CENTRE FOR
POLICY
RESEARCH

NAMAMI GANGE

TREADS
TRANSBOUNDARY RIVERS ECOLOGIES
AND DEVELOPMENT STUDIES

Interstate Cooperation for Namami Gange:

Policy and Institutional Challenges and Opportunities

DRAFT

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List of Abbreviations

CPR	Centre for Policy Research
CPWD	Central Public Works Department
CWC	Central Water Commission
DPRs	Detailed Project Reports
DGCs	District Ganga Committees
EYC	Eastern Yamuna Canal
ETF	Empowered Task Force
EPA	Environment (Protection) Act, 1986
FYPs	Five-Year Plans
GAP	Ganga Action Plan
GoI	Government of India
IIT	Indian Institutes of Technology
LGC	Lower Ganga Canal
MoEFCC	Ministry of Environment Forest and Climate Change
MoHUA	Ministry of Housing and Urban Affairs
MoJS	Ministry of Jal Shakti
NGP	Namami Gange Programme
NGC	National Ganga Council
NGRBA	National Ganga River Basin Authority
NGT	National Green Tribunal
NMCG	National Mission for Clean Ganga
NRLD	National Register of Large Dams
OCEMS	Online Continuous Emission Monitoring Systems
O&M	Operation and Maintenance
PWD	Public Works Department
RBA	River Boards Act
STPs	Sewage Treatment Plants
SGCs	State Ganga Committees
UPPCB	Uttar Pradesh Pollution Control Board
UPJN	Uttar Pradesh Jal Nigam
UGC	Upper Ganga Canal
WRD	Water Resources Development
WYC	Western Yamuna Canal

01

Introduction

Why Cooperation Matters?

Why Cooperation Matters?

India has a fairly long, and unfortunately, less celebrated history of interstate cooperation on water. Even though instances such as the Cauvery water dispute dominate the headlines, efforts for cooperation have been quietly continuing in the background since the pre-independence days (Iyer, 1994). Post-independence, the first three decades saw a steep rise in interstate agreements facilitating cooperation. Incidentally, these decades coincided with major investments in water resources projects through the Five Year Plans (FYPs) (NITI Aayog, respective FYP documents, 1951-2012). This period also saw the emergence of the first disputes over the Narmada, Krishna, and Godavari rivers.

In an increasingly fragmented global order, instances of cooperation have become rarer, and it is the conflicts that dominate the big headlines (Chokkakula, 2014). Conflict over water sources also contributes to these frictions. India is no different. Its relations with neighbours such as China and Pakistan have time and again been strained over transboundary rivers, with the Indus Waters Treaty episode being the most recent. These regional tensions tend to impact interstate cooperation as well (Chokkakula & Prajapati, 2021).

Nurturing an ecosystem for cooperation can have manifold benefits and can also lead to cooperation in other allied sectors. Interstate cooperation can be beneficial in addressing challenges emanating from pressing issues such as climate change. Climate change-related uncertainties have had adverse impacts on water systems and water governance — affecting both water quantity and quality (Milly, 2008). These uncertainties extend not just to evaluating the risks associated with extreme weather events but also to the management of existing storage structures such as dams and the associated flow regimes and allocations (Wolf, 2003). It further exacerbates the likelihood of increased emergence and recurrence of interstate conflicts. Climate change-induced risks call for "a coordinated action, not only between the Centre and states but also between states" (Chokkakula, 2019). In India, there has always been a skewed focus on addressing water quantity issues while paying lesser attention to water quality problems.

Interstate cooperation also lays the groundwork for a more permanent and resilient resolution of disputes. India has historically taken a more judiciary-driven route for the resolution of these disputes (Chokkakula, 2018). Instead of looking at why the cooperation failed in the first place, the attention of both policy thinking as well as scholarship chose to address the challenge of dispute resolution. This 'band-aid' strategic response is baffling because it persisted for decades and remains the primary strategy, but it only provides a short-term solution. This strategy does not address the root causes of lack of cooperation between states, thereby leading to the recurrence of these disputes time and again.

Furthermore, interstate cooperation has an added layer of complexity, as it is embedded in a federal context where cooperation is a prerequisite condition. This context adds an additional challenge of enabling cooperation while working within the intergovernmental structures of federal governance. It brings in the additional dimension of managing Centre-state relations besides those between states. Analysing and sustaining an ecosystem for enabling cooperation entails engaging with a range of dimensions — federal governance, politics, and institutions — which this paper explores in the subsequent sections.

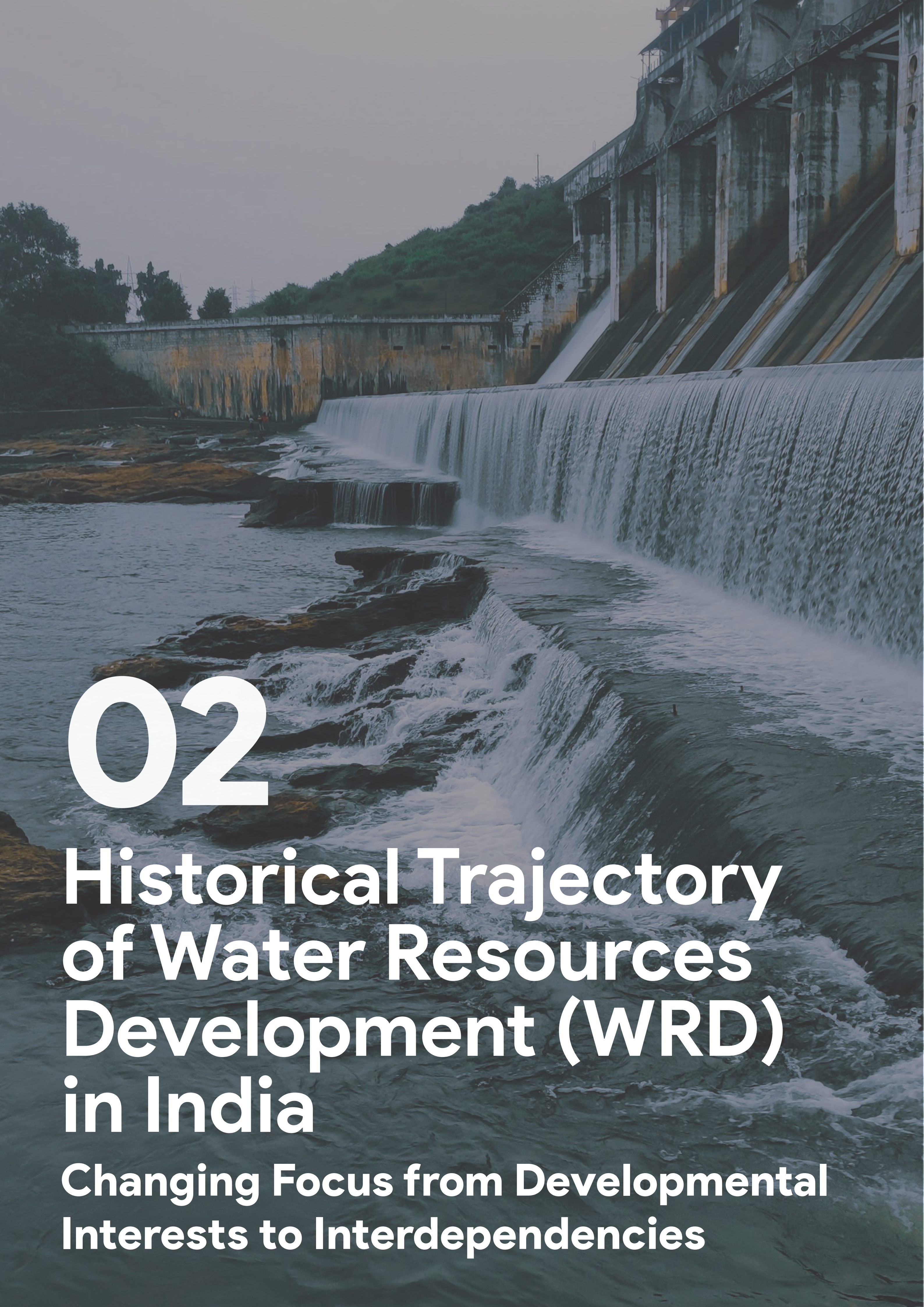
This web of interdependencies is key to understanding the importance of creating and sustaining a resilient ecosystem of cooperation between states. Cooperation on aspects of water quantity, infrastructure, etc., can shift focus to critical aspects of water quality. The importance of political will in driving cooperation for transboundary rivers as drivers of cooperation – where do interdependencies come into the picture? The importance of centre-state relations/cooperation in ensuring cooperation in the long term – how does India's federal nature impact this cooperation – are cooperation agreements always Centre-driven or are they mostly the result of bilateral cooperation between states with minimal role of the Centre (Chokkakula, 2015).

In an attempt to delineate the intricacies of interstate cooperation and expand on how states cooperated over water resources, this paper starts with tracing the historical evolution of water resources development in pre and post-independence India, with a specific focus on the Ganga basin. It then goes on to discuss the instances of conflict and cooperation in the Ganga basin – mapping their form, nature, and spatial and functional scope. For the purpose of this study, our focus is only on the episodes of cooperation in the Ganga basin and why states cooperate. To assess the underlying interdependencies which drive these instances of cooperation, the paper proposes a framework adapted from the scholarly contributions of Fischer & Jager (2020), Sadoff and Grey (2005), and Le Marquand (1977) and modified based on the contextual specificity of the Ganga basin. This framework helps in identifying the enablers of interstate water cooperation and understanding the reasons for cooperation between states.

Additionally, we delve into the institutional architecture which enables and sustains this subnational cooperation. The intricate interdependencies among the states and the number of cases where the Ganga basin states have cooperated lay the groundwork for identifying and developing a potential ecosystem for cooperation among these states in the development and management of interstate rivers, albeit with certain limitations. Most of the cooperation has been driven by water quantity and supply augmentation concerns. However, there are encouraging developments.

The flagship Namami Gange Programme (NGP) has received extensive attention for its unprecedented budgetary allocation and unique institutional structure. NGP's institutional structure is devised to reinforce the importance of the political and developmental concerns of the state's subnational governments and actively work with them. Besides, from 2023 onwards, the All India State Water Minister's Conference has been a useful forum to advance a national vision for India's long-term water security under its unique federal context. The analysis of the NGP and the proceedings from the Conference reveals a latent and encouraging shift in perspectives of the states towards environmental and ecological considerations in their respective water resources management. However, this shift is still at a nascent stage, and the states are slow in institutionalising the NGP into their respective plans and policies.

We delve into the possible reasons for this gradual and intermittent ownership of the NGP from the states. We argue that the existing cooperative arrangements pertaining to water resources projects have produced indispensable interdependencies among the Ganga basin states in sharing benefits and managing risks. These arrangements offer invaluable lessons for the states and the centre to conceptualise an enabling ecosystem wherein states could cooperate in improving the water quality and the ecological health of the Ganga basin.



02

Historical Trajectory of Water Resources Development (WRD) in India

Changing Focus from Developmental Interests to Interdependencies

Changing Focus from Developmental Interests to Interdependencies

In the pre-independence period, the water and irrigation sector received less focus until the great famine in British India in 1858 (Mishra et al., 2019). The Public Works Department (PWD) began limited activity under the Government of India (GoI) Act 1858, transferring the power from the East India Company to the British Crown. The GoI Act 1919 limited the central government's role to an advisory and coordinator capacity by transferring the subject of irrigation to the provincial government. The Central Board of Irrigation was set up in 1927, to take a more robust stand on limiting the Centre's power. With the increasing workload, the Department of Labour was assigned the irrigation and power sector to overcome the shortcomings.

Table 01: Pre-Independence evolution of the WRD in India

1885	**Public Works Department**	• Not much importance was given to irrigation work before the famine of 1858.
1923	**Department of Industries and Labour**	• Under the GoI Act 1919, irrigation became a Provincial subject, and the Government of India's responsibility was confined to advising, coordinating, and settling disputes on water rights of interprovincial rivers. • The PWD was merged with the Department of Industry, and the Central Board of Irrigation was constituted in 1927.
1937	**Department of Labour**	• The Department of Industry and Labour was bifurcated into the Department of Communication and the Department of Labour. • The Department of Labour was assigned the work relating to Irrigation and Power.

Source: TREADS Analysis

With the Independence in 1947, reform and expansion took place in each sector, creating the Department of Works, Mines, and Power, focusing on expanding the domains of Irrigation and Power. In 1951-1952, with the first independent government of India, a dedicated ministry was created as the Ministry of Irrigation and Power, marking water as a national development priority (Dhawan, 1993).

Between 1954-1980, the sectoral focus and institutional development increased with the establishment of the Flood Control Board, highlighting a new concern for flood management. The Irrigation Commission was constituted in 1969 to plan a comprehensive irrigation department, which led to further restructuring of separate departments and ministries focused on bringing irrigation to the Central government's agenda as a standalone ministry (GoI, 1972).

2.1

History of Water Resources Development in the Ganga Basin

Water resources development in the Ganga Basin has historically contributed to the agricultural development of some of the key basin states at an unprecedented scale. In particular, the Ganga and Yamuna Canal systems — namely, the Western and Eastern Yamuna Canals (WYC and EYC) and the Upper and Lower Ganga Canal (UGC and LGC) — date back to the pre-colonial period but underwent a significant transformation under British rule. The development of this vast network of canals not only transformed the irrigation and economic landscape of the region but also shaped the institutional ecosystem for water resources development *(See Map 01).*

The origin of the Central Public Works Department (CPWD) was conceived by the British government during the 1850s for the development of irrigation and other infrastructure (Arnold, 2018). The development of irrigation was driven by its geographic and economic potential for revenue generation for the British colonial government. This explains the early development of irrigation in provinces such as the Punjab, United Provinces, Sind, and Madras (Whitcombe, 2008). Hardiman (2007) and Whitcombe (2008) further show that by the 1860s, the vast canal networks, along with the sluices and distributary channels, were under the direct control of the PWD, which was relatively independent and directed the production of the commercial crops such as wheat, sugarcane, indigo, cotton, and rice in this region. In this aspect, the Ganga basin has historically been highly developed, albeit with a skewed focus on supply augmentation (Chokkakula, 2019). The following table shows Brief description of the historical development of the Ganga & Yamuna canal systems.

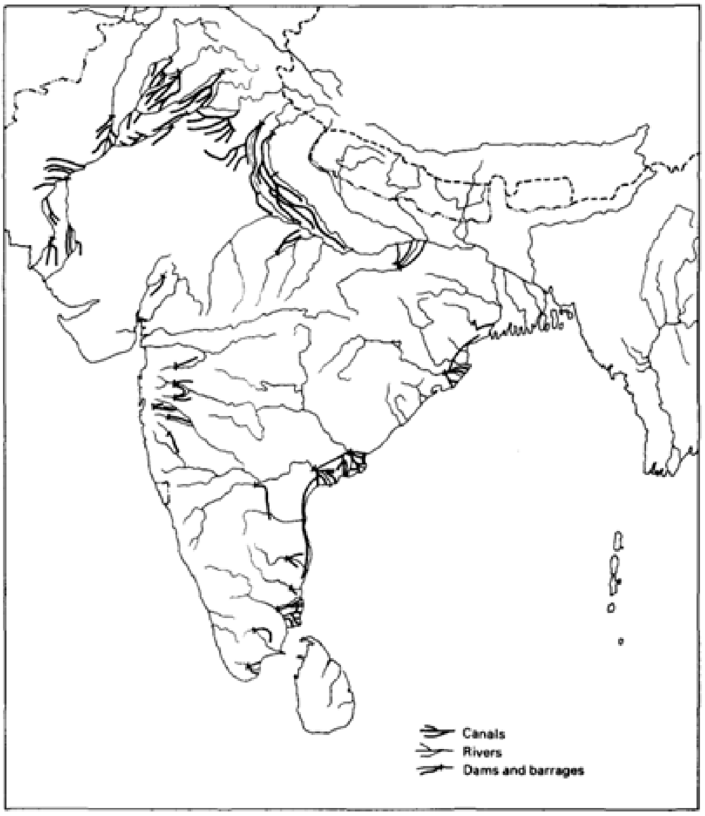
Table 02: Brief description of the historical development of the Ganga & Yamuna canal systems

1800-1947	**UGC** The construction was initiated by the then British government in the 1840s to address drought and famine in the western part of the current state of Uttar Pradesh (Jain et al. 2007). **LGC** To irrigate the lower portion of the Ganga-Yamuna doab, a project was sanctioned, and work started from 1872 onwards by constructing a new canal from the main Ganga Canal in Narora, Bulandshahr (Jain et al. 2007). **WYC & EYC** The origin of the Western Yamuna Canal dates back to Feroz Shah Tughlaq, who constructed the WYC. During the British period, the canal was realigned and repaired from 1821 onwards (Jain et al. 2007). The earliest canals in Northern India of which any record exists are the old canals that take off from both banks of the Yamuna (Mukherjee, 2007).

Source: TREADS Analysis & CWC (2015)

Whitcombe (2008) further highlights that there had been an attempt during the 1920s and 1930s by the colonial government to diversify the use of the water resources in India, especially the hydropower sector, for prospective revenue income. However, lack of power demand in the rural areas was a major impediment in this process, and irrigation continued to be the sole driving force for water resource development in the Ganga Basin (Ray, & Pullabhotla, 2023).

Map 01: Irrigation Canal Network 1901



Source: Hardiman (2007)

These large-scale developments also required various arrangements between the erstwhile British government/provinces and those of the princely states as well as among the provinces. In most cases, the agreements were aimed at water and cost-sharing arrangements, specificity of repair work following flood disasters, supply of water during the crop sowing Kharif season, and dispute resolution mechanisms. These arrangements also represented the control of the colonial government over the irrigation infrastructure and the requirement of payments and other penalties to them by the princely states (Basu, 2022).

The Central Water Commission (CWC) produced a legal instrument (Legal Instruments on Rivers in India, Vol. 3, Part II) which shows three such arrangements, and the table below provides a brief synopsis of the same.

Table 03: Colonial arrangements on Ganga Basin

Year	Basin	Arrangement	Scope of the Arrangement
1892	**Yamuna**	British Government and the Princely State of Jhind	• Regulation on irrigation supply from the Western Jumna Canal. • It defined allocation rights, maintenance responsibilities, and dispute-resolution mechanisms.
1925	**Yamuna**	Punjab and the United Provinces	Repairs and alterations below the Eastern Jumna sluices, regulating, repairing the bunds, and construction of spurs on account of the 1924 Yamuna floods.
1943	**Yamuna**	Government of East Punjab (British Province) and Princely State of Jhind	It defined control and management, regulation and distribution of supplies, assessment collection and payment to Punjab by the princely states, penalties, and dispute resolution protocols of the Sundar Sub-Branch of WYC.

Source: TREADS Analysis & CWC (2015)

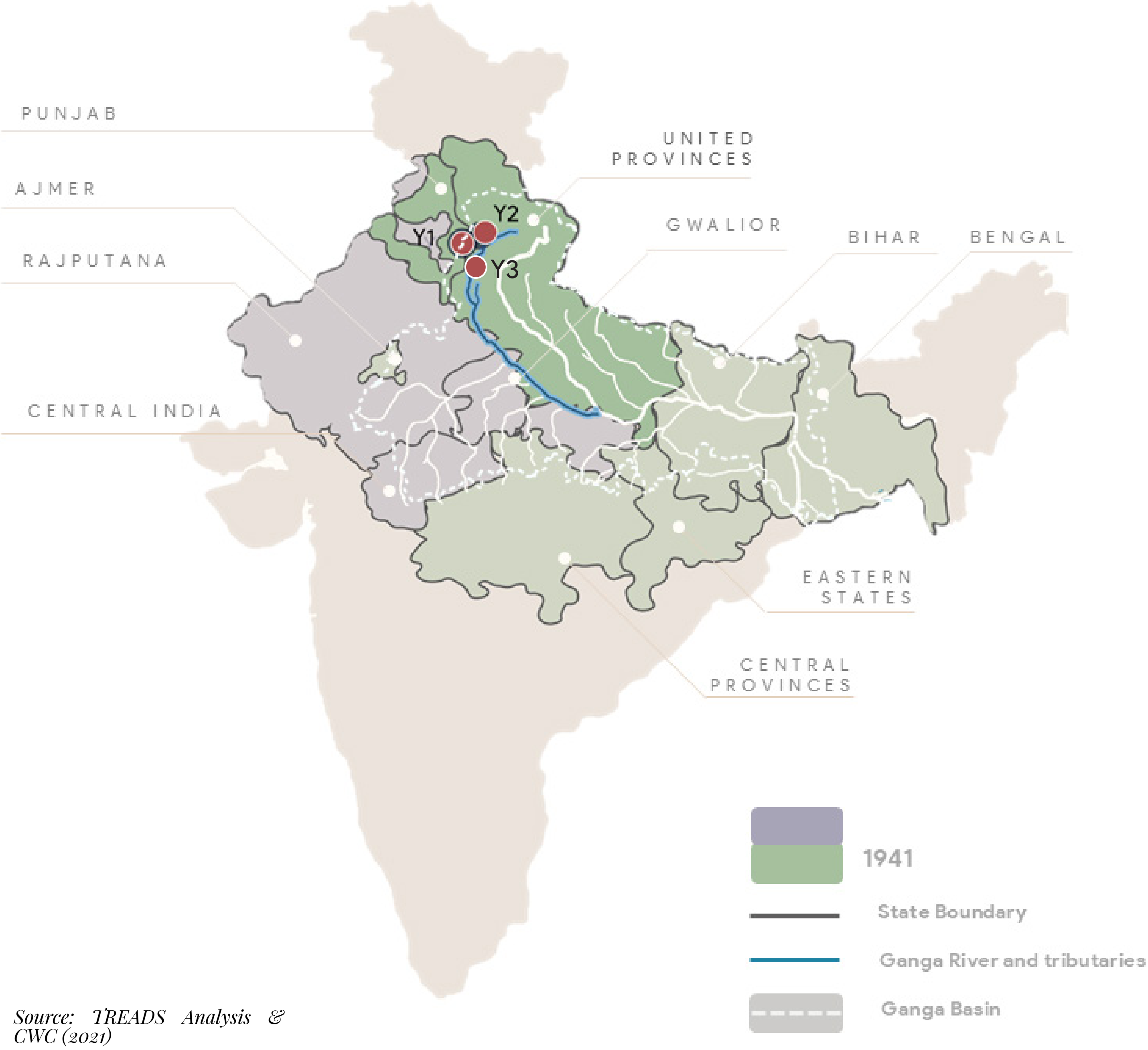
The colonial development of the Ganga Canal reveals three key themes:

- The large-scale irrigation focus in the Northwestern Part of the Ganga Basin — which still remains one of the most agriculturally productive regions in India.

