



07 October, 2023

## Flash floods

**Context:** On October 4, 2023, heavy rain triggered a glacial lake outburst flood from South Lhonak Lake in Sikkim, India.

### Definition:

- Flash floods are sudden and rapid flooding events that occur within a short period of time.
- They are highly localized but can cause significant damage due to their suddenness.

### Causes of Flash Floods in India:

- Excessive or continuous rainfall over a short span, often less than 6 hours.
- Concentration of approximately 75% of total rainfall in India during the monsoon season (June to September).
- Cloudbursts and thunderstorms, especially in hilly regions.
- Overflowing glacial lakes in Himalayan states due to melting glaciers.
- Depression and cyclonic storms in coastal areas, such as Orissa, West Bengal, Andhra Pradesh, Karnataka, and Tamil Nadu.
- Flash floods may also result from factors like dam overflows, breaches in embankments, and wildfires.
- Climate change and global warming have increased the frequency and intensity of these events.

### Dangers and Impact:

- Flash floods often trigger landslides, adding to the devastation.
- Landslides are common in mountainous terrains with specific soil, rock, geology, and slope conditions.
- Flash floods are especially dangerous due to their sudden onset and the potential for rapid water accumulation in low-lying areas.
- Vulnerable areas include riverbeds, canyons, and urban regions with poor drainage systems.

### India's Vulnerability:

- India is among the worst flood-affected countries globally, second only to Bangladesh.
- Approximately 40 million hectares of land in India are susceptible to floods annually, according to the National Flood Commission.
- India accounts for a significant portion of global flood-related fatalities.
- Flash floods have been observed in major cities like Chennai and Mumbai.

### Regional Factors:

- Cloudbursts are a common cause of flash floods in Himalayan states and the Western Ghats of Maharashtra and Kerala.
- Himalayan states face additional challenges from overflowing glacial lakes formed due to glacier melt.
- Flash floods can also be triggered by various factors in different regions, including depression and cyclonic storms in coastal areas and breaches in embankments in states like Assam, Bihar, Uttar Pradesh, Orissa, and Andhra Pradesh.

## The State of the World's Amphibians, 2023

**Context:** Based on the second global amphibian assessment (GAA2), a recent study identifies climate change as the greatest threat to amphibian life.

- A recent study, titled 'Ongoing declines for the world's amphibians in the face of emerging threats,' published in Nature on October 4, analyzed two decades of global data.
- The study, part of the second global amphibian assessment, involved over 1,000 experts and evaluated over 8,000 amphibian species, including 2,286 for the first time.
- Shockingly, the data revealed that 40% of amphibian species are threatened with extinction, and these findings will be included in the IUCN Red List of Threatened Species.
- Between 2004 and 2022, more than 300 amphibian species moved closer to extinction, with climate change being the primary threat for 39% of them.
- The Global Amphibian Assessment (GAA), initiated in 2015 by the Amphibian Red List Authority, assesses all amphibian species for the IUCN Red List of Threatened Species.

### Findings

- Over 300 amphibian species moved closer to extinction from 2004 to 2022.



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- 2 out of every 5 amphibian species are threatened with extinction.
- Salamanders are the most threatened group, with 3 out of 5 species at risk.
- Globally, 41% of amphibian species are threatened with extinction.
- Main threats include habitat loss, climate change, disease, fire, invasive species, and over-exploitation.
- The Neotropical realm is the most threatened biogeographic region.
- Amphibians struggle to escape climate change-induced extreme weather events due to limited mobility.
- Some areas show signs of recovery, especially when critical habitat is protected.

