that the scheme addresses the diverse agricultural landscapes and challenges across India.
- The total proposed expenditure for PM-RKVY and its components is ₹1,01,321.61 crore.

### Krishonnati Yojana

- It is also known as the **Green Revolution – Krishonnati Yojana**, is an umbrella scheme aimed to enhance agricultural productivity and ensure sustainable development in the agriculture sector.
- It integrates multiple schemes to address various aspects of agricultural growth.

### Objectives and Scope

- **Increase agricultural productivity:** Enhance the production and productivity of crops through scientific and sustainable practices.
- **Improve farmers' income:** Ensure better returns on agricultural produce by improving market access and value addition.
- **Promote sustainable agriculture:** Encourage practices that are environmentally sustainable and economically viable.

### Key Components

- Krishonnati Yojana comprises several sub-schemes and missions, each targeting specific areas of agricultural development.
- **Mission for Integrated Development of Horticulture (MIDH):** Focuses on the holistic growth of the horticulture sector, including fruits, vegetables, and spices.
- **National Food Security Mission (NFSM):** Aims to increase the production of rice, wheat, pulses, coarse cereals, and commercial crops.

- **National Mission for Sustainable Agriculture (NMSA):** Promotes sustainable agricultural practices, including soil health management and rainfed area development.
- **Sub-Mission on Agricultural Mechanization (SMAM):** Enhances the reach of farm mechanisation to small and marginal farmers.
- **Sub-Mission on Seeds and Planting Material (SMSP):** Ensures the availability of quality seeds and planting materials to farmers.

### Implementation and Funding

- The scheme is implemented through a combination of central and state government efforts, with funding shared between the central and state governments.
- This collaborative approach ensures that the scheme addresses the diverse agricultural needs across different regions of India.

## MANKIDIA COMMUNITY OF ODISHA

### Context

- Recently, **Mankidia community of Odisha** received habitat rights over forested areas under the ***Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006***.

### About the Mankidia Community of Odisha

- The Mankidia community, classified as a **Particularly Vulnerable Tribal Group (PVTG)**, has a rich cultural heritage

deeply intertwined with the forests of Odisha.

- It is the **second PVTG in Odisha** to be formally accorded these rights, after the **Paudi Bhuyan PVTG of Deogarh district**.
  - **Other PVTG in Odisha** are **Juang, Saora, Chuktia Bhunjia, and Hill Khadia**.
- Traditionally, they are known for their skills in rope making, trapping, and consuming monkeys.
- Their livelihood has always been dependent on the forest, which provides them with essential resources like Siali fibre and wild honey.

### Struggle for Rights

- Despite their historical connection to the land, the Mankidia community faced numerous challenges in securing legal recognition of their habitat rights.
- It aims to correct historical injustices faced by forest-dwelling communities.
- For years, they were officially prevented from accessing forest land or using forest produce, which severely impacted their traditional way of life.
- The core area of the **Similipal Tiger Reserve**, where many Mankidia reside, became a contentious issue, with the forest department reluctant to grant land rights due to concerns over wildlife safety.

## ECO-SENSITIVE ZONE (ESZ)

### Context

- Recently, the Union government declared 184,000 hectares surrounding

the Gir protected area — the natural abode of Asiatic lions — an Eco Sensitive Zone (ESZ), Gujarat.

### About the Eco-Sensitive Zones (ESZ)

- These are designated areas surrounding protected regions like national parks and wildlife sanctuaries.
- These zones act as buffers, mitigating the impact of human activities on the fragile ecosystems within the protected areas.
- The concept of ESZs was introduced to ensure that development activities do not adversely affect the ecological balance and biodiversity of these regions.

### Do You Know?

- The idea of ESZs was first proposed in 2002.
- The National Wildlife Action Plan (2002-2016) emphasised the need to protect areas outside the protected area network to prevent the isolation of biodiversity fragments.
- The Ministry of Environment, Forest and Climate Change (MoEFCC) has since been responsible for declaring and managing these zones.

### Purpose and Objectives

- The primary purpose of declaring an area as an ESZ is to create a **'shock absorber'** for the protected areas, ensuring that the ecological integrity of these regions is maintained. These include:

- Protecting the environment from degradation due to anthropogenic activities.
- Acting as a transition zone from areas of higher protection to areas with lesser protection.
- Regulating developmental activities in a sustainable manner, considering the needs and aspirations of local communities.

## KOLKATA'S TRAMS

### Context

- Recently West Bengal moves to discontinue Kolkata's Trams despite calls to revive the city's oldest and cleanest mode of transport.

### About the Kolkata's Trams

- Established in 1873, Kolkata's tram network is the oldest in Asia and one of the few remaining in the world.
- Kolkata's trams began as **horse-drawn carriages** in the late 19th century, transitioning to **electric trams** by the early 20th century.
- The trams were not just a means of commuting; they were an integral part of Kolkata's cultural and social fabric.

### Decline



- Despite their historical significance and environmental benefits, Kolkata's trams have been steadily declining.
- From 52 routes in the 1970s, the network has shrunk to just a few operational routes today.
- The reasons for this decline include urban congestion, the rise of private vehicles, and a lack of investment in tram infrastructure have all contributed to the trams' diminishing presence.