- The institutional evolution, such as the PWD represented a hydro bureaucracy with a sole focus on supply augmentation and revenue maximisation — the supply side focus is still embedded in the institutional culture of the State Water Resources Department.

- Growth of water-intensive commercial crops in the region, such as sugarcane and rice, through irrigation development is still continuing.

Map 02: Colonial arrangements on Ganga Basin



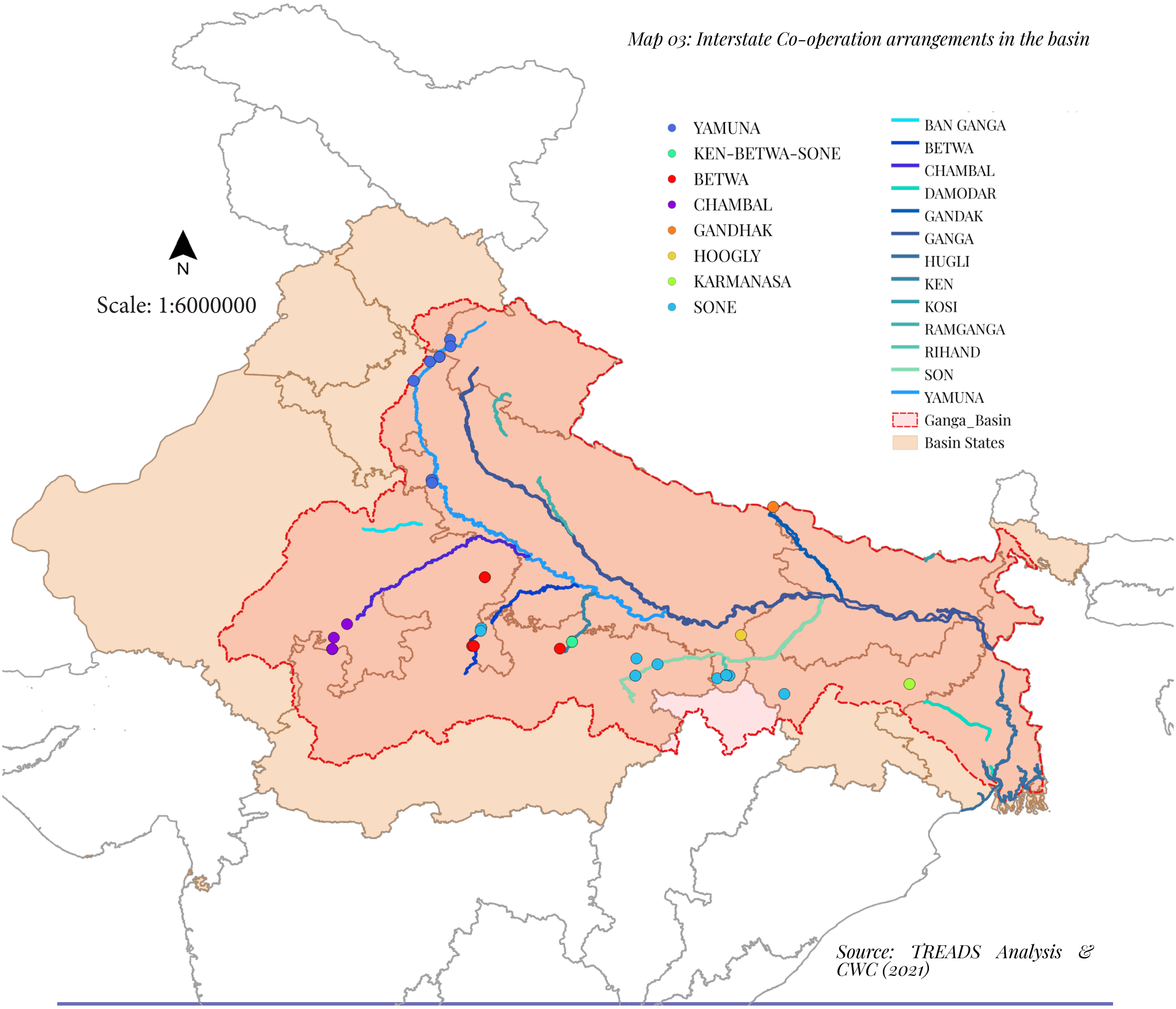
Source: TREADS Analysis & CWC (2021)

03

Interstate Conflict and Cooperation in the Ganga Basin

The colonial agreements in many ways reflected deeply inequitable arrangements where the revenue maximisation was a key objective for the erstwhile British government (Whitcombe, 2008). However, the purpose of the post-independence cooperative arrangements are vastly different. Besides the territorial reorganisation of the basin states, India's subnational political and developmental imperatives required some interstate arrangements to harness the potential of interstate rivers. In other words, the Ganga basin states have seen merit in cooperation.

The Ganga and its tributaries have formed a large, flat, and fertile plain in North India. The availability of water resources, the suitable soil and climatic conditions, and the historical contribution of irrigation development have made the region agriculturally productive (India-WRIS 2012). At the same time, the basin region has one of the highest population densities in the country and grapples with varied environmental risks — of which flooding and water pollution are the most prominent. These conditions have been favourable to the Ganga basin in creating an ecosystem of interstate cooperation whereby the basin states share costs and benefits and jointly manage water resource projects. Contrary to the instances of interstate water disputes that are prevalent in the peninsular rivers — such as the Cauvery and the Krishna — the Ganga basin states have historically cooperated on a number of occasions.



Map 03: Interstate Co-operation arrangements in the basin

Source: TREADS Analysis & CWC (2021)

3.1

The track record of interstate river water cooperation in the Ganga Basin

Volume 3 of Legal Instruments on Rivers in India, published by the CWC in 2015, compiles all the interstate river water agreements or arrangements. It may also be noted that all cooperative arrangements are not agreements under legal jurisprudence — it varies between formal agreements and informal arrangements reached during various high-level convenings. The Volume lists a total of 160 entries across all the interstate river basins in India.

In 2018, the Centre for Policy Research (CPR), in collaboration with the CWC, took up the task of updating the track record of interstate cooperation. The Volume (under review), updated in 2021 , led to identifying 32 more agreements. It may be noted that for the purpose of this study, the updated version has been taken into account that corresponds to 47 entries of cooperative arrangements in the Ganga Basin that are varied in nature. At the same time, there are a few caveats when it comes to explaining and analysing these interstate cooperative arrangements:

- They are not exhaustive. The arrangements/agreements included here are only those that are reported by the states to the CWC. Some additional instances of these cooperative arrangements were collected by the TREADS Initiative during their field visits. In many cases, the states underreport the existing arrangements.

- The cooperative arrangements — and their components, including the quantity of benefits and costs specified — do not always translate into the actualisation of projects and vary widely.

- Some of the arrangements are associated with multiple projects and are spatially varied. For the purpose of spatial representation of each instance, we have selected a location that is in proximity and which tentatively covers multiple projects. For example, the Chambal system corresponds to the Gandhi Sagar, Rana Pratap Sagar, and Jawahar Sagar projects shared by Madhya Pradesh, Uttar Pradesh, and Rajasthan.

Detailed analysis of 47 cooperative instances in the Ganga basin with thematic use and spatial coordinates is attached in Annexure A.

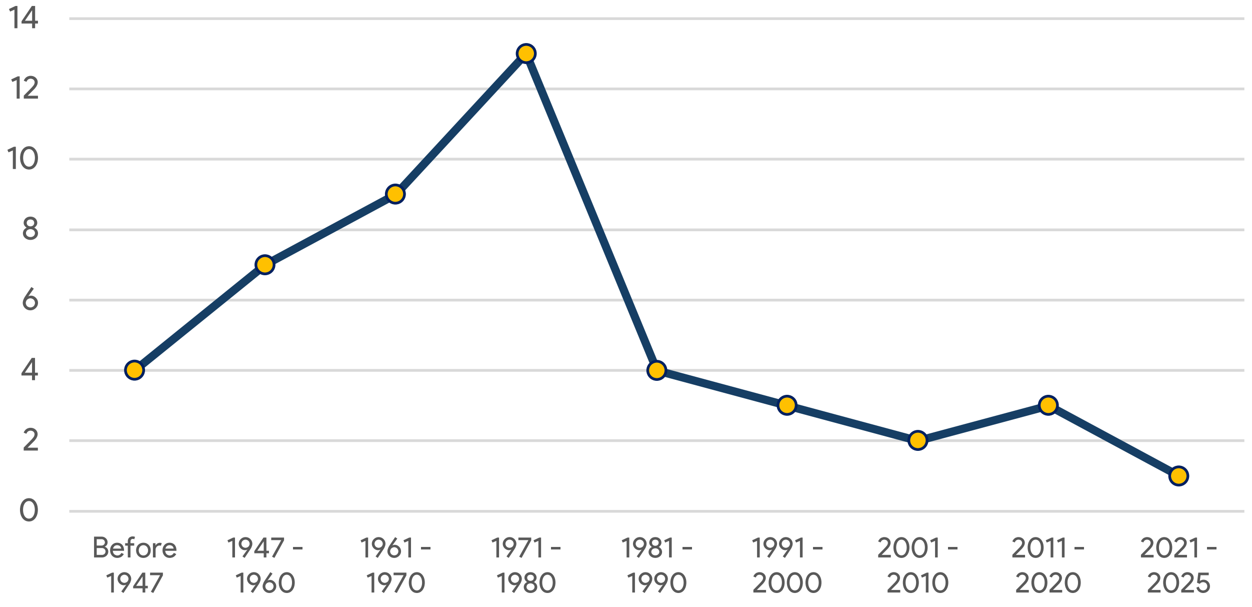
3.2

Unpacking the nature of interstate river water cooperation in the Ganga Basin

The nature of the cooperative arrangements in the Ganga Basin presents significant variation in both spatial and functional scope. The cooperation between the states has resulted in some of the most significant and consequential large-scale water resources projects in the Ganga river, enabling a transformative impact on the region's social and economic development. The Fig. 01 outlines the instances where Indian states cooperated with each other post-independence in the development of the Ganga basin. It may be noted that for the purpose of analysis only post-independence cooperation has been considered.

It is interesting to note that there has been a steady growth of interstate cooperation post independence which peaked in the decade of 1970-80 before a sharp decline from the 1980s onwards. This increase in cooperative arrangements is attributed to a combination of factors. First, the State Reorganisation Act of 1956 (GoI, 1956) — where state boundaries were redrawn based on a linguistic line. The reorganisation led to juxtaposing new territorial and political units on the hydrological basin boundary of Ganga, requiring states to cooperate for joint development. The decades of the 1950s and 1960s also had several interstate conferences for irrigation development over interstate rivers, led by the Planning Commission (Chokkakula & Prajapati, 2021).

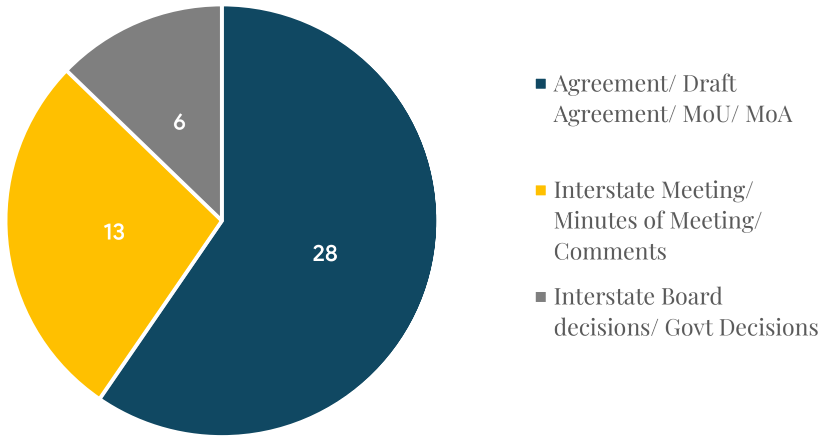
Fig 01: Decadal frequency of interstate cooperative arrangements



Source: TREADS Analysis & CWC (2021)

The nature of the agreement also varies widely. There are both bilateral agreements (among states without the Centre's involvement) and those actively facilitated by the Centre. Some agreements/ arrangements are also outcomes of the formal mediation processes by the Centre or the tribunals, sometimes in the form of notifications or orders by the Centre (Chokkakula & Prajapati, 2021). In addition, decisions arrived at interstate meetings became a key enabler of multiple interstate water resources projects. River Boards — such as Chambal Board (now formally known as the Madhya Pradesh-Rajasthan Inter State Control Board) — became important avenues for consensus building on inter-state water matters.

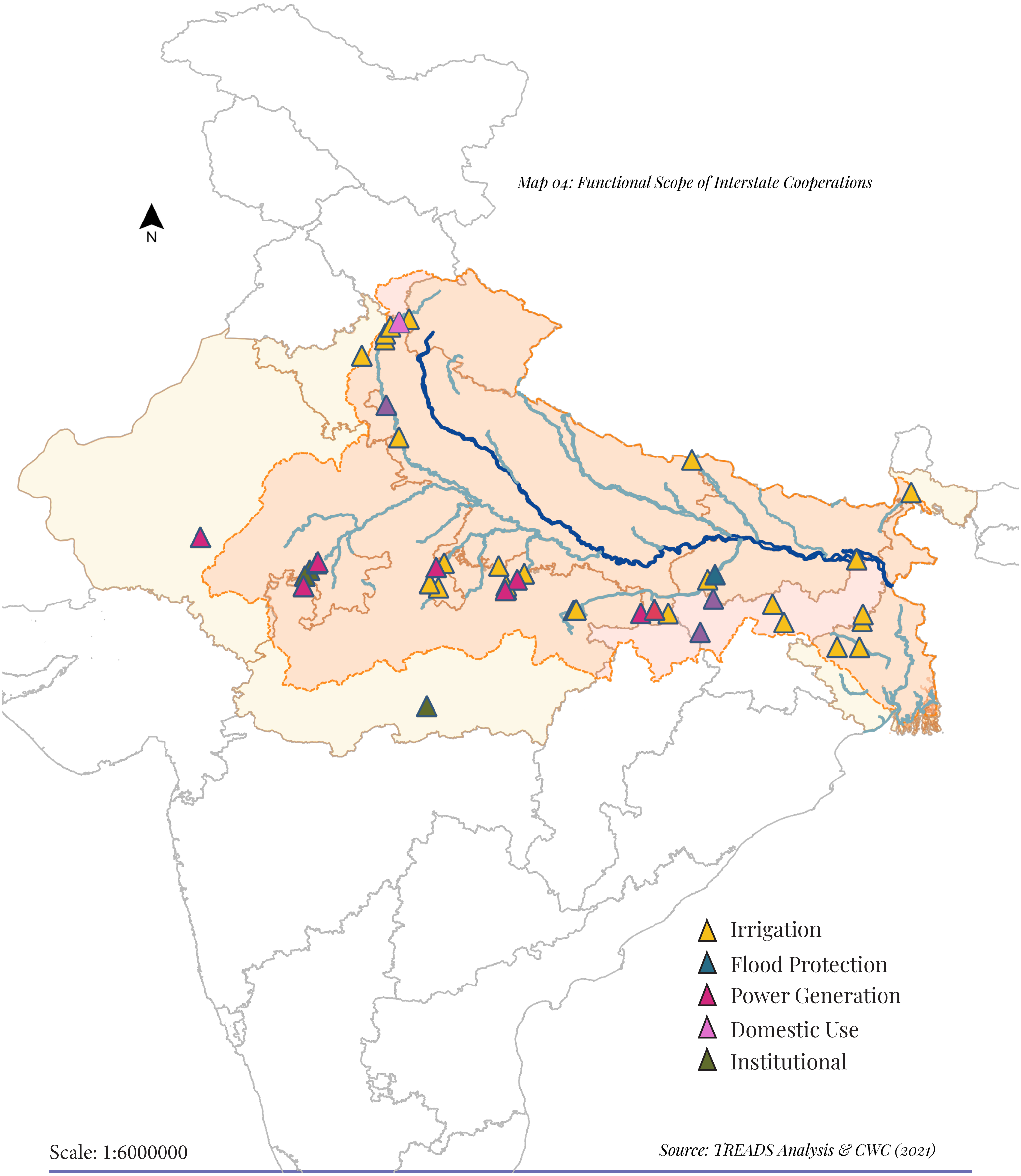
Fig 02 Forms and Nature of Arrangements



Source: TREADS Analysis & CWC (2021)

3.3

Spatial and Functional Scope of the Inter-State Cooperation Arrangements on Ganga Basin



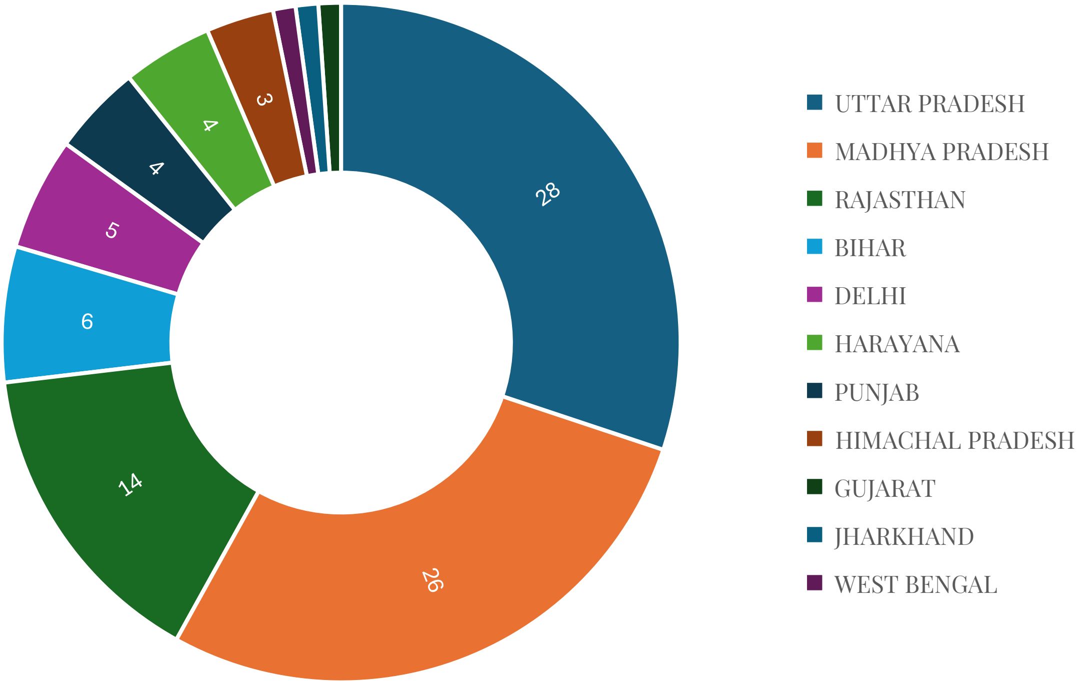
Map 04: Functional Scope of Interstate Cooperations

Scale: 1:6000000

Source: TREADS Analysis & CWC (2021)

The mapping of interstate cooperation agreements (Map 03) highlights an interesting trend. The cooperation among the states resulted in a number of water resources projects, the majority of which are located in the interstate tributaries and not on the main stem of the Ganga basin. In particular, the sub-basins/tributaries of Ganga — Yamuna, Chambal, and Betwa — are where most of the inter-state projects are located and which required cooperation amongst the states. Across these sub-basins, select states such as Rajasthan, Madhya Pradesh, and Uttar Pradesh are party to the majority of the agreements or decisions (Fig. 03).

