



## National River Conservation Directorate

Department of Water Resources,  
River Development and Ganga Rejuvenation  
Ministry of Jal Shakti  
Government of India

# Legal constraints in Krishna River Basin



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## **National River Conservation Directorate (NRCD)**

The National River Conservation Directorate, functioning under the Department of Water Resources, River Development & Ganga Rejuvenation, and Ministry of Jal Shakti providing financial assistance to the State Government for conservation of rivers under the Centrally Sponsored Schemes of 'National River Conservation Plan (NRCP)'. National River Conservation Plan to the State Governments/ local bodies to set up infrastructure for pollution abatement of rivers in identified polluted river stretches based on proposals received from the State Governments/ local bodies.

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The Centres for Krishna River Basin Management Studies (cKrishna) is a Brain Trust dedicated to River Science and River Basin Management. Established in 2024 by NIT Warangal and NITK Surathkal, under the supervision of cGanga at IIT Kanpur, the center serves as a knowledge wing of the National River Conservation Directorate (NRCD). cKrishna is committed to restoring and conserving the Krishna River and its resources through the collation of information and knowledge, research and development, planning, monitoring, education, advocacy, and stakeholder engagement.

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## **Acknowledgment**

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## **Disclaimer**

This report is a preliminary version prepared as part of the ongoing Condition Assessment and Management Plan (CAMP) project. The analyses, interpretations and data presented in the report are subject to further validation and revision. Certain datasets or assessments may contain provisional or incomplete information, which will be updated and refined in the final version of the report after comprehensive review and verification.

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## PREFACE

In an era of unprecedented environmental change, understanding our rivers and their ecosystems has never been more critical. This report aims to provide a comprehensive overview of our rivers, highlighting their importance, current health, and the challenges they face. As we explore the various facets of river systems, we aim to equip readers with the knowledge necessary to appreciate and protect these vital waterways.

Throughout the following pages, you will find an in-depth analysis of the principles and practices that support healthy river ecosystems. Our team of experts has meticulously compiled data, case studies, and testimonials to illustrate the significant impact of rivers on both natural environments and human communities. By sharing these insights, we hope to inspire and empower our readers to engage in river conservation efforts.

This report is not merely a collection of statistics and theories; it is a call to action. We urge all stakeholders to recognize the value of our rivers and to take proactive steps to ensure their preservation. Whether you are an environmental professional, a policy maker, or simply someone who cares about our planet, this guide is designed to support you in your efforts to protect our rivers.

We extend our heartfelt gratitude to the numerous contributors who have generously shared their stories and expertise. Their invaluable input has enriched this report, making it a beacon of knowledge and a practical resource for all who read it. It is our hope that this report will serve as a catalyst for positive environmental action, fostering a culture of stewardship that benefits both current and future generations.

As you delve into this overview of our rivers, we invite you to embrace the opportunities and challenges that lie ahead. Together, we can ensure that our rivers continue to thrive and sustain life for generations to come.

**Centers for Krishna River Basin Management Studies (cKrishna)**

**NIT Warangal and NITK, Surathkal**



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## **1. Introduction**

The governance of inter-state river basins in India presents significant legal, institutional, and administrative complexities, particularly in basins characterized by high water demand, spatial variability in availability, and competing sectoral priorities. Among these, the Krishna River Basin represents one of the most critical and historically contested river systems in peninsular India. Spanning the states of Maharashtra, Karnataka, Telangana, and Andhra Pradesh, the Krishna River serves as a vital lifeline for irrigation, drinking water supply, hydropower generation, and industrial development, sustaining millions of people across diverse agro-climatic regions.

However, inter-state water sharing within the basin has long been shaped by complex legal arrangements, tribunal adjudications, and evolving political realities. The absence of a permanently enforceable and adaptive basin-level governance framework has periodically led to disputes over allocations, project clearances, reservoir operations, and utilization of surplus waters. These legal challenges are rooted in historical agreements, reorganization of states, constitutional provisions under Article 262, and the functioning of adjudicatory bodies such as the Krishna Water Disputes Tribunal (KWDT I and KWDT II). While tribunal awards and judicial interventions have sought to define water-sharing entitlements and operational guidelines, issues related to implementation, monitoring, data transparency, and interstate coordination continue to pose challenges.

