



## Reforming Death Penalty

**For Prelims:** Important Cases Related to Death Penalty, Provisions for Death Penalty, Article 21.

**For Mains:** Judiciary, Government Policies & Interventions, Issues Arising Out of Design & Implementation of Policies, Death penalty and Arguments Related to it.

### Why in News?

Recently, a Bench of [Supreme Court \(SC\)](#) has agreed to **comprehensively examine procedures in death penalty cases** to ensure that judges who have to choose between life imprisonment and the death sentence have comprehensive sentencing information.

- Earlier, the SC had **raised concerns in the process of assessments of mitigating information** in death penalty cases.
- The court is undertaking an exercise to reform the procedures by which information necessary in a death penalty case is brought before courts. In doing so, the **Supreme Court is acknowledging concerns with the manner in which death penalty sentencing is being carried out.**
  - While the death penalty has been held to be constitutional, **the manner in which it has been administered has triggered accusations of unfairness and arbitrariness.**

### What is a Death Penalty?

- **Capital punishment**, also called the death penalty, is **the execution of an offender sentenced to death after conviction by a court of law of a criminal offence.**
- It is the highest penalty awardable to an accused. Generally, it is awarded in extremely severe cases of murder, rapes, treason etc.
- The death penalty is seen as the most suitable punishment and effective deterrent for the worst crimes.
- Those who oppose it, however, see it as inhumane. Thus, the morality of the death penalty is debatable and many criminologists and socialists all across the globe, have been long demanding abolition of the death penalty.

### How are judges supposed to choose between life and death sentences?

- In **May 1980**, when the Supreme Court upheld the constitutional validity of the death penalty in **Bachan Singh's case**, **a framework was developed for future judges to follow when they had to choose** between life imprisonment and the death penalty.
- At the heart of that framework was the recognition that the legislature in the Criminal Procedure Code had made it clear that **life imprisonment would be the default punishment and judges would need to give “special reasons” if they wanted to impose the death sentence.**
- Through the 1980 framework — popularly but inaccurately known as the **“rarest of rare” framework** — the Supreme Court said that judges must consider both aggravating and mitigating factors concerning the crime and the accused when deciding if the death penalty is to be imposed.
- The judgment also made it clear that **life imprisonment as a sentence would have to be “unquestionably foreclosed” before judges imposed the death sentence.**

- There was an indicative list of factors that the judgment identified as being relevant, but it was clear that it was not meant to be an exhaustive list.
- The Supreme Court has **repeatedly lamented the inconsistency in application of the Bachan Singh framework**. Similar concerns have been **expressed by the Law Commission of India (262<sup>nd</sup> Report)**.

## What is Mitigation in Capital Cases?

- A criminal trial has two stages — **the guilt stage and the sentencing stage**.
  - Sentencing happens after the accused has been found guilty of the crime; this is the stage where punishment is determined. Therefore, anything presented or said during sentencing cannot be used to reverse or change the finding of guilt.
- It is a **fundamental tenet of criminal law that sentencing must be individualized**, i.e, in the process of determining punishment, the **judge must take into account individual circumstances of the accused**.
- Mitigation, also referred to as "mitigating factors" or "mitigating evidence," is evidence (information) the defense can present in the sentencing phase of a capital trial to provide reasons why the defendant should not receive a death sentence.
- The task of collecting such is not something lawyers are trained to do — that is the reason the American Bar Association's 2003 Guidelines for the Appointment and Performance of Defence Counsel in Death Penalty recognises the role of a mitigation specialist with a clearly defined role that goes beyond what lawyers can do.
- The SC judgments in *Santa Singh* (1976) and *Mohd Mannan* (2019) have recognised the interdisciplinary nature of such an exercise, and that **it requires professionals other than lawyers to collect such information**.

## What is the Status of Death Penalty in the Indian Context?

- Prior to the [Criminal Procedure \(Amendment\) Act \(Cr PC\) of 1955](#), the death penalty was the rule and life imprisonment an exception in India.
  - Further, the courts were bound to give an explanation for awarding a lighter penalty than death for capital offences.
- After the **amendment of 1955 courts were at liberty to grant either death or life imprisonment**.
  - As per Section 354 (3) of the Cr PC, 1973 the courts are required to state reasons in writing for awarding the maximum penalty.
  - The situation has been reversed and a life sentence is the rule and death penalty an exception in capital offences.
  - Moreover, despite a global moratorium against the death penalty by the United Nation, India retains the death penalty.
  - India is of view that allowing criminals guilty of having committed intentional, cold-blooded, deliberate and brutal murders to escape with a lesser punishment will deprive the law of its effectiveness and result in travesty of justice.
- In concurrence of this, a **proposal for the scrapping of the death penalty was rejected by the Law Commission in its 35<sup>th</sup> report 1967**.
- In India as per official statistics, 720 executions have taken place in India after it became independent in the year 1947, which is a minuscule fraction of the people who were awarded death penalty by the trial courts.
  - In the majority of the cases, death was commuted to life imprisonment and some were acquitted by the higher courts.

## Way Forward

- There must be a very high degree of fairness in a system that is interested in subjecting individuals to the experience of death row, and ultimately taking lives through the instrumentality of law. With that as the starting point, the criminal justice system needs to do all it can to ensure that systems are created for procedural fairness.

- The **paths of reforming the death penalty on the one hand and abolishing it on the other, go alongside each other for a very long distance.** Every instance of engagement on reforming the death penalty throws light on the inherent unfairness of using the death penalty, especially in a system like ours.
- In India, the current position regarding death sentences is quite a balanced one. But the broad judicial discretion given to the court has resulted in an extremely uneven judgment in similar cases; this does not represent a good picture of the Indian Judiciary.
- The principle laid down in cases like Bachan Singh or Machhi Singh has to be strictly followed so that the person convicted for an offence of identical nature is awarded a punishment of an identical degree.