Fig 03: State's cooperation on Ganga Basin

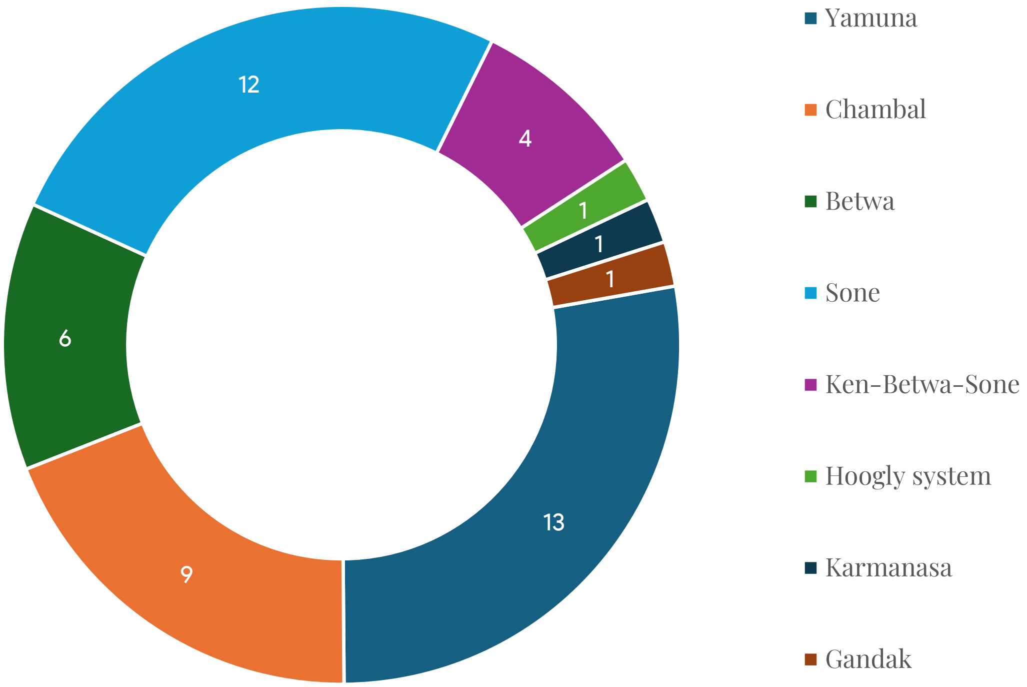


Source: TREADS Analysis

These instances of interstate cooperation have an expansive functional scope — ranging from allocative and distributional issues, cost sharing, and coordination mechanisms for joint development (Map 04).

However, there have been no instances where states cooperated in managing water pollution or improving the ecological health of the river system. A closer reading of these agreements suggests that the primary motivation of the states to cooperate has been skewed towards water quantity-related aspects rather than quality — indicating that in India's federal context, the developmental concerns of the states took precedence over ecology since independence.

Fig 04: River-wise Co-operative Arrangements



Source: TREADS Analysis

However, a longitudinal analysis reveals important shifts in the ways water resources are managed — from resource extraction and revenue generation considerations towards developmental and environmental risk concerns. For example, addressing drought risks and water pollution in recent times. The cooperative arrangements reveal that although over a period of time the states have been territorialised on multiple occasions, they are mutually dependent in managing shared water resources. In the next section, we discuss how states are interdependent and what lessons we can draw from these interdependencies in conceiving an ecosystem of inter state cooperation for river rejuvenation.

04

Interstate Interdependencies

4.1

How has India Cooperated: A Framework for Analysing Interstate Stakes and Interdependencies

These developmental concerns of the states, coupled with the interjurisdictional nature of the Ganga basin system, have produced a degree of interdependence among them that transcends beyond allocation and distribution of water — from hydropower distribution among states to flood risk management and incentives in jointly developing and managing large-scale water resources projects. To better understand this complex interplay, this study has developed a framework to map attributes driving cooperation among the states. Specifically, the framework is developed by drawing from the work of Fischer & Jager (2020), Sadoff and Grey (2005), and Le Marquand (1977) and modified based on the contextual requirements of this study.

This framework identifies **five key drivers** that create interdependence among the states:

- **Water/environmental risks and stressors:** Cooperation as an outcome of water-related stress/risks. Many of the Ganga basin states are highly vulnerable to flooding. The downstream states are subjected to acute flooding and bank erosion challenges. For example, Bihar and West Bengal.

- **Benefit Sharing:** Cooperation as an outcome of shared water resources/power distribution and allocation. From pre-independence, the Ganga and its tributaries support an intricate and vast network of canal systems and are one of the most important contributors to India's hydroelectric power generation. Many of these benefits are derived from large-scale multipurpose interstate projects whose benefits are distributed across state boundaries. As per the India-Water Resources Information System database, there are 784 dams situated in the Ganga basin, out of which 158 dams are included in the National Register of Large Dams (NRLD), 66 barrages, 92 weirs, and 45 lift schemes. These contribute to a total of 478 medium and major irrigation projects, 39 hydroelectric projects, and 56 powerhouses. The benefits are largely distributed.

- **Cost Sharing:** Financial incentives as an outcome of joint development of projects. A number of these projects have been financed jointly by the states with and without the financial support from the centre. The joint development of interstate projects is incentivised through cost sharing.

- **Coordination Demands:** Creation of interstate river boards/authorities as an outcome of coordination demands. The joint development of projects often involves benefit distribution on a pro rata basis or based on their hydrological/catchment area contribution. In the efficient management of these projects, a joint river management board/authority for implementation and coordination becomes central.

- **Reorganisation of State Boundaries:** Interstate and center-state political groupings.

Subsequently, the framework is used to assess the 47 instances of cooperation. It is important to note that, when analysing the drivers of this subnational cooperation, some of the subnational agreements may correspond to one or more of these attributes. Furthermore, in addition to assessing these drivers, we analyse the diverse federal and interstate entities — such as river boards and authorities — including their origin, legal instruments of constitution, and respective functional mandates. This allows us to highlight how these institutional arrangements have produced functional interdependencies among states to govern the interstate rivers *(Table 04)*.

Table 04: Framework for Analysing Inter-state Stakes and Interdependencies

Attributes	Description	Agreements
Water/environmental risks and stressors	Recurring floods and droughts.	Ken-Betwa-Sone: KBS3, KBS4 Hooghly: H1
Benefit Sharing	Functional interdependencies leading to joint development and sharing of benefits.	Ken-Betwa-Sone: KBS1, KBS2 Yamuna: Y6, Y7, Y8, Y4, Y9, Y13 Chambal: C1, C2 Sone: S1, S3, S4, S8, S9, S10, S12 Betwa: B1, B3, B4, B5 Hooghly: H1 Karmanasa: K1 Gandak: G1
Cost Sharing	Cost sharing among the states.	Ken-Betwa-Sone: KBS1, KBS2, KBS3, KBS4 Yamuna: Y5, Y6, Y7, Y8, Y9, Y10, Y12 Chambal: C3, C4, C5, C6 Sone: S1, S2, S4, S6, S7, S8, S10, S11 Hooghly: H1 Karmanasa: K1 Betwa: B2, B3, B5
Coordination Demands	Joint institutions and engagement of the central government.	Ken-Betwa-Sone: KBS3, KBS4 Yamuna: Y4, Y5, Y8, Y9, Y10 Chambal: C2, C7, C8, C9 Sone: S5, S8, S10 Betwa: B2, B5, B6
Reorganisation of State Boundaries	Favourable inter-state and centre-state political groupings.	Ken-Betwa-Sone: KBS3, KBS4 Chambal: C1, C4, C5 Sone: S1

Source: TREADS Analysis
**Yamuna: Y1 - Y4 arrangements are Pre-Independence. Hence excluded.*

Refer to Annexure C: Visual Representation of the Drivers of Cooperation in the Ganga Basin

The interstate bodies — ranging from river boards to authorities — have proven to be indispensable to respond to the complex water governance challenges in the Ganga basin. These institutions have been instrumental for the state to collaborate effectively, promote joint planning of infrastructure, build consensus, and coordinate the execution of projects. In effect, all the interstate joint bodies/ river authorities/boards have one component in common — representation from the central government.

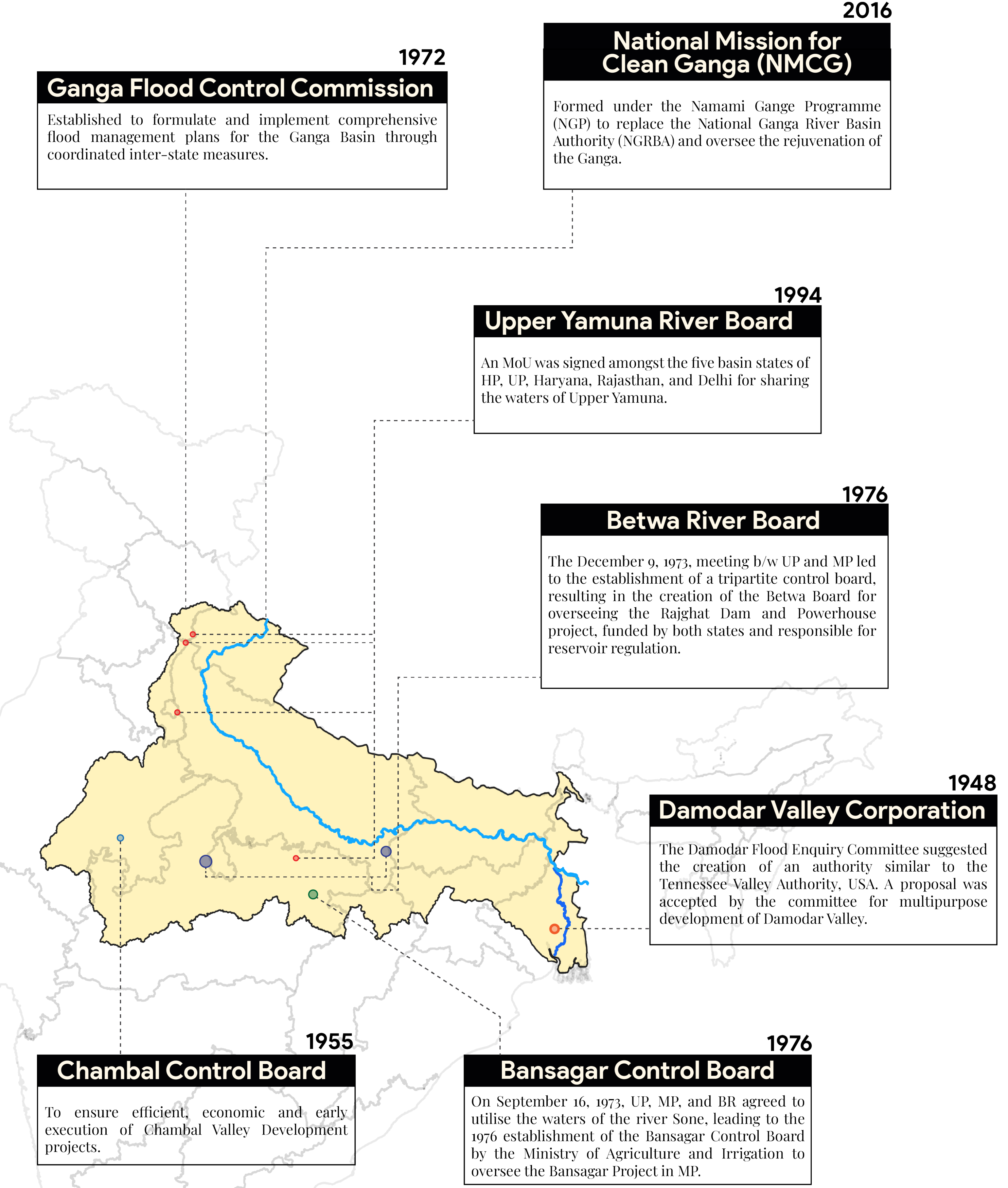
However, their spatial and functional scope has been limited, and their constitution has been ad hoc in managing compounding and cascading water-related risks and pollution. These interstate bodies have been constituted with an exigency-based approach and are context-specific. Table 04 shows how most of the boards were drawn from multitudes of legal provisions and not from the River Boards Act (RBA) 1956, which was specifically enacted by the Parliament under Article 262 of the Indian Constitution. The RBA 1956 was specially designed to constitute interstate river boards and is vested with wide-ranging functions for both the development and regulation of interstate rivers. One of the crucial functions of these boards was the prevention of pollution of the waters of interstate rivers. This structured approach in the constitution of river authorities was not taken, and water quality and quantity have been dealt with separately. *(See Fig. 05)*

The Current Shifts: Progressive Policymaking

From 2014 onwards, there has been a visible shift. In 2014, GoI launched the NGP with an unprecedented outlay of INR 20,000 crores. The National Ganga River Basin Authority (NGRBA) and the National Mission for Clean Ganga (NMCG) were shifted out of the Ministry of Environment Forest and Climate Change (MoEFCC) to the Ministry of Water Resources, renamed as the Ministry of Water Resources, River Development & Ganga Rejuvenation, stressing the importance attached to cleaning the Ganga. In the next section, we will revisit how the NGP is a promising step towards interstate cooperation for water quality management and the bottlenecks it is facing in realising that objective.

The identification of these interdependencies is crucial to presenting a case on how states could be incentivised to cooperate with each other to address water quality issues and the improvement of river ecology. As a preview for the next section, we note that states themselves are required to progressively reform their subnational water policies and institutions to incorporate ecological sensitivities and incrementally shift from a skewed focus on water quantity and supply augmentation. In the next section, we analyse the evolving and emerging trends where India is prioritising water quality and ecology in its broader water governance framework — both at the national and subnational levels.

Fig 05: Inter-State Institutions in Ganga Water Resource Management



1972

Ganga Flood Control Commission

Established to formulate and implement comprehensive flood management plans for the Ganga Basin through coordinated inter-state measures.

2016

National Mission for Clean Ganga (NMCG)

Formed under the Namami Gange Programme (NGP) to replace the National Ganga River Basin Authority (NGRBA) and oversee the rejuvenation of the Ganga.

1994

Upper Yamuna River Board

An MoU was signed amongst the five basin states of HP, UP, Haryana, Rajasthan, and Delhi for sharing the waters of Upper Yamuna.

1976

Betwa River Board

The December 9, 1973, meeting b/w UP and MP led to the establishment of a tripartite control board, resulting in the creation of the Betwa Board for overseeing the Rajghat Dam and Powerhouse project, funded by both states and responsible for reservoir regulation.

1948

Damodar Valley Corporation

The Damodar Flood Enquiry Committee suggested the creation of an authority similar to the Tennessee Valley Authority, USA. A proposal was accepted by the committee for multipurpose development of Damodar Valley.

1955

Chambal Control Board

To ensure efficient, economic and early execution of Chambal Valley Development projects.

1976

Bansagar Control Board

On September 16, 1973, UP, MP, and BR agreed to utilise the waters of the river Sone, leading to the 1976 establishment of the Bansagar Control Board by the Ministry of Agriculture and Irrigation to oversee the Bansagar Project in MP.

Source: TREADS Analysis

For detailed analysis, refer to Annexure D: Inter-State Institutions in Ganga Water Resource Management.

05

Latent and Emerging Trends

Water resources management in post-independence India has primarily been driven by supply-augmentation considerations, a continuation from the colonial period. This is reflected in how water resources have been located in the different ministries since 1947 *(Fig. 06)*. In the initial period, there were no separate ministries managing the country's water resources, and instead, water governance was subsumed under the subjects of irrigation, power, energy, and agriculture. This positioning of water resources with energy and irrigation reinforces water as a resource that has been considered from the point of view of extraction and supply for India's developmental needs. It was in 1985 when the Ministry of Irrigation was renamed as the Ministry of Water Resources , albeit without a visible shift in its mandate and objectives when it comes to water quality management and protection and conservation of water resources.

Fig. 06: Post-Independence evolution of the water sector administration in India

POST-INDEPENDENCE

1947

Department of Works, Mines, and Power

Created on the recommendation of the Secretariat Reorganization Committee, which looked after the subject of Irrigation and Power.

1951

Ministry of National Resources and Scientific Research

It took over the subject of Irrigation and Power from the Ministry of Works, Mines, and Power.

1952

Ministry of Irrigation and Power

A separate Ministry was set up to look after the subject of 'Irrigation.'

1974

Ministry of Agriculture and Irrigation

The Department of Irrigation was set up under the new Ministry, consequent upon the bifurcation of the erstwhile Ministry of Irrigation and Power.

1980 (Jan)

Ministry of Energy and Irrigation

The Department of Irrigation came under the newly formed Ministry.

1980 (July)

Ministry of Irrigation

The Ministry of Energy and Irrigation was bifurcated, and the erstwhile Department of Irrigation was raised to the level of a Ministry for a coordinated and comprehensive view of the entire irrigation sector.

1985 (Jan)

Ministry of Irrigation and Power

The Ministry of Irrigation was once again combined under the Ministry of Irrigation and Power.

1985 (Sept)

Ministry of Water Resources

The Ministry of Irrigation and Power was bifurcated, and the Department of Irrigation was re-constituted as the Ministry of Water Resources.

This recognition of the necessity of planning for the development of the country's water resources in a coordinated manner resulted in a change in the character of the Ministry and the Ministry assumed a nodal role regarding all

2011

Ministry of Drinking Water and Sanitation

In 1999, the Department of Drinking Water Supply (DDWS) was formed under the Ministry of Rural Development for focused attention on drinking water and sanitation. Later it was renamed as the Department of Drinking Water and Sanitation in 2010.

Nodal department for the overall policy, planning, funding and coordination of programmes of drinking water and sanitation in the country.

2014

Ministry of Water Resources, River Development & Ganga Rejuvenation

The Ministry of Water Resources was renamed to "Ministry of Water Resources, River Development & Ganga Rejuvenation", making it the NGRBA for conservation, development, management, and abatement of pollution in the river Ganges and its tributaries.

2019

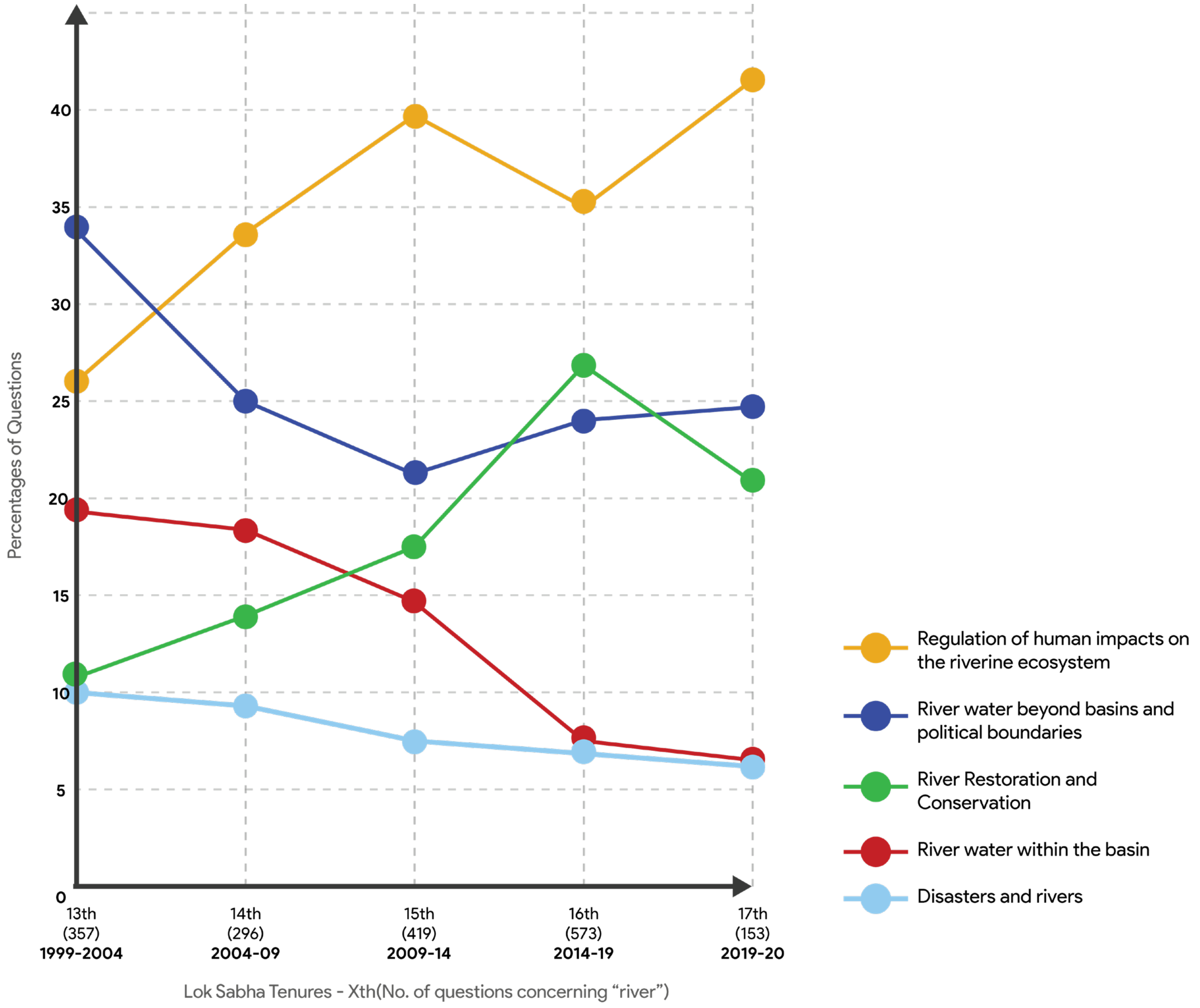
Ministry of Jal Shakti

It consists of two Departments i.e., the Department of Water Resources, River Development and Ganga Rejuvenation (Jal Sansadhan, Nadi Vikas Aur Ganga Sanrakshan Vibhag) & Department of Drinking Water and Sanitation (Peya Jal Aur Swachhata Vibhag).

