

## WEEKLY UPDATES – (17<sup>th</sup> – 23<sup>rd</sup> July)

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## ENVIRONMENT & DISASTER MANAGEMENT

### Hoolock Gibbon

**Context:** The conservation status of India's only ape was a cause for concern at a global event on gibbons held a week ago in China.

#### Key Highlights

- Gibbons, the smallest and fastest of all apes, live in tropical and subtropical forests in the south-eastern part of Asia.
- The hoolock gibbon, unique to India's northeast, is one of 20 species of gibbons on Earth.
- The estimated population of hoolock gibbons is 12,000.
- The Global Gibbon Network (GGN), which had its first meeting at Haikou in China's Hainan province from July 7-9 said,
  - Like all apes, they are extremely intelligent, with distinct personalities and strong family bonds.
  - Unfortunately, the current conservation status of gibbon species is alarming – all 20 species are at a high risk of extinction.
  - Since 1900, gibbon distribution and populations have declined dramatically, with only small populations in tropical rainforests.
  - The hoolock gibbon faces threats primarily from the felling of trees for infrastructure projects.
  - GGN was founded with a vision to safeguard and conserve a key element of Asia's unique natural heritage – the singing gibbon and their habitats, by promoting participatory conservation policies, legislations, and actions.
- American naturalist R. Harlan was the first to describe the hoolock gibbon, characterized by their vigorous vocal displays, from Assam in 1834.
- Over the decades, zoologists thought the Northeast housed two species of the ape
  - The eastern hoolock gibbon (*Hoolock leuconedys*) found in a specific region of Arunachal Pradesh.
    - It lives in certain areas of Arunachal Pradesh and Assam in India, as well as in parts of southern China and northeastern Myanmar.
  - The western hoolock gibbon (*Hoolock hoolock*) distributed elsewhere in the northeast.
    - It is found in all the states of North-East India, but its range is limited to the area between the south of the Brahmaputra river and the east of the Dibang river. Outside of India, it can be found in eastern Bangladesh and north-west Myanmar.



A study led by Hyderabad-based Centre for Cellular and Molecular Biology (CCMB) in 2021 proved through genetic analysis that there is only one species of ape in India. It debunked earlier research that the eastern hoolock gibbon was a separate species based on the color of its coat.

#### Conservation Status

- ✓ International Union for Conservation of Nature's Red List:
  - Western Hoolock Gibbon: Endangered
  - Eastern Hoolock Gibbon: Vulnerable
- ✓ Both the species are listed on **Schedule 1 of the Indian (Wildlife) Protection Act 1972.**

## Cicada Species

**Context:** A 'foreign' cicada that is commonly found in several parts of South India has assumed an Indian identity.

### Key Highlights

- The insect species has been named **Purana cheeveeda** (after its Malayalam name Cheeveedu).
  - Previously, it was mistaken for *Purana tigrina*, a species described in Malaysia in 1850.
- The Association for Advancement in Entomology has corrected the taxonomic identification error and excluded the Malaysian species from the South Indian cicada fauna.
- The researchers in Kerala **observed differences in the structure of the male genitalia and operculum**, leading to the discovery.
- The **gradual disappearance** of these cicadas, once a common sight in homesteads, could be an indicator of the **deteriorating quality of soil and vegetation**, according to their cautionary note.



*Purana cheeveeda*

### What are Cicadas?

Title	Description
<b>About</b>	<ul style="list-style-type: none"> <li>• Insects that belong to the order Hemiptera and the superfamily Cicadoidea.</li> <li>• Also called true bugs, have mouthparts used for piercing and sucking and have two pairs of wings.</li> <li>• Large eyes, transparent wings and loud calls that are produced by special organs called tymbals.</li> </ul>
<b>Habitat</b>	<ul style="list-style-type: none"> <li>• Most cicadas are canopy dwellers and are found in natural forests with large trees; found in every continent except Antarctica.</li> <li>• The generic diversity of cicadas in India and Bangladesh ranks the highest in the world, followed by China.</li> </ul>
<b>Life Cycle &amp; Dietary Pattern</b>	<ul style="list-style-type: none"> <li>• Mostly herbivorous and feed on plant sap.</li> <li>• Complex life cycles: involve long periods of underground development and short periods of adult emergence.</li> </ul>
<b>Threats</b>	<ul style="list-style-type: none"> <li>• Human development activities reduce the number of trees that cicadas depend on for feeding and reproduction.</li> <li>• Climate change may disrupt the timing and synchronization of cicada emergence.</li> <li>• Pesticides, herbicides and fungicides contaminate the soil and water and affect the health and survival of cicadas and their host plants.</li> </ul>
<b>Significance</b>	Cicadas are important for biodiversity because they provide food for many predators, pollinate flowers, aerate the soil, recycle nutrients and indicate environmental health.