This report presents a comprehensive examination of the legal constraints influencing water governance in the Krishna River Basin. It analyzes the historical evolution of disputes, institutional mechanisms, tribunal decisions, and judicial pronouncements, with the objective of identifying key legal and administrative barriers. The report further aims to propose actionable recommendations to strengthen cooperative federalism, enhance compliance mechanisms, and promote sustainable and equitable water governance within the basin.

## **2. Understanding Legal Constraints**

Legal constraints in the Krishna River Basin are limitations imposed by constitutional provisions, judicial rulings, parliamentary acts, and regulatory frameworks that govern interstate relations. These constraints aim to ensure order and justice in managing shared resources like water but often result in administrative hurdles, policy delays, and prolonged disputes among Maharashtra, Karnataka, Telangana, and Andhra Pradesh. They influence resource sharing (e.g., Krishna River water), territorial claims, economic regulations (e.g., hydropower revenue), environmental laws (e.g., dam impacts), and political-administrative conflicts (e.g., center-state tensions over enforcement). Key sources include the Indian

Constitution's division of powers, judicial precedents, the Inter-State River Water Disputes Act, 1956 (ISRWD Act), and regulatory bodies like the Central Water Commission (CWC).

### **3. Inter – State Disputes**

The Krishna River Basin has been the subject of prolonged and complex inter-state water disputes arising from competing demands, uneven spatial distribution of water resources, and evolving political boundaries. As a major peninsular river system shared by Maharashtra, Karnataka, Telangana, and Andhra Pradesh, the Krishna River supports extensive irrigation networks, urban water supply schemes, hydropower projects, and industrial activities. Increasing water demand, upstream–downstream dependencies, and variability in monsoon flows have intensified competition among riparian states, leading to recurring disagreements over allocation, utilization, and project development.

**3.1 Almatti Dam Controversy:** The Almatti Dam on the Krishna River represents a classic upstream–downstream conflict within the Krishna River Basin. Originally approved in 1963 under the Upper Krishna Project, its height was restricted to 519.6 m by the Krishna Water Disputes Tribunal (KWDT-I) in 1976, limiting storage to 42 TMC to protect downstream flows to major reservoirs such as Nagarjuna Sagar Dam and Srisailem Dam. However, Karnataka sought enhanced storage to address chronic drought conditions in its northern districts and expand irrigation coverage in arid regions. In its 2010 award, KWDT-II permitted raising the dam height to 524.256 m, increasing storage capacity to 123 TMC based on updated hydrological data and a 65% dependability criterion. Downstream states—erstwhile Andhra Pradesh and later Telangana—argued that the increased storage significantly reduced inflows, especially during drought years such as 2001–2004, when basin flows drastically declined, affecting delta irrigation and hydropower generation. Concerns were also raised regarding impacts on agricultural livelihoods, drinking water supply to Hyderabad, and ecological stability in the Krishna Delta. Andhra Pradesh challenged the decision through a Special Leave Petition in the Supreme Court, resulting in interim legal intervention and prolonged uncertainty. Karnataka, on the other hand, maintained that surplus floodwaters were going unutilized and justified enhanced storage for equitable development. The issue remains sensitive, reflecting broader allocation tensions, tribunal interpretations, and the evolving interstate dynamics following the bifurcation of Andhra Pradesh and the inclusion of Telangana in basin governance.

**3.2 Telugu Ganga Project Dispute:** The Telugu Ganga Project, initiated in 1983 through an agreement between Andhra Pradesh and Tamil Nadu, diverts 15 TMC of Krishna water from Srisailem Reservoir to Chennai over a distance of about 406 km. The scheme was designed to address Chennai's projected drinking water deficit of nearly 1,200 MLD by 1990. It utilizes surplus flows beyond the 2,060 TMC allocation made under the Krishna Water Disputes Tribunal (KWDT-I), where surplus use was considered a temporary privilege rather than a

permanent right. Karnataka and Maharashtra opposed the diversion, arguing that it strengthened Andhra Pradesh's downstream advantage. Tensions intensified during the 1990s when the construction of Almatti Dam coincided with drought years (1995–1997), reducing inflows to Srisaïlam significantly below average levels. Despite reduced inflows, Andhra Pradesh accelerated canal construction, completing nearly 90% of the 1,100 km network by 1997. Karnataka protested through political mobilizations, including demonstrations in Raichur, demanding equitable surplus distribution. Maharashtra also raised objections, citing its capped allocation of 560 TMC under KWDT-I. The issue was revisited during KWDT-II proceedings, where Andhra Pradesh's surplus share was upheld. The episode reflects how surplus water interpretation remains a politically sensitive issue in the Krishna River Basin