[Source: IE](#)

## De-notified, Nomadic and Semi-nomadic Tribes

**For Prelims:** De-notified, Nomadic and Semi-nomadic Tribes, Related commissions and committees, Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNC), Schemes for DNT

**For Mains:** Issues Related to SCs & STs, Government Policies & Interventions, State of De-notified, Nomadic and Semi-nomadic Tribes in India.

### Why in News?

Recently, the **standing committee of Parliament** has criticised the functioning of the development programme for **de-notified, nomadic and semi-nomadic tribes.**

- The committee noted that the Scheme for **economic empowerment of Denotified Tribes (DNTs) communities** has total outlays of Rs 200 crore for the period of **five years from 2021-22** and the **Department could not spend even a single rupee in 2021-22.**

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## DENOTIFIED TRIBES - MEANING

- **DE notified Tribes (DNTs)**, also known as **Vimukta Jati**, are the tribes that were originally listed as "Criminal Tribes" and "addicted to the systematic commission of non-bailable offences."
- Once a tribe became "notified" as criminal, all its members were required to register with the local magistrate, failing which they would be charged with a "crime" under the Indian Penal Code.



## Who are De-Notified, Nomadic And Semi-Nomadic Tribes?

- These are communities that are the **most vulnerable and deprived**.
- DNTs are communities that were **'notified' as being 'born criminals'** during the British regime under a series of laws starting with the **Criminal Tribes Act of 1871**.
  - These Acts were repealed by the **Independent Indian Government in 1952, and these communities were "De-Notified"**.
- A few of these communities which were listed as **de-notified were also nomadic**.
  - **Nomadic** and semi-nomadic communities are defined as **those who move from one place to another rather than living in one place all the time**.
- Historically, **Nomadic Tribes and De-notified Tribes** never had access to private land or home ownership.
- While most DNTs are spread across the **[Scheduled Castes \(SC\)](#), [Scheduled Tribes \(ST\)](#) and [Other Backward Classes \(OBC\)](#) categories, some DNTs are not covered in any of the SC, ST or OBC categories.**
- Many **commissions and committees** constituted since Independence have referred to the problems of these communities.
  - These include the **Criminal Tribes Inquiry Committee, 1947** constituted in the United Provinces (now Uttar Pradesh),
  - **Ananthasayanam Ayyangar Committee in 1949** (it was based on the report of this committee the **Criminal Tribes Act was repealed**),
  - **Kaka Kalelkar Commission** (also called **first OBC Commission**) constituted in 1953.
  - The **B P Mandal Commission** constituted in 1980 also made some recommendations on the issue.
  - The **National Commission to Review the Working of the Constitution (NCRWC), 2002** held that DNTs have been **wrongly stigmatised as crime prone and subjected to high handed treatment** as well as exploitation by the representatives of law and order and general society.
    - The NCRWC was established under the chairmanship of **Justice M N Venkatachaliah**.
- It has been estimated that **South Asia has the world's largest nomadic population**.
  - In India, roughly 10% of the population is Denotified and Nomadic.
  - While the number of Denotified Tribes is about 150, the population of Nomadic Tribes consists of about 500 different communities.

## What are the Developmental Efforts Regarding DNT?

- **Background:** A **National Commission for De-notified, Nomadic and Semi-Nomadic Tribes (NCDNT)** was constituted in 2006 by the then government.
  - It was headed by **Balkrishna Sidram Renke** and submitted its report in 2008.
  - The commission held that "It is an irony that these tribes **somehow escaped the attention of our Constitution makers**."
  - They are deprived of Constitutional support **unlike Scheduled Castes and Scheduled Tribes**".
  - The Renke commission estimated their population at **around 10.74 crores based on Census 2001**.
- **Schemes for DNT:** The Ministry of Social Justice and Empowerment is implementing the **following schemes for the welfare of the DNTs**.
  - **Dr. Ambedkar Pre-Matric and Post-Matric Scholarship for DNTs**.
    - This Centrally Sponsored Scheme was launched w.e.f. 2014-15 for the welfare of those DNT students who are not covered under SC, ST or OBC.
  - **Nanaji Deshmukh Scheme of Construction of Hostels for DNT Boys and Girls**.
    - This Centrally Sponsored Scheme launched w.e.f. 2014-15 is implemented through State Governments/ UT Administrations/ Central Universities.
  - From the year 2017-18, the scheme "**Assistance to Voluntary Organization working for the Welfare of OBCs** " has been extended for DNTs

## What is the Development and Welfare Board for De-notified, Nomadic and

## Semi-Nomadic Communities (DWBDNC)?

- A new Commission was constituted in February 2014 to prepare a **state-wise list**, which submitted its report in 2018, identified 1,262 communities as de-notified, nomadic and semi-nomadic.
  - The commission recommended the setting up of a permanent commission for these communities.
- The government set up the **Development and Welfare Board for De-notified, Nomadic and Semi-Nomadic Communities (DWBDNC)**.
- DWBDNC was established under the **Societies Registration Act, 1860** under the aegis of the Ministry of Social Justice and Empowerment for the purpose of implementing welfare programmes.
  - The DWBDNC was constituted on **21<sup>st</sup> February 2019, under the chairmanship of Bhiku Ramji Idate**.