Source: TREADS Analysis

The paradigm shift came in 2014 when 'Ganga Rejuvenation' was incorporated into the Ministry's mandate. The merger indicated the progressive policy shifts where water quality and ecological health have been equally prioritised along with the quantity in India's broader water resource governance framework. This observation has also been validated by the work of Azhoni et al. (2022), where they analysed Indian Parliamentary Questions (Lok Sabha) concerning rivers and the changing priorities of the central government in managing river basins over the last decades. They argue that there is a visible shift in focus by the parliamentarians — from large-scale reservoirs, irrigation, and hydropower towards increased attention on inter-basin water transfers, river conservation, and pollution *(Fig. 07)*.

Fig. 07: Indian Parliamentary Questions concerning rivers



Source: Azhoni et al. (2022)

5.1

The spatial scope of the NMCG and how they enable Cooperation and Coordination

The launch of the NGP was a critical point of transition, paving the way for robust interstate and centre-state cooperation in managing transboundary environmental pollution, which we will discuss in the next section.

5.1.1 From Ganga Action Plan (GAP) to National Ganga River Basin Authority (NGRBA)

The GAP was launched in 1984 with a limited mandate. The goal of the GAP in addressing point source pollution was straightforward: "intercept, divert, and treat" wastewater generated in urban centres. However, GAP proved to be inadequate in tackling the complexity of water pollution in the Ganga. One of the key arguments for the underwhelming outcome of the GAP was the limited role and inadequate resources of the state government. The insufficient institutional capacity of the state governments was unable to address the complex water pollution challenges in the Ganga basin. The Ganga River Basin Management Report, produced by a consortium of seven Indian Institutes of Technology (IITs), in their SWOT analysis of the GAP observed, "... GAP missed many aspects such as the need for analysing policy and legal aspects of center-state relationships, implementation of the 74th amendment to the Indian Constitution, and State Government-ULBs relationships, as well as the convergence of policies adopted for implementing GAP with the broader developmental policies." To address this gap, the Government of India constituted the NGRBA.

The NGRBA was constituted by the Environment (Protection) Act, 1986 (EPA), to increase the scope of cooperation and coordination on the Ganga. NGRBA was designed to take a holistic approach as a unit of planning and institutional restructuring, focusing robustly on a basin-wide approach to river management. In 2014, the Authority was reconstituted, designating the MoEF&CC as the nodal agency for programme oversight and entrusting the NMCG with executive responsibility for project implementation and financial management. However, the programme lacked financial resources and an adequate legal and institutional structure in addressing water pollution at the basin scale.

5.1.2 From NGRBA to National Ganga Council (NGC)

In 2016, the GoI issued the River Ganga (Rejuvenation, Protection and Management) Authorities Order of 2016 (Ganga Notification, 2019). This Order dissolved the NGRBA, and the NMCG was accorded the status of an authority. A National Ganga Council (NGC) was created to oversee and guide the NMCG. The NGC is a representative and deliberative body with extensive political heft. It is headed by the Prime Minister with the Chief Ministers of the riparian states and other ministers as members. NGC functions through an Empowered Task Force (ETF) headed by the Union Minister for Jal Shakti and an Executive Council headed by NMCG's Director General with extensive financial and regulatory powers. The 2016 Order also recognises the subnational governments as partners by creating State Ganga Committees (SGCs) and District Ganga Committees (DGCs) with their functions laid out for implementing the NGP.

5.2

Interstate Cooperation and Subnational Institutionalisation for Ganga Rejuvenation Cooperation and Coordination

The five-tiered structure (See fig. 08), as proposed under NGP, is yet to function to its full potential. This is linked to an absence of subnational ownership of the programme, reflected by the non-existence of adequate basin-state-level legal, institutional, and budgetary responses. In contrast to the interstate cooperation for large-scale water resources projects, as was discussed in the previous section, there are few incentives for the states to build mechanisms and jointly implement a river rejuvenation programme.

NGP is largely a centrally sponsored programme. In this view, the endurance of the NGP is, to a large extent, dependent on two aspects. First, the ability of the states to cooperate with each other in driving the programme once its mission life ends. For example, in the case of data sharing, there is no procedural framework for the states to share data with each other. Secondly, the states are also required to institutionalise the programme into their subnational plans and policies and in reorienting the institutional culture of their Water Resource Departments, moving from a sole focus on supply augmentation towards incorporating pollution risk management in their mandate. The weak subnational response is reflected in the judiciary-driven pollution management, such as the NGT, which frequently directs states to comply with its orders on various river pollution-related measures.

In the recently held Maha Kumbh (2025) in Prayagraj, Uttar Pradesh, the National Green Tribunal (NGT) took cognisance and appointed a Joint Committee (Report by District Magistrate, Prayagraj, 2022), which submitted a report through the Uttar Pradesh Pollution Control Board (UPPCB), revealing that the untreated sewage through the untapped drains was flowing directly into the river and there was a significant gap in the generation and treatment of sewage. It was found that out of 76 drains, 37 were tapped by UP Jal Nigam (UPJN), which are being treated by 10 Sewage Treatment Plants (STPs), and the discharge was released directly into the rivers.

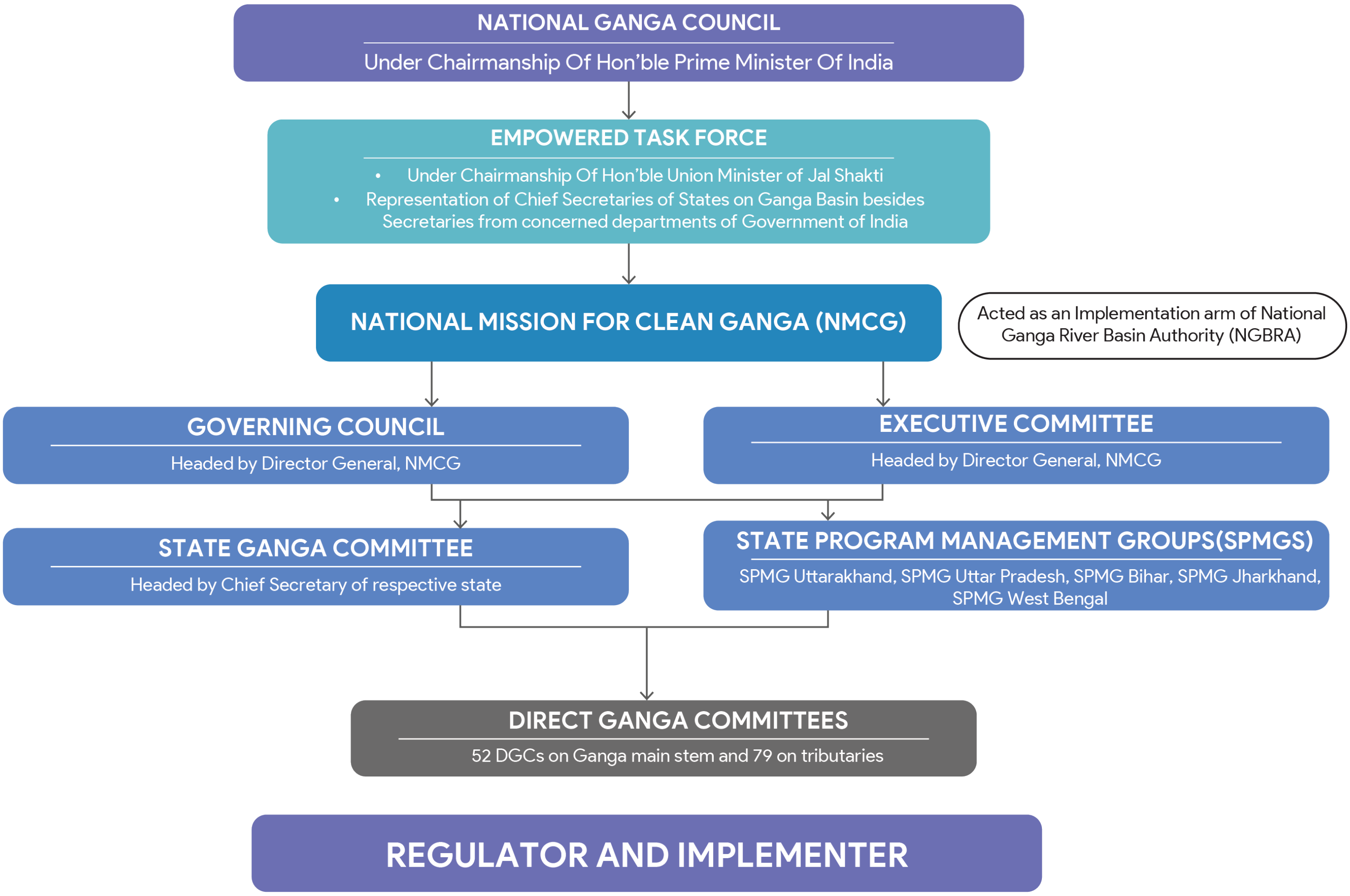
However, in the last few years, there is an emerging trend where states are increasingly raising the concerns of environmental pollution affecting the state's water management. For instance, Delhi's drinking water supply gets severely disrupted with an increase in upstream pollution load. The discussion presents a case where analysing the states' concerns, their political and developmental priorities, and evolving interest in water resources management remains key in conceiving an ecosystem of cooperation for collective action by the Ganga basin states. In order to do that, we analyse:

1. ETF meetings — where the State and the Central Ministers interact across sectors on key issues and priorities for Ganga rejuvenation (5.2.1.);

2. Key informant interviews (5.2.2.); and

3. The All India State Water Minister's Conference — where the central government is working with the states to formulate India's Water Vision 2047 (5.2.3.).

Fig. 08 – NMCG's five-tiered structure


NATIONAL GANGA COUNCIL
Under Chairmanship Of Hon'ble Prime Minister Of India
EMPOWERED TASK FORCE
Under Chairmanship Of Hon'ble Union Minister of Jal Shakti
Representation of Chief Secretaries of States on Ganga Basin besides Secretaries from concerned departments of Government of India
NATIONAL MISSION FOR CLEAN GANGA (NMCG)
Acted as an Implementation arm of National Ganga River Basin Authority (NGBRA)
GOVERNING COUNCIL
Headed by Director General, NMCG
EXECUTIVE COMMITTEE
Headed by Director General, NMCG
STATE GANGA COMMITTEE
Headed by Chief Secretary of respective state
STATE PROGRAM MANAGEMENT GROUPS(SPMGS)
SPMG Uttarakhand, SPMG Uttar Pradesh, SPMG Bihar, SPMG Jharkhand, SPMG West Bengal
DIRECT GANGA COMMITTEES
52 DGCs on Ganga main stem and 79 on tributaries
REGULATOR AND IMPLEMENTER

Source: NMCG

5.2.1 Empowered Task Force Meetings

The NGC and the ETF offer a two-tier system wherein the political and technical concerns of the states are represented. Although the NGC has only met twice since 2016, ETF meetings are convened frequently by the NMCG. In this section, we analyse the proceedings of these meetings from 2015 to 2025 to identify the perspectives of the states as well as the mechanisms through which NMCG supports the states in the implementation of the NGP. The following trends emerged from our analysis, and the detailed proceedings of the ETF meetings during the period of 2015 to 2025 can be accessed in **Annexure D.**

- In terms of the proceedings, the Central ministries have shown domination in setting the agenda (conducting meetings and deciding sectoral financial allocations), while state-specific bottlenecks, particularly those related to political and financial issues, were rarely discussed. The majority of the meeting time and agenda were devoted to progress monitoring, with relatively fewer or limited discussions or advocacy for state-level concerns. The states' inputs were mostly procedural, where they mention the compliance status rather than mentioning their local challenges or political impediments and concerns. Therefore, the focus is shifted to central directives and achievements by sidelining granular realities on the ground faced by the states.

- From 2017 to 2025, the ETF meetings on the NGP primarily focused on the fund's utilisation, project progress within the states, and stakeholder participation across the Ganga basin states. Each basin state is responsible for the implementation of their statewise projects under NGP funded by NMCG. The coordination with multiple central ministries and state governments ensures the convergence of funding and project synergies.

- Across the basin states, the focus was primarily on identifying and mapping the nallahs, wetlands, and small water bodies for rejuvenation. With the coordination of ULBs, various plans or advanced action plans are prepared with pending approvals from the state governments. The STP projects were widespread, especially in UP and Bihar, with over 136 STP/I&D (inlet and drainage) projects reported during the 2018–2021 phase. Water Quality monitoring through Online Continuous Emission Monitoring Systems (OCEMS) was mandated for STPs with >1 MLD capacity.

5.2.2 Key Informant Interviews

The proceedings from the ETF meetings provide limited perspectives on how the centre-state or interstate concerns are addressed. To get a more granular understanding, key informant interviews and practitioners' perspectives have proven to be useful. Some observations from these consultations are as follows:

- The interstate and the centre-state political alignment, although useful for implementing large-scale programmes such as the NGP, are not always true. The complexities are often layered — such as between the state and the local governments. Similarly, on many occasions, even if the political alignment between the centre and the state has not been favourable, project implementation has not suffered.

- States on many occasions have been criticised for their capacity in the preparation of the Detailed Project Reports (DPRs) and delays in land acquisition for the construction of STPs. However, this challenge is seldom discussed in the ETF/other forums and is instead discussed in various informal-level discussions.

- The Central government often uses various levers — fiscal, legal, and institutional — to nudge states to cooperate in the implementation of the NGP. For instance, the central government has not only provided extensive capital expenditure support in implementing the NGP, but significant Operation and Maintenance (O&M) costs are also borne by the Centre. This has often resulted in an institutional culture where deployment of finance has been central to the NGP. In addition, NMCG has also deployed its role as an authority in influencing the states' water resources policy. For instance, NMCG amended the 2016 authority notification to permit the discharge of treated sewage into the river, canal, or water bodies.

5.2.3 All India State Water Minister's Conference

In the last two years, the forum for the All India State Water Ministers' Conference has received significant political attention. The Conference, hosted by the MoJS, gave a platform to the states to highlight their respective crucial aspects of water management, including effective governance, transboundary cooperation, innovative financing, and community participation. We transcribed and analysed the proceedings of the Conference to highlight the major challenges, progress, and concerns of the states in their management of water resources. It may be noted that only the Ganga basin states have been considered for the purpose of this analysis. The detailed proceedings of the Conference between the period of 2015 to 2025 can be accessed in **Annexure E.**

Haryana

- Water Scarcity in Southern part of Haryana aims at 100% reuse of wastewater by 2028.
- Challenges of fragmented governance. The Model State Integrated Water Resources Plan was formulated on the basis of block-level data of demand and supply in 2023. There were significant concerns regarding asset management pertaining to drinking water and irrigation supply.

Delhi

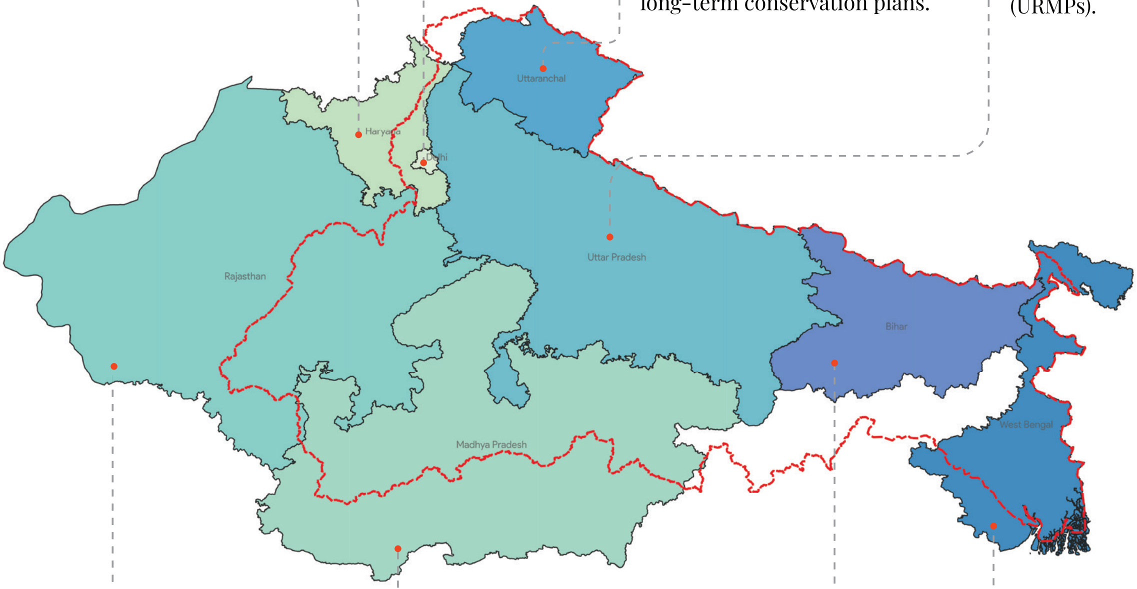
- High dependency on external water sources: 52% of Delhi's water is non-revenue water, which is mainly because of the ageing infrastructure and mismanagement.
- Key issue raised: Yamuna water pollution.

Uttarakhand

- Focus on Springs and Water Bodies: The govt. established the Spring and River Rejuvenation Authority (SARA) to protect and revive various water bodies, including small and large rivers, reservoirs, and rain-fed streams.
- Use of technology: Deploying technology such as GIS technology, GPS, and drones for terrestrial assessment, monitoring flow rates, and water quality. Geo-hydrological studies and mapping help identify recharge areas, forming the basis for long-term conservation plans.

Uttar Pradesh

- Flood Plain Zoning and regulations for major rivers to control encroachment and pollution are major considerations after the NGT's directives have led to the scientific determination of flood zones for rivers like Ganga, Yamuna, Gomti, Ramganga, Betwa, Ghagra, and others using high-resolution remote sensing.
- Advancing urban river rejuvenation through planning and implementation of the Urban River Management Plans (URMPs).



Rajasthan

- Acknowledges the importance of inter-state river water cooperation between Madhya Pradesh and Haryana in addressing Rajasthan's water challenge.

Madhya Pradesh

- Water overuse: Irrigation for agriculture and the use of technology such as SCADA (Supervisory Control And Data Acquisition) are major focuses.

Bihar

- Ensuring safe drinking water in arsenic, fluoride, and iron-affected areas. High focus on water supply projects before 2047 to shift from groundwater to surface water supply using modern technology and smart meters.
- Flooding in North Bihar is a major issue, with the Kosi River (a tributary of the Ganga) frequently changing course, causing erosion and destruction. Long term solution by building high dams through Indo-Nepal Cooperation is required, as well as the strengthening of embankments.
- Asset Management: Bihar Embankment Asset Management System is a GIS-based web portal for scientific planning, flood forecasting, and disaster impact assessment that has been useful

West Bengal

- Focus on agriculture and irrigation development.
- Challenges with water reuse and greywater management.
- Fragmented water legislation in the state.

Fig. 8 - Brief Perspectives & Concerns of Basin States in All India State Water Minister's Conference

Source: Compiled from the proceedings of the Second All India State Water Minister's Conference, February 2025

06

Concluding Remarks

The Ganga Basin is one of the most complex river systems in the world for governance and management. It has one of the highest population densities, with significant variation of socio-economic indicators, both at the subnational level and among districts within the same state. Agriculturally, it remains one of the country's most productive regions, historically and presently. The colonial development of large-scale irrigation has shaped both the irrigation and institutional structures of its state water resources departments. Following independence, water resources projects in the Ganga basin were primarily driven by India's developmental and state-building concerns. These large-scale projects generated dispersed benefits, motivating states to cooperate to gain water for irrigation, hydropower, and flood protection while also sharing costs and reducing administrative and technical complexities through interstate bodies. This process fostered interdependencies among the states and between the centre and states, helping to address developmental concerns and manage environmental risks. However, the incentives for maintaining cooperation have been limited to water quantity and distributive aspects, rarely addressing ecological risks like river pollution and aquatic degradation.

