

1. The Mahanadi Water Conflict – Polity

1. Historical and Geographical Foundations

1. The Mahanadi River is the sixth-largest river system in India, originating from the Sihawa range in the Dhamtari district of Chhattisgarh and flowing 851 kilometres to the Bay of Bengal.
2. The river basin covers approximately 1.41 lakh square kilometers, with 53% situated in Chhattisgarh and 46% in Odisha.
3. Historically, the river was managed under a 1983 Memorandum of Understanding between Odisha and the then-undivided Madhya Pradesh, based on the assumption that the river was water-surplus.
4. The construction of the Hirakud Dam in the 1950s established Odisha as the primary downstream beneficiary, focusing on flood control and irrigation for the coastal delta.
5. The administrative landscape shifted in 2000 with the creation of Chhattisgarh, which sought to utilize its primary catchment area for independent industrial and agricultural growth.

2. Core Drivers of the Dispute

1. Odisha contends that Chhattisgarh has unilaterally constructed over 500 anicuts and multiple massive barrages (such as the Kelo project) in the upstream reaches.
2. The primary grievance is the reduction of "non-monsoon" or lean-season flow, which Odisha claims dries up the Hirakud Reservoir and impacts drinking water for 15 districts.
3. Chhattisgarh invokes the Principle of Equitable Apportionment, arguing that as the state where the majority of the water originates, it has a sovereign right to develop its mineral-rich regions and support its farmers.
4. The dispute transitioned from political dialogue to legal battle in 2016, leading to the formation of the Mahanadi Water Disputes Tribunal (MWDT) in March 2018.

2. Legal and Constitutional Framework

1. Article 262 of the Constitution empowers Parliament to legislate on inter-state water disputes, effectively barring the Supreme Court from direct jurisdiction once a tribunal is involved.
2. The Inter-State River Water Disputes Act (ISRWD), 1956, provides the quasi-judicial mechanism for these tribunals, though the process is notoriously slow.
3. The River Boards Act, 1956, intended for integrated basin-level management, has remained largely unimplemented, leaving a vacuum where states act in silos rather than as a single ecological unit.
4. Recent legislative efforts, like the 2019 Amendment Bill, propose a Permanent Tribunal to replace the fragmented system of individual boards to solve the "delay and decay" problem.

3. Technical and Data Challenges

1. A major obstacle is the "Data War" – there is no mutually accepted "single source of truth" regarding hydrological yield or actual consumption.
2. States often provide divergent data on rainfall patterns and evaporation losses to strengthen their respective legal standing.
3. The lack of real-time, satellite-linked monitoring systems makes it difficult for the Tribunal to verify if upstream barrages are actually withholding water during critical periods.
4. Assessment of "Environmental Flows" is often neglected, as both states prioritize human and industrial consumption over the health of the riverine ecosystem and the Bhitarkanika mangroves.

4. Impact of Climate Change and Urbanization

1. Erratic monsoon patterns have rendered historical water-sharing formulas obsolete; the basin now faces "hydro-climatic extremes" of flash floods and prolonged droughts.
2. Rapid urbanization in the Raipur-Bhilai industrial corridor (Chhattisgarh) and the Cuttack-Bhubaneswar zone (Odisha) has created a competing demand between urban residents and rural farmers.
3. Saltwater intrusion in the Mahanadi delta is a growing threat, as reduced freshwater pressure allows the Bay of Bengal to encroach upon fertile agricultural lands.

5. Strategic Way Forward

1. Implementation of a Mahanadi River Basin Authority to manage the river as a single entity, moving beyond administrative boundaries.
2. Shift toward Demand-Side Management, where Chhattisgarh adopts micro-irrigation and Odisha modernizes its aging canal infrastructure to reduce transit losses.
3. Establishment of a Centralized Data Repository with IoT-based sensors to provide transparent, indisputable water-flow data to all stakeholders.
4. Adherence to strict legal timelines for tribunal awards to prevent states from creating "fait accompli" situations through ongoing construction.

Source - <https://www.thehindu.com/news/national/odisha/mahanadi-tribunal-gives-last-opportunity-to-odisha-chhattisgarh-to-settle-river-water-dispute/article70893266.ece>