[Source: IE](#)

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## Dispute over Sutlej Yamuna Link (SYL) Canal

**For Prelims:** Indus Water Treaty, Ravi and Beas, Article 143, Sutlej River, Yamuna River

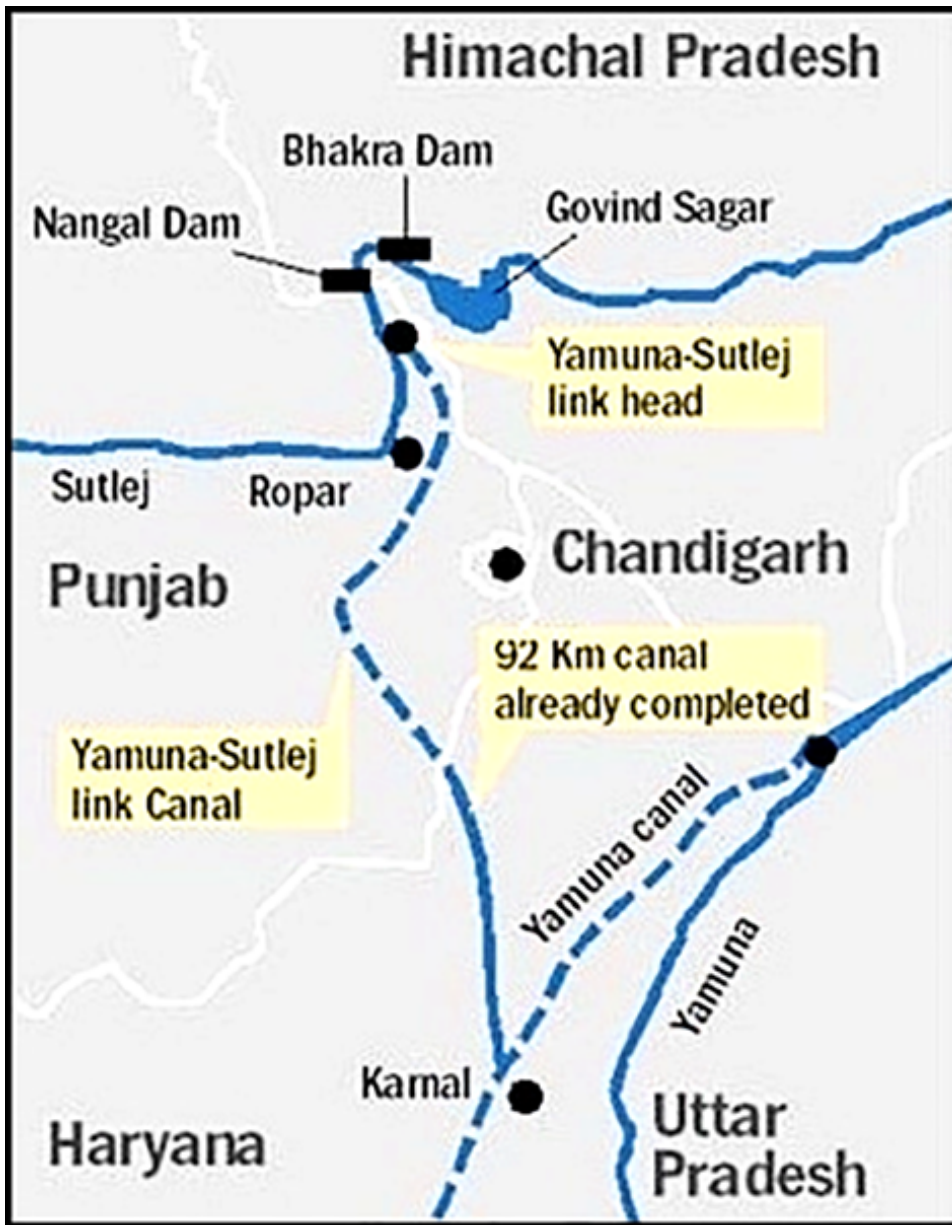
**For Mains:** Dispute over Sutlej Yamuna Link Canal (SYL) Canal, Interstate River Water Issue

### Why in News?

Recently, the Haryana Vidhan Sabha has passed a resolution seeking completion of the **Sutlej Yamuna Link (SYL) Canal**.

- The canal, once completed, will **enable sharing of the waters of the rivers Ravi and Beas** between Haryana and Punjab.
- The **Satluj Yamuna Link Canal is a proposed 214-kilometre-long canal** connecting Sutlej and Yamuna rivers.
- **Water resources are under the State List**, while the **Parliament has the power to make laws regarding inter-state rivers under the Union List**.





## What is the Background?

- **1960:** The dispute can be traced back to the [Indus Water Treaty](#) between India and Pakistan, allowing the former 'free and unrestricted use' of Ravi, Beas and Sutlej.
- **1966:** Creation of Haryana from the old (undivided) Punjab presented the problem of giving Haryana its share of river waters.
  - **For Haryana to get its share of the waters of the Sutlej and its tributary Beas,** a canal linking the Sutlej with the Yamuna was planned (SYL Canal).
  - **Punjab refused to share waters with Haryana stating it was against the riparian principle** which dictates that the water of a river belongs only to the State and country or States and countries through which the river in question flows.
- **1981:** Both states mutually **agreed for the re-allocation of water.**
- **1982:** Construction of **214-km SYL was launched in Kapoori village, Punjab.**
  - Agitations, protests and assassinations were carried out in protest creating the environment of terrorism in the state and making the issue of national security.
- **1985:**
  - Prime Minister Rajiv Gandhi and then Akali Dal chief Sant signed an accord agreeing for a new tribunal to assess the water.
  - The **Eradi Tribunal** headed by Supreme Court Judge V Balakrishna Eradi was set up to reassess availability and sharing of water.
  - In 1987, the tribunal recommended an increase in the shares of Punjab and Haryana to 5

MAF and 3.83 MAF, respectively.