**3.3 Tungabhadra Water Sharing Dispute (Karnataka – Andhra Pradesh):** The Tungabhadra Dam, constructed across the Tungabhadra River (a major tributary of the Krishna), has been a focal point of water-sharing tensions between Karnataka and Andhra Pradesh. The dam supports irrigation through the Left Bank Canal (LBC) in Karnataka and the Right Bank Low-Level and High-Level Canals (RBLLC & RBHLC) serving Andhra Pradesh's Rayalaseema region. During years of deficient rainfall, disputes arise over release schedules, prioritization of canal irrigation, and hydropower generation. Andhra Pradesh has periodically alleged inadequate releases affecting its drought-prone command areas, while Karnataka argues that upstream inflow variability limits assured supply. Sedimentation in the reservoir, reducing live storage capacity over time, has further intensified allocation stress. The dispute underscores the vulnerability of sub-basin infrastructure to climatic variability and the need for coordinated reservoir operation protocols.

## **4. Inter – State Water Agreements**

Inter–State Water Agreements play a crucial role in governing the allocation, regulation, and management of shared river waters among riparian states. In the Krishna River Basin, such agreements have evolved through negotiated settlements, tribunal awards, and central interventions to address competing demands for irrigation, drinking water, hydropower, and industrial use. These arrangements aim to balance upstream and downstream interests while ensuring equitable and reasonable utilization of river resources. However, variations in hydrological conditions, developmental priorities, and political considerations often influence the interpretation and implementation of these agreements.

**4.1 Inter- State Agreement: 1951:** The Interstate Agreement of 1951, signed on July 25, 1951, between the Bombay Presidency, Hyderabad State, and Madras Presidency, was a pre-independence pact aimed at allocating Krishna River waters based on existing irrigation

projects and colonial priorities. Facilitated by the British colonial administration under the Government of India Act, 1935, this agreement stemmed from negotiations to manage water sharing among princely states and British provinces in the Krishna Basin. It prioritized Bombay's Koyna Dam (planned pre-independence, completed 1964 with 36 TMC initial capacity), Hyderabad's Nizam Sagar (25 TMC), and Madras's Krishna Delta irrigation system (developed since 1858 by Arthur Cotton, irrigating 0.5 million hectares). The pact favored downstream Hyderabad and Madras, reflecting colonial economic interests in fertile deltas and princely state agreements, while upstream Bombay received limited allocations for its nascent projects. The 1956 States Reorganization Act, enacted on November 1, 1956, redrew boundaries along linguistic lines—Maharashtra (Marathi-speaking upper basin), Karnataka (Kannada-speaking middle basin, incorporating parts of Bombay and Hyderabad), and Andhra Pradesh (Telugu-speaking lower basin, merging Madras and Hyderabad)—rendering the 1951 agreement obsolete. New states pursued expanded irrigation—e.g., Maharashtra's Koyna expansion (98 TMC by 1970) and Karnataka's Tungabhadra projects (100 TMC)—clashing with Andhra Pradesh's delta reliance (200 TMC historical) [3]. By the 1960s, upstream dam construction (e.g., Karnataka's Ghataprabha, 48 TMC) and Andhra Pradesh's surplus usage sparked disputes, necessitating KWDT-I in 1969.

## **4.2 Krishna Water Disputes Tribunal (KWDT)**

**4.2.1 Krishna Water Dispute Tribunal – I (1976):** The Krishna Water Disputes Tribunal-I (KWDT-I) was constituted on April 10, 1969, under the Inter-State River Water Disputes Act (ISRWD Act) of 1956, chaired by Justice R.S. Bachawat, following petitions from Maharashtra, Karnataka (then Mysore), and Andhra Pradesh amid escalating tensions over water sharing. Over seven years, it assessed 47 years of flow data (1928–1975) from 26 gauging stations (e.g., Vijayawada, Karad), estimating the Krishna's dependable yield at 2,060 TMC at 75% dependability—available in 75 out of 100 years. On May 31, 1976, KWDT-I allocated this yield: Maharashtra (560 TMC), Karnataka (700 TMC), and Andhra Pradesh (800 TMC), reflecting basin areas (Maharashtra: 26.8%, Karnataka: 43.8%, Andhra Pradesh: 29.4%) and irrigation needs.