## Captive-Bred Vultures

**Context:** In 2020, eight critically endangered oriental white-backed captive-bred vultures were released into the wild for the first time in India from the Jatayu Conservation Breeding Centre in Pinjore, Haryana.

- Close to three years later, five survive and two have paired and successfully nested, in the untamed habitat of the Shivalik range in the foothills of the Himalayas.
- This has received a hurrah from wildlife enthusiasts working towards protecting the vultures that have been under threat of extinction since the 1990s.

### Key Highlights

There has been no report of deaths due to veterinary non-steroidal anti-inflammatory drugs (NSAIDs). This too is a relief for ornithologists, who had over the years been worried about the uncontrolled use of these drugs on cattle, especially the illegal use of the banned diclofenac. Vultures feeding on their carcasses die as the drugs are toxic to them.

- Nesting is a very important milestone and an encouraging sign for the re-induction programme. Also, the fact that there has been no mortality is inspiring and indicates increasing vulture-safe zones.
- After the release from Pinjore, 31 oriental white-backed vultures were released in batches in West Bengal in 2021. All the birds fly every day and have started locating their own food. Our teams have been monitoring the released birds. Of the 31, as many as 29 are surviving.
- The BNHS and Royal Society for Protection of Birds (RSPB) have been managing four Jatayu conservation breeding centres across the country in partnership with the State governments of Haryana, Madhya Pradesh, West Bengal, and Assam. Through this conservation breeding programme, the BNHS-RSPB has bred more than 700 birds in captivity since 2004.
- The birds “wear” tracking devices, through which the team has found that one of the oriental white-backs released from Rajabhatkhawa in West Bengal flew into Nepal, re-entered India, and then reached Bhutan, and is now back in India. “So, this bird is moving between Nepal, Bhutan, and India.

### Soft release centres

Prompted by the success, the BNHS has already started the construction of soft release centres in Madhya Pradesh, Assam, Rajasthan, and at three tiger reserves in Maharashtra. Mr. Rithe said tiger reserves had become free from humans and livestock, and had sufficient wild prey that were free from NSAIDs. Hence the BNHS now intends to use these areas to release the captive-bred vultures. A vulture-safe zone is an area of 30,000 sq. km that is declared free from the drug diclofenac, says the IUCN.



In 1993, there was an estimated 40 million vultures in India, a BNHS study said. The population of three species — the oriental white-backed, the long-billed, and the slender-billed — has declined by over 97% since the 1990s.

- The oriental white-backed vulture’s prevalence has gone down by an astonishing 99.9%.
- All three species are classified as critically endangered by the International Union for the Conservation of Nature (IUCN), composed of both government and civil society bodies.
- The species come under Schedule 1 of the Wildlife Protection Act, 1972, meaning they enjoy the highest level of protection.



## Lightning Not a Natural Disaster, says Centre

**Context:** The number of deaths due to lightning has been increasing of late; if it joins the list of natural disasters, victims will be entitled to compensation under the State Disaster Response Fund; but an official says Centre is not in favour of it as deaths can be prevented through awareness programmes.

### Key Highlights

- India is among only five countries in the world that has an early warning system for lightning — the forecast is available from five days to up to three hours.
- The States such as Bihar and West Bengal have been demanding that lightning deaths be covered as a natural disaster. Once this is notified, the victims will be entitled to compensation from the State Disaster Response Fund (SDRF). The Centre makes 75% of the contribution to the SDRF.
- Cyclone, drought, earthquake, fire, flood, tsunami, hailstorm, landslip, avalanche, cloudburst, pest attack, frost and cold wave are now considered disasters under the SDRF.
- In the past few years, there has been a spurt in deaths due to lightning. It is possible that climate change is one of the reasons.
- There are times when people acknowledge the message and take adequate precautions, but during peak farming season, sometimes people tend to ignore the warnings.
- National Crime Records Bureau (NCRB) data show that 2,880 people died in lightning strikes in 2021.
  - The deaths made up 40% of all accidental deaths caused by “forces of nature”.
  - While 2,862 people died in 2020, the number stood at 2,876 in 2019.
- A presentation made by the Director-General, India Meteorological Department (IMD) at the National Platform for Disaster Risk Reduction Conference (NPDRR) in March said the frequency of lightning was the highest in northeastern States and in West Bengal, Sikkim, Jharkhand, Odisha and Bihar, but the number of deaths is higher in the central Indian States of Madhya Pradesh, Maharashtra, Chhattisgarh and Odisha.

## INTERNATIONAL RELATIONS

### India & Mongolia Exercise: Nomadic Elephant-23

**Context:** Indian and Mongolian troops will take part in the 15th edition of a bilateral military exercise in Ulaanbaatar from July 17 to 31 aimed at exchanging best practices and developing interoperability, the Ministry of Defence said.

