



## **DAILY CURRENT AFFAIRS 26-01-2024**

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## **Soda lake**

**Syllabus: GS-1; Geography**

### **Context**

- *Scientists have discovered a lake that could be a good match for Darwin's "warm little ponds" where life got started on the primordial Earth.*



### **More to know**

- *A team of scientists from the University of Washington made the discovery when they found a shallow "soda lake" in western Canada that seems to have the chemistry and conditions that a small body of water would have needed to facilitate the spontaneous synthesis of complex molecules that led to the emergence life on Earth around 4 billion years ago.*
- *Soda lakes like the one in this research focuses on are small bodies of water containing high levels of dissolved carbonates and sodium, similar to having a large amount of baking soda dumped into them. In this case, though, the high levels of dissolved sodium and carbonate are caused by reactions between water and volcanic rocks.*

### Significance of the findings

- *The findings could help solve a long-standing problem in **explaining how life on Earth emerged** and could also be applied to other planets in the solar system, like Mars and Venus.*

### More to know

- *A soda lake, also known as an **alkaline lake**, is a lake with a pH level between 9 and 12. Soda lakes are saline and alkaline ecosystems that are thought to have existed since the beginning of geological records.*
- *Soda lakes get their name from the high levels of dissolved **sodium and carbonate**, similar to dissolved baking soda.*
- *This occurs from the reactions between **water and volcanic rocks beneath**.*
- *Soda lakes can also contain a high concentration of sodium chloride and other salts, making them saline or hypersaline lakes.*
- *Soda lakes support the growth of ecologically and economically important microorganisms due to their unique geochemistry.*

## D K Basu judgement

**Syllabus: GS-2: Indian Polity – Judiciary.**

### Context:

- *The Supreme Court on Tuesday orally observed the 2022 incident of four Gujarat Police officers publicly flogging Muslim men after tying them to a pole in Kheda district for allegedly disrupting a garba event amounted to an “atrocious”.*

### About D. K. Basu Judgement:

- *The D.K. Basu v. State of West Bengal judgement is a landmark case in Indian jurisprudence, setting forth crucial safeguards against custodial violence and upholding the fundamental right to life and liberty enshrined in Article 21 of the Indian Constitution.*

### Background:

- *In 1996, the Supreme Court of India took up a petition filed by Dr. D.K. Basu, a human rights activist, highlighting the alarming prevalence of torture and deaths in police custody. The Court, recognizing the gravity of the situation, aimed to establish guidelines for law enforcement agencies to prevent such violations.*

### Judgement:

*The Court delivered a historic verdict, laying down a set of 11 crucial guidelines to be followed in all cases of arrest and detention:*

- **Information to arrested person:** *The arrested person must be informed of the grounds for arrest and the details of the case against them, in a language they understand.*
- **Communication to relatives/friends:** *The arrested person has the right to inform a relative or friend about their arrest, preferably within 24 hours.*
- **Medical examination:** *The arrested person must undergo a medical examination by a qualified doctor within 24 hours of arrest, and every 48 hours thereafter. This helps document any pre-existing injuries and prevent custodial torture.*
- **Memo of arrest:** *A memo of arrest must be prepared and signed by both the arresting officer and the arrested person, specifying the time and place of arrest.*
- **Production before Magistrate:** *The arrested person must be produced before a Magistrate within 24 hours of arrest, excluding the time for journey. This ensures judicial oversight and prevents prolonged illegal detention.*
- **Legal aid:** *The arrested person has the right to consult with a lawyer of their choice at any stage of detention.*
- **Rights during interrogation:** *During interrogation, the arrested person must be informed of their right to remain silent and not to confess guilt.*
- **Protection from torture:** *Torture of any kind is strictly prohibited. Any complaint of torture must be promptly investigated and appropriate action taken.*
- **Parade before Identification:** *An arrested person cannot be paraded before an identification witness without the order of a Magistrate.*
- **Maintenance of Register:** *Police stations must maintain a register of all arrests, with details of the arrested person and the reasons for arrest.*
- **Judicial oversight:** *These guidelines must be brought to the notice of all police officers and magistrates.*