- **1996:** Haryana moved the [Supreme Court \(SC\)](#) seeking directions to Punjab to complete the work on the SYL.
- **2002 and 2004:** SC directed Punjab to complete the work in its territory.
- **2004:** Punjab Assembly passed the **Punjab Termination of Agreements Act**, terminating its water-sharing agreements and thus jeopardising the construction of SYL in Punjab.
- **2016:** SC started hearings into a presidential reference ([Article 143](#)) to decide on the legality of the 2004 Act and **declared that Punjab backed out of its promise to share the waters of rivers**. Thus, the act was **termed constitutionally invalid**.
- **2020:**
  - **SC directed the Chief Ministers of both states to negotiate and settle the SYL canal issue** at the highest political level to be mediated by the Centre.
  - Punjab has asked for a tribunal for fresh time-bound assessment of the water availability.
    - Punjab holds that there has been no adjudication or scientific assessment of river waters in the state till date.
    - The **availability of Ravi-Beas water has also come down** from the estimated 17.17 MAF in 1981 to 13.38 MAF in 2013. A fresh tribunal would ascertain all this.

## What is the Argument of Punjab and Haryana?

- **Punjab:**
  - Many areas in **Punjab may go dry after 2029** and the state has **already over-exploited its groundwater for irrigation purposes** as it fills granaries of the Centre by growing wheat and paddy worth Rs 70,000 crore every year.
    - **Water in about 79% of the state's area is over-exploited** and in such a situation, the government says **sharing water with any other state is impossible**.
- **Haryana:**
  - It says that providing irrigation is tough for the state and there was a **problem of drinking water in southern parts of Haryana**, where groundwater has depleted up to 1,700 feet.
  - Haryana has been **citing its contribution to the central food pool** and arguing that **it is being denied its rightful share in the water** as assessed by a tribunal.

## What are the Key Highlights about Sutlej and Yamuna River?

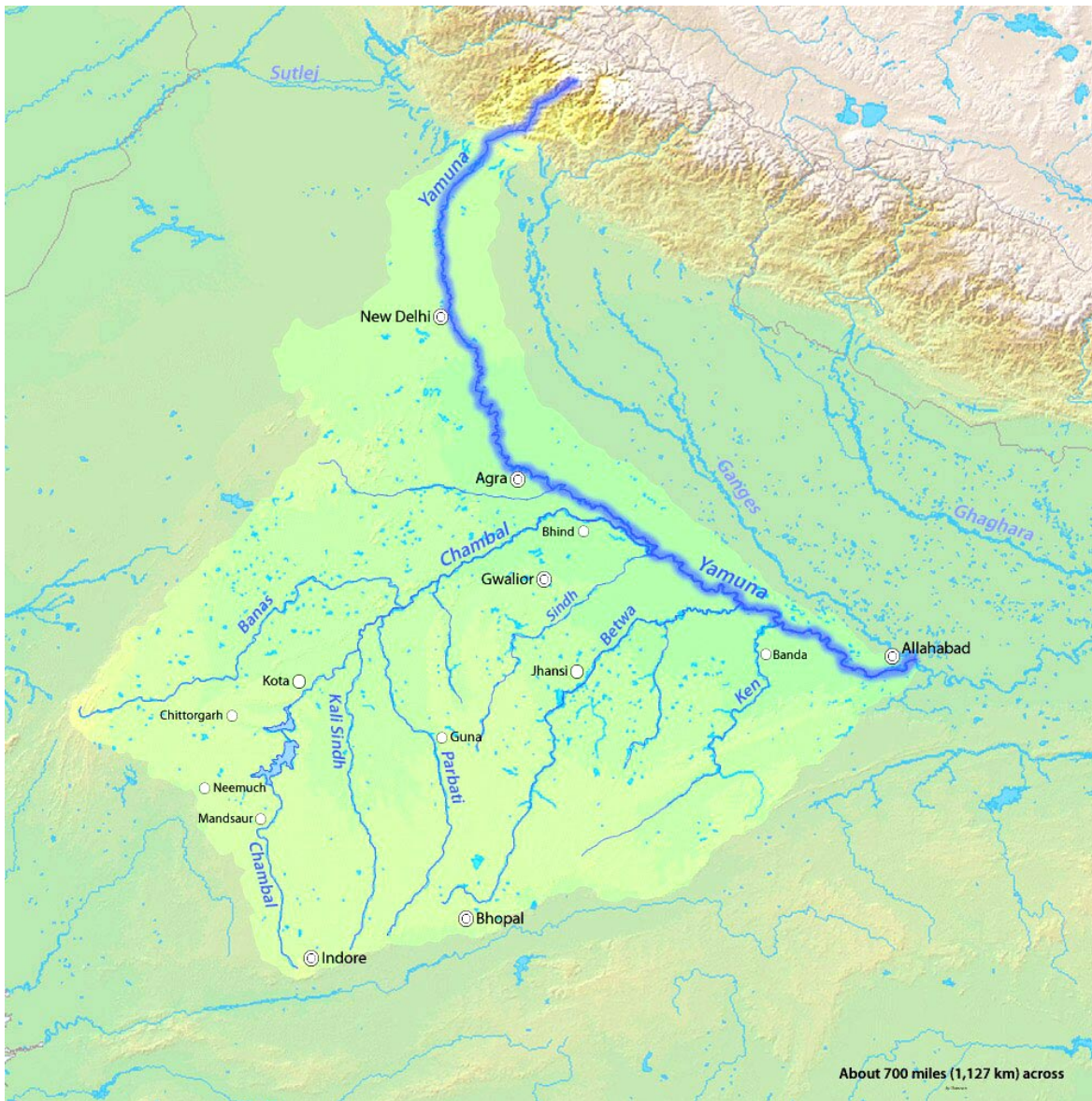
- **Sutlej:**
  - The ancient name of **Sutlej River is Zaradros (Ancient Greek) Shutudri or Shatadru (Sanskrit)**.
  - It is the **longest of the five tributaries of the Indus River** that give the Punjab (meaning "Five Rivers") its name.
    - Jhelum, Chenab, Ravi, Beas and Satluj are main tributaries of Indus.
  - It rises on the **north slope of the Himalayas** in Lake La'nga in southwestern Tibet.
    - Flowing northwestward and then west-southwestward through Himalayan gorges, it enters and crosses Himachal Pradesh before beginning its flow through the Punjab plain near Nangal.
    - Continuing southwestward in a broad channel, it receives the Beas River (and forms 65 miles of the India-Pakistan border before entering Pakistan and flowing another 220 miles to join the Chenab River west of Bahawalpur.
      - Sutlej River meets the Beas River in Harike in the Ferozpur district before entering Pakistan.
    - The combined rivers then form the Panjnad, the link between the Five Rivers and the Indus.
  - **Luhri Stage-I Hydro Electric Project** is located on River Satluj in Shimla and Kullu districts of Himachal Pradesh.