From 1990 onwards, river pollution started to gain public attention as well as policy traction. The launch of the Ganga Action Plan in 1990 was an important step towards a gradual and incremental development of India's environmental policies and institutions. In the last few decades, the trend in India's water resources management has been shifting towards quality concerns. The inclusion of Ganga Rejuvenation within the Ministry's mandate and the gradual rise of discussion on issues related to river restoration, conservation, and ecosystem health are indicative of these shifts. These incremental steps have finally culminated in the NGP with NMCG as its executive body with both implementing and regulatory powers.

The NGP, although centrally driven, marks a clear departure from earlier initiatives by recognising states as key drivers and equal stakeholders. Its institutional structure acknowledges the importance of the states for the Programme's endurance, but the core mechanism remains the Centre's financial leverage and state use of funds to enhance infrastructure addressing river pollution, as seen in ETF meetings. Both the Centre and the states have yet to create a plan for sustaining the Programme after the mission concludes. In parallel, the MoJS has launched an initiative for India's long-term water security vision by closely engaging the states. Conference proceedings indicate that states have yet to integrate ecological risks fundamentally into their water resources management strategies.

The discussion on interstate cooperation in this study aims to provide a foundation and an impetus for designing effective incentives to encourage proactive state engagement. This needs to occur at two levels: first, subnational institutionalisation of the NGP, aligning state responses — budgetary, legal, and institutional — with the Programme; and second, renewed collaboration among states in sharing costs to improve the river's aquatic health. Thus, the Ganga basin offers lessons from its past and a pathway for reimagining future interstate cooperation by harnessing those lessons to address the challenges of a rapidly evolving landscape.

POLICY IMPLICATIONS

The research is based on the preliminary findings from the various publicly available data and our interactions with key stakeholders. However, for the preparation of the policy brief, we plan to conduct an extensive consultation at the state and basin level with the following questions of interest as prompts and to discuss and get inputs on the recommendations emerging from the study.

1. Are there mechanisms through which states can cooperate with each other in sharing infrastructural costs in river conservation and restoration? What enduring institutional mechanisms could it follow? Are there learnings from the existing interstate river boards/ authorities that could facilitate such transformation?

2. How can states cooperate for data sharing and standardisation of data sharing protocols?

3. How can the ETF/RCA meetings provide more context and be streamlined in bringing states' perspectives and challenges in dealing with river pollution?

4. What are the challenges associated with the states in utilising the funds released under NMCG? What are the financial and institutional responses that would be required from the states to sustain the NGP post its mission life? Pertaining to this, what can be the renewed role of NMCG in facilitating and strengthening India's river rejuvenation programme?

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ANNEXURE A:

Analysis of 47 cooperative instances in the Ganga Basin with thematic use and Spatial coordinates

COOPERATIVE ARRANGEMENTS						IMPLEMENTATION							SPATIAL COORDINATES	
						THEMATIC USE								
KEN-BETWA-SONE	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL	WATER SUPPLY/ SHARE	INTER-LINKING/ INDUSTRIAL	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
KBS1	1972	Agreement on some irrigation projects in Bundelkhand.	Uttar Pradesh (UP) Madhya Pradesh (MP)	1. Lower Orr Dam 2. Neemkheda barrage 3. Barari barrage 4. Kotha barrage 5. Kesari barrage	Rajghat Dam will have 62 TMC live storage (16 TMC dead storage), reserving 9 TMC for committed downstream uses in UP and MP; remaining water is shared between UP and MP. UP may use 9 TMC for downstream and Bhander Canal, with excess use requiring Joint Board approval without permanent rights. Rangwan Dam allows MP up to 2 TMC for Kharif crops till October 31; remaining storage (as of November 1st) is split **36:15** between UP and MP. Urmil Dam allocates 40% of water to UP and 60% to MP at 75% dependability. Lalitpur Dam water will irrigate 1,800 acres in MP's Tikamgarh using UP's water with equivalent duty.	NA	**Cost will be equally divided in proportion to the benefits.** **Lalitpur Dam:** Cost of the canal system will be borne by MP.	**Greater Gangau Dam:** MP completed the investigation with Central Water & Power Commission assistance. **Lalitpur Dam:** MP will construct an extension of the canal system in their area.	NA	NA	NA	NA	24.76	78.23
KBS2	1977	Minutes of Meeting of the Chief Ministers of MP and UP regarding the following projects: (i) Rajghat project, (ii) Paisuni project, (iii) Ken Canal, (iv) Kanhar, (v) Urmil, (vi) Bansagar project, (vii) Bhander canal.			NA	NA	**Rajghat:** 1 Cr. by MP & the rest sponsored by World Band or by a Middle East Country. **Bhander Canal:** MP to bear the total cost for repairs or remodelling, and maintenance.	**Rajghat Project:** To be started as soon as possible. U.P. agreed to M.P.'s proposal of making the Left Bank Canal from the Bariyarpur headworks. U.P. has agreed that it will not increase its irrigation beyond 2.10 lakh acres during Kharif and 1.60 lakh acres during Rabi.	**Paisuni Project:** 1462 m.c.ft. of water reserved for upstream use in M.P., and the balance will be used by U.P.	NA	NA	NA	**24.19**	**81.29**
KBS3	2005	Memorandum of understanding (MoU) on Ken-Betwa Link Project	Uttar Pradesh (UP) Madhya Pradesh (MP) Union Government		National Water Development Agency (NWDA) conducted a study on benefit sharing: Gross Water available: 218.54 TMC MP requirement (upstream of Daudhan Dam): 80.03 TMC Regeneration capacity: 15.61 TMC Net Water Balance available: 154.12 TMC Total requirement of MP: 59.58 TMC (including D/S use: 48.56 TMC, en route use: 9.29 TMC, domestic use: 59.58 TMC Total requirement of UP: 60.04 TMC (including D/S and domestic use). **The benefit-cost ratio and IRR have been worked out as 1.51:1 and 11.26 %.**	The project provides an annual irrigation of 10.62 lakh ha. (considering CCA of 9.04 lakh ha).	Cost of ₹ 44,605 crore and shall be completed in 8 years.	NA	Drinking water supply to a population of about 62 lakhs. Proposed water transfer to Betwa Basin 23.27 TMC Ecological Requirments D/s of dam 11.23 TMC.	Ken-Betwa Interlinking.	Generate 103 MW of hydropower and 27 MW solar power utilizsng about 4,843 MCM of water.	**Special Purpose Vehicle (SPV) called Ken-Betwa Link Project Authority (KBLPA) to be set up implementation of Project.**	24.84	80.09
KBS4	2021	Memorandum of Agreement (MoA) amongst the States on the implementation of the Ken-Betwa Link Project (KBLP)			The tripartite MOU signed on 25th Aug, 2005 shall be adhered to. After reserving 2266 MCM for upstream uses in MP in Ken basin u/s of Daudhan dam, and accounting for mandatory releases for environment and reservoir losses at Daudhan dam, the rest of the water in Ken basin up to Bariyarpur Pick Up Weir (PUW) shall be utilised by the states of MP and UP in Ken and Betwa basins. The committed releases and any deficit from Daudhan reservoir during the non-monsoon period (Nov to May): MP: 1834 MCM (71%) UP: 750 MCM (29%).	Project shall provide irrigation to 10.62 lakh hectares in the perennially drought prone area and water starved regions in Chhatarpur, Panna and Tikamgarh of Madhya Pradesh and Banda, Mahoba and Jhansi of Uttar Pradesh.	**Estimated cost of ₹ 44,605 crore (year 2020-21 price level) with a Central Support of ₹ 39,317 crore.**	UP shall be free to create additional storages in its own territory downstream of Bariyarpur PUW to store monsoon water as per its requirement during non monsoon period.	Supply drinking water to 62 lakh people. Water Sharing (In Normal Year): MP: shall utilise a total of 2350 MCM (83 TMC) UP: shall utilise a total of 1700 MCM (60 TMC) Annually from the Ken River.	Ken-Betwa Interlinking.	NA	**Special Purpose Vehicle, i.e., Ken-Betwa Link Project Authority (KBLPA).**	24.84	80.09

YAMUNA	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL	WATER SUPPLY/ SHARING	INTER-LINKING/ INDUSTRIAL USE	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
Y1	1892	Amended terms of the agreement between the British Government and the State of Jind for regulating the supply of water for irrigation from the Western Jumna canal.	British Government The State of Jind		Water-course heads taken out of the Butana Distributary shall be constructed at the cost of the British Government. (Dadupur Barrage)	Western Yamuna Canal Major Irrigation Project benefiting districts of Bhiwani, Saharanpur, Muzaffarnagar, Baghpat, Jind, Yamunanagar, Sonipat, Rohtak, Panipat, Kurukshetra, Karnal, Jhajjar, Hisar 436 t ha irrigation potential created.	Butana Distributary constructed at the cost of the British Government	NA	British Canal Officer Discretion	NA	NA	NA	30.22	77.4
Y2	1905	Agreement between rulers of Bharatpur state and government of United Province in August, 1905 regarding Nandgaon dig escape and further rules dated 9th March, 1909 for running the dig escape	Rulers of Bharatpur State Government of the United Province		NA	NA	Bharatpur Darbar agrees to bear the cost of constructing an Escape Channel from Nandgaon Distributary, Agra Canal to the Bharatpur State boundary, including necessary channels and works to their tanks at Dig and elsewhere.	NA	NA	NA	NA	NA	27.95	77.43
Y3	1925	Agreement between the Punjab and United Provinces Governments regarding supplies to the Eastern Jumna canal.	Punjab United Provinces		Repairing the damage done by the floods of 1924.	NA	Reparing Cost given by Punjab.	NA	NA	NA	NA	NA	30.31	77.58
Y4	1943	Working agreement between the Government of East Punjab and the Jind Government for kharif supply for areas in Jind territory from the Sundar sub-branch of the Western Jumna canal extension scheme.	East Punjab The Jind Government		For Kharif supply, the respective shares of the Govt. and the Durbar will be calculated on the basis of the ratio of the sanctioned total head capacities of the Government and Durbar channels, including direct outlets from the Sundar Sub-Branch.	NA	Cost Sharing - Amount payable each year by the Durbar to Govt will be based on the income derived from the Sundar Sub-Branch system in Punjab Territory and will be in proportion to the share discharge.	NA	Water supply rates would be identical in both the states.	NA	NA	NA	29.85	77.09
Y5	1954	Draft agreement between the Punjab and Uttar Pradesh Govts. regarding distribution of supplies of river Yamuna at Tajewala, between Western Jumna canal and Eastern Jumna canal and apportionment of expenditure on Tajewala headworks and related works.	Punjab (PB) Uttar Pradesh (UP)		Western Jumna canal and Eastern Jumna canal water sharing between UP & Punjab.	NA	Cost Sharing to be proportionate in the ratio of total discharge in cusec days run in two canals during the current year. Maintenance Cost - Punjab Govt.	NA	Total river discharge is in excess of 10900 cusecs the Punjab and the UP will have the right to utilize the excess over 10900 cusecs in the ratio of **2:1**.	NA	NA	NA	30.31	77.58

Y6	**1955**	Draft proceedings of the inter-state meeting between the Chief Engineers of the Punjab, Uttar Pradesh, and Rajasthan regarding the distribution of waters of the Jumna river held in the Central Water & Power Commission's room.	Punjab (PB) Rajasthan (RJ) Uttar Pradesh (UP)	1. Western Yamuna Canal 2. Tajewala 3. Eastern Jumna canal 4. Upper Yamuna River Board (UYRB). 5. Hathnikund barrage.	Due to the increased capacity of the Western Yamuna Canal by Punjab at 10,900 cusecs, the supplies are distributed in the ratio of 8,400 cusecs for Punjab and 2,500 cusecs for UP. There should be no withdrawals into either canal taking off at Tajewala unless water escaped below Okhla, after meeting the requirements of the Agra Canal. Punjab wants the supplies to be shared in a 2:1 ratio even at full capacity, which is opposed by others.	NA	Rajasthan requested a Feeder Canal. Punjab proposed Gurgaon Canal Project, designed for a discharge of 1,105 cusecs to be run when supplies at Okhla are available over and above the existing requirements of the Agra Canal. Re-modelling of WYC.	NA	NA	NA	NA	NA	**30.31**	**77.58**
Y7	**1963**	Summary record of the decision taken at the inter-state meeting among the governments of Himachal Pradesh, Uttar Pradesh, Punjab, Delhi and Rajasthan regarding Yamuna water development.	Himachal Pradesh (HP) Delhi (DL) Punjab (PB) Rajasthan (RJ) Uttar Pradesh (UP)		Benefits on account of the Kishau Dam will be shared between the States. The share will be in respect of water and in respect of power produced at the Kishau Dam site only.	NA	Cost Sharing - according to the benefits recieved by the state.	NA	NA	NA	NA	Proposals accepted in the agreement for Dam should be constructed on the Tons River and Giri River.	**30.64**	**77.78**
Y8	**1964**	Draft agreement for supply of 300 cusecs of water to Rajasthan state through Bharatpur feeder channel off taking from mile 1st right bank of Aring distributary off taking from Agra Canal at mile 69 right bank.	Punjab (PB) Rajasthan (RJ) Uttar Pradesh (UP)		UP has agreed to supply surplus Yamuna River water to the Rajasthan State through the Agra Canal in the monsoon period for being utilized for irrigating land of Bharatpur District, Rajasthan	NA	RJ: Govt. will bear the expenditure for annual maintenance and repair including supervision of the feeder in U.P. upto the amount of Rs.7,000/- year. Also, Rs.5,000 for the clearance of Agra Canal shall be placed by the Rajasthan Government at the disposal of the Uttar Pradesh Govt. in the month of April every year	NA	In monsoon period, UP will supply surplus Yamuna River water to RJ, **300 Cusec**.	NA	NA	Feeder channel taking off from Aring Distributary along with its appurtenant works including remodeling of Aring Disty in its first mile and strengthening of Regulator floor in Agra will be maintained by the Irrigation Department of UP at the cost of the RJ.	**27.89**	**77.44**
Y9	**1974**	Agreement regarding Tajewala and Okhla barrage.	Uttar Pradesh (UP) Haryana (HR)		The technical committee has come to the conclusion that it would be advisable to construct a new barrage at Tajewala.	NA	Cost of the Tajewala barrage would be shared in the ratio of 2:1 by Haryana and Uttar Pradesh. Cost of the Okhla barrage is to be shared in the ratio of the discharges required to be drawn by each State.	Haryana to construct the Tajewala barrage and UP to construct the Okhla barrage	NA	NA	NA	A technical Committee headed by the Member (D&R) of the Central Water & Power Commission and the Chief Engineers of the two States was appointed to examine and finalise the relative economics of remodelling.	**30.31**	**77.58**
Y10	**1993**	Memorandum of Understanding (MoU) regarding the construction of an additional parallel water carrier system from Munak head exclusively for carrying water for Delhi.	Haryana (HR) NCT Delhi		Delhi will continue to have a share in the capacity of Delhi Branch as here to before and will be free to use the Delhi Branch and the new carrier together in a suitable manner in consultation with Haryana within the overall allocation of Delhi as per MOU.	NA	Entire cost of this Carrier shall be borne by the National Capital Territory of Delhi. After its construction, Haryana shall maintain and operate this Carrier on behalf of Delhi, the annual charges being paid by Delhi.	Construction of this Carrier shall be carried outby Haryana.	Carrier shall be fully dedicated to Delhi's water supply requirements.	NA	NA	Capacity and the type of Carrier shall be decided by Delhi Administration, in consultation with Haryana.	**30.31**	**77.58**
Y11	**1994**	Memorandum of understanding (MoU) regarding allocation of surface flow of Yamuna signed by Chief Ministers of basin States.	Uttar Pradesh (UP) Haryana (HR) Rajasthan (RJ) NCT Delhi (DL) Himachal Pradesh (HP)		Basin States agree on allocation of the utilizable water resources of river Yamuna assessed on mean year availability, which will be regulated by UYRB. The surplus availability will be distributed amongst the States in proportion to their allocations.	NA	NA	NA	1. HR - 5.730 BCM. 2. UP - 4.032 BCM. 3. RJ - 1.119 BCM. 4. HP - 0.378 BCM. 5. Delhi - 0.724 BCM.	NA	NA	Upper Yamuna River Board (UYRB) was created.	**30.31**	**77.58**
Y12	**1994**	Agreement regarding construction of Hathnikund barrage on river Yamuna	Uttar Pradesh (UP) Haryana (HR) Rajasthan (RJ) NCT Delhi (DL)		Construction of Hathnikund barrage on river Yamuna.	NA	Cost of the Barrage be initially financed by **Haryana**. Cost of Barrage including the cost of Head Regulators shall be shared by HR, UP, RJ & NCT of Delhi.	Haryana shall construct Hathnikund Barrage.	NA	NA	NA	Haryana operate and maintain the Hathnikund Barrage.	**30.31**	**77.58**
Y13	**2019**	Memorandum of Understanding (MoU) between Himachal Pradesh and NCT of Delhi for the supply of water on the 20th day of December, 2019	NCT of Delhi (DL) Himachal Pradesh (HP)		HP will supply its unutilized Yamuna water to Delhi with seasonal allocations of 368 cusecs (Nov–Feb) and 268 cusecs (Mar–Jun), potentially rising to 421 cusecs annually after upstream storages, while Delhi bears 90% of Renukaji Dam's power costs, regulated by the UYRB, with Haryana's cooperation needed for canal conveyance.	NA	NA	NA	368 cusecs (Nov–Feb) 268 cusecs (Mar–Jun)	NA	NA	NA	**30.51**	**77.79**

BETWA	**YEAR**	**AGREEMENT**	**PARTIES**	**MAJOR HIGHLIGHTS**	**BENEFIT SHARING**	**IRRIGATION**	**COST**	**INFRASTRUCTURAL**	**WATER SUPPLY**	**INTER-LINKING/ INDUSTRIAL USE**	**POWER GENERATION**	**INSTITUTIONAL**	**LATITUDE**	**LONGITUDE**
B1	**1953**	Agreement regarding Matatila and Rangawan Projects, between Uttar Pradesh, Madhya Bharat and Vindhya Pradesh.	Uttar Pradesh (UP), Madhya Bharat & Vindhya Pradesh	1. Betwa Canal. 2. Matatila Dam. 3. Rajghat Dam. 4. Bhander Canal. 5. Rangwan Dam 6. Jamni Dam	The intensity of irrigation in the new areas to be brought under irrigation - **33%** while it will be **45%** for such areas of U.P. as are irrigated by the existing Betwa Canal System of that state.	MP utilizes for Kharif crops upto 31st October upto 2 TM.C. and the balance storage as available on 1st November will be divided between UP and MP in the ratio of **36:15**.	NA	Matatila Dam	NA	NA	Matatila Dam - generates about 45 MW of power.	NA	**24.71**	**79.86**
B2	**1965**	Agreement between UP and MP regarding Bhander canal system.	Uttar Pradesh (UP) Madhya Pradesh (MP)		The MP, Irrigation Branch, shall credit the net revenue from the Bhander Canal System to the UP Government, Irrigation Department, after deducting the maintenance and operational charges.	NA	The actual cost of the maintenance and operation of the canal system plus the establishment charges shall be limited to Rs.4/- per acre of the area actually irrigated in a particular year.	NA	NA	NA	NA	MP Irrigation Branch shall maintain and operate the Bhander Canal System.	**26.08**	**78.44**
B3	**1965**	Agreement regarding Projects in Bundelkhand: Rangwan Dam, Bhander Canal and Jamni Dam			NA	NA	**Rangwan Dam: 19:36.** **Jamni Dam:** 450:2200, with MP bearing costs of outlet structures and canal systems within its territory, and UP covering the remaining expenses based on usage and infrastructure location.	Rangwan Dam Bhander Canal (Matatilla Dam Canal) Jamni Dam	Equitable allocation	NA	NA	NA	**26.08**	**78.44**
B4	**1973**	Summary record of discussions of the meeting held in CWPC Committee Room, Bikaner House, New Delhi, regarding supplies to Bhander canal-Rabi season of 1973-74.			The demand of Madhya Pradesh for Bhander Canal for the Rabi Season 1973-74 was put forward as 7.3 TMC, against 5.3 TMC worked out by U.P.	NA	NA	NA	M.P. and U.P. agreed that it should be 6.5 TMC and on ad-hoc basis, for this rabi season only. Weekly water account may be maintained by M.P. & RJ.	NA	NA	NA	**26.08**	**78.44**
B5	**1973**	Agreement between the governments of UP and MP about the Rajghat project.			Madhya Pradesh will use its full share of water from Rajghat Dam. The height of Rajghat Dam should be decided by the Central Water & Power Commission.	NA	NA	Rajghat Dam	Madhya Pradesh will use its full share of 26.5 TMC from Rajghat.	NA	NA	Tripartite Control Board for the speedy, smooth and efficient execution of the various inter-state projects of UP and MP. Standing Committee will be constituted for taking management decisions as may be delegated by the Board.	**24.76**	**78.2**