### Environmental and Social Impact

- The decline of the tram system is particularly troubling given Kolkata's severe pollution and congestion issues.
- Trams are a **zero-emission mode of transport**, making them an ideal solution for a city grappling with high levels of air pollution.
- Moreover, trams can carry a large number of passengers, reducing the need for private vehicles and thereby alleviating traffic congestion.

## INVASIVE THREAT OF KAPPAPHYCUS ALVAREZII

### Context

- India is set to expand seaweed cultivation along its coastline by promoting **Kappaphycus Alvarezii**, a known invasive species that has smothered coral reefs in the Gulf of Mannar over the past two decades.

### About the Kappaphycus Alvarezii

- It is a **red seaweed species**, originally introduced for commercial purposes,

this seaweed has **now become a threat to biodiversity**, particularly in regions like the **Gulf of Mannar and Goa**.

- India has cultivated Kappaphycus Alvarezii seaweed, either experimentally or commercially, at more than 48 sites across 9 coastal states and 1 Union Territory.
  - Many of these locations are near coral reefs.

### Commercial Value vs. Ecological Threat

- Kappaphycus Alvarezii is valued for its ability to produce carrageenan, an emulsifier used in various industries, including food, beverages, and pharmaceuticals.
- Additionally, it is used to create biostimulants that enhance crop yields.
- Despite these benefits, the seaweed's rapid growth and invasive characteristics pose severe risks to local ecosystems.

### Impact on Coral Reefs

- In the Gulf of Mannar, Kappaphycus Alvarezii has smothered and killed coral colonies.
- The **International Union for Conservation of Nature (IUCN)** lists this seaweed as **one of the world's 100 most invasive species**.
- The seaweed's ability to double its size in just 15-30 days allows it to outcompete native species and dominate the marine environment.

### Case Study: Goa

- In Goa, fishermen have reported the presence of Kappaphycus Alvarezii in

their nets, raising concerns about its potential impact on local livelihoods.

- The seaweed was introduced in Goa for trial cultivation, but it has since started growing independently, indicating its invasive potential.
- Local fisherfolk are worried about the long-term effects on native seaweed species and the overall marine ecosystem.

## MELANISTIC TIGER (BLACK TIGER) IN ODISHA

### Context

- Recently, Odisha aimed to introduce two female tigers to Similipal forests to improve genetic diversity of its melanistic tiger population.

### About

- Melanistic tigers, often referred to as black tigers, are primarily found in the Similipal Tiger Reserve.
- The state government has announced plans to establish the **world's first melanistic tiger safari**, further highlighting Odisha's commitment to wildlife conservation and tourism.

### What are Melanistic Tigers?

- Melanistic tigers are a rare genetic variant of the Bengal tiger, characterised by an excess of dark pigmentation, giving them a striking black appearance. This condition, known as **pseudo-melanism**, results in tigers with thick black stripes that merge together, covering much of their orange fur.



- These tigers are not a separate species but a unique genetic anomaly within the Bengal tiger population.

### Similipal Tiger Reserve

- It is located in the **Mayurbhanj district of Odisha**, is the only known habitat for wild melanistic tigers.
- This reserve, sprawling over 2,750 square kilometres, is a biodiversity hotspot, home to a variety of flora and fauna.
- The presence of melanistic tigers in Similipal has been confirmed through camera traps and sightings, making it a significant location for wildlife enthusiasts and researchers alike.

## Subjective Questions

1. To what extent do you believe that debt relief for climate-hit nations is a morally imperative response to the disproportionate impacts of climate change on developing countries?
2. How can Panchayats in India effectively contribute to achieving the United Nations' Sustainable Development Goals (SDGs), given their unique role in local governance and community development?
3. How ethical is it to legalise euthanasia in India, considering the country's cultural, religious, and social values?

4. How can we most effectively balance individual liberties with public health measures in future pandemic preparedness and response plans to ensure both the protection of society and the preservation of essential freedoms?

### MCQs

Q.1 Which one of the following organisations released the 'Pandemic Prevention, Preparedness, and Response Accord'?

- (a) Doctors Without Borders
- (b) World Bank
- (c) World Health Organization (WHO)
- (d) NITI Aayog

Q.2 With reference to the *Marburg disease*, consider the following:

1. It is a viral zoonotic infection that causes hemorrhagic fever and bleeding.
2. The natural reservoir of the Marburg virus is the African fruit bat.

Which of the statements given above is/are **not** correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Q.3 'Mankidia Community', sometimes appeared in the news, belongs to which of the following Indian states?

- (a) Odisha
- (b) Maharashtra

- (c) Madhya Pradesh
- (d) Jharkhand

Q.4 *Kappaphycus Alvarezii* is an invasive species, frequently appeared in the news, primarily affects the:

- (a) Cheetah
- (b) Coral Reef
- (c) Cow
- (d) Fish

Q.5 'Melanistic tigers', sometimes appeared in the news, are primarily found in?

- (a) Sariska Tiger Reserve
- (b) Tadobha Andhari Tiger Reserve
- (c) Satkoshia Tiger Reserve
- (d) Similipal Tiger Reserve

Q.6 With reference to the '*Silicosis is a form of pneumoconiosis*', consider the following statements:

1. It primarily affects workers in industries such as mining, construction, and stone cutting, where silica dust is prevalent.
2. Its symptoms are similar to those of tuberculosis (TB).

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

**Answer Keys:** \_\_\_\_\_

**1. (c) 2. (d) 3. (a) 4. (b) 5. (d) 6. (c)**