▪ **Yamuna:**

- **Source:** The river Yamuna, a **major tributary of river Ganges**, originates from the Yamunotri glacier near Bandarpooch peaks in the Mussoorie range of the lower Himalayas at an elevation of about 6387 meters above mean sea level in Uttarkashi district of Uttarakhand.
- **Basin:** It meets the Ganges at the Sangam (where **Kumbh** mela is held) in **Prayagraj, Uttar Pradesh** after flowing through **Uttarakhand**, Himachal Pradesh, Haryana and Delhi.
- **Length:** 1376 km
- **Important Dam:** Lakhwar-Vyasi Dam (Uttarakhand), Tajewala Barrage Dam (Haryana) etc.
- **Important Tributaries:** **Chambal**, Sindh, **Betwa and Ken**.





## Way Forward

- The water disputes **can be solved or balanced by having a permanent tribunal** established with appellate jurisdiction of the Supreme Court established over the tribunal's decision.
- The immediate target of any Constitutional Government **should be amendment to [Article 262](#)** (Adjudication of disputes relating to waters of inter State rivers or river valleys) **and amendment to [Inter-State Water Disputes Act](#)** and its implementation at the equal note.

## UPSC Civil Services Examination, Previous Year Questions (PYQs):

**Q. With reference to the Indus river system, of the following four rivers, three of them pour into one of them which joins the Indus directly. Among the following, which one is such a river that joins the Indus direct?**

- (a) Chenab
- (b) Jhelum
- (c) Ravi
- (d) Sutlej

**Ans: (d)**

- The Jhelum joins the Chenab near Jhang in Pakistan.
- The Ravi joins the Chenab near Sarai Sidhu.
- Satluj is joined by the Chenab in Pakistan. Thus, Satluj receives the collective drainage of the Ravi, Chenab and Jhelum rivers. It joins the Indus a few kilometres above Mithankot.

**Q. Consider the following pairs: (2014)**

**Wetlands**

**Confluence of rivers**

1. Harike Wetlands : Confluence of Beas and Satluj/Sutlej
2. Keoladeo Ghana : Confluence of Banas National Park and Chambal
3. Kolleru Lake : Confluence of Musi and Krishna

**Which of the above pairs is/are correctly matched?**

- (a) 1 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3

**Ans: (a)**

- Harike is one of the largest man-made wetlands of Northern India. It came into existence in 1952 after the construction of barrage near the confluence of rivers Satluj and Beas.
- It was accorded the wetland status in 1990 under the Ramsar Convention.
- Keoladeo National Park is situated at the confluence of the Gambhir and Banganga rivers in the Bharatpur district of Rajasthan.
- Kolleru Lake is located between Krishna and Godavari deltas. Kolleru spreads into two districts - Krishna and West Godavari.

[Source: IE](#)

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## Nipah virus Infection (NiV)

**For Prelims:** Nipah virus Infection, IgG, IgM, IgA, IgD, IgE, zoonotic virus, Ribonucleic acid virus, encephalitic syndrome

**For Mains:** Achievements of Indians in Science & Technology

### Why in News?

Recently, Scientists detected the **presence of IgG antibodies against Nipah virus infection (NiV)** in 51 bats that were captured from Karnataka, Kerala, Tamil Nadu and Puducherry.

### What is Antibody?

- Antibody, also called immunoglobulin, is a **protective protein produced by the immune system** in response to the presence of a foreign substance, called an antigen.

- A wide range of substances are **regarded by the body as antigens**, including disease-causing organisms and toxic materials.
- Antibodies recognize and attack onto antigens in order to remove them from the body.

## What are the Different Types of Antibodies?

- **IgG:**
  - It is the **main antibody in blood and it has a powerful ability to bind to bacteria** and toxins, and thus it takes on an important role in the biological defense system.
  - It is the **only isotype that can pass through the placenta**, and IgG transferred from the mother's body protects a newborn.
- **IgM:**
  - It is **constructed of five units of basic Y-shaped structures** and is mainly distributed to the blood. Produced first upon pathogen invasion by B cells, IgM has a key role in the initial immune system defense for protecting the body.
    - The B-cell, also called B-lymphocyte, is a type of white blood cell that plays a significant role in protecting your body from infection.
- **IgA:**
  - While in blood, **IgA is mainly present as monomers** (the shape of a single Y), but it forms dimers (a combination of 2 Ys) in secretions such as bowel fluid, nasal discharge, and saliva, to prevent bacterial invasion from a mucous membrane. It is also present in breast milk and protects the gastrointestinal tract of newborns from bacterial and viral infection.
- **IgD:**
  - It is **present on the surface of B cells** and it is reported to play a role in the induction of antibody production and the prevention of respiratory tract infections.
- **IgE:**
  - It is believed that **IgE was originally related to immunity reactions to parasites**. By binding to mast cells, **IgE is believed to be involved in allergies such as pollinosis**.