## Amphibians

- Amphibians are vertebrates belonging to the class Amphibia, characterized by four limbs and ectothermic metabolism.
- All living amphibians are classified under the group Lissamphibia.
- They inhabit a diverse range of ecosystems, including terrestrial, fossorial, arboreal, and freshwater aquatic environments.
- Amphibians typically begin their life cycle as aquatic larvae, but some species have adapted to bypass this stage.
- Young amphibians undergo metamorphosis from larval forms with gills to adult forms with lungs.
- Their skin serves as a secondary respiratory surface, and some small salamanders and frogs lack lungs entirely, relying solely on their skin for respiration.
- Unlike reptiles, amphibians require water bodies for breeding due to their complex reproductive needs and permeable skin.
- Amphibians are often used as ecological indicators, and there has been a significant decline in amphibian populations worldwide in recent decades.
- The earliest amphibians evolved during the Devonian period from sarcopterygian fish, eventually adapting to terrestrial life.
- They thrived during the Carboniferous and Permian periods but were later supplanted by reptiles and other vertebrates.
- Modern amphibians, part of the Lissamphibia group, likely originated from temnospondyls during the Permian period, around 250 million years ago.
- The three existing orders of amphibians are Anura (frogs), Urodela (salamanders), and Apoda (caecilians).
- Approximately 8,000 amphibian species are known, with nearly 90% being frogs.
- The smallest amphibian and vertebrate are the New Guinea frogs (*Paedophryne amauensis*), measuring just 7.7 mm (0.30 in) in length.
- The largest living amphibian is the South China giant salamander (*Andrias sligoi*) at 1.8 m (5 ft 11 in), but prehistoric temnospondyls like *Mastodonsaurus* could reach up to 6 m (20 ft) in length.
- The study of amphibians is known as batrachology, while the study of both reptiles and amphibians is called herpetology.

## Classification

Apoda (Caecilia)	Urodela (Caudata)	Anura (Salientia)
Limbless organisms with scales on their body Eyes often covered Chemoreceptive tentacles on the head Possess venom glands Secrete mucus to reduce water loss  Examples: Caecilians	Have tails Elongated bodies with four equally sized limbs Smooth skin with poison glands Internal fertilization Feed on insects and worms Found in leaf litter, soil, or water Some reproduce primarily in winter Little sexual dimorphism Use spermatophores for internal fertilization May have hidden gills Examples: Salamanders	Four limbs Front limbs adapted for jumping Fused head and trunk Tail present only in larvae, lost in adults External fertilization, eggs laid in water  Examples: Frogs and toads

## Money Bill

**Context:** The Supreme Court said on Friday it will constitute a seven-judge Bench to consider the issue of validity of passage of laws like the Aadhaar Act as Money Bill.

- The decision aims to address controversies related to Money Bills.
- The government has introduced legislation like the Aadhaar Bill and amendments to the Prevention of Money Laundering Act as Money Bills to avoid the Rajya Sabha where it lacked a majority.
- A Bench led by Chief Justice D.Y. Chandrachud has announced that all pending seven-judge Bench matters will be listed on October 12 for procedural directions.
- In November 2019, a five-judge Bench of the Supreme Court referred the issue of examining the validity of the passage of the Finance Act, 2017 as a Money Bill to a larger Bench.

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## What is Money Bill?

- **A bill is deemed a Money Bill if it addresses matters related to:**
  - Imposition, abolition, remission, alteration, or regulation of any tax.
  - Regulation of borrowing of money or giving guarantees by the Government of India.
  - Custody of the Consolidated Fund or the Contingency Fund of India, money payments into or withdrawal from such funds.
  - Appropriation of money from the Consolidated Fund of India.
  - Declaration of expenditure as charged on the Consolidated Fund of India or increasing such expenditure.
  - Receipt of money on account of the Consolidated Fund of India or the public account of India or the custody or issue of such money.
  - Any matter incidental to the above matters.
- **Procedure for Passage of a Money Bill in Parliament:**
  - Money bills can be introduced in the Lok Sabha only with the President's recommendation.
  - They are considered government bills and can only be introduced by a minister.
  - The Rajya Sabha can make recommendations but cannot reject or amend the bill.
  - The Rajya Sabha must return the bill to the Lok Sabha within 14 days with or without recommendations.
  - The Lok Sabha can accept or reject any recommendations made by the Rajya Sabha.
  - If the Lok Sabha accepts recommendations, the bill is passed in the modified form.
  - If the Lok Sabha does not accept any recommendations, the bill is deemed passed in its original form.
  - The President may give or withhold assent to a money bill but cannot return it for reconsideration.
- **Issues Related to Misuse of Money Bills:**
  - Misuse to bypass legislative scrutiny or evade Rajya Sabha's scrutiny.
  - Controversies, such as during the passage of the Aadhaar Act, regarding whether certain bills qualify as money bills.
  - Concerns about the Speaker's role in certifying bills as money bills.
  - Instances where non-financial provisions were included in money bills.