The award included a “surplus flows” clause, allowing Andhra Pradesh to use water beyond 2,060 TMC (200–300 TMC in wet years) for projects like Nagarjuna Sagar (408 TMC capacity) without permanent rights. It capped Karnataka's Almatti Dam at 519.6 meters (42 TMC storage) to protect downstream flows. A review clause permitted reassessment after May 31, 2000, anticipating demand growth. Andhra Pradesh's surplus usage—peaking at 1,000 TMC in 1980—drew Karnataka's objections, as upstream projects like Ghataprabha (48 TMC) faced shortages, prompting its push for KWDT-II by 2000.

**4.2.2 Krishna Water Dispute Tribunal – II (2010):** The Krishna Water Disputes Tribunal-II (KWDT-II) was constituted on April 2, 2004, under Justice Brijesh Kumar, following Karnataka’s 2002 review request post-KWDT-I’s expiration, driven by upstream development and Andhra Pradesh’s surplus usage. Using 47 years of updated flow data (1961–2008) from 30 gauging stations, KWDT-II recalculated the dependable yield at 2,578 TMC at 65% dependability—reflecting more frequent availability—and allocated it: Maharashtra (666 TMC), Karnataka (911 TMC), and Andhra Pradesh (1,001 TMC). It reserved 16 TMC (0.45 BCM) for environmental flows—a first for the basin—and distributed surplus: Maharashtra (81 TMC), Karnataka (177 TMC), and Andhra Pradesh (190 TMC).

Key decisions included raising Almatti Dam to 524.256 meters (123 TMC storage) to irrigate Karnataka’s drought-prone northern districts (e.g., Bagalkot, 500 mm rainfall), balanced by safeguards for Andhra Pradesh’s Nagarjuna Sagar and Srisaïlam flows. Delivered on December 30, 2010, the award faced Andhra Pradesh’s Special Leave Petition (SLP Civil No. 10498/2011) in March 2011, alleging reduced delta flows, securing a Supreme Court stay on September 19, 2011. The 2014 bifurcation into Telangana and Andhra Pradesh complicated matters, with Telangana demanding a fresh share. KWDT-II’s further report on November 29, 2013, under Section 5(3) of the ISRWD Act, stalled implementation. New Terms of Reference in October 2023 extended KWDT-II to July 31, 2025, to split Andhra Pradesh’s share (811 TMC from KWDT-I plus surplus) [Press Information Bureau, 2023]. As of present, the award remains unimplemented, with Telangana’s allocation pending.

## **5. Committees and Commissions**

Committees and commissions have played a vital role in addressing technical, administrative, and legal challenges related to water sharing in the Krishna River Basin. These bodies were constituted at different stages to examine hydrological data, evaluate project proposals, monitor reservoir operations, and facilitate coordination among riparian states. Unlike tribunals, which deliver binding legal awards, committees and commissions primarily function as advisory, regulatory, and monitoring mechanisms. Their recommendations help in implementing tribunal decisions, resolving operational disputes, and ensuring equitable utilization of basin resources.

**5.1 Krishna River Management Board (KRMB):** The Krishna River Management Board (KRMB) was established under Section 85 of the Andhra Pradesh Reorganization Act, 2014, following Telangana’s formation on June 2, 2014, to regulate water releases from shared projects between Telangana and Andhra Pradesh, notably Srisaïlam (215 TMC capacity, 1,670 MW hydropower) and Nagarjuna Sagar (408 TMC, irrigating 1.3 million hectares) Headquartered in Hyderabad, the KRMB comprises a chairperson appointed by the center, two engineers from Telangana and Andhra Pradesh, and a central representative from the

Ministry of Jal Shakti. Its mandate includes monitoring inflows (e.g., 30 BCM average at Srisaïlam), scheduling releases, and ensuring compliance with KWDT awards, extended to cover KWDT-II's 2010 allocations post-2014.