## What are the Key Highlights about the Nipah virus?

- **About:**
  - It is a **zoonotic virus** (it is transmitted from animals to humans).
  - The organism which causes Nipah Virus encephalitis is an RNA or **Ribonucleic acid virus** of the family Paramyxoviridae, genus Henipavirus, and is closely related to Hendra virus.
    - **Hendra virus (HeV) infection** is a rare emerging zoonosis that causes severe and often fatal disease in both infected horses and humans.
  - It **first broke out in Malaysia and Singapore** in 1998 and 1999.
  - It **first appeared in domestic pigs** and has been found among several species of domestic animals including dogs, cats, goats, horses and sheep.
- **Transmission:**
  - The disease spreads through **fruit bats** or 'flying foxes,' of the genus Pteropus, who are natural reservoir hosts of the Nipah and Hendra viruses.
  - The **virus is present in bat urine** and potentially, bat faeces, saliva, and birthing fluids.
- **Symptoms:**
  - The human infection presents as an **encephalitic syndrome** marked by fever, headache, drowsiness, disorientation, mental confusion, coma, and potentially death.
- **Prevention:**
  - Currently, there are **no vaccines for both humans and animals**. Intensive supportive care is given to humans infected by Nipah virus.

## UPSC Civil Services Examination, Previous Year Questions (PYQs)

### Q. Consider the following statements: (2017)

1. In tropical regions, Zika virus disease is transmitted by the same mosquito that transmits dengue.

2. Sexual transmission of Zika virus disease is possible.

**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

**Ans: (c)**

- Zika virus is a flavivirus which was first discovered in 1947 in monkeys and then in humans in Uganda in 1952.
- Both Zika and Dengue have similarities in terms of symptoms of fever, skin rashes, conjunctivitis, muscle and joint pain, malaise, and headache. In addition to this, the mode of transmission is also same for both the diseases, i.e., both are spread by *Aedes aegypti* and *Aedes albopictus* species of mosquitoes.
- Modes of Zika Transmission:
  - Mosquito bites
  - From mother to child during pregnancy, which can cause microcephaly and other severe fetal brain defects. Zika virus has also been found in breast milk.
  - Sexual transmission from infected partner.

**Q. H1N1 virus is sometimes mentioned in the news with reference to which one of the following diseases? (2015)**

- (a) AIDS
- (b) Bird flu
- (c) Dengue
- (d) Swine flu

**Ans: (d)**

- H1N1 virus is related to Swine Flu.
- The World Health Organization declared the flu caused by H1N1 to be a global pandemic in 2009.
- Symptoms of Swine Flu include fever, cough, sore throat, chills, weakness and body aches.

**Source: IE**

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## **Green Initiatives for Effective Plastic Waste Management**

**For Prelims:** Prakriti, National Dashboard on Elimination of Single Use Plastic, Extended Producer Responsibility Portal, Graphene, Plastic Waste and Related Initiatives.

**For Mains:** Conservation, Environmental Pollution & Degradation, Government Policies & Interventions, Plastic Waste and Related Initiatives.

**Why in News?**



Recently, the Union Minister of Environment, Forest & Climate Change (MoEFCC) launched the Awareness Mascot '**Prakriti**' & **Green Initiatives for Effective [Plastic Waste Management](#)**.

- The mascot will **spread greater awareness among masses** about small changes that can be sustainably adopted in our lifestyle for a better environment.
- Earlier in February, the Ministry of Environment, Forest, and Climate Change announced the **[Plastic Waste Management \(Amendment\) Rules, 2022](#)**.

## What are the Green Initiatives Launched?

- **National Dashboard on Elimination of [Single Use Plastic \(SUP\)](#) and Plastic Waste Management** by MoEFCC to bring all stakeholders including Central Ministries/ Departments, State/UT Governments at one place and track the progress made for elimination of SUP and effective management of plastic waste.
- **[Extended Producer Responsibility \(EPR\) Portal](#)** by **[Central Pollution Control Board {CPCB}](#)** for Plastic Packaging, improving accountability, traceability, transparency and facilitating ease of reporting compliance to EPR Obligations by Producers, Importers and Brand-owners
- **Mobile App** for Single Use Plastics Grievance Redressal by CPCB to empower citizens to check sale/usage/manufacturing of SUP in their area and tackle the plastic menace.
- **Monitoring module for Single Use Plastics (SUPs)** by CPCB for local bodies, State Pollution Control Boards (SPCBs) and CPCB, to inventorize details of SUP production/ sale & usage in commercial establishments at district level, and on-ground enforcement of ban on SUP.
- **Industrial production of [Graphene](#) from Waste Plastic** by National Institute of Health and Environment & National Research Development Corporation to promote more industries to come forward to upcycle plastic waste.

## What is Plastic Waste?

- Unlike other forms of wastes like paper, food peels, leaves etc, which are biodegradable (capable of being decomposed by bacteria or other living organisms) in nature, **plastic waste because of its non-biodegradable nature persists into the environment**, for hundreds (or even thousands) of years.
- Plastic pollution is **caused by the accumulation of plastic waste in the environment**. It can be categorised in **primary plastics**, such as cigarette butts and bottle caps, or **secondary plastics**, resulting from the degradation of the primary ones.
- Plastic has become one of the **most pressing environmental issues** that we are facing today.
  - **India** is generating about **3.5 million tonnes of plastic waste annually and the per capita plastic waste generation has almost doubled over the last five years**.
- Plastic pollution **adversely affects our ecosystems and is also linked to air pollution**.