B6	1976	Establishment of a board for the creation of a reservoir at Rajghat by construction, on behalf of the Government of MP and UP, of a dam on the Betwa river at Rajghat and for the regulation of such reservoir.			The Central Government will establish a board under its control to regulate and develop the inter-state Betwa River and River Valley.	NA	NA	Reservoir at Rajghat would be constructed	NA	NA	NA	**Betwa River Board** is created by Central Govt.	24.76	78.23

CHAMBAL	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL USE	WATER SUPPLY	INTER-LINKING/ INDUSTRIAL USE	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
C1	1948	Agreement between Rajasthan and Madhya Bharat Union held in the Manikbagh Annexe, Indore	Rajasthan (RJ) Madhya Bharat Union (Malwa Union)	1. Rana Pratap Sagar Dam 2. Kota Dam 3. Gandhi Sagar Dam and Power Station. 4. Kotah Barrage	Madhya Bharat Union to provide funds to undertake investigation on multipurpose development schemes on the Chambal River.	NA	NA	Investigations regarding communications, power plant, layout of the construction town, layout of the roads, construction of bridges across the Chambal, Sanitation and water supply of the colony and the works area, housing of about 15,000 labourers, etc. are completed to be worked out in detail within six months.				NA	25.18	75.83
C2	1955	Summary Record of decisions arrived at in the meeting held in the Planning Commission regarding the Chambal Project	Madhya Pradesh (MP) Rajasthan (RJ)		The project report and estimates should be revised to exclude the Rana Pratap Sagar Dam from the Project. It was agreed that the C.W.P.C. would furnish a note on the costs to be shared by each state. The sharing of the cost of transmission lines etc. would also be taken into account.	Agricultural Experimental Farms for instructing ryots in the use of irrigation facilities were established in each State.	NA	NA	NA	NA	NA	Formation of Chambal Control Board	24.7	75.55
C3	1960	Proceedings of the Meeting held to discuss the question of allocation of cost of common works of the Chambal Project between the States of Madhya Pradesh and Rajasthan			i) Gandhi Sagar Dam cost (Rs. 1360.25 lakhs) shared equally. ii) Kotah Barrage cost (Rs. 382.55 lakhs) shared equally. iii) Left Bank Canal distributaries cost Rs. 219.44 lakhs (RJ). Right Bank Canal distributaries cost Rs. 261.00 lakhs (RJ). Iv) Right Bank Canal (RJ) cost shared 75.40:24.60 (cusec-mile basis). v) Right Bank Canal (M.P.) total cost Rs. 1774.20 lakhs (M.P.). vi) Gandhi Sagar Dam Power Station cost Rs. 479.12 lakhs (shared). vii) Transmission Line Gandhi Sagar to Kotah cost Rs. 40.43 lakhs (shared). viii) Transmission Line Kotah to Sawai Madhopur cost Rs. 69.23 lakhs, shared by transformer capacity. ix) Transmission Line Sawai Madhopur to Gwalior cost borne by M.P. Transmission Lines, Northern Grid cost borne by Rajasthan. x) Transmission Line Gandhi Sagar to Neemuch cost Rs. 27.28 lakhs, shared by transformer capacity. Transmission Lines Southern Grid cost borne by M.P.	NA	**Sent to State Govt for approval.**	NA	NA	NA	NA	NA	24.7	75.55
C4	1961	The decision of Government of MP on the allocation of the cost of common works on Chambal Project			**Reaffirmed the distribution agreed in the Meeting (1960) on common works on Chambal Projects.** ii) The water utilized in generating power is to be sold by the Irrigation Sector to the Power Sector. The rate for this will be fixed by the State Govt to bring the income of about Rs.32.00 lakh equally. Water rates should be charged on 25% of the total generating capacity, 60% load factor in the first year, 50% in the second year, 75% in the third year, and full generating capacity from the fourth year and onwards. iii) The RJ Govt. should be consulted in regards to the share of the cost to be charged to the Irrigation sector and also fixing the rate of supply of water.	NA	Approved as per the proposal.	NA	NA	NA	NA	NA	24.7	75.55
C5	1963	The decision of the Chambal Control Board on the allocation of the cost of common works on the Chambal Project along with a note on item No.21 of the Second Supplementary Agenda			Matter of cost allocation for the Chambal Project between Rajasthan and Madhya Pradesh is under active consideration.	NA	The Board agreed to submit the certified accounts of common works of the Chambal Project to the Board's office so that the Board may be apprised of the factual position from time to time.	NA	NA	NA	NA	NA	24.7	75.55
C6	1966	Extract from the summary record of the decision taken by the Chambal Control Board at its sixty-sixth meeting held at New Delhi.			i) The cost of Rana Pratap Sagar Dam and Power station at Kota Dam may be shared in the ratio of 50:50. ii) Regarding the allocation of expenditure on Dam and apartment works of Rana Pratap Sagar Project between Irrigation and Power, the Board decided that this may be first discussed between the representatives of the two State Governments and the matter brought before the Board separately for consideration.	NA	Cost shared in the ratio of 50:50.	NA	NA	NA	NA	NA	24.92	75.58
C7	1973	Decisions arrived at inter-state control board meeting regarding Water regulation committee in the command of Chambal Project			NA	NA	NA	The government of M.P. may post a small cell headed by an executive engineer at Kota at their cost to maintain the weekly water account.	Weekly water account may be maintained by M.P. & Rajasthan.	NA	NA	Water Regulation Committee	24.7	75.58
C8	1973	Constitution of Madhya Pradesh - Rajasthan Inter-State (Irrigation & Power) Control Board			NA	NA	NA	NA	NA	NA	NA	Constitution of Madhya Pradesh - Rajasthan Inter-State (Irrigation & Power) Control Board.	24.7	75.58
C9	1981	Decision arrived at Interstate control board Meeting regarding constitution of the field agency for water regulation (FAWR) to ensure implementation of the decision of the Standing Commitee for effective regulation of releases from the reservoirs /Kota Barrage in the canal system especially the common carrier.			NA	NA	NA	NA	NA	NA	NA	The Field Agency for Water Regulation (FAWR) was constituted under the Inter-State Control Board.	24.7	75.58

SONE	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL	WATER SUPPLY/ SHARE	INTER-LINKING/ INDUSTRIAL USE	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
S1	1948	Agreement between the Uttar Pradesh and the United States of Vindhya Pradesh relating to the Rihand Dam Project.	United States of Vindhya Pradesh (USVP) Uttar Pradesh (UP)	1. Kota Barrage. 2. Rihand Power Station. 3. Matatila Power Station. 4. Rihand Hydropower Project. 5. Bansagar Dam. 6. Bansagar Hydroelectric Project.	Foreshore land within the USVP. shall be available for cultivation to USVP. The U.P. Govt would undertake a planned development of the lake for fish culture. and the net profit accruing therefrom shall be shared between the two states in proportion to the volume of territories.	USVP shall have the right to pump water from the lake for irrigation.	UP: Compensation for the submerged lands, houses, wells, trees, forests and public ways, etc. In addition, compensate USVP. for the resettlement of dispossessed people on the same scale as it would cost the UP to resettle dispossessed people in their own area.	NA	NA	USVP shall have the right to pump water for industrial uses but no effluent from any industry shall be discharged into the Rihand.	NA	U.P. Government shall provide facilities, to the extent feasible, for uninterrupted use of the Rihand as an inland waterway for boating and transport purposes.	24.2	83.01
S2	1964	Minutes of the meeting held at New Delhi on 2nd & 3rd September 1964 on (i) Supply of Power from Rihand to MP, (ii) Supply of power from Matatilla to MP, and (iii) Diversion of Water From Rihand Catchment for Additional Power Generation in MP.	Uttar Pradesh (UP) Madhya Pradesh (MP)		A settlement regarding the supply of power to Madhya Pradesh from the Rihand and the Matatila Power stations located in U.P. was reached at the meeting of the Central Zonal Council held at Nainital. A Committee was appointed by the Chairman of the Central Zonal Council Comprising Mr. Sachdev as Chairman, the Chairman, Central Water and Power Commission (Shri M.R. Chopra) and the power Member of the Central Water and Power Commission (Shri K.P.S. Nair) as Member for working out the cost of power generation at the Rihand and the Matatila Power stations after hearing the representatives of the two states concerned	NA	Rihand Power Station to MP: Power supply rate - 3.5 paise/Kwh (cost of generation plus 5%) up to a ceiling of 15% of the saleable energy including a surcharge if necessary. Matatila Power station to MP: Power supply rate - 6.5 paise/Kwh (cost of generation plus 5%) up to a ceiling of 33% of the saleable energy including a surcharge if necessary.	NA	NA	NA	Supply of power to Madhya Pradesh from the Rihand and the Matatila Power stations located in U.P. U.P. State Electricity Board to make available to the MP Electricity Board 15% of power based on energy available at Rihand from year to year; one-third of power based on the energy available at Matatila from year to year.	Formation of a commitee to settle the cost of power generation comprised of Chairman, Central Water and Power Commission and the power Member of the Central Water and Power Commission.	25.1	78.37
S3	1973	Agreement dated 16th September, 1973 between the Governments of Bihar and Uttar Pradesh on Rihand Reservoir	Uttar Pradesh (UP) Bihar (BR)		Bihar requests that 0.3 m.a.ft. of the Rihand storage may be reserved for them for additional waters for irrigation under Sone Barrage in October.	NA	Detailed studies are to be made by a team of Engineers from Bihar and Uttar Pradesh States to draw up detailed recommendations, including financial aspects, for consideration by the Govts of Bihar and Uttar Pradesh.	NA	NA	NA	NA	NA	24.14	82.84
S4	1973	Agreement on Bansagar project	Madhya Pradesh (MP) Uttar Pradesh (UP) Bihar (BR)		The proportion of cut or increase would be **5.25:2.75:1.25 for Madhya Pradesh, Bihar, and Uttar Pradesh,** respectively. UP will use Sone waters for irrigation. The allocation of water from the Sone River agreed to would be for Bihar 637.75 m.a.ft. while it is 5.25 m.a.ft for M.P. and 1.25 m.a.ft for UP. Bihar's irrigation requirements are accepted.	**MP:** Storage of 2.0 MAF would be for the use. They may utilise water up to a total of 2.0 M.A.F. at this site for current and future irrigation. MP will also use 1.0 M.A.F. in the areas upstream of Bansagar for Irrigation. **UP:** Storage of 1.0 MAF. UP will use 1.25 MAF of Sone waters for irrigation, out of which 0.25 MAF would be from the Kanhar river and up to 1.0 MAF from the Bansagar Dam and by lifting from the Sone river downstream of Bansagar.	The cost of Dam (Unit-I) is to be shared in the ratio of **2:1:1** amongst MP, UP, BR - based on the share of water allocated to the states.	Banasagar Dam	NA	NA	NA	NA	24.19	81.29
S5	1976	Resolution for the constitution of Bansagar Control Board	Madhya Pradesh (MP)		For economical and early execution of the Bansagar Project in Madhya Pradesh including all connected works, the Control Board to be in overall charge of the project including its technical and financial aspects. The actual works of construction will be carried out under the direction of the Control Board by the Chief Engineer concerned of the Madhya Pradesh Government.	NA	NA	NA	NA	NA	NA	Bansagar Control Board was set up vide Government of India, Ministry of Agriculture and Irrigation Resolution No. 8/17/74-DW-II dated the 30th January, 1976. It was amended vide Resolution No 18/17/74-DW-II dated the 28th March 1990.	24.52	81.31
S6	1976	Minutes of the meeting held in the room of Member (Hydro-Electric). Central Electrical Authority with the representatives of Uttar Pradesh and Madhya Pradesh state Electricity Boards regarding settlement of outstanding issues between Uttar Pradesh and Madhya Pradesh for power supplies from Rihand and Matatila Power Stations	Uttar Pradesh (UP) Madhya Pradesh (MP)		NA	NA	MP offered to pay at the rate of 5.5 paise/kWh for energy supplied from Matatila during the four monsoon months and at the rate of 8.5 paise per kWh for the other 8 months of the year, subject to the condition that MPEB should be permitted to avail power at these rates up to its share plus 10% thereof.	NA	NA	NA	UP agreed to compensate MP for the difference in power not supplied between 01.09.67 to 15.06.69.	Chairman, UPSEB accepted the offer of MPEB in as much as rates are concerned for two periods in the year, but did not agree to supply additional 10% over and above MP's share in saleable energy at the aforesaid rates.	25.05	78.36
S7	1981	Comments of the Government of Madhya Pradesh (Irrigation Department in the U.P. Government's on construction of new schemes for consumptive use of water by M.P. in catchment area of Rihand Dam			NA	NA	NA	Kota Barrage	NA	NA	NA	Constitution of the field agency for water regulation (FAWR). Standing Committee to work out the modalities of the proposed agency for field level implementation on priority.	24.41	81.71
S8	1981	Establishment of joint ownership thermal power stations of Bandhav Thermal Power Station in the Sidhi District and Mand Thermal Power Station in the Rajgarh District	Gujrat (GJ) Madhya Pradesh (MP)	1. Bandhav Thermal Power Station. 2. Mand Thermal Power Station.	To implement the establishment of joint ownership thermal power stations in pursuance of the policy of the Govt. of India to establish such stations at pit-heads of coal mines, in the larger interests of the country the Chief Ministers of Madhya Pradesh and Gujarat agreed to establish jointly the following thermal power stations in the state of Madhya Pradesh.	NA	The costs and benefits of these two projects will be shared by the two states equally and power will be shared without regard to any power cut prevailing in Madhya Pradesh.	Bandhav Thermal Power Station in the Sidhi District. & Mand Thermal Power Station in the Rajgarh District.	NA	NA	Bandhav Thermal Power Station: Initial capacity - 2 x 500 MW ultimate capacity - 4 x 500 MW (2000 MW). Mand Thermal Power Station: Initial capacity - 2 x 21C MW ultimate capacity - 6 x 210 MW (1260 MW).	NA	24.19	83.07
S9	1982	Agreement on sharing of Kanhar waters.	Uttar Pradesh (UP) Madhya Pradesh (MP)	Baradih dam	The share of Bihar in Kanhar waters at Baradih shall be 0.43 MAF. The share of M.P. shall be 0.47 MAF upto Baradhi dam site and 0.15 MAF between Baradih and M.P. – U.P. border. Notwithstanding that, the three State Govts. are free to use their share of Kanhar waters in the best manner they like.	NA	NA	Baradih dam may be constructed by Bihar to utilize its share of 0.43 MAF. Bihar and M.P. agree to the construction of a dam near village Anwar as proposed by U.P. for utilizing 0.15 MAF.	NA	NA	NA	CWC would be the responsible authority in the construction of the Baradih Dam.	23.84	84.11

S10	2006	MoU regarding Management, Construction, Operation & Maintenance, and Sharing of Costs and Benefits from (i) the North Koel Reservoir Project, (ii) Batane Reservoir Project, and (iii) Bateswarasthan Pump Canal Project.	Jharkhand (JH) Bihar (BR)	1. North Koel Reservoir Project. 2. Batane Reservoir Project. 3. Bateshwarsthan Pump Canal Scheme.	**North Koel Reservoir Project & Batane Reservoir Project:** Both governments. agree in principle that the excess or deficit based on 10-daily requirement shall also be shared by these two States in proportion to the irrigation and Municipal & Industrial (M&I) benefits derived. **Bateshwarsthan Pump Canal Scheme: 78 cusecs water** pumped from River Ganga through this scheme shall be shared between the States of Bihar and Jharkhand in proportion to the rrigation benefits derived.	North Koel Reservoir Project: 987 MCM (0.82 MAF) available water shall be shared in proportion to the irrigation and M&I benefits derived. Batane Reservoir Project: 64.14 MCM (0.052 MAF) available water shall be shared in proportion to the irrigation benefits derived.	Cost for everything will be shared in the proportion of the benefits derived by the respective States on CCA consideration.	**North Koel Reservoir Project & Batane Reservoir Projects:** Construction of Dam, Barrage & Distribution	**Bateshwarsthan Pump Canal Scheme:** 78 cusecs B/w JH & BH.	NA	**North Koel Reservoir Project:** The installed capacity of power generation at the Dam shall be 24 MW (2 X 12 MW) - shared in the inverse proportion to the ratio of CCA.	Joint Monitoring Committee (JMC)	**24.2**	**83.01**
S11	2015	Minutes of second inter-state meeting on request of Bihar for constitution of a tribunal for adjudication of Sone river water dispute held by Chairman, CWC on 07.04.2015 at New Delhi	Uttar Pradesh (UP) Bihar (BR)		U.P & Bihar to meet periodically every two months to analyse the release pattern vis-a-vis the JOC recommendations from Rihand dam and try to solve the issues bilaterally.	The subcommitee found Bihar's demand of increased irrigation by modifying the operation pattern of Rihand hydropower project as not feasible it as in doing so, the interest of UP gets affected. UP has raised the issue of utilization of water by MP in the catchment area of Rihand reservoir without accounting for the same in their share and has requested to assess the details of such utilization through remote sensing.	NA	NA	NA	Bihar has raised the issue of compensation from Bansagar reservoir in place of consumptive utilisation by industries/thermal plants, etc, of U.P. Data provided by UP, the utilisation on this account during 2013-14 by U.P., Central entities and M.P. are **0.122 MAF, 0.134 MAF** and **0.019 MAF**, respectively.	NA	Sub-Committee: Chairmanship of Chief Engineer (BPMO), CWC, with officers from Irrigation/Water Resources Departments of Govts. of UP and BR, UPJVNL, UPPCL, GFCC, CWC and CEA as its members to study the feasibility of meeting the irrigation requirement of BR by modifying the operation pattern of the Rihand hydropower project.	**24.2**	**83.01**
S12	NA	Report of Sub Committee and Arrangement regarding Distribution of Rihand Water	Uttar Pradesh (UP) Madhya Pradesh (MP)		**Madhya Pradesh**: Requested the committee regarding possibilities of utilising Rihand reservoir water in the foreshore area for irrigation and industrial purposes by pumping where it was stated that the best 10 cusecs of water could be utilised by lift in Madhya Pradesh for irrigation purposes all the year round. Also, '**Irrigation and Hydel Power Potential of Rihand basin in MP**', wherein the said potentialities, both for irrigation and power generation which amounts to total of 1.458 Maf. **Uttar Pradesh**: Agreed to the utilisation of water by lift to the limited extent contemplated by Madhya Pradesh. Also, the utilisation of water for irrigation and generation of power may be made in the normal way in the basin area lying in the districts of Sidhi, Surguja and Rajgarh of MP to the extent indicated in the note referred to above. It was further decided that this utilisation will, however, be within the catchment area only and that MP will, from time to time, keep the UP government informed for their utilisation schemes.	For Irrigation Potential of Rihand basin in Madhya Pradesh, UP agreed. (For Irrigation - 1.091 maf).	NA	NA	NA	NA	For Hydel Power Potential of Rihand basin in Madhya Pradesh, UP agreed. (For Power Generation - 0.367 Maf).	NA	**24.2**	**83.01**

GANDHAK	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL	WATER SUPPLY/ SHARE	INTER-LINKING/ INDUSTRIAL USE	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
G1	2014	Minutes of inter-state meeting between officials of Governments of UP and Bihar on Western Gandak canal system of Bihar.	Uttar Pradesh (UP) Bihar (BR)	Saran Main Canal Western Gandak Main Canal & Thermal Power Plants.	Bihar Govt. stated that the designed discharge of Western Gandak Main Canal at the head of the canal is 18800 cusec, out of which 15800 cusec is made available at UP-Nepal border for UP and Bihar in the ratio of 46% and 54% i.e., 8500 cusec, but UP never releases Bihar's full share at 118.4 km of WGMC. BR has requested to sort out the issue by convening an inter-state meeting, if necessary.	NA	NA	Western Gandak Main Canal & Thermal Power Plants from WGMC (called Saran Main Canal in Bihar) of Bihar.	NA	UP will ensure 4100 cusec of water at UP – Bihar border. Also, make efforts to gradually increase discharge to 5000 cusec. BR proposes to allocate 280 cusec of water out of its share under the WG canal system to thermal power plants in BR.	NA	NA	**27.43**	**83.9**

KARMANASA	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL	WATER SUPPLY/ SHARE	INTER-LINKING/ INDUSTRIAL USE	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
K1	1968	Agreement between UP and Bihar regarding construction of Musakhand Dam.	Uttar Pradesh (UP) Bihar (BR)	Musakhand Dam	The total utilisation on account of Musakhand dam may be taken as 5.25 TMC, of which 2.25 TMC shall be in Bihar and 3.00 TMC in U.P.	Karamanasa flows at Latifshah are shared between Bihar and UP at 15:85 during Kharif and 30:70 during Rabi, with Bihar receiving 1.8 TMC in Kharif and 0.45 TMC in Rabi out of a total of 13.25 TMC; if flows fall below 13.25 TMC, allocations will be proportionally reduced.	Cost shared equally between UP and BR.	Musakhand Dam	NA	NA	NA	NA	**24.03**	**86.48**