## NEWS IN BETWEEN THE LINES

### Left Wing Extremism



#### About Left Wing Extremism:

- Wing Extremism (LWE), also known as **Naxalism** or **Maoism**, is a political ideology and **armed insurgency movement**.
- It aims to bring about **radical social** and **economic change** through the overthrow of existing governments.
- In India, LWE specifically refers to **Maoist-inspired groups** operating to establish a communist state through armed struggle.
- These groups are active in regions marked by **rural poverty**, **social disparities** and limited access to government services.
- The affected areas in India are concentrated in **central** and **eastern India**, often referred to as the "**Red Corridor**."
- They advocate for the rights of **marginalized communities** and **land redistribution**.
- LWE groups engage in **armed insurgency**, **guerrilla warfare** and **attacks on security forces** and government establishments.
- They also often resort to **extortion**, **kidnapping** and recruitment of cadres, including child soldiers.

### Burevestnik Missile



#### About Burevestnik Missile:

The Burevestnik missile, meaning "**storm petrel**" in English, is a **ground-launched cruise missile** developed by **Russia**.

It holds strategic significance as it is capable of carrying a **nuclear warhead** and is **nuclear-powered**.

Russian President **Vladimir Putin** introduced the **Burevestnik** as one of **six** strategic weapons in a **2018** speech.

**NATO** (North Atlantic Treaty Organization) has designated the Burevestnik missile as '**SSC-X-9 Skyfall**.'

The Burevestnik missile boasts a remarkable range of up to **14,000 miles (22,000 km)**.

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## Sutlej Yamuna Link Canal



### What is Sutlej Yamuna Link Canal?

- The Sutlej Yamuna Link Canal (SYL) is an **ongoing canal project** intended to connect the **Sutlej** and **Yamuna** rivers.
- Its primary purpose is to transport water from **Punjab** to **Haryana**.

### Origin of the Dispute:

- The long-standing dispute over the SYL canal stems from a **disagreement** over the sharing of water from the **Ravi** and **Beas** rivers.
- The **Beas** river joins the **Sutlej** river in Punjab.
- The water-sharing dispute emerged following the reorganization of Punjab in **1966**, which led to the creation of the state of **Haryana** from **Punjab**.

### Historical Water Allocations:

- Prior to the reorganization in **1955**, the Centre allocated **8 MAF (million acre feet)** of **Ravi** and **Beas** water to undivided **Punjab**, along with allocations to other states.
- In **1976**, the **Punjab Reorganisation Act** led to fresh allocations, providing **3.5 MAF** to Haryana.
- In **1981**, water flowing from Beas and Ravi was estimated to be **17.17 MAF**.

## Yak Churpi



Recently, the **Yak Churpi** has been granted the prestigious **Geographical Indication (GI)** tag.

### About the Yak Churpi:

- Yak Churpi is a distinctive **dairy product made** from the milk of native yaks in **Arunachal Pradesh**.
- It originates from the indigenous **Arunachali yak breed** and is reared by **Brokpas**, tribal yak pastoralists.
- Primarily found in **West Kameng** and **Tawang** districts of Arunachal Pradesh.
- **Rich in protein**, Yak Churpi is a vital dietary staple for tribal communities in cold, **mountainous regions**.
- It is used in various dishes, including **vegetable** and **meat curries** and often consumed with **rice**.

## Extinction of Amphibian



### About:

- Amphibians are a class of **cold-blooded vertebrate animals** known for their unique life cycle that involves both aquatic and terrestrial stages.
- Climate change is now the primary threat to **39%** of amphibian species, compared to just **1%** between **1980** and **2004**.
- A study analyzed **8,000+** amphibian species, including **2,286** new additions to the **IUCN Red List**.
- Amphibians are highly vulnerable, with **40.7%** globally **threatened**, especially **salamanders**.
- Diseases, habitat loss, and climate change are emerging threats to amphibians, affecting **frogs**, **caecilians** and **salamanders**.
- Between **1980** and **2004**, diseases and habitat loss accounted for **91%** of status deteriorations.
- High concentrations of threatened amphibians are found in various regions, including **India's Western Ghats**.