### Key Highlights

- An Indian Army contingent comprising 43 personnel reached Ulaanbaatar on an Indian Air Force C-17 aircraft to take part in the exercise, “Nomadic Elephant-23”.
- “The **aim** of this exercise is to build positive military relations, bonhomie, camaraderie and friendship between the two Armies.
- The primary **theme** of the exercise will focus on counter-terrorism operations in mountainous terrain under United Nations mandate.



- “Nomadic Elephant” is an annual training exercise that is conducted alternatively in Mongolia and India. Soldiers of the Mongolian Armed Forces Unit 084 and the Indian Army's Jammu and Kashmir Light Infantry Regiment will participate in the exercise.

## U.S. Hands Over 105 Antiquities to India

**Context:** The countries had agreed to work towards preventing illegal trafficking of cultural artefacts during Modi’s state visit to the U.S. last month and the United States handed over 105 trafficked antiquities to India.

- India and the U.S. have agreed to work for a **Cultural Property Agreement** that would help **prevent illegal trafficking of cultural artefacts** in future.
- Such an understanding would add further value to the dynamic bilateral collaboration between Homeland Security and law enforcement agencies of the two countries as “for the people of India, these were not just pieces of art but part of their living heritage and culture”.

### About Artefacts

- The 105 artefacts represent a wide geographical spread in terms of their origin in India – with 47 from eastern India, 27 from southern India, 22 from central India, six from northern India and three from western India.
- Spanning a period from 2nd-3rd century CE to 18th-19th century CE, the artefacts are made of terracotta, stone, metal and wood. Around 50 of them have religious significance.

During Mr. Modi’s 2016 visit to the U.S., 16 artefacts were handed over by the U.S. side while in 2021, the U.S. government handed over 157.

In 2022, the U.S. authorities formally handed over 307 antiquities, estimated to be worth nearly \$4 million to Indian officials.

## SCIENCE

### Webb Space Telescope Rediscovered Star-Forming Region

**Context:** NASA has released an image obtained by the James Webb Space Telescope of the Rho Ophiuchi cloud complex, the closest star-forming region to earth, as the space agency marked one year since it unveiled the telescope’s first scientific results.

- The Webb telescope was launched in 2021 and began collecting data last year.
- The Rho Ophiuchi image was an example, showing a nebula, a humongous cloud of interstellar gas and dust that serves as a nursery for new stars, located in the Milky Way galaxy, roughly 390 lightyears from earth. The nebula is only about a million years old.
- “Here, we see how new suns are forming, along with planet-forming disks appearing as small dark silhouettes. These are very similar to what we think the solar system looked like more than 4.5 billion years ago,” former Webb project scientist Klaus Pontoppidan, now a research scientist at the Jet Propulsion Laboratory, said.



The Rho Ophiuchi cloud complex as seen by the James Webb Space Telescope. AP

- “As the stars and planetary systems assemble, they blow apart the dusty cocoon from which they formed in violent outbursts, as seen in red jets ploughing through the cloud.
- The Rho Ophiuchi core is completely obscured by huge amounts of dust, so it is essentially invisible to telescopes working in visible light, like the Hubble telescope.
- Yet, Webb peers through the dust to reveal the young stars within, showing the very first stages in the life of every star,” Dr. Pontoppidan added.
- The image, obtained, shows how the jets of material emanating from young stars affect the surrounding gas and dust while lighting up molecular hydrogen. In one part of the image, a star is seen inside a glowing cave that its stellar winds carved out in space.

### James Webb Space Telescope

- Webb has revealed the existence of the earliest-known galaxies and black holes.
- It has observed large and mature but remarkably compact galaxies teeming with stars that had formed within a few hundred million years of the Big Bang event.
- The orbiting observatory was designed to be more sensitive than the Hubble space telescope. Webb looks at the universe mainly in the infrared, while Hubble has examined it primarily at optical and ultraviolet wavelengths.

## GOVERNANCE

### Ban on Export of Non-Basmati White Rice

**Context:** Centre bans export of non-basmati white rice to control price rise in India.

#### Key Highlights

- The ban was announced by the Directorate General of Foreign Trade under the Union Commerce Ministry through a notification.
- The ban is effective immediately, and exemptions will be granted only if certain conditions are met.
  - Exemptions will be given if the loading of non-basmati rice on the ship had commenced before the notification or if the shipping bill was filed and vessels had already berthed or arrived and anchored in Indian ports.
- The decision was taken to ensure sufficient availability of non-basmati white rice in the domestic market and to control the price rise.
- Non-basmati rice was previously exported under the category 'Free with export duty of 20%.'
- The retail prices of non-basmati white rice have increased by 11.5% over a year and 3% over the past month, leading to the ban.
- Last year, an export duty of 20% was imposed on non-basmati white rice to lower the price and maintain availability in the domestic market.
- Despite the imposition of the export duty, the export of this variety increased significantly in the following years.
- The increase in exports can be attributed to various factors, including high international prices, geopolitical scenarios, El Nino sentiments, and extreme climatic conditions in other rice-producing countries.