HOOGLY	YEAR	AGREEMENT	PARTIES	MAJOR HIGHLIGHTS	BENEFIT SHARING	IRRIGATION	COST	INFRASTRUCTURAL	WATER SUPPLY/ SHARE	INTER-LINKING/ INDUSTRIAL USE	POWER GENERATION	INSTITUTIONAL	LATITUDE	LONGITUDE
H1	1978	Agreement on utilisation of the water resources of the Damodar Barakar, Ajoy, Mayurakshi, Sidheshwari, Noon Beel, and Mahananda river basins, reached by the Chief Ministers of West Bengal and Bihar regarding implementation of agreement dated 19th July 1978.	Bihar (BR West Bengal (WB)	1. Damodar Barakar river basin. 2. Ajoy river basin. 3. Mayurakshi river basin. 4. Sidheshwari river basin. 5. Noon Beel river basin. 6. Mahananda river basin.	Damodar Barkar Basin: The Tilaiya conservation storage and flood cushion of Tilaiya will be utilised by Bihar for irrigation in Damodar and adjacent valley. The Konar conservation storage will be utilised by Bihar for irrigation in Damodar and adjacent valley and flood cushion of Konar will be utilized by West Bengal. Mayurakshi and Sidheshwari-Noon Beel Basin-West Bengal may construct the Sidheshwari-Noon Beel dam for utilizing upto a maximum of 1.60 lakh acre ft; the balance yield of the rivers will be reserved for use in Bihar upstream of this dam.	NA	DVC will bear the cost of acquisition and rehabilitation for lands within Bihar and WB as Bihar will not share the cost. West Bengal will bear the cost for areas submerged in Bihar. West Bengal will bear the cost for areas submerged by the Kalipahari dam in both Bihar and WB. The cost of the Mahananda Barrage at Fulbari will be shared between Bihar and West Bengal based on irrigation areas.	NA	NA	NA	NA	NA	**24.97**	**83.29**

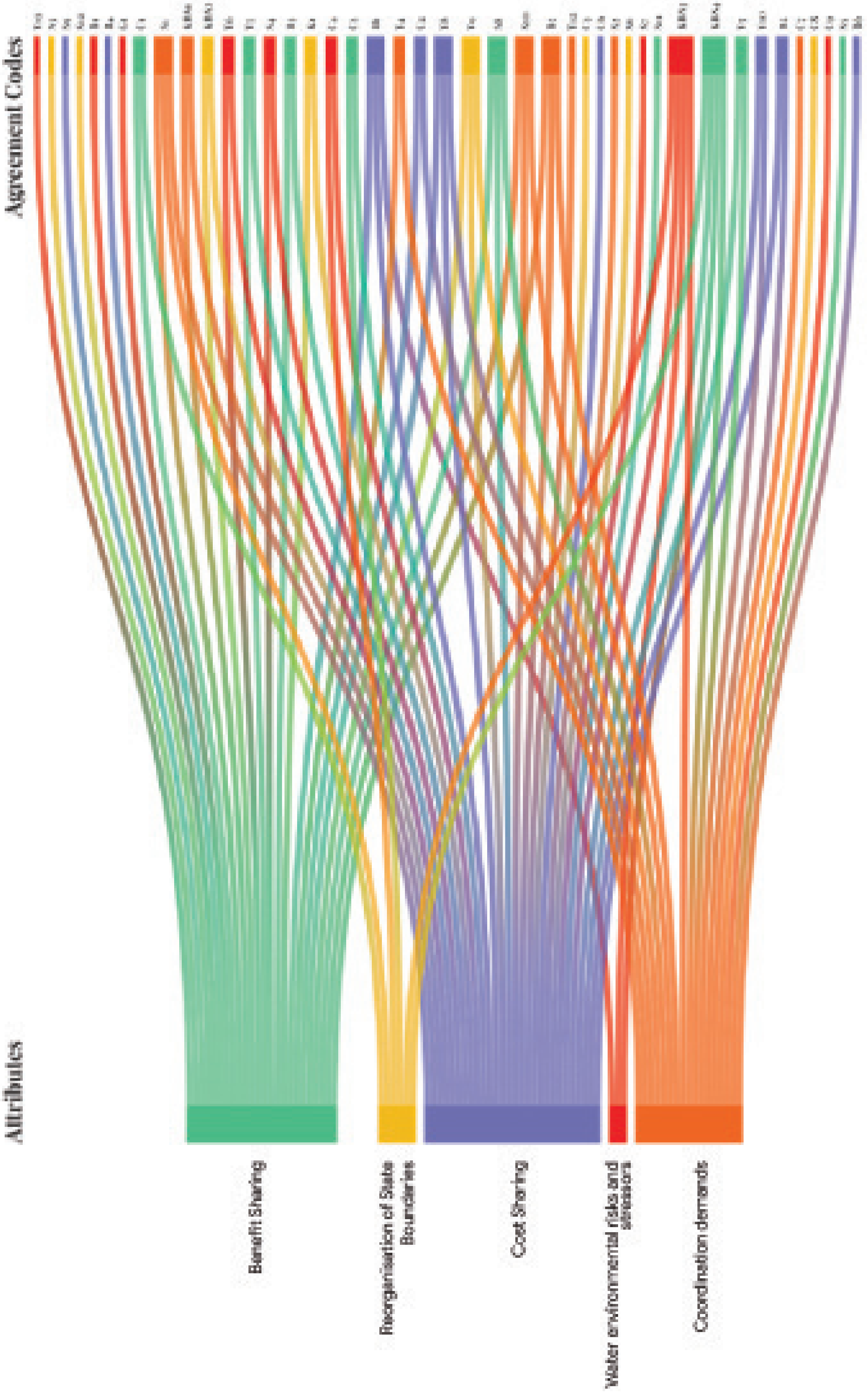
ANNEXURE B: Inter-State Institutions in Ganga Water Resource Management

Interstate Institutions in Ganga Water Resource Management

Year	Institutions	Genesis	Legal Instruments	Major Functions
1948	**Damodar Valley Corporation**	The Damodar Flood Enquiry Committee suggested the creation of an authority similar to the Tennessee Valley Authority, USA. A proposal was accepted by the committee for multipurpose development of Damodar Valley.	Damodar Valley Corporation Act, 1948	Power generation for transmission and distribution of electricity. The subsidiaries include flood control, irrigation, soil conservation and afforestation; industrial, economic and other development of the Damodar Valley region.
1955	**Chambal Control Board**	To ensure efficient, economic and early execution of Chambal Valley Development projects.	The Board was set up by an Agreement between Madhya Pradesh and Rajasthan	Irrigation, power generation, and allied works across MP and RJ, with the joint management of the Central government.
1972	**Ganga Flood Control Commission**	Established to formulate and implement comprehensive flood management plans for the Ganga Basin through coordinated inter-state measures.	The commission was formed as per clause 5 vide Govt. of India Resolution No. F.C. 47(3)/72 dated 18th April 1972	Provides technical guidance to the basin states for effective implementation of plans.
1976	**Bansagar Control Board**	On September 16, 1973, UP, MP, and BR agreed to utilise the waters of the river Sone, leading to the 1976 establishment of the Bansagar Control Board by the Ministry of Agriculture and Irrigation to oversee the Bansagar Project in MP.	Resolution dated the 30th January 1976, setting up the Bansagar Board.	Reviews estimates, approves designs & contracts, delegates powers, and ensures cost-effective, timely execution of the project. Monitors progress, allocates funds, enforces guidelines, and oversees resettlement & phased development for optimal results.

1976	**Betwa River Board**	The December 9, 1973, meeting b/w UP and MP led to the establishment of a tripartite control board, resulting in the creation of the Betwa Board for overseeing the Rajghat Dam and Powerhouse project, funded by both states and responsible for reservoir regulation.	Betwa River Board Act, 1976.	Efficient execution of the various interstate projects of both States. Facilitates inter-state coordination, approves technical designs, monitors project implementation, and arbitrates disputes to ensure timely, cost-effective development of the Betwa Basin.
1994	**Upper Yamuna River Board**	An MoU was signed amongst the five basin states of HP, UP, Haryana, Rajasthan, and Delhi for sharing the waters of Upper Yamuna.	Resolution dated 11.03.1995 of the MoWR, RD & GR set up UYRB.	Governs the equitable distribution of the Yamuna waters among the basin states. It oversees reservoir operations and maintains flow agreements through rigorous monitoring. The board serves as a technical arbiter for water-sharing conflicts. It approves infrastructure projects and ensures compliance with river conservation norms.
2016	**National Mission for Clean Ganga (NMCG)**	Formed under the Namami Gange Programme (NGP) to replace the National Ganga River Basin Authority (NGRBA) and oversee the rejuvenation of the Ganga.	Ganga Notification	Reducing pollution in the Ganga River through various initiatives (construction and upgrading of STPs, etc.). Rejuvenation and conservation of the Ganga river ecosystem.

ANNEXURE C: Visual Representation of the Drivers of Cooperation in the Ganga Basin



ANNEXURE D: Empowered Task Force: National Mission for Clean Ganga

Empowered Task Force (ETF) Meetings							
Details		Stakeholders					
		Bihar	Jharkhand	Uttar Pradesh	Uttarakhand	West Bengal	Other Ministries & Authorities
Meeting Number 2, 03/08/2017							
Utilisation of Funds	**CAMPA Funds**	*Not specifically mentioned*	Criticised for high crematorium expenditure despite poor community health needs.	*NA*	Funds confirmed for afforestation along riverbanks.	*NA*	**MoEF&CC:** Explained CAMPA fund uses; agreed to release funds for Uttarakhand and coordinate APOs with NMCG.
	General Funds	Mention of overspending *(Rs. 1150 Cr. v. Rs. 400 Cr. provision)* on ghats and crematoria under NGP.	Overspending concern under NGP.	No fund misuse mentioned; emphasised local enforcement authority.	46 prioritised ghats *(Rs. 129 Cr)* ready with clearances; requested project execution.	*Not specifically mentioned*	Funds under sub-heads were exhausted. Approved reappropriation between components; need for approval by the competent authority.
Project Progress	**Water Rejuvenation**	Mentioned Ganga Gram villages *(4 identified in Bihar)*; general concerns about project rationalisation.	5 Ganga Gram villages identified; concern over inefficient crematoria investment.	10 Ganga Gram villages identified; authority given to State Ganga Committee for regulatory action.	3 Ganga Gram villages identified; ghats & crematoria clearance obtained for 46 sites.	2 Ganga Gram villages identified	**DoDWS:** Presentation on 24 Ganga Grams; objectives include waste management, tourism, organic farming, etc.
	Solid Waste Management	SW dump sites identified by NMCG during field visits.	*NA*	ULBs encouraged to fund basic SWM like dustbins instead of waiting for NMCG.	Dump site identification; poor ULB engagement flagged.	*NA*	**Secretary (Urban Dev):** Requested dump site data from NMCG; convergence with NMCG encouraged.
	STPs	*NA*	*NA*	Show cause & closure notices issued to 1109 polluting industries *(up from 764)*; STPs mentioned as part of long-term solution.	First HAM-based STP awarded in Haridwar; praised as a breakthrough.	*NA*	**DG (NMCG):** Push for city-wise comprehensive HAM-based STP maintenance contracts.
	Other Projects	Crematoria projects flagged for rationalization due to overlap and lack of NOCs.	Model stretch; implementation & monitoring quality criticized.	Use of Authority Notification (07.10.2016) to empower SGC.	Request for institutional coordination mechanism between SPMG & CPCB/SPCB NA accepted by MoEF&CC.	*NA*	**Secretary (Tourism):** Offered convergence of Tourism schemes with NMCG & Urban Dev. **DG (NMCG):** Last-mile household sewer connections stressed EP Act Section 5 to be enforced strongly with CPCB/SPCB.
Comments		NA	*NA*	Regulatory action can be taken by State Ganga Committees independently, despite constrains (trained manpower, testing laboratories). States were requested to take practical steps as State Ganga Committees have been give power to issue direction.	Requested that an institutional mechanism be setup for coordination between SPMG and CPCB/SPCB.	*No representative present*	*NA*
Meeting Number 3, 26/12/2018							
	CAMPA Funds	FRI's DPR for afforestation plans approved for CAMPA funding; no hesitation from states noted.	Same as others NA CAMPA funds to be used for afforestation per FRI DPR.	Same as others NA CAMPA funds accepted for afforestation; 10% central share to be used.	Same as others NA CAMPA afforestation work supported.	Same as others NA CAMPA afforestation plans to be initiated.	**MoEF&CC:** Affirmed CAMPA rules are framed and funding for afforestation to come from 10% Central share under R&D.

Utilisation of Funds	**General Funds**	State supporting financially for Patna sewerage	*NA*	Largest connection gap (13+ lakh); projects under HAM; Prayagraj & Kanpur major sites; Goitha STP cited as JnNURM-funded with under-scoped house connections	*NA*	*NA*	**AMRUT:** Funding for house connections available. **Smart Cities:** NITI Aayog proposed a conditional release tied to grassroots action. **Namami Gange:** 136 STP/I&D projects ongoing.
Project Progress	**Solid Waste Management**	*NA*	*NA*	Sisamau Nala fully tapped; Prayagraj & Kanpur networks progressing; dashboard suggested for monitoring; Goitha STP delayed due to under-assessed house connections (50K done vs. 2L+ needed)	*Not specifically mentioned.*	*NA*	NMCG to become **River Basin Authority**; One-City-One-Operator strategy for STP operations introduced.
	STPs	*NA*	*NA*	13+ lakh connections required; One-City-One-Operator model; HAM projects progressing; Goitha STP (120 MLD) delayed due to limited connections; state investment noted	Projects exist but not detailed in this meeting	*NA*	136 total STP/I&D projects: 106 on main stem, 30 on tributaries; only 40% paid upfront under HAM, balance post-2020.
	Other Projects	State initiatives in Patna for sewerage house connection linkage highlighted.	*NA*	Meeting proposed at the CM level with the Sec. UD & CEO NITI Aayog suggested fortnightly CMNA Municipal Commissioner reviews.	*NA*	*NA*	**MoDWS:** Called for CM-level oversight and faster UC submissions. **NITI Aayog:** Pushed for dashboard-based monitoring and grassroots movement. **DG (NMCG):** Sought institutional strengthening of NMCG as "Authority" and long-term O&M commitment.
Meeting Number 4, 09/08/2019							
Utilisation of Funds	**CAMPA Funds**	*NA*	*NA*	*NA*	*NA*	*NA*	MoEF&CC accepted the use of CAMPA funds for plantation along the Ganga; AOPs called from the state forest departments.
	General Funds	State not represented; NMCG critical of Bihar's lack of commitment; funds for ODF/SLWM already provided by NMCG.	*NA*	*NA*	Mention of funds provided by NMCG for ODF/SLWM in Ganga villages.	State not represented; similar concerns as Bihar.	**MoRD:** Coordination on waterbody rejuvenation in Ganga districts. **HRD:** Funds used for educational material; West Bengal completed the assigned task. **IOCL:** Buyback of treated water; replication discussed. **MoAYUSH:** Medicinal plantations along Ganga.
	Water Rejuvenation	*NA*	*NA*	Waterbody rejuvenation proposed through convergence with MoRD schemes	Waterbody rejuvenation proposed; linked to Ganga Grams and Jal Shakti Abhiyan	*NA*	**MoRD:** Working on the rejuvenation of water bodies in the Ganga districts. **MoAFW:** Organic farming clusters discussed; proposal for a mandatory organic belt along the Ganga.

Project Progress	**Solid Waste Management**	*NA*	*NA*	*NA*	Poor condition of MSW in Haridwar noted; concern over readiness for next Kumbh.	*NA*	*NA*
	STPs	*NA*	*NA*	Action reviewed with SMCG, UP; concern over delays & environmental clearance (CETP).	STPs in Haridwar & Rishikesh under KFW scheme; completion by next Kumbh targeted.	*NA*	*NA*
	Other Projects	NMCG critical of SGC meeting scheduling; to be raised with CM and CS of Bihar.	*NA*	CETP environmental clearance (Jajmau); Need for timely completion.	Ganga Gram model villages; completion of I&D, STPs by 2019; long-term sewerage network planned.	*NA*	**MoHRD:** Ganga Bal Mela, Ganga Quiz to change mindset. **MoEF&CC:** DPR for forestry rejuvenation for other rivers. **Ayush:** Promotion of agroforestry with medicinal plantations. **DG (NMCG):** Dashboard creation, project tracking, and financial sustainability discussions.
Meeting Number 5, 10/02/2020							
Utilisation of Funds	**CAMPA Funds**	*NA*	*NA*	*NA*	*NA*	*NA*	**MoEF&CC:** Will fund nursery and wetland pilots using National CAMPA funds.
	General Funds	*NA*	*NA*	*NA*	*NA*	*NA*	NMCG to fund remaining 54,844 ha forestry plantations (CAMPA-unfunded); MoA to scale Paramparagat Krishi Vikas Yojana (PKVY) for organic farming saturation in Ganga Grams; Swadesh Darshan funds used by MoTourism for river-based circuits.
Project Progress	**Water Rejuvenation**	Mentioned under PKVY coverage but state-wise progress not detailed.	*NA*	MoRD & NMCG to jointly revive smaller tributaries.	*NA*	*NA*	**MoRD:** Directed to support rejuvenation of water bodies with geotagging.
	Solid Waste Management	*NA*	*NA*	Integration of solid and liquid waste management in river towns mandated, especially in UP.	*NA*	*NA*	MoHUA and NIUA tasked to integrate MSW and WWM systems in cities along Ganga.
	STPs	*NA*	*NA*	Focus on reuse of treated water; all thermal power plants *(within 50 km of Ganga)* to use tertiary-treated water from STPs.	*NA*	*NA*	**MoPower:** Instructed to ensure zero-liquid discharge and STP effluent reuse in TPPs.
	Other Projects	*NA*	*NA*	Ganga Yatra completed: 7.8 crore participants, 1.16 lakh toilets, 302 playgrounds, 118 parks. Proposal for similar events in other states.	*NA*	*NA*	**MoCulture:** Add Ganga to Sanskriti Yatra; set up museum galleries. **MoTourism:** Create a database of river-based heritage.
Meeting Number 6, 25/09/2020							
	CAMPA Funds	*NA*	*NA*	*NA*	*NA*	*NA*	**MoEF&CC:** Instructed to fund nurseries and wetland pilots using CAMPA funds.

Utilisation of Funds	**General Funds**	*NA*	*NA*	*NA*	*NA*	*NA*	**NMCG:** To fund 54,844 ha plantation *(not covered by CAMPA)*. **MoA:** To scale up Paramparagat Krishi Vikas Yojana *(PKVY)* in Ganga Grams. **MoTourism:** To use the Swadesh Darshan Scheme for river-based tourism.
Project Progress	**Water Rejuvenation**	*NA*	*NA*	Focus on rejuvenating tributaries. *(NMCG + MoRD)*	*NA*	*NA*	**MoRD:** To map and geotag water bodies for rejuvenation efforts.
	Solid Waste Management	Capacity: 13%	*NA*	MoHUA directed to integrate solid + liquid waste management in Ganga towns; **Capacity: 81%.**	**Capacity: 53%**	*NA*	NIUA involved in model integration of SWM and wastewater management.
	STPs	*NA*	*NA*	Emphasis on reuse of treated water from STPs by thermal power plants within 50 km of Ganga.	*NA*	*NA*	**MoPower:** Use treated STP water in thermal power plants - ensuring zero liquid discharge.
	Other Projects	*NA*	*NA*	Ganga Yatra conducted across 27 districts: 7.8 cr people reached. 1.16 lakh toilets, 302 playgrounds, 118 parks created.	*NA*	*NA*	• MoCulture to promote Ganga via Sanskriti Yatra • MoTourism to develop heritage circuits & cultural maps • Museums & Ganga galleries planned
Meeting Number 7, 19/03/2021							
Utilisation of Funds	**CAMPA Funds**	*NA*	*NA*	*NA*	*NA*	*NA*	**MoEFCC:** To fund nurseries and wetland pilots through CAMPA funds.
	General Funds	*NA*	*NA*	*NA*	*NA*	*NA*	**NMCG** to fund 54,844 ha plantation not covered by CAMPA. **MoA:** To scale PKVY in Ganga Grams. MoTourism to fund river-based tourism via Swadesh Darshan Scheme.
Project Progress	**Water Rejuvenation**	*NA*	*NA*	Rejuvenation of tributaries planned with MoRD.	*NA*	*NA*	**MoRD:** To geotag & rejuvenate water bodies. **MoWR:** to develop wetland pilots. **CPCB:** To identify non-compliant drains.
	Solid Waste Management	*NA*	*NA*	MoHUA asked to integrate solid + liquid waste in Ganga towns.	*NA*	*NA*	NIUA to model integrated SWM systems. MoHUA to implement in 3-tier cities.
	STPs	*NA*	*NA*	Treated water from STPs to be reused in thermal power plants.	*NA*	*NA*	**MoPower:** Ensure treated water usage within a 50 km radius of plants.