### Impact:

- *The guidelines have been incorporated into the Code of Criminal Procedure (CrPC) and serve as a vital safeguard against custodial violence.*
- *While challenges remain in their effective implementation, the judgement continues to be a beacon of hope for upholding fundamental rights and protecting individuals from the abuse of power.*

### Significance:

- *The D.K. Basu judgement stands as a testament to the Indian judiciary's commitment to human rights and the rule of law.*

- *It has not only strengthened the legal framework for protecting individuals from custodial violence but also empowered citizens to assert their rights and demand accountability from law enforcement agencies.*
- *The case continues to inspire ongoing efforts to promote police reforms and ensure that the right to life and liberty is respected within the criminal justice system.*

## **Report by State Bank of India**

**Syllabus: GS-3: Indian Economy – Inequality.**

**Context:**

- *Recent State Bank of India (SBI) report shows a significant decrease in income inequality in India over the last decade.*

**Major findings:**

- *The Gini coefficient, a measure of inequality, dropped from 0.472 in 2014-15 to 0.402 in 2022-23, **indicating a nearly 15% reduction in inequality.***
- *However, the analysis is based on taxpayer data, and around 80% of income-earners, as per the 2022-23 Periodic Labour Force Survey, earn less than the minimum taxable amount of ₹2.5 lakh per annum.*
- *The study uses data from the 2017-18 and 2022-23 rounds of the Periodic Labour Force Survey to analyze changes in income inequality among all income earners in India.*
- *While the **overall reduction in the Gini coefficient** is supported by the SBI report, there are nuances.*
- *The **income growth of the top 10%** has outpaced the bottom 30%, and a polarization in incomes is observed, particularly among self-employed workers.*

**About Gini Co-efficient:**

<b>Point</b>	<b>Description</b>
<b>Definition</b>	<i>The Gini coefficient measures economic inequality, indicating the deviation of income or wealth distribution from perfect equality.</i>
<b>Range</b>	<i>Ranging from 0 to 1, with 0 representing perfect equality and 1 representing perfect inequality.</i>
<b>Calculation</b>	<i>Calculated by plotting the Lorenz curve and measuring the area between this curve and the line of perfect equality. Expressed as a ratio.</i>
<b>Interpretation</b>	<i>Higher values (e.g., 0.6 or more) indicate significant inequality, while</i>



Point	Description
	<i>lower values (e.g., 0.4) suggest a more equal distribution.</i>
<b>Application</b>	<i>Widely used to assess and compare income or wealth inequality globally. Helps inform policymaking and address inequality issues.</i>

## **Simlipal Tiger Reserve**

**Syllabus: GS-3; Biodiversity**

### **Context**

- *Odisha to establish a **melanistic tiger safari** – a first of its kind in the world*
- *The Similipal Tiger Reserve is the only home for melanistic tigers in wild in the world, says State Forest and Environment department.*



### **About**

- *Simlipal is a tiger reserve in the **Mayurbhanj district** in the Indian state of Odisha.*

- *It is part of the Mayurbhanj Elephant Reserve, which includes three protected areas— Simlipal Tiger Reserve, Hadgarh Wildlife Sanctuary and Kuldiha Wildlife Sanctuary with 272.75 km<sup>2</sup>.*
- *Simlipal National Park derives its name from the abundance of **red silk cotton trees growing in the area.***
- *The park is home to Bengal tiger, Asian elephant, gaur, and chausingha.*
- *This protected area is part of the **UNESCO World Network of Biosphere Reserves since 2009.***
- *Simlipal Elephant Reserve is an ecosystem complete with forest vegetation (mainly sal trees), fauna and the adjoining **Ho / Santhal tribal settlements.***
- *It lies in the Eastern Highlands **moist deciduous forests** ecoregion, with **tropical moist broadleaf forest and tropical moist deciduous forests with dry deciduous hill forest** and high level Sal forests.*
- ***The grasslands and the savannas** provide grazing grounds for the herbivores and hiding places to the carnivores.*

### Know more

#### Melanistic tigers

- *Melanistic tigers, also known as **black tigers**, are a rare color variant of the Bengal tiger.*
- *They are found only in Odisha's Simlipal Tiger Reserve, and are known for their thick, dark stripes that are more prominent than those of the Royal Bengal Tiger.*
- *Melanistic tigers are extremely rare and their population is declining due to habitat loss and poaching.*
- *A 2021 study found that the dark coloration and patterning of these tigers is caused by a single mutation in the **Transmembrane Aminopeptidase Q (Taqpep) gene.***