Despite its technical expertise, KRMB's authority is contested, limiting its effectiveness. Andhra Pradesh's refusal in June 2021 to cede operational control of Srisaïlam and Nagarjuna Sagar—retaining 60% of staff and infrastructure—stemmed from fears of Telangana prioritizing Hyderabad's 2 BCM annual drinking water needs. During the 2023 monsoon shortage (inflows dropped to 10 BCM vs. 20 BCM norm), Telangana bypassed KRMB directives, releasing 5 TMC unilaterally for power generation, sparking protests in Andhra Pradesh's Vijayawada [Telangana Today, 2023]. The 2024 dry spell saw Karnataka withhold 10 TMC from Almatti, ignoring KRMB's call for downstream equity, highlighting its lack of enforcement power under the ISRWD Act [The Hindu, 2024]. As of present, KRMB's role remains advisory, with states flouting schedules—e.g., Andhra Pradesh drew 15 TMC excess in 2023—delaying Telangana's share resolution.

**5.2 Krishna Basin Review Committee:** Krishna Basin Review Committees are bodies formed to assess KWDT award compliance and recommend adjustments, lacking statutory authority. Post-KWDT-I (1976), the 2000 Review Committee evaluated the 2,060 TMC allocation (Maharashtra: 560 TMC, Karnataka: 700 TMC, Andhra Pradesh: 800 TMC) as its May 31, 2000, review clause expired. Comprising hydrologists and state officials, it suggested redistributing surplus flows (beyond 2,060 TMC), proposing Karnataka increase Almatti storage from 42 TMC to 60 TMC to irrigate 100,000 additional hectares. Its 2002 report faced rejection: Andhra Pradesh opposed upstream gains, citing delta shortages (e.g., 0.8 BCM in 2001–2004), while Maharashtra resisted surplus cuts.

A 2013 committee reviewed KWDT-II's stalled 2010 award (2,578 TMC), recommending interim releases (e.g., 20 TMC from Srisaïlam) pending Telangana's inclusion, but Karnataka and Andhra Pradesh dismissed it, prioritizing local needs. Without binding power under the ISRWD Act, these committees' impact is minimal—e.g., 2023 suggestions for 16 TMC environmental flows were ignored, with delta inflows at 0.5 BCM.

## 6. Reports and Studies

Over the decades, several governmental reports, tribunal documents, scientific studies, and institutional assessments have been produced to understand the legal, hydrological, ecological, and socio-economic complexities of the Krishna River Basin. These studies form an essential foundation for policy formulation, dispute resolution, and legal adjudication.

**6.1 Krishna Godavari Commission report (1962):** The Krishna Godavari Commission Report, published in October 1962, was an early comprehensive assessment of the Krishna and Godavari River basins, chaired by D.N. Khosla, a former Central Water Commission (CWC) chairman. Constituted in April 1961 by the Ministry of Irrigation and Power, the commission comprised 10 members—engineers, hydrologists, and representatives from Bombay, Hyderabad, and Madras states—tasked with evaluating water resources before the Krishna Water Disputes Tribunal (KWDT) era. Over 18 months, it held 25 meetings across Delhi, Hyderabad, and Bombay, analyzing 60 years of flow data (1901–1960) from 15 gauging stations (e.g., Vijayawada, Karad). The report estimated the Krishna’s annual yield at 69 billion cubic meters (BCM) at 75% dependability, lower than the modern 78 BCM average, reflecting conservative colonial-era measurements.

The commission recommended equitable surface water division among the three pre-1956 states—Bombay (26%, ~18 BCM), Hyderabad (29%, ~20 BCM), and Madras (45%, ~31 BCM)—prioritizing irrigation for Madras’s Krishna Delta (800 TMC projected). It ignored groundwater, then estimated at 40 BCM annually (50% of irrigation in Hyderabad), and ecological flows (e.g., 44.3 BCM to the sea in 1955), assuming unlimited downstream discharge. Published in a 300-page document with 50 annexures (e.g., rainfall maps, dam proposals), it influenced KWDT-I’s 1976 award (2,060 TMC), particularly Andhra Pradesh’s 800 TMC share. However, its data grew outdated post-1956 States Reorganization Act, which split the basin into Maharashtra, Karnataka, and Andhra Pradesh, and amid climate variability—e.g., a 15% monsoon decline since 2015. Presently, its historical surface-water focus remains a benchmark, but its neglect of holistic basin dynamics limits modern relevance.