## Portal Launched to Report Violation of Ban on E-Cigarettes

**Context:** Portal launched to report violation of ban on e-cigarettes.

### Key Highlight

- E-cigarettes, despite being banned by the Union government in 2019, are still being sold on e-commerce sites, even to children below 18, according to experts in tobacco control.
- To address this issue, the Health Ministry has launched an online portal, [www.violation-reporting.in](http://www.violation-reporting.in), to facilitate the reporting of violations under the Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution, Storage, and Advertisement) Act (PECA).
- The portal **aims** to enable faster action against reported violations of the ban on e-cigarettes, as stated by the government.
- The ban on electronic cigarettes was introduced to protect the younger generation from a new form of toxic addiction, and the online portal is seen as a positive step towards strict enforcement and effective implementation of the ban.
- The Health Ministry had previously cautioned all States and Union Territories about the weak implementation of PECA, which led to the easy availability of e-cigarettes through various channels, including online, retail, convenient stores, stationery shops, and near educational institutions.
- The States were directed to review the compliance of PECA and issue necessary instructions for effective implementation through special drives and random checking.

### What is E-Cigarette?

E-cigarettes are electronic devices powered by batteries, which function by heating a liquid to produce an aerosol that users inhale and exhale. The liquid used in e-cigarettes usually consists of nicotine, propylene glycol, glycerin, flavorings, and various other chemicals.

## Up in smoke

Wednesday's move follows an advisory by the government in 2018 to all States to consider banning e-cigarettes

- e-cigarettes are brought from China and other countries and are not manufactured in India. They are also available online

- WHO too urged member countries to take appropriate steps. It does not endorse e-cigarettes as cessation aids

- 16 States & one Union Territory have already banned them. The Indian Council of Medical Research, in a recent paper, had recommended a complete ban on them



- They are marketed as being safer than conventional cigarettes but this is false. Available literature suggests that they may act as gateway products to induce non-smokers to nicotine-use

### Reason for Banning e-cigarettes

The Health ministry provided several reasons to justify the ban on e-cigarettes, including:

- Threat to country's tobacco control efforts.
- Hindrance in achieving targets under Sustainable Development Goals, National Monitoring Framework for Prevention and Control of non-communicable diseases, and National Health Policy, 2017.
- Concerns for the overall public health of youth and pregnant women.
- Addictive nature of nicotine.



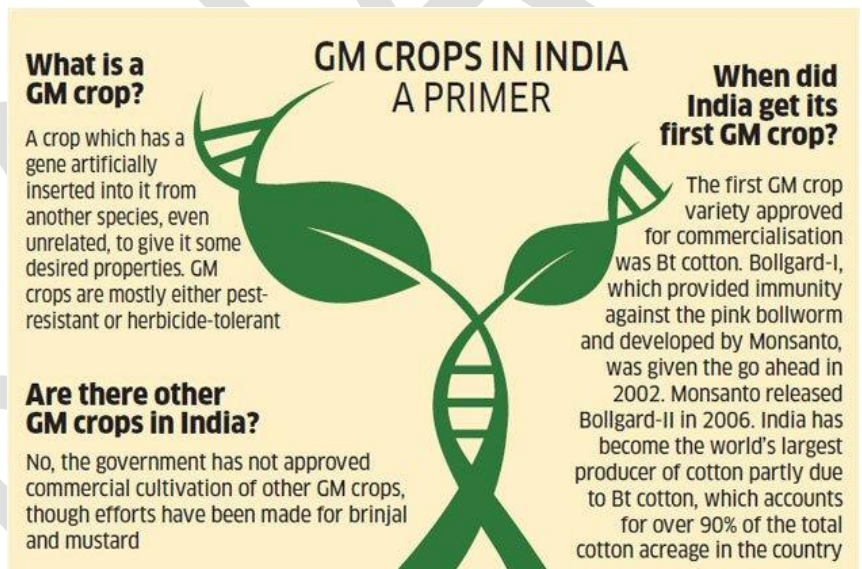
- Insufficient scientific evidence for the use of e-cigarettes as effective tobacco cessation aids.
- Safety concerns regarding flavors combined with nicotine.
- The government also cited Article 47 of the Indian Constitution to support the e-cigarette ban, which emphasizes the State's duty to improve public health and raise the standard of living of its people.
- Additionally, the Indian Council of Medical Research (ICMR) warned against the growing use of e-cigarettes, citing studies showing adverse effects such as DNA damage, carcinogenicity, toxicity at the cellular, molecular, and immunological levels, as well as respiratory, cardiovascular, neurological disorders, and negative impacts on foetal development and pregnancy.

## GM Mustard

**Context:** Rather than engaging with constitutional issues involving public health, environmental protection and agricultural livelihoods, the government is disregarding facts and logic before the Supreme Court. A determined battle by environmentalists in the Supreme Court of India against Delhi University's genetically modified (GM) herbicide-tolerant (HT) mustard is all that stands between GM food and Indian farmers and consumers.