## Padma Awards

### Syllabus: GS-4: Learnings from the life of unsung heroes (value addition).

#### Context:

- *For the year 2024, the President has approved conferment of 132 Padma Awards including 2 duo cases.*
- *Two people from **Karnataka** — **Somanna, a tribal rights activist** from Mysuru district, and **Prema Dhanraj, a plastic surgeon** who treats burn victims from*

*Bengaluru — are on the list of Padma awardees announced on the eve of Republic Day.*

### **Dr. Prema Dhanraj's Background:**

- *Survived a stove burst at the age of eight with 50% burns.*
- *Underwent 14 surgeries at Christian Medical College, Vellore.*
- *Became a Surgeon and Head of Department at the same hospital.*
- *Completed MD in Plastic and Reconstructive Surgery from Christian Medical College, Ludhiana.*
- *Served in Rajarajeshwari Medical College, Bengaluru, and as a visiting professor in Texas College, America.*

### **Agni Raksha NGO:**

- *Founded by **Dr. Dhanraj and her sister Chitra** in 1999.*
- *Provides medical treatment and holistic rehabilitation for burn victims.*
- *Offered **free surgery to 25,000** burn victims.*
- *Established Ethiopia's first burns unit and educated doctors in Kenya, Tanzania, Norway, and Ethiopia.*

### **Recognition and Reaction:**

- *Dr. Dhanraj expressed happiness at being chosen for the Padma award.*
- *Worked quietly without expecting recognition.*
- *Not aware of who nominated her for the award.*

### **Somanna's Background:**

- *Belongs to the **Jenu Kuruba** tribe from Motta haadi near H.D. Kote in Mysuru district.*
- *Participated in various struggles for the **upliftment of the tribal community.***

### **Struggles and Activism:**

- *Fought against the **Taj resort at Nagarahole** in the 1990s.*
- *Engaged in the '**enter forest**' agitation in 1994.*
- *Advocated for tribal rights and implementation of the **forest rights act (2006).***
- *Acted in the **Kannada movie "Kanneri"** depicting tribal struggles.*
- *District president of **Jilla BudakattuKrishikara Sangha** for a few years.*

### **Agriculturist by profession.**

- *Won the '**People's Rajyothsava**' in 2016 after his name was initially missing from the official list.*

### **Padma Awards: A Brief Overview**



**Definition:**

- *Padma Awards, among the **highest civilian honors** in India, are announced annually on **Republic Day alongside the Bharat Ratna.***

**Objective:**

- *Recognize outstanding achievements **in various fields with a significant element of public service.***

**Limitation:**

- *The total number of awards in a year (excluding posthumous awards and those for NRI/foreigners/OCIs) **is capped at 120.***
- *The award is **not a title and cannot be used as a prefix or suffix** to the awardees' name.*

**Categories:**

- **Padma Vibhushan:** *Awarded for exceptional and distinguished service.*
- **Padma Bhushan:** *Recognizes distinguished service of a high order.*
- **Padma Shri:** *Conferred for distinguished service.*

**Eligibility:**

- *All individuals, irrespective of race, occupation, position, or gender, are eligible.*
- *Government servants, except doctors and scientists, **are generally ineligible.***
- *Posthumous awards are not typical but may be considered in highly deserving cases.*
- *A higher Padma award can be given after a minimum of five years since the last one, with exceptions in deserving cases.*

**Nomination Process:**

- *Nominations are reviewed by the **Padma Awards Committee, led by the Cabinet Secretary** and comprising the Home Secretary, Secretary to the President, and four to six eminent members.*
- *The Committee's recommendations are then submitted to the **Prime Minister and the President of India for approval.***

**Historical Context:**

- *Instituted in 1954, the Padma Awards were initially two civilian awards, Bharat Ratna and Padma Vibhushan.*
- *The Padma Vibhushan classes (Pahela Varg, Dusra Varg, Tisra Varg) were renamed Padma Vibhushan, Padma Bhushan, and Padma Shri in 1955.*