	Other Projects	*NA*	*NA*	Ganga Yatra across 27 districts in UP 1.16 lakh toilets, 302 playgrounds, 118 parks created.	*NA*	*NA*	**MoCulture:** Organise Sanskriti Yatra. **MoTourism:** Develop heritage circuits. **MoCulture:** Establish Ganga museums/galleries.
Meeting Number 8, 22/09/2021							
Fund Utilisation	**CAMPA**	*NA*	*NA*	Used for afforestation, ghat works.	Used for afforestation and ghat development.	Used for mangrove and biodiversity restoration.	Used with MoEFCC for plantation and biodiversity.
Project Progress	**Water Rejuvenation**	Wetland rejuvenation initiated in select areas.	Wetland restoration; drain mapping underway.	Riverfront development *(Kanpur, Prayagraj)*, aquifer mapping.	Spring shed protection; drain interception at Haridwar.	Wetland rejuvenation; mangrove ecosystem focus.	**MoJS:** Drain mapping. **MoEFCC:** Pollution load reduction.
	Solid Waste Management	Solid waste issues in Ganga towns identified.	Action plan for 31 Ganga towns being prepared.	SBM funds used in Ganga Grams and urban ULBs.	Ganga towns covered under SBM; O&M challenges raised.	8 towns under SBM; focus on segregation and capacity.	MoHUA and MoRD convergence encouraged under SBM.
	STPs	Delays in land acquisition; capacity gaps in STPs.	Dhanbad STP delayed due to land issues.	Major STPs in progress; some delays noted.	Haridwar, Rishikesh STPs complete; reviewed for performance.	Garden Reach, Ballygunge STPs delayed due to clearances.	MoHUA tracks AMRUT/STPs; MoD/STPs in cantonments are examined.
	Other Projects	Drainage system improvement in Patna; biodiversity park planned.	Biodiversity parks proposed; wetlands inventory in progress.	Ganga parks, urban greening, ghat beautification.	Eco-sensitive zone development; afforestation.	Eco-tourism and mangrove restoration in Sunderbans.	**MoTourism:** River cruises, Ganga Yatra. **MoEFCC:** ESZs, biodiversity.
Meeting Number 9, 15/03/2022							
Fund Utilisation	**CAMPA**	*NA*	*NA*	Continued CAMPA-funded afforestation noted.	CAMPA used for afforestation in ~20,550 ha.	CAMPA & NMCG afforestation with Rs 48 Cr APO.	MoEFCC distributing CAMPA, other schemes.
Project Progress	**Water Rejuvenation**	Small rivers & wetland revival plan; scientific plans for 10 wetlands/district.	Same wetlands/focus on small waterbodies via DGCs.	*NA*	*NA*	*NA*	MoEFCC to compile wetland list; NWIC water quality setup.
	Solid Waste Management	New SWM plan for 4500 Ganga villages under development.	Jharkhand cities preparing SWM action plans.	UP cities SWM action plans underway.	Uttarakhand SWM action plans completed and near approval.	SWM plan prep in early stage.	**MoHUA:** Initiated river-centric urban planning, drain mapping.
	STPs	All Ganga cities covered under sewage/septage management.	Monitoring of STP/ghat projects.	Sewage plans in progress; black/greywater addressed.	Uttarakhand far ahead in sewage/septage coverage.	WB Included in sewage/septage roll-out.	**MoHUA:** Overseeing sewer connections in AMRUT towns.
	Other Projects	10 new tributary DPRs.	Uttarakhand lagging in organic farming; Jharkhand and Bihar too.	Natural farming corridors, ban on exotic fish.	Same organic farming note for Uttarakhand.	Noted organic/afforestation emphasis.	**Arth Ganga:** DGC strengthening, Arth logo, Ghat haats, cultural tourism, policy on wastewater reuse, Project Dolphin prep (MoEFCC), policy & DGC trainings via NITI Aayog, DST tech support.
Meeting Number 10, 15/03/2022							

Fund Utilisation	**CAMPA**	*NA*	*NA*	Utilised for afforestation and ghat development.	Utilised for afforestation & biodiversity parks.	Mangrove & biodiversity restoration funded via CAMPA.	**MoEFCC:** CAMPA for riverine afforestation.
Project Progress	**Water Rejuvenation**	District level water projects: 11 completed, 5 by Dec 2022, others in pipeline.	Mentioned priority for small rivers, but no state specific data.	Groundwater recharge structures ongoing.	Projects in hill districts under review.	District discussions mention DGC updates, but no specifics.	**MoEFCC:** Developing wetland inventories. **MoJS:** Driving dashboard mapping.
	Solid Waste Management	*Not detailed except referencing ULB engagement.*	SLWM in Jharkhand cities underway.	STML/SLWM integrated with SBM and AMRUT.	SBM/AMRUT progress noted; mapping of urban drains active.	ULBs in WB are preparing plans; dashboard uploads are pending.	**MoHUA:** Reports mapping 7k drains, plans for 47 AMRUT & 49 SBM towns.
	STPs	Bihar reported 11 completed projects, 5 by Dec 2022, others in tender.	Monitoring STP & ghat progress.	PU in Kanpur, Varanasi, Prayagraj advancing.	Uttarakhand STP & ghats underway; villages aiming for ODFNAplus.	West Bengal DGC minutes note STP/ghat tracking.	**MoP:** engagement on thermal plant reuse; MoHUA tracks AMRUT sewer connections
	Other Projects	Drainage improvements and biodiversity covered under LID.	STP/Others under monitoring; organic farming noted.	STP/ghats monitored; ODFNAplus plans underway.	Ghats in Badrinath prioritised; ODFNAplus commitment.	DGC uploads and asset tracking being strengthened.	**MoEFCC:** Pushing Dolphin action plan.
Meeting Number 11, 20/04/2023							
Fund Utilisation		*NA*	*NA*	*NA*	*NA*	*NA*	**MoEFCC:** Driving Dolphin sanctuary and wetland policies. **Finance/Accounts:** TSA transition completed; **₹2,220 Cr** allocated for FY 22-23 has been fully disbursed. **₹4,000 Cr** budgeted for FY 23-24. **Clean Ganga Fund (CGF)** corpus: **₹733 Cr.**
Project Progress	**Water Rejuvenation**	*NA*	*NA*	*NA*	*NA*	*NA*	**National Ganga Council 2nd meeting (Dec 2022).** **PRAYAG monitoring centre launched.**
	Solid Waste Management	*NA*	*NA*	*NA*	*NA*	Tunnel debris dumping flagged; Geo tagging drains & arrestor screens to be installed (2,400 drains).	MoHUA/U20/DHARA initiatives under RCA; drain mapping under AMRUT.
	STPs	*NA*	*NA*	*NA*	*NA*	*NA*	PM inaugurated 20 STPs + 7 sewer networks in Kolkata; 55 MLD STP in Varanasi.
	Other Projects	*NA*	*NA*	MV Ganga Vilas river cruise flagged off; 11 jetties in Varanasi, 22 planned in Bihar; Ganga Sanskriti Yatra & museum space.	Focus on pressuring debris control on Uttarkashi riverbanks.	**Hilsa fish ranching upstream Farakka:** 90,433 adults ranched; 8 lakh seeds released; cage approach trial underway.	**Arth Ganga verticals:** Natural farming, sludge/wastewater reuse, JALAJ livelihoods, Ganga Praharis, RCA expansion, digital capacity building and certification programs.
Meeting Number 12, 10/09/2024							
	Utilisation Certificates	Pending UCs for IHHL to be submitted by Oct 2024.	Pending UCs by mid-Sept 2024.	Pending UCs by mid-Sept 2024.	Pending UCs by mid-Sept 2024.	Pending UCs by 1st week Oct 2024.	*NA*

Fund Utilisation	**CAMPA**	*NA*	*NA*	*NA*	*NA*	*NA*	MoEF&CC to submit report on Chambal Dolphin Sanctuary (interstate with UP, MP, Rajasthan).
	> Non-CAMPA Funds	Jamalpur I&D/STP funded under AMRUT; DPRs for Arah, Barauni, Buxar STPs pending.	NA	Sewerage work (some) funded under other schemes; drone survey ongoing.	NA	Request for DPR prep funding clarified to be covered under 4% centage.	*NA*
Project Progress	**Water Rejuvenation**	Mapping of nallas in 10 Ganga districts by 31 Oct.	Mapping of nallas in 1 Ganga district by 31 Oct.	Mapping of nallas in 27 Ganga districts by 31 Oct.	Mapping in 7 districts + tributary focus (Bhela, Dhela, etc.).	Mapping in 12 districts by 31 Oct.	PRAYAG: 250 STPs >1 MLD; 90 to be OCEMSNAlinked (Bihar: 8, WB: 40, UP: 11, UK: 18, JH: 13).
	Solid Waste Management	Tagging of villages with FSTPs (Faecal Sludge Treatment Plants).	Tagging of villages with FSTPs (Faecal Sludge Treatment Plants).	Tagging of villages with FSTPs (Faecal Sludge Treatment Plants).	Tagging of villages with FSTPs (Faecal Sludge Treatment Plants).	Tagging of villages with FSTPs (Faecal Sludge Treatment Plants).	All States to align reuse policies with national framework; promote treated wastewater reuse.
	STPs	STP DPRs pending: Arah, Barauni, Buxar. STP works delinked from sewer network in Motihari/Daudnagar. Jamalpur under AMRUT	No new STPs; future projects on tributaries deferred.	DPRs submitted: Manikpur, DDU Nagar. Others (Kanpur, Agra, Prayagraj) due by 30 Sep. Power to STPs by Sep 15. Land acquisition ongoing	Gauri Kund site shift; STPs on tributaries to be expedited; Udham Singh Nagar project due by 31 Dec.	DPRs due: Srirampur, Siliguri, Shantipur by Sep 30; others by Dec 31. Land issue at North Barrackpore in Defence area	Ministry of Power to enforce use of treated water in TPPs. No new exemptions. 61 TPPs to comply.
	Other Projects	ODF Plus: 7 villages to be declared; 431 verifications due by Dec.	ODF Plus: All verifications due by Dec 15.	ODF Plus: Declare 1 village urgently; 1581 verifications pending.	ODF Plus: 184 verifications due by Oct.	ODF Plus: 67 villages to declare; verifications by Feb 2025.	CETP: Gorakhpur DPR + Unnao agreement (UP) due in 1 month; Ministry of Tourism to train guides, develop GangaNAbased tourism; Natural Farming model farms by
Meeting Number 13, 09/12/2024							
Fund Utilisation		GrantNAinNAaid via DoDWS (FY15NA19) NA ₹32.63 Cr UCs pending (under rural sanitation/ODF interventions).	₹0.95 Cr UCs pending (via DoDWS).	₹38.18 Cr UCs pending (via DoDWS).	*NA*	₹36.83 Cr UCs pending (via DoDWS)/	**DoDWS:** Follow up on pending UCs with States at the Chief Secretary level; Annual Accounts of NMCG for FY 23-24 adopted. Audit certified statements as fair. Audit observations to be addressed in 2024-25.
	Water Rejuvenation	District Ganga Plans (DGPs) to be prepared for Bhagalpur & Nalanda (via GIZ). Others via academic institutions.	*NA*	DGPs for 29 districts prepared/underway with support from GIZ & IIPA. Districts: Shahjahanpur, Moradabad, Bareilly, etc.	DGPs for 12 districts are being hand-held by GIZ. Example: Udhamsingh Nagar, Haridwar.	Nadia & Hooghly to be supported by GIZ.	**Natural Farming:** MoA&FW to lead; NMCG to support. ₹2431 Cr scheme approved. 42 workshops held; 2 model farms (Sambhal, Haridwar) funded for impact study (results by 30.06.2025).

Project Progress	**STPs**	Barauni DPR cost being revised (was ₹531 Cr for 25 MLD). Revised DPR due 31.12.2024. Hajipur: Power connection by 31.12.2024. Mokama: Railway NOC due by 31.12.2024. Kahalgaon: Access road issue to be resolved by 31.12.2024. Dehri on Sone: Land issue by 31.12.2024. Jamui, Motihari, Daudnagar: LoA process to be expedited by 31.12.2024.	*NA*	Agra: DPR comments from TPA shared; response expected in 15 days. Kanpur: Drone survey complete; DPR due 31.12.2024. Prayagraj: Drone in progress; DPR due 31.01.2025. Varuna Action Plan unsatisfactory; action demanded within 15 days. Gulaothi STP: Land to be procured by 31.01.2025. Dadri STP is directed to use treated water. CETP: Gorakhpur tender refloated; Unnao contract not signed.	Gauri Kund STP: Design modified and approved by IIT Roorkee; completion by 30.04.2025. Kalyani River: ROW issue resolution by 15.01.2025.	Srirampur: DPR comments due 15.01.2025. Siliguri: Land to be located by 15.01.2025. Shantipur: Alternative land is being located. 12 towns *(incl. English Bazar, Howrah, etc.)*: No land; planning FSTPs instead; action plan due 15.01.2025. North Barrackpore: Cantonment Board clearance due by 31.12.2024.	**MoPower:** 6 TPPs reviewed (Panipat, Indira Gandhi, MG TPPs in Haryana, Dadri in UP); action plan sought OCEMS to be installed on all >1 MLD STPs in 4 months; 39 work orders *(Bihar, Jharkhand, Uttarakhand)* issued; others (UP, WB) to be finalised by 31.12.2024. **Use of the PRAYAG portal is emphasised.**
	Other Projects	ODF+ Village verification ongoing; 7 villages to be declared ODF+. DGPs: Bhagalpur & Nalanda (via GIZ).	ODF+ Village verification completed by 15.12.2024.	ODF+ verification of 1000 villages is ongoing till 31.12.2024; 67 villages to be declared ODF+. DGPs underway in 29 districts; URMPS for Kanpur & Ayodhya completed; State to notify implementation committee by 31.12.2024.	ODF+ survey to be completed by 31.12.2024. Natural Farming: Model farm in Haridwar. DGPs for 12 districts are being hand-held by GIZ.	425 villages to be declared ODF+; verification to complete by Feb 2025. DGPs for Nadia & Hooghly via GIZ.	**Ganga Knowledge Portal (gyanganga.ai) launched.** Annual Accounts for FY 23-24 adopted; 4 minor audit issues noted **MoTourism:** Symposium being planned; To promote Namami Gange circuits. **ED(F):** Emphasised UCs follow-up; **DoDWS:** To pursue at the CS level.
Meeting Number 14, 11/03/2025							
Fund Utilisation		*NA*	*NA*	Mention of UC utilization (DDWS) and land procurement.	*NA*	STP at Khardah being built with state funds.	**DDWS:** ₹75 Cr spent, UCs to be submitted in 30 days.
Project Progress	**Water Rejuvenation**	Aquifer mapping in Prayagraj-Kanpur stretch (via NGRI).	*NA*	Aquifer mapping, URMPs for Kanpur & Ayodhya.	Mention of the Kalyani River encroachment resolution.	GIS mapping of wetlands underway.	NGRI (aquifer mapping), River Cities Alliance (URMPs).
	Solid Waste Management	*NA*	*NA*	Mention of segregation advisory via MoT; drone survey for new drains in Prayagraj.	*NA*	MoT advisory, Gobar Gas → FSTP in Champadani.	Min. of Tourism: Issued SWM advisory to states; training in 24 cities.
	STPs	Hajipur: power connection by 31.3.2025. Jamui & Daudnagar: work ongoing. Motihari: contract pending. Kahalgaon: road issue to be resolved. Dehri on Sone: land transfer in progress Mokama: railway NOC received.	*NA*	Gulaothi STP: land by 31.3.2025. Varuna River projects approved. Dinapur: 27 new drains to be tapped. Kanpur & Prayagraj DPRs progressing CETPs in Gorakhpur & Unnao.	Gauri Kund STP: by 30.04.2025 US Nagar STPs: staged completion till April 2025 Kalyani River: encroachments cleared.	Multiple DPRs under process (Siliguri, Shantipur, Haldia, Diamond Harbour, etc.) Kharda STP with state funds Land issues in several towns (e.g. Rishra, Howrah).	Min. of Power: Exploring reuse of treated water at Buxar, Dadri, Meja TPPs.

	Other Projects	GIS layer of wetlands ready.	*NA*	CETPs at Gorakhpur (4MLD) & Unnao (2.5MLD); Drain survey via LIDAR River Cities Alliance NA URMPs.	Kalyani River encroachment Sanitation status survey (ODF/ODF+) underway.	DPR town reclassification (e.g. Raiganj dropped); use of existing plants (e.g. Gobar gas to FSTP).	DoWR: pushing for eNAflow compliance in Yamuna. MoP: Coordination on treated water reuse. MoT: Ecotourism promotion, dolphin sites. DDWS: Sanitation survey; 393 drains inventoried.
Meeting Number 15, 24/06/2025							
Fund Utilisation		No funds specified; mostly NMCG funded DPRs and STPs.	No specific mention; multiple STPs under different statuses.	Funds sanctioned for Gulaothi STP land by 15 July.	No mention of fund type, but multiple DPRs/STPs discussed.	DPRs in progress and submitted; no fund types mentioned.	DoDWS: ₹953 Cr disbursed to Ganga states (FY 2015NA19); UCs still pending.
Project Progress	**Water Rejuvenation**	Wildlife clearance delays for Kahalgaon & Bhagalpur HAM projects.	Several STPs in Dhanbad & Petia. Delays due to forest land/local agitation.	Drone surveys in Prayagraj completed. Agra drains DPR approved. Varuna & Dinapur DPRs in progress. Aquifer mapping with NGRI; DPR by 15 July.	DPRs prepared for Udhamsingh Nagar, Gauri Kund STP 70% done; encroachment on Kalyani river sewer line cleared.	English Bazar, Haldia FSTP, Shantipur, North Barrackpore, Diamond Harbour, Howrah, etc. at different DPR stages.	NGRI: Aquifer mapping with UP Ground Water Dept.
	Solid Waste Management	*NA*	*NA*	*NA*	*NA*	No new info; FSTP DPRs in process (e.g., Haldia).	DoDWS: ₹953 Cr for SWM & ODF in Ganga Grams; UCs pending.
	STPs	Mokama STP operational. Power pending at Hajipur. Kahalgaon road issue resolved. DehriNAonNASone land NOC received. Motihari, Jamui, Daudnagar NA LoA signed. New site for Panderkali STP; Gobindpur STP under realignment. Joriya STP forest share reduced.	Petia STP local agitation (1.5 months for resolution). Sizuwa STP resolved; work to resume.	Agra DPR approved. Kanpur DPR approved. Gulaothi STP: land fund sanctioned. Numayadahi & Kodra STPs planned. Prayagraj: drains to be connected to existing STPs.	Gauri Kund STP: 70% done; to begin trial by 30 June Kalyani River: 1500 encroachments to be cleared Kotdwar STP: Army to provide alternate land.	Multiple DPRs under preparation or review: Siliguri, Serampore, Shantipur, Khardah, Howrah, Rishra, Champadani, etc.	NMCG is encouraging the reuse of treated water (national reuse policy alignment requested from states).
	Other Projects	Income Tax exemption granted to NMCG under Section 10(46A).	*NA*	CETP at Unnao (2.5 MLD): enforcement actions by UPPCB/CPCB; state to convene meeting.	Kotdwar STP site to shift (Army land); NMCG site visit planned.	Uluberia: Consultant terminated, new tender floated Various DPRs in the pipeline.	NMCG is adopting Insurance Surety Bonds for bid/ performance/ mobilisation security. GST guidance for HAM projects released. Comparative analysis of project time under NMCG vs AMRUT requested by the Secretary.

ANNEXURE E: All India State Water Minister's Conference

2nd ALL INDIA STATE WATER MINISTERS' CONFERENCE 2025					
S. NO.	**STATES**	**REPRESENTATIVE**	**DESIGNATION**	**STATES POINT OF VIEW**	**REMARKS**
1	**Andaman and Nicobar Islands**	Chandra Bhushan Kumar	Chief Secretary	836 islands, 31 inhabited, 3400 mm rainfall in 117-209 rainy days, indigenous rainwater harvesting by tribes. example of Chaura island- had their own dugwell and water conservation method. Modern day desalination plant set up and trying to improve quality of structures. Urban area- 33 MLD 1.8 lakh people, 24,4 MLD demad. Rural areas- 14.41 MLD 2.27 lakh people 12.48 MLD demand. Water from other islands to be brought is suggested. Ruttland Water Supply project- spreading pipelines. Dhani Khadi Dam 6.6 MLD water will be increased for mitigating summer water problem. Water givernance problems. Normative-Uