

Indian Drainage System

These notes are your ultimate revision weapon to revise the Indian Drainage System. We've distilled years of previous exam questions (PYQs) into one powerful, concise resource. Everything you need to know, nothing you don't.

- **PYQs, Decoded:** All key concepts from past exams, organized and simplified.
- **Revise in Record Time:** Short, precise, and designed for last-minute review.
- **Focus on What Matters:** Master high-probability topics and boost your confidence.

I. Major River Systems of India

A. Indus River System



- **Major Rivers:** Indus, Jhelum, Chenab, Ravi, Beas, Sutlej.
- **Sutlej River:**
 - Type: Trans-Himalayan.
 - Origin: Rakas Lake, Tibet.
 - Course: Cuts across Himalayan ranges, forming deep gorges.
 - Confluence: Rivers Ravi and Jhelum flow into the Chenab, which then meets the Sutlej. The Sutlej finally joins the Indus directly.
- **Rivers in Himachal Pradesh:** Beas, Chenab, Ravi, Sutlej, and Yamuna.
- **Sequence (North to South):** Shyok → Zaskar → Spiti → Sutlej.
- **Doabs (Land between two rivers):**
 - Bist Doab: Between Beas and Sutlej.
 - Bari Doab: Between Ravi and Beas.
 - Rachna Doab: Between Ravi and Chenab.
 - Chaj Doab: Between Chenab and Jhelum.

- **Specific River Facts:**

- **Shyok:** Tributary of the Indus; known as the 'River of Death'.
- **Zaskar:** Joins the Indus at Nimu.
- **Spiti:** Originates from Kunzum Pass; merges with the Sutlej.
- **Chenab:** Site for the world's highest arch bridge.
- **Jhelum:** Tributary is the Kishanganga River.

B. Ganga River System

- **Major Tributaries:** Son, Ramganga, Gandak, Yamuna.

- **Yamuna River:**

- Origin: Yamunotri Glacier.
- Tributaries: Chambal, Ken.

- **Son River:**

- Dispute: Origin is disputed between Madhya Pradesh and Chhattisgarh (Sonmuda near Amarkantak vs. Son Bachharwar in Bilaspur).
- Characteristic: An example of a superimposed river.
- Catchment Area: Largest among its peers (70,055 sq km).

- **Damodar River:**

- Nickname: "Sorrow of Bengal".
- Origin: Chotanagpur Plateau (Palamau Hills).
- Confluence: Tributary of the Hooghly River (part of the Ganga system).
- Drainage Type: Famous for its rift valley (fault valley) drainage due to down-warping.
- Tributaries: Barakar, Konar, Jamunia, Barki.
- Infrastructure: The Edon Canal is taken out from it.
- Status: Considered one of the most polluted rivers in India.
- **Raja Rappa:** A temple site at the confluence of the Damodar and Bhera (Bhairavi) rivers.

- **Other Rivers:**

- **Doodh Ganga River:** Located in Jammu and Kashmir and Uttarakhand.

- **Gandak River:** Feeds the Triveni Canal in West Champaran, Bihar.
- **Kosi River:**
 - Origin: Gosainthan region, Eastern Nepal (not glacier-fed).
 - Length: 720 km.
 - Nickname: "Sorrow of Bihar".
 - Behavior: Notorious for frequent, massive course shifts (e.g., a major shift in 2008).
 - Confluence: Joins the Ganga near Bhagalpur, Bihar.
 - Tributaries: Has seven branches; the Arun River is the main one.
- **Ramganga:** Catchment area: 30,641 sq km.
- **Mahananda:** Catchment area: 20,600 sq km.
- **Gandak:** Catchment area: 12,180 sq km.

C. Brahmaputra River System

- **Teesta River:**

 - Origin: Glacial lake in Sikkim (e.g., Khanchung Chho).
 - Tributary: Rangeet River (originates in Sikkim).
 - Course: Flows through Sikkim and West Bengal into Bangladesh, where it is a tributary of the Brahmaputra.
- **Other Tributaries:** Kopili (Kapili), Tista, Sankosh.
- **Sankosh River:** Forms the boundary between Assam and West Bengal.

D. South Indian Rivers (Flowing into Bay of Bengal)

- **Major Systems:** Godavari, Mahanadi, Krishna, Cauvery.
- **Deccan Plateau Slope:** Higher in the west (Western Ghats), sloping gently eastwards, explaining the eastward flow of major rivers.
- **Krishna River System:**
 - Tributaries: Bhima, Tungabhadra, Koyna, Panch Ganga, Ghataprabha.
 - **Hagari River (Vedavathi):** Tributary of the Tungabhadra.

- **Tel River:** Not a tributary of the Krishna; it is part of the Mahanadi system.
- **Bhima River:** Flows through Maharashtra, Karnataka, and Telangana.
- **Ghataprabha River:** Flows through Maharashtra and Karnataka.
- **Godavari River System:**
 - Tributaries: Wainganga, Penganga, Manjra, Indravati.
 - North-to-South Sequence: Wainganga followed by Penganga.
 - **Indravati River:** Flows mainly through the Bastar region of Chhattisgarh.

II. General Drainage Patterns & Characteristics

A. Drainage Basins (Flowing to Sea)

- **Arabian Sea Drainage:** Tapti, Narmada, Sabarmati, Mahi, Kali (Kalinadi).
- **Bay of Bengal Drainage:** Ganga → Yamuna → Chambal → Khari; Krishna, Son, Gandak, Kosi.

B. Inland Drainage Rivers

- **Definition:** Do not reach the sea; drain into inland lakes or get lost in deserts.
- **Examples:** Luni, Ghaggar, Rupen, Saraswati.

C. River Origins & Sources

- **Glacier-fed:** Yamuna (Yamunotri), Alaknanda (Satopanth), Mandakini (Chorabari Tal).
- **Non-Glacier-fed:** Kosi (Gosainthan, Nepal).
- **Other Specific Origins:**
 - **Sutlej:** Rakas Lake, Tibet; enters India via Shipki La pass.
 - **Mahi:** Madhya Pradesh.

- **Luni:** Pushkar valley of the Aravalli Range, near Ajmer, Rajasthan.
- **Mithi River (Mumbai):** Vihar Lake, Mumbai.
- **Kali River (Sharda):** Kalapani near Lipulekh pass; tributaries include Eastern Dhauliganga, Gori, Sarju.

D. Unique River Characteristics

- **Superimposed Rivers:** Rivers that cut across geological structures (e.g., Chambal, Son).
- **Mahi River:** Crosses the Tropic of Cancer twice.
- **Luni River:**
 - Length: 320 km.
 - Course: Flows through Thar Desert; freshwater in upper course, becomes saline in lower course before ending in the Rann of Kutch.
 - States: Flows through Rajasthan and ends in Gujarat.

III. Dams, Projects & Infrastructure

- **Rajghat Dam:** Built across the Betwa River.
- **Betwa River:** Hosts the joint Rajghat River Valley Project (Uttar Pradesh and Madhya Pradesh).
- **Ken-Betwa Link Project:** First major river-linking project in India (MoU signed 2005).
- **Mahatma Gandhi Setu:**
 - Location: Patna to Hajipur, over the Ganga River in Bihar.
 - Length: 5,575 metres.

IV. Other Important Rivers

- **Kali River (Kalinadi):** West-flowing river in Karnataka (Uttara Kannada); empties into the Arabian Sea.
- **Mayurakshi River:** Jharkhand; the Hizla fair in Dumka is celebrated on its bank.

Know More About the Indian Drainage System:

- [Indian Drainage System – Old Year Questions](#)
- [Indian Drainage System One Liner Questions & Answers](#)