### Key Highlights

- GM crops are quite different from conventional varieties and hybrids, such as those developed by farmers, agricultural research institutions and companies.
- Biotechnologists insert select genes at a random location in the DNA of a plant to develop a GM crop. The insertion makes a GM crop express traits that it ordinarily would not.
  - For instance, GM mustard has been altered to withstand the broad-spectrum plant-killer or herbicide glufosinate.
  - This makes it easier to develop hybrid mustard seeds for higher yields. And farmers growing GM mustard can spray the herbicide to kill all plants except the mustard.



**What is a GM crop?**  
A crop which has a gene artificially inserted into it from another species, even unrelated, to give it some desired properties. GM crops are mostly either pest-resistant or herbicide-tolerant

**Are there other GM crops in India?**  
No, the government has not approved commercial cultivation of other GM crops, though efforts have been made for brinjal and mustard

**When did India get its first GM crop?**  
The first GM crop variety approved for commercialisation was Bt cotton. Bollgard-I, which provided immunity against the pink bollworm and developed by Monsanto, was given the go ahead in 2002. Monsanto released Bollgard-II in 2006. India has become the world's largest producer of cotton partly due to Bt cotton, which accounts for over 90% of the total cotton acreage in the country

### GM crops in India, the debate

India has seen a robust debate on GM crops in the last two decades. Environmentalists, scientists, politicians, farmers, consumers and the higher judiciary have asked probing questions about the safety, efficacy and even the very necessity of GM food.

Many have been alarmed by the experience with Bt cotton, the first and only GM crop approved in the country. Long-term research suggests that Bt cotton has provided only fleeting benefits to farmers, while enormously increasing their costs of cultivation and risk. On the other hand, some seed companies have profited handsomely from the expensive GM seeds.

### Arguments for GM Crops

- can address challenges of food security
- higher yields and income
- reduced use of pesticides & herbicides thus protecting the environment
- can withstand the challenge of climate change
- India's climate specific crops can be made
- Example: the spectacular success of BT cotton

### Arguments against GM Crops

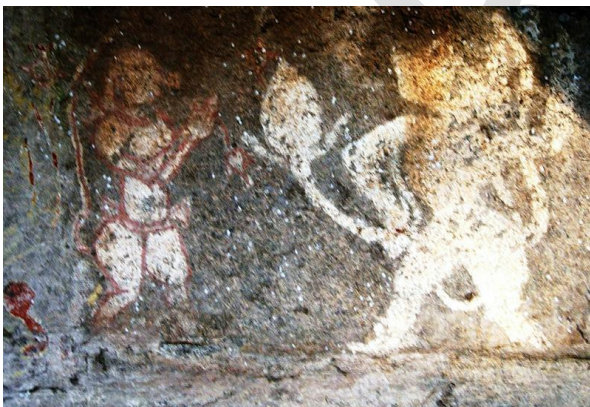
- can cause long term consequences on human health
- As they are self-replicating organisms thus can cause genetic contamination of the environment
- seed stock will also be contaminated at the molecular level
- It can make farmers susceptible to the unfair practices of MNCs
- complete consequence of the GM Crops are not known yet
- Case Study: BT cotton crop loss faced by farmers due to pest attack

## HISTORY

### Fusion of Rock Art in A.P.'s Rudragiri

**Context:** Fusion of Rock Art depicting the intense battle between the Vanara brothers — Vali and Sugriva found in A.P.'s Rudragiri.

- Rudragiri hillock, located in the village of Orvakallu, Atchampet mandal, in Guntur district of Andhra Pradesh, boasts a celebrated historical past and remarkable archaeological monuments.



- This site unveils a fascinating combination of prehistoric rock paintings from the Mesolithic period and exquisite artwork from the Kakatiya dynasty.
- Rudragiri, nestled amidst the Eastern Ghats, features five naturally formed



rock shelters at its foothills, facing westward.

- These shelters served as living quarters for people during the Mesolithic age around 5000 B.C., and they bear witness to the luminous rock paintings of that era.
- Interestingly, two natural caves at the southern end of the hillock also exhibit exceptional murals from the renowned Kakatiya kingdom.

### Artistic brilliance

- These caves showcase the artistic brilliance of the Kakatiya period. While many have suffered damage over time due to exposure to the elements, some sketches and outlines have managed to survive.
- The paintings, adorned with a variety of colours derived from white **kaolin** and different pigments, depict captivating scenes from the epic **Ramayana**. Despite the impact of nature's wrath, fragments of these paintings offer valuable insights into their creation during the 13th century A.D.
- The first cave, starting from the southern end of the hillock, presents a narrative mural portraying the intense battle between the Vanara brothers — Vali and Sugriva.
- In the middle cave, a grand sketch of Hanuman, accompanied by sacred symbols of the conch (Sankha) and the fire altar (Yagna Vedi), captures visitors' attention. Hanuman is depicted carrying the Sanjivani hill in his hand, symbolising his mission to save Lakshmana's life.
- The third cave houses the prehistoric rock paintings from the Mesolithic era. Interestingly, the Kakatiya artist chose the same rock shelter to superimpose the elegant figure of Hanuman, who is portrayed in a unique 'Anjali' posture, folding his hands in a divine offering.

### Genomic Data Throw Light on Demise of Copper Age

**Context:** An analysis of ancient human genomic data suggests that Copper Age farmers and steppe pastoralists may have interacted 1,000 years earlier than previously thought. The findings, published in Nature, may aid our understanding of the demise of the Copper Age and the expansion of pastoralist groups around 3,300 BC.

### Key Highlights

- Previous analyses of ancient genomic data have suggested that two major genetic turnover events occurred in Western Eurasia;
  - One associated with the spread of farming around 7,000-6,000 BC and
  - A second resulting from the expansion of pastoralist groups from the Eurasian steppe starting around 3,300 BC.
- The period between these two events, the Copper Age, was characterized by a new economy based on metallurgy, wheel and wagon transportation, and horse domestication. But what happened between the demise of Copper Age settlements (around 4,250 BC) and the expansion of pastoralists is not well understood.
- According to the paper, the researchers analysed genetic data from 135 ancient individuals, dating to between 5,400 and 2,400 BC, from eight sites across southeastern Europe and the northwestern Black Sea region.
- While there was genetic continuity between the Neolithic and Copper Age groups, from around 4500 BC groups from the northwestern Black Sea region carried varying amounts of ancestry from Copper Age and steppe-zone populations.
- They suggest that this finding shows that the groups had cultural contact and mixed nearly 1,000 years earlier.



- The transfer of technology between farmers and transitional hunters from different geographical zones was integral to the rise, formation and expansion of pastoralist groups around 3300 BC, the authors propose.
- A finding from our study indicates early contact and admixture between Copper Age farming groups from southeastern Europe and Eneolithic groups from the steppe zone in today's southern Ukraine, possibly starting in the 5,500 BC when settlement densities shifted further north.
- The early admixture during the Eneolithic appears to be local to the NW Black Sea region of the fourth millennium BC and did not affect the hinterland in southeastern Europe.
- The Early Bronze Age individuals from Yunatsite and Pietrele do not show traces of steppe-like ancestry but instead a resurgence of hunter-gatherers ancestry observed widely in Europe during the fourth millennium BC.

## REPORT & INDEX

### Global Report on the Food Crises (GRFC) 2023 released

**Context:** The Global Report on the Food Crises (GRFC) 2023 released recently estimated that between 691 million and 783 million people in the world suffered from hunger in 2022.

#### Key Highlights

- The Global Report on the Food Crises (GRFC) 2023 released recently estimated that between 691 million and 783 million people in the world suffered from hunger in 2022. While the two pandemic years did not record a growth in food insecurity, the data for 2022 shows levels far higher than pre-pandemic 2019.
- This year's report records the historic moments that had an impact on the assessment — a pandemic and ensuing economic crisis, a war (in Ukraine), soaring prices of food, and agricultural inputs.
- The GRFC is produced by the Food Security Information Network in support of the Global Network against Food Crises, and involves 16 partners to achieve a joint consensus-based assessment of acute food insecurity in countries.

#### What is food security?

Food security is defined (from the World Food Summit of 1996) thus: "When all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active, and healthy life". The prevalence of moderate or severe food insecurity in the population is based on the Food Insecurity Experience Scale (FIES).

#### What are the key findings?

- The Global Report starts with a qualified assertion that hunger is no longer on an alarming path upwards at the global level, but still far above pre-COVID pandemic levels, and that the world is far off track towards achieving Sustainable Development Goal 2 — Zero Hunger.
- It sets the global contexts preceding and during the year under assessment, particularly paying attention to the increasing

#### What are the key drivers of food insecurity?

The report notes the following reasons as being responsible: slowing down, thanks to lockdowns, economic downturns, and other pandemic-related disruptions in 2020 that led to job losses and reduced incomes for many people; the Ukraine war; governmental policies that may not be entirely favourable; and increasing urbanisation that drives changes through the agrifood systems. The report's comparison of food insecurity among rural, peri-urban and urban populations reveals that global food insecurity is lower in urban areas.



phenomenon of urbanisation, and its effects on food security.

