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**EN-BUZZER**

# Daily News Analysis

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## 1. Dulhasti Hydel Power Project Stage II got Approved

### Prelims perspective: What need to learned

- What is a Run off River Project
- Location: On **Chenab river in Jammu and Kashmir**
- Indus Water Treaty
- Similar Hydrel projects in the Region

### Mains Perspective: Note need to be prepared

- India-Pakistan Relations and Indus Water Treaty (**GS II- International Relations**)

### Prelims Fact:

- Sawalkote, Ratle, Bursar, Pakal Dul, Kwar, Kiru, and Kirthai I and II Hydel projects: on Chenab and its Tributaries

### What needs to be Known:

- **What is a Run off River Project:**
  - A hydroelectric project generates power using the natural flow of a river without large dams or reservoirs for long-term storage.
  - The river water is diverted to a penstock and utilised for operating the turbines for electricity generation and the water is released back to the river.
- **Indus Water Treaty (IWT):**
  - It was signed in 1960 between India and Pakistan with World Bank mediation, allocating waters of the Indus River system to resolve post-partition disputes.
  - **India controls the Eastern Rivers** (Ravi, Beas, Sutlej) for unrestricted use.
  - **Pakistan manages the Western Rivers** (Indus, Jhelum, Chenab), allocated 80%, with India permitted limited irrigation and unlimited non-consumptive uses like hydropower.
  - India has suspended the IWT in the aftermath of the Pahalgam terror attack in April 2025.



## 2. Kavach System Installation faces Delay

### Prelims perspective: What need to learned

- What is 'Kavach' System
- RFID Technology and its Applications

### Mains Perspective: Note need to be prepared

- Application of RFID Technology (GS III- Science and Technology)
- Modernizing Railways (GS III- Economy)

### Prelims Fact:

- Kavach is an indigenously developed Automatic Train Protection System of India to prevent train collision.

### What Need to be Known:

- **What is Kavach System:**
  - It automatically applies brakes if the driver overlooks signals or exceeds speed limits, using **radio frequency communication** between trains, tracks, and locomotives.
  - It was developed by **Research Designs and Standards Organization (RDSO)** and Indian Industry partners- **Fully Indigenous**.
  - It is being installed both on tracks as well as the locomotives.
  - It is being implemented in a phased manner.
  - It does not replace the need for the loco pilot.
- **RFID Technology:**
  - It is a **wireless technology** that uses electromagnetic fields to automatically identify and track tags attached to objects, animals, or people.
  - Readers emit radio waves to activate tags, which then transmit stored data like unique IDs without needing line-of-sight.
  - **Applications:** **FASTag**, Retail & Supply Chain (Tracking goods), Manufacturing & Logistics (Real-time monitoring and Tracking), Healthcare, Pet Detection and Tracking, etc.



### 3. Snake Bites and their Solutions

#### Prelims perspective: What need to learned

- Snake Bite and its Impacts
- Antivenom for Snake Bites

#### Mains Perspective: Note need to be prepared

- Man-Animal Conflict (GS III- Environment)

#### Prelims Fact:

- India has over **60 venomous snake species**.
- Snake bites account for nearly **58000 deaths in rural India annually**.

#### What Need to be Known:

- **Snake Bite and its Impacts:**
  - Snake venom are **proteins** and are harmful only when administered into blood-  
Are safe to consume orally.
  - Venom can be **Hemotoxic** like Vipers and **Neurotoxic** like Cobra and Krait
  - **Impacts:** Can cause **three types of damage** to the human body- Blood disorders, Muscle paralysis and Tissue death.
- **Antivenom for Snake Bites:**
  - A Standard Antivenom has been developed against the '**Big Four Species**' of snakes in India (The Common Krait, Russell's Viper, Saw-scaled Viper and Spectacled Cobra).
  - A cocktail of the venoms of the four species of snakes are injected into **Horses** in non-lethal doses and the Antibodies are extracted from the blood of the horses.
  - Snake venom for the antivenom production in India are mostly sourced from **Tamil Nadu's Irula Tribes** (Particularly Vulnerable Tribal Group).