**6.2 Integrated Hydrological Data book (Central Water Commission, 2018):** The Integrated Hydrological Data Book, published by the CWC in 2018, compiles 117 years of Krishna Basin flow data (1901–2017) across 25 gauging stations (e.g., Vijayawada, Karad, Srisaïlam), updating the 69 BCM estimate to 78 BCM at 75% dependability [Central Water Commission, 2018]. Spanning 400 pages with 60 annexures (e.g., rainfall trends, dam storage), it was compiled over 2 years by a 15-member CWC team with a ₹5 crore budget, integrating satellite data (e.g., IMD’s 3,000 mm Western Ghats rainfall) [Indian Meteorological Department, 2018]. It detailed tributary contributions—Bhima (20 BCM), Tungabhadra (30 BCM), Ghataprabha (10 BCM)—and confirmed 95% flow impoundment by 2017 (74 BCM stored). The report noted a 10% flow decline since 2000 (70 BCM average, 2010–2017), attributing it to climate variability (15% monsoon deficit) and upstream dams

Intended to guide KWDT-II’s post-2014 Telangana adjustments, it highlighted groundwater overuse (45 BCM annually, 50% of irrigation) and recommended basin-wide monitoring, ignored by states focused on KWDT-II’s 2,578 TMC surface allocation. As of present, its data

supports Telangana's 500 TMC claim (2023 protests) but lacks legal weight, with Karnataka citing its 43.8% basin area for 911 TMC. Its holistic approach informs climate adaptation calls.

**6.3 Environmental Impact Assessment:** Post-2000 Environmental Impact Assessments (EIAs) have documented the Krishna Basin's ecological decline due to upstream damming, with a seminal study by the Central Water Commission in 2010 analyzing 1990–2009 data. Conducted over 18 months with 20 hydrologists and ecologists, it used 30 monitoring stations (e.g., Hamsaladevi, Almatti) to assess flow reductions—e.g., Krishna Delta inflows dropped to 0.8 BCM in 2001–2004 (a 98% decline from 44.3 BCM in 1955) due to 130+ projects storing 95% of historical flows (74 BCM) [3]. Key dams implicated include Almatti (123 TMC), Srisaïlam (215 TMC), and Nagarjuna Sagar (408 TMC), with cumulative impoundment reducing downstream discharge from 2,100 TMC (1950s average) to 16 TMC by 2010 [5]. The 250-page report, with 40 annexures (e.g., salinity charts, fish yield trends), highlighted a 20% mangrove loss since 1970 and 30% fisheries decline (50,000 tons in 2000 to 35,000 tons in 2009).

## 7. Landmark Judgements

The Supreme Court judgment in Special Leave Petition (SLP) Civil No. 10498/2011 arose when Andhra Pradesh challenged the Krishna Water Disputes Tribunal-II (KWDT-II)'s award, issued on December 30, 2010, which allocated 2,578 TMC at 65% dependability—Maharashtra (666 TMC), Karnataka (911 TMC), and Andhra Pradesh (1,001 TMC)—and permitted Karnataka to raise Almatti Dam to 524.256 meters (123 TMC storage) [4]. Filed on March 25, 2011, under Article 136, Andhra Pradesh argued that KWDT-II's decision—based on 47 years of flow data (1961–2008)—was biased, reducing downstream flows to Nagarjuna Sagar (408 TMC) and Srisaïlam (215 TMC), critical for irrigating 1.3 million hectares and powering 1,670 MW [Supreme Court of India, 2011]. The state cited the 2001–2004 drought (0.8 BCM delta inflows vs. 44.3 BCM in 1955) as evidence of upstream over-extraction, alleging Karnataka's height increase (from 519.6 meters, 42 TMC under KWDT-I) violated equitable sharing.

**7.1 Karnataka Vs Andhra Pradesh (2006):** The Karnataka vs. Andhra Pradesh case, filed as Original Suit No. 1 of 2006 under Article 131, challenged Andhra Pradesh's Telugu Ganga Project, initiated in 1983 to divert 15 TMC from Srisaïlam Reservoir to Chennai. Karnataka argued that KWDT-I's 1976 award (2,060 TMC) designated surplus flows (beyond 2,060 TMC) as temporary, not a right, and that Andhra Pradesh's diversion—completed 90% by 1997—reduced Srisaïlam inflows (18 BCM in 1995–1997 vs. 30 BCM norm). Filed on January 15, 2006, Karnataka sought an injunction, citing its 700 TMC allocation for 600,000 hectares and the 1997 Raichur protests against downstream bias. The Supreme Court, under Justice

Y.K. Sabharwal, held 12 hearings (2006–2008), but on April 22, 2008, referred it to KWDT-II (formed April 2, 2004), citing Article 262’s tribunal mandate. KWDT-II’s 2010 award upheld Andhra Pradesh’s 190 TMC surplus, rejecting Karnataka’s plea, though implementation stalled post-2011 stay [KWDT, 2010]. As of present, the judgment’s legacy—reinforcing tribunal primacy—persists, with Chennai receiving 12 TMC in 2023, while Karnataka demands renegotiation.

**7.2 Maharashtra Vs Karnataka and Others (1990):** The Maharashtra vs. Karnataka & Others case, filed as Original Suit No. 2 of 1990 under Article 131, addressed surplus flow disputes post-KWDT-I’s 1976 award [Supreme Court of India, 1990]. Maharashtra challenged Karnataka’s Almatti construction (begun in 1990, targeting 42 TMC under KWDT-I) and Andhra Pradesh’s surplus use (beyond 800 TMC), arguing its 560 TMC allocation for 400,000 hectares in the Bhima sub-basin was undermined by downstream priority. Filed on June 10, 1990, it cited 1980s flow reductions (20 BCM vs. 25 BCM norm at Ujjani) due to Karnataka’s upstream projects [Central Water Commission, 1990].

The Supreme Court, under Justice Ranganath Misra, conducted 8 hearings (1990–1992), but on March 15, 1992, referred it to KWDT-II’s predecessor negotiations, citing Article 262. KWDT-II’s 2010 award increased Maharashtra’s share to 666 TMC (81 TMC surplus), resolving some claims, though the 2011 stay stalled enforcement. As of present, this early judgment shaped surplus debates, with Maharashtra’s 2024 stance (no further concessions) reflecting its legacy.

## **8. Legal Constraints among Authorities**

Legal constraints among authorities arise when overlapping jurisdictions, statutory mandates, and tribunal awards create complexities in water governance within the Krishna River Basin. Multiple institutions—ranging from state irrigation departments to central regulatory bodies—operate under different legal frameworks, often leading to ambiguity in roles, enforcement powers, and decision-making authority. While tribunal awards and constitutional provisions aim to ensure equitable water sharing, their implementation frequently depends on inter-governmental coordination. Conflicts may emerge due to varying interpretations of allocations, reservoir operation protocols, and surplus water rights.

### **8.1 Legal Issues between KRMB, State Boards and Central Water Commission (CWC):**

The Krishna River Management Board (KRMB), established under Section 85 of the Andhra Pradesh Reorganization Act, 2014, oversees water releases from shared projects like Srisailem (215 TMC) and Nagarjuna Sagar (408 TMC) between Telangana and Andhra Pradesh [Andhra Pradesh Reorganization Act, 2014]. Headquartered in Hyderabad, KRMB’s operational control is undermined by state boards—e.g., Karnataka’s Water Resources

Department (KWRD), Maharashtra's Water Resources Department (MWRD), and Telangana and Andhra Pradesh Irrigation Departments—which prioritize local needs over basin-wide equity. The Central Water Commission (CWC), under the Ministry of Jal Shakti, provides technical advice—e.g., 2022 Srisaïlam release schedules (20 BCM annually)—but lacks enforcement power under the ISRWD Act, 1956, amplifying disputes.

A notable standoff occurred in July 2023, when Srisaïlam inflows fell to 10 BCM (50% below the 20 BCM norm) due to a 15% monsoon deficit [Indian Meteorological Department, 2023]. KRMB directed Telangana to release 5 TMC to Andhra Pradesh's delta, but Telangana drew 8 TMC for Hyderabad's 770 MW hydropower demand, prompting Andhra Pradesh's Vijayawada protests (10,000 farmers). Andhra Pradesh's refusal to cede Srisaïlam control in June 2021—retaining 26 spillway gates and 60% of staff (1,200 personnel)—further weakened KRMB, with Telangana alleging bias (60% of KRMB meetings in Hyderabad). In January 2024, Karnataka defied KRMB's 10 TMC Almatti release order, citing drought in Bagalkot (450 mm rainfall vs. 550 mm norm), reducing Nagarjuna Sagar inflows to 5 BCM. As of present, CWC's advisory role—e.g., 50 flow sensors installed in 2024—fails to bridge state resistance, with KRMB's budget (₹50 crore, 2023–2024) inadequate for enforcement.

**8.2 Jurisdictional Overlaps:** Jurisdictional overlaps among the Krishna River Management Board (KRMB), state irrigation departments, and the Central Water Commission create frequent conflicts in reservoir operations within the Krishna River Basin. While water is a state subject under constitutional provisions, KRMB is mandated to regulate shared releases, leading to disputes over operational control. Instances such as conflicting release orders from Almatti (2021) and Srisaïlam (2022) highlight contradictions between state directives and central advisories. Legal challenges, including petitions dismissed under Article 262, demonstrate the limited judicial recourse in inter-state river disputes. These institutional overlaps continue to delay project implementation and weaken coordinated basin governance.

**8.3 Lack of Coordination:** No mechanism aligns KRMB, CWC, and state plans, delaying Telangana's allocation (pending since 2014). KRMB's 2023 Srisaïlam schedule (20 BCM) conflicted with Telangana's 25 BCM hydropower plan and Andhra Pradesh's 30 BCM delta demand, while CWC's 22 BCM basin-wide target was ignored. The ISRWD Act lacks a coordination framework, unlike the Narmada Control Authority's binding model. In 2021, Andhra Pradesh's unilateral 15 TMC Nagarjuna Sagar drawal (408 TMC capacity) bypassed KRMB-CWC talks, stalling Telangana's 500 TMC claim. A 2022 Inter-State Council proposal for a Krishna Coordination Committee (10 members, ₹100 crore budget) faltered over state vetoes—Karnataka feared 911 TMC cuts [Inter-State Council Secretariat, 2022]. As of present, this gap—compounded by 14-year KWDT-II delays—affects equitable sharing.

## 9. Summary and Recommendations

The case of the Krishna River Basin highlights the structural limitations of India's inter-state water governance framework: although legal mechanisms and tribunal awards exist, their effective enforcement is often constrained by political dynamics and state-level priorities. Despite the establishment of tribunals and regulatory boards, recurring disputes over allocations, reservoir control, and surplus utilization demonstrate that institutional authority remains limited in practice. Moving forward requires strengthening enforcement mechanisms, clarifying jurisdictional roles, and fostering cooperative basin-level governance beyond adversarial legal processes.

- **Strengthen KRMB's Statutory Powers:** Amend relevant provisions to grant KRMB binding enforcement authority over reservoir operations and data compliance.
- **Establish a Unified Basin Authority:** Transition from a coordination-based board to a legally empowered Krishna Basin Authority with representation from all riparian states and the Centre.
- **Real-Time Data Transparency:** Implement compulsory real-time telemetry systems with publicly accessible dashboards to reduce disputes over inflows, storage, and releases.
- **Clear Surplus Water Guidelines:** Develop standardized definitions of "surplus" water based on updated hydrological assessments and climate variability projections.
- **Conflict Resolution Mechanism:** Create a permanent technical arbitration panel within the basin framework to address operational disputes before they escalate to tribunals or courts.

## 10. Significance of Legal Constraints Report of KRB

The significance of preparing a detailed report on legal constraints in the Krishna River Basin lies in its ability to bring clarity to one of India's most intricate inter-state water governance systems. The basin is regulated by a complex framework comprising tribunal awards of the Krishna Water Disputes Tribunal (KWDT I & II), provisions of the Inter-State River Water Disputes Act, 1956, the Andhra Pradesh Reorganisation Act, 2014, and subsequent administrative directives. These legal instruments are often interpreted differently by riparian states, leading to operational disputes over allocations, surplus waters, and reservoir control. By consolidating and analyzing these frameworks in a structured manner, the report simplifies the legal landscape for policymakers, administrators, and researchers engaged in basin management.

More importantly, the report identifies areas where legal mandates and institutional roles overlap or conflict—such as tensions between tribunal allocations and state irrigation priorities, or the limited enforcement authority of the Krishna River Management Board. It highlights how ambiguities in surplus water definitions, dependability criteria, and post-bifurcation arrangements have contributed to recurring disputes, particularly during distress years. Rather than merely documenting historical conflicts, the report bridges the gap between statutory provisions and ground-level implementation, explaining why compliance challenges persist.

By presenting these issues from a basin-wide perspective, the report provides an evidence-based foundation for institutional reform, improved coordination, and adaptive policy mechanisms in the face of climatic variability. Ultimately, it strengthens conflict prevention strategies and promotes cooperative governance, offering not only guidance for the Krishna Basin but also a framework applicable to other inter-state river systems in India facing similar legal and administrative complexities.

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