**Major Threats:** **Agriculture** (77%), **timber/plant harvesting** (53%), and **infrastructure** development (40%) are major threats.

**Climate Change Impact:** Climate change and diseases impacted **29%** of amphibian species between **2004** and **2022**.

## Protein Binders



Recently, Food Safety and Standards Authority of India (FSSAI) has banned the use of protein binders and additives in dairy products.

### About:

- The Food Safety and Standards Authority of India (FSSAI) has clarified that the addition of **protein binders** or any **other additives** in dairy products is not permitted.
- Protein binders are **biological research** reagents used to bind to specific target proteins, enabling the creation of various new food products.
- Protein binding can either enhance or detract from the performance of **food products**, depending on their intended use.

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	<ul style="list-style-type: none"> <li>➤ Protein binding is known to influence the <b>digestibility</b> of the <b>protein-bound compounds</b>, potentially affecting the biological and nutritive value of milk protein.</li> <li>➤ Milk protein is recognized as an excellent source of essential <b>amino acids</b>.</li> <li>➤ It is easily digestible and <b>lacks anti-nutritional</b> factors commonly found in many plant-based proteins.</li> </ul>
<p><b>Place in News</b></p> <p><b>Armenia</b></p>	<p>Recently, more than 100,000 ethnic Armenians, constituting nearly the entire population of the disputed Nagorno-Karabakh region, have fled to neighboring Armenia within the past ten days.</p> <p><b>Armenia: (Capital: Yerevan)</b></p> <p><b>Location:</b> Armenia is a <b>landlocked country</b> situated in the <b>South Caucasus region</b>, bordering <b>Turkey, Georgia, Azerbaijan and Iran</b>.</p> <p><b>Geography Features:</b></p> <ul style="list-style-type: none"> <li>➤ <b>High Elevations:</b> It boasts high elevations, with <b>Mount Aragats</b> as the highest point at <b>4,090 meters</b>.</li> <li>➤ <b>Mount Ararat:</b> Mount Ararat, although now in <b>Turkey</b>, holds cultural significance and was historically part of Armenia.</li> <li>➤ <b>Mountain Dominance:</b> Over 85% of Armenia's land is mountainous, resembling Switzerland and Nepal.</li> </ul> 
<p><b>Personality in News</b></p> <p><b>Narges Mohammadi</b></p>	<p><b>Narges Mohammadi</b></p> <p>Born in <b>1972</b>, Mohammadi comes from a family with a history of political activism, dating back to the <b>Iranian Revolution in 1979</b>.</p> <p><b>Contributions:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Advocacy for Women's Rights:</b> She tirelessly advocates for <b>women's rights</b> and human rights in <b>Iran</b>.</li> <li>➤ <b>Freedom and Equality:</b> Her work aims to promote <b>freedom</b> of expression and <b>political freedoms</b> while challenging authoritarianism.</li> <li>➤ <b>Literary Impact:</b> Mohammadi's book "<b>White Torture</b>" sheds light on human rights abuses, particularly in solitary confinement.</li> </ul> <p><b>Awards and Honors:</b></p> <ul style="list-style-type: none"> <li>➤ Narges Mohammadi was awarded the <b>Nobel Peace Prize in 2023</b> for her exceptional dedication to advocating women's rights, human rights and freedom in Iran.</li> <li>➤ She is associated with the Defenders of <b>Human Rights Center</b> in Tehran, founded by <b>Shirin Ebadi</b>, another Nobel Peace Prize laureate, showcasing her commitment to human rights.</li> </ul> 

## POINTS TO PONDER

- ❖ **Which Indo-Aryan language has been recently, listed as an endangered language by the UNESCO?** -'Vaagri' spoken by Hakki Pikkis tribal community
- ❖ **Under which international convention was Kolleru Lake designated as a wetland of international importance?** -The Ramsar Convention, in November 2002
- ❖ **Who has been recently, awarded the Nobel Prize for Literature in 2023?** -Norwegian author Jon Olav Fosse
- ❖ **Who does India support for the peaceful resolution of the Nagorno-Karabakh conflict?** - OSCE (Conference on Security and Cooperation in Europe) Minsk Group
- ❖ **When and where did India launch CDRI (Coalition for Disaster Resilient Infrastructure)?** - at the UN Climate Action Summit in 2019

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