- New estimates of FIES, as per the report, “confirm that for 2022, no progress was made on food insecurity at the global level. Following a sharp increase from 2019 to 2020, the global prevalence of moderate or severe food insecurity remained unchanged for the second year in a row, but remained far above pre-COVID-19-pandemic levels.”
- In 2022, an estimated 2.4 billion people did not have access to adequate food. This is still 391 million more people than in 2019. Global hunger, measured by yet another metric — the prevalence of undernourishment — remained relatively unchanged from 2021 to 2022 but is, again, far above pre-COVID-19-pandemic levels, affecting around 9.2% of the world population in 2022 compared with 7.9% in 2019, according to the report.
- Some good news is that stunting, another key metric, defined as the condition of being too short for one’s age, among children under five years of age has declined steadily, from 204.2 million in 2000 to 148.1 million in 2022.
- Simultaneously, child wasting, caused by insufficient nutrient intake or absorption, declined from 54.1 million in 2000 to 45 million in 2022. In terms of children who are overweight or obese, the study indicated a non-significant increase from 5.3% (33 million) in 2000 to 5.6 % (37 million) in 2022.
- The revised analysis presented in this year’s report shows that almost 3.2 billion people worldwide could not afford a healthy diet in 2020, with a slight improvement in 2021.
- The cost of a healthy diet increased globally by 6.7% between 2019 and 2021. It also projects that almost 600 million people will be chronically undernourished in 2030.

### **What are the solutions ahead?**

- The report helps “identify vulnerable population groups, contributing to evidence to inform decision-making and effective action through the appropriate targeting and design of policies and programmes.”
- Sound nutrition is fundamental to the achievement of the Sustainable Development Goals and must be central in government policy and supported by civil society and the private sector.
- Some of the recommendations include supporting healthier food outlets as key for enabling access to healthy diets.
- Policy incentives are necessary to encourage shops to sell greater amounts of fresh and minimally processed foods.
- Another key input is on street foods, which an estimated 2.5 billion people worldwide consume every day, thanks to the convenience and cost factor. The report calls for addressing multiple infrastructure and regulatory gaps to improve nutritional safety and quality of street food.
- The GRFC also suggests building rural infrastructure, including quality rural and feeder roads to connect remote farms and enterprises to main road networks.
- Other public investments to support linkages between (mainly small) farms and small and medium enterprises could include warehousing, cold storage, dependable electrification, access to digital tools and water supply.

It underlines several times the role of local governments as fundamental actors in leveraging multilevel and multi-stakeholder mechanisms that have proved effective in implementing essential policies for making healthy diets available and affordable for all.

## National Multi-Dimensional Poverty Index

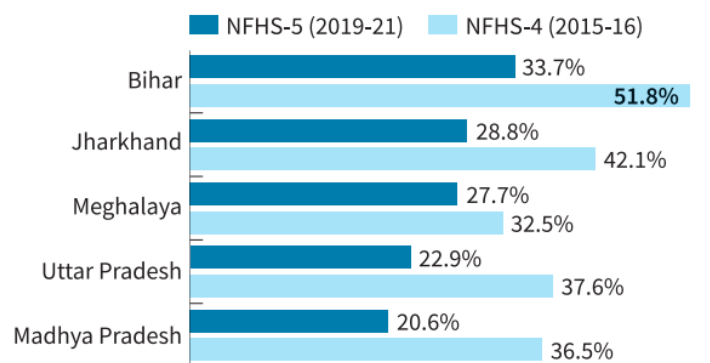
**Context:** India has registered a significant decline of 9.89 percentage points in the number of multidimensionally poor, from 24.85% in 2015-16 to 14.96% in 2019-2021, says the “National multidimensional poverty index: a progress review, 2023”, released by NITI Aayog.

### Key Highlights

- The study says nearly 13.5 crore people came out of multidimensional poverty during the period, assessed by identifying “acute deprivations in health, education and standard of living” using United Nations-approved parameters.
- The report said rural areas witnessed the fastest decline in poverty from 32.59% to 19.28%, mainly due to a decrease in number of multidimensionally poor in States such as Bihar, Uttar Pradesh, Madhya Pradesh, Odisha, and Rajasthan. Delhi, Kerala, Goa, and Tamil Nadu have the least number of people facing multidimensional poverty, along with the Union Territories. Bihar, Jharkhand, Meghalaya, Uttar Pradesh, and Madhya Pradesh top the chart where the percentage of population which is multidimensionally poor is high. Multidimensional poverty in urban areas, during the same period, saw a decrease from 8.65% to 5.27%.
  - Uttar Pradesh registered the largest decline in number of poor with 3.43 crore people escaping multidimensional poverty.
- The report has been prepared based on the latest National Family Health Survey of 2019-21 and is the second edition of the National Multidimensional Poverty Index (MPI).
- The broad methodology followed is in consonance with the global methodology. It said 12 parameters of health, education, and standard of living are examined in the report.
  - These include nutrition, child and adolescent mortality, maternal health, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing, assets, and bank accounts.
- According to the report, between 2015-16 and 2019-21, the MPI value has nearly halved from 0.117 to 0.066 and the intensity of poverty has reduced from 47% to 44%.
- With our own national MPI, India is poised to gain a deeper understanding of poverty’s complexities and forge solutions that ensure inclusivity for all.
- The district-wise estimation of the national MPI will also prioritise reaching out to the furthest behind first through focused efforts on specific indicators and dimensions.

### Poverty score

The chart shows the top-five States with the highest share of population with multidimensional poverty, according to the latest NITI Aayog report



The results and findings of the index provide valuable insights for both policymakers and the wider community, as it will help the country to achieve the target of reducing multidimensional poverty as per UN’s Sustainable Development Goals.

## WHO and UNICEF Estimates for National Immunisation Coverage

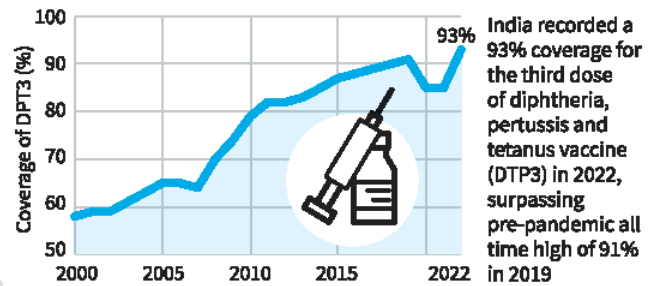
**Context:** India reports a record 93% DTP3 immunisation coverage in 2022: WHO.

### Key Highlights

- The coverage rate for DTP3, the third dose of diphtheria, pertussis and tetanus vaccines, in India rose to an all-time of 93% in 2022, surpassing the previous pre-pandemic best of 91% recorded in 2019, and also marking a sharp increase from the 85% recorded in 2021, the World Health Organization (WHO) has said.
- The WHO and UNICEF estimates for national immunisation coverage for 2022, showed that in the WHO South-East Asia Region, the coverage rate for DTP3 recovered to the pre-pandemic level of 91%, a sharp increase from the 82% recorded in 2021.
- The region also witnessed a 6% improvement in the coverage of the measles vaccine, rising to 92% in 2022 from 86% in 2021.
- The number of zero-dose children (those that have not received even the first dose of DPT vaccine) halved to 2.3 million in 2022 from 4.6 million in 2021.
- Similarly, the number of partially vaccinated children (those that have received at least one dose of DPT vaccine but did not complete the primary series of three doses) reduced to 6.5 lakh in 2022 from 1.3 million in 2021.
- The region had the best immunisation recoveries among all the WHO regions. This can be majorly attributed to the efforts being made by India and Indonesia.
- Indonesia reported a DTP3 coverage of 85% in 2022, the same as in 2019, but rising sharply from the 67% recorded in 2021.
- Bhutan recorded 98% and the Maldives 99%, surpassing their pre-pandemic rates.
- Bangladesh with 98% and Thailand 97% demonstrated consistency in routine immunisation coverage throughout the COVID-19 pandemic and beyond, the report said.

### All-time high

A look at DTP3 coverage rate over the years, according to WHO estimate of national immunization coverage in India



## Passport Index

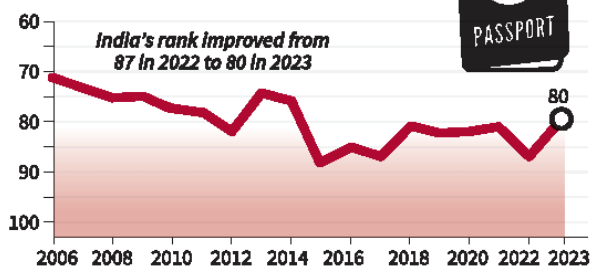
**Context:** India climbs seven points to 80 on Passport Index; Singapore at top position.

### Key Highlights

- India has climbed seven places on the Henley Passport Index, 2023, reaching the 80th rank from 87 last years, with no change in the number of countries allowing visa-free access to Indian passport holders.
- The Henley Passport Index ranks all world passports based on the number of destinations their holders can access without a prior visa. It includes 199 passports and 227 travel destinations.
- The index is published by Henley and Partners.

### Slight uptick

A look at India's ranking over the years, according to the Henley Passport Index



- In 2014, India ranked 76 with 52 countries allowing visa-free access, but its performance has been fluctuating over the years.
- Japan, previously at the top position on the index for five years, dropped to third place. Singapore replaced Japan and is now the most powerful passport in the world, offering visa-free access to 192 travel destinations out of 227.
- Germany, Italy, and Spain share the second place. Third place is occupied by Japan, Austria, Finland, France, Luxembourg, South Korea, and Sweden.
- The U.K. moved up two places to fourth place, while the U.S. dropped two places to the eighth spot, continuing its decline over the past decade.
- Henley & Partners also introduced the Henley Openness Index, which measures how many nations a country allows visa-free access to. India was ranked 94 out of 97 ranks, allowing visa-free access to only four countries.
- The bottom four countries on the Openness Index, scoring zero for not permitting visa-free access to any passport, are Afghanistan, North Korea, Papua New Guinea, and Turkmenistan.