## What are the Major Challenges to Plastic Waste Management?

- **Mismanaged Plastic Waste (plastic dumped openly)**: In the form of microplastics/microbeads when plastic enters the environment via inland waterways, wastewater outflows, and transport by wind or tides cannot all be filtered out once it enters the ocean.
  - As plastics travel with ocean currents, an island of trash called the Great Pacific Garbage Patch has been created.
- **Spurious Biodegradable Plastic**: In the **absence of robust testing and certification** to verify claims made by producers, spurious biodegradable and compostable plastics are entering the marketplace.
- **Online or [E-Commerce](#) Companies**: Apart from the plastic we consume through traditional retail, **the popularity of online retail and food delivery apps, though restricted to big cities, is contributing to the rise in plastic waste**.
- **Microplastics**: After entering into the aquatic environment, **microplastics** can travel vast distances floating in seawater, or sediment to the seabed. A recent study has revealed that microplastics in the atmosphere are trapped by the clouds and the falling snow.
  - **Microplastic particles** are commonly white or opaque in colour, which are commonly mistaken by many surface-feeding fishes as food (plankton) and can even move up the



food chain to human consumers (from eating contaminated fish/seafood/shellfish).

- **Marine Litter:** Plastic pollution in freshwater and marine environments have been identified as a global problem and it is estimated that plastic pollution accounts for **60-80% of marine plastic waste**.
- **Terrestrial Plastic:** 80% of plastic pollution originates from land-based sources with the remainder from ocean-based sources (fishing nets, fishing ropes).

## What are other Related Initiatives?

- [Swachh Bharat Mission](#)
- [India Plastics Pact](#)
- [Project REPLAN](#)
- [Un-Plastic Collective](#)
- [GoLitter Partnerships Project](#)

## Way Forward

- **Raising awareness amongst the public** of the harm caused by plastic pollution through education and outreach programs to modify behaviour.
- **Finding substitutes for use-and-throw plastic** and ensuring alternative livelihoods for producers, waste pickers and other groups involved in the business will go a long way in solving the problem.
- The government should not only place fines for not adhering to the guidelines but **incentivise producers to switch to more sustainable products**. Along with proper monitoring, promoting responsible consumerism is very important.
- **Identify and engage key stakeholder** groups like retailers, consumers, industry representatives, local government, manufacturers, civil society, environmental groups, and tourism associations in order to ensure broad buy-in.
- Citizens also have to **bring behavioural change and contribute by not littering** and helping in waste segregation and waste management.

## UPSC Civil Services Examination, Previous Year Questions (PYQs):

**Q. Bisphenol A (BPA), a cause of concern, is a structural/ key component in the manufacture of which of the following kinds of plastics?**

- (a) Low-density polyethylene
- (b) Polycarbonate
- (c) Polyethylene terephthalate
- (d) Polyvinyl chloride

**Ans: (b)**

- Bisphenol A (BPA) is a chemical produced in large quantities, primarily for the use in the production of polycarbonate plastics and epoxy resins.

**Q. Why is there a great concern about the 'microbeads' that are released into environment? (2019)**

- (a) They are considered harmful to marine ecosystems.
- (b) They are considered to cause skin cancer in children.
- (c) They are small enough to be absorbed by crop plants in irrigated fields.
- (d) They are often found to be used as food adulterants.

**Ans: (a)**

[Source: PIB](#)

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## Babu Jagjivan Ram

**For Prelims:** Babu Jagjivan Ram, Pandit Madan Mohan Malviya, Indian Freedom Movement.

**For Mains:** Important Personalities, Significance of Babu Jagjivan Ram in Pre and Post Independence.

### Why in News?

The Prime Minister paid tributes to freedom fighter **Babu Jagjivan Ram** on his 115<sup>th</sup> birth anniversary (5<sup>th</sup> April).

- Jagjivan Ram, popularly known as Babuji, was a **national leader, a freedom fighter, a crusader of social justice**, a champion of depressed classes and an outstanding Parliamentarian.



### Who was Jagjeevan Ram and What are his Contributions?

- **Birth:**
  - Jagjivan Ram was born **on 5<sup>th</sup> April 1908** in Chandwa in Bihar to a Dalit family.

### ▪ **Early Life and Education:**

- He **pursued his schooling at the nearby town of Arrah** where he faced discrimination for the first time.
  - He **was considered 'untouchable' and had to drink water from a different pot.**
  - **Jagjivan Ram protested against this by breaking the pot.** The principal then had to remove the separate pot from the school.
- In **1925**, Jagjivan Ram met scholar [Pandit Madan Mohan Malaviya](#) and was greatly inspired by him. On Malaviya's invitation, **he joined the Banaras Hindu University.**
  - Even at the university, **Jagjivan Ram faced discrimination.** This inspired him to protest against such social boycotts of a section of society.
  - He also **organised the scheduled castes to protest against injustice.**
- After his stint at BHU, he joined the **University of Calcutta from where he secured a B.Sc. degree in 1931.**
- Jagjivan Ram had organised a number of Ravidas Sammelans and had **celebrated [Guru Ravidas Jayanti](#) in different areas** of Calcutta (Kolkata).

### ▪ **Pre Independence Contributions:**

- In 1931, he **became a member of the [Indian National Congress](#)** (Congress Party).
- He was **instrumental in the foundation of the All India Depressed Classes League**, an organisation dedicated to attaining equality for untouchables, in 1934-35.
  - He was a champion of social equality and equal rights for the Depressed Classes.
- In 1935, he proposed at a session of the [Hindu Mahasabha](#) **that drinking water wells and temples be open to untouchables.**
- In 1935, Babuji also appeared before the **Hammond Commission at Ranchi** and demanded, for the first time, voting rights for the Dalits.
- He was jailed twice in the early 1940s for his political activities associated with the [Quit India movement](#) against British rule.

### ▪ **Post Independence Contributions:**

- When Jawaharlal Nehru **formed the provisional government, Jagjivan Ram became its youngest minister.**
- After independence he **held the labour portfolio until 1952.** Thereafter he served in Nehru's cabinet in the posts of **minister for communications (1952-56), transport and railways (1956-62), and transport and communications (1962-63).**
- He served as minister for **food and agriculture (1967-70)**, and in 1970 he was made minister of defence.
  - The [Indo-Pakistan War of 1971](#) was fought when he was the defence minister.
- **He left Congress in 1977** and joined the Janata Party alliance, along with his Congress for Democracy (new party). He later served as the Deputy Prime Minister of India (1977-79).
- Jagjivan Ram was a **member of the Parliament uninterrupted from 1936 to 1986 (40 years)** and this is a world record.
- He also holds another record for being the **longest-serving cabinet minister in India (30 years).**

### ▪ **Death:**

- He died on **6<sup>th</sup> July 1986 at New Delhi.**
- His memorial at his cremation place is named **Samta Sthal** (Place of Equality).

[Source: TH](#)

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**INS Valsura**

**Why in News?**

Recently, the President of India presented the **prestigious President's Colour to INS** (Indian Naval Ship) **Valsura**.

## What does the President's Colour mean?

- It is the **highest award bestowed on a military unit** in India in recognition of its exceptional services to the nation.
  - Out of the three defence forces, the [Indian Navy](#) was the **first Indian Armed Force to be awarded the President Colour by [Dr. Rajendra Prasad](#) in 1951.**
- **The Tradition:** The origin of Colours in the military **is as old as the service itself**. In ancient India, the armies of various Kings carried the '**Dhwaj**' or the flag whenever it went into a battle.
  - The same is also true for the military traditions of ancient **Egypt or Rome** where the armies carried flags and the 'Roman Eagle' into battle.
  - In India, as well as many Commonwealth nations, the **tradition of Colours has been drawn from the British Army.**
  - Traditionally, there have been **four kinds of symbols associated with Colours** —Standards, Guidons, Colours and Banners.
  - The Infantry regiments, army establishments, and Naval and Air Force units are all awarded Colours by the President while the Armoured Regiments are awarded the Standards.
  - The battle honours of the regiments are displayed on the Colours and therefore **serve as a link to the regiment's past.**
  - The only exception is the **Regiment of Artillery**. In Artillery, the **guns are considered to be the Colours** and losing a gun in battle is similar to losing the Colour of the entire regiment.

## What is INS Valsura?

- **History:** The name "Valsura" **was derived from the combination of two Tamil words, 'Vaal'** (meaning sword) and '**Sorrah**' (shark). It was considered appropriate due to the variety of **swordfish** found off the **coast of Saurashtra**.
  - Swordfish was also the name of the famous Second World War **torpedo-carrying aircraft.**
  - The unit was commissioned as a **torpedo training school during [World War II](#) to enhance the capability of the Indian Royal Navy.**
  - The establishment was commissioned on 15<sup>th</sup> December, 1942 by then **Maharani Gulab Kunverba Sahiba of Nawanagar**. After Independence, HMIS Valsura was **renamed as INS Valsura** on 1<sup>st</sup> July, 1950.
- **Remarkable Outreach Activity:** In the aftermath of the **devastating earthquake in Gujarat**, Valsura performed a remarkable 'Outreach' activity.
  - It played an important role in the restoration of the earthquake-ravaged Moda village and the **construction of a new Navy Moda village** in record time.
  - This achievement was recognised by the Navy when the **Special Unit Citation** was bestowed on the unit in December 2001, an honour **normally reserved for operational units.**
- **Current Status of INS Valsura:** The unit imparts **quality training on contemporary and niche technologies** through progressive augmentation of training infrastructure.
  - The setting up of [Artificial Intelligence](#), Big Data, and Medium Voltage labs in recent years exemplify its quest for technological excellence in contemporary technology and also in training officers and sailors.
  - INS Valsura has **also emerged as the preferred training destination for Friendly Foreign Navies.**
  - INS Valsura has also **helped India strengthen bilateral ties with countries in the [Indian Ocean region.](#)**

## Freedom Fighter: Prahlad Patel

### Why in News?

Recently, the Prime Minister recalled the **'Nation First'** spirit of freedom fighter **Prahlad Patel** on his 115<sup>th</sup> birth anniversary.

- He noted Shri Prahladji Patel's generosity in social service and his sacrifice. And **requested universities in Gujarat should carry out research and bring to light such forgotten freedom fighters** and underscore their contribution in the independence movement.

### Who was Prahlad Patel?

- Prahlad Patel hailed from Becharaji in Gujarat and fought for India's independence from British rule, and later joined the **'Bhoodan' movement** of social reformer **Vinoba Bhave**.
  - He **donated 200 bighas** of land that he owned.
- The freedom fighter joined the freedom struggle on the call of **Mahatma Gandhi** and underwent imprisonment in Sabarmati and Yerawada .
- Shri Patel's father passed away when he was incarcerated but Shri Prahladji Patel **did not accept the conditions of apology** that were put forward by the colonial rulers for allowing him to perform the last rites.
  - He also **supported many freedom fighters who were fighting underground**.
- Prahlad Patel also helped **Sardar Patel** in the **merger of princely states after independence**.
- When Gujarat was formed in 1960, he even **contested elections from the Chanasma seat in Patan district** and took the entire region on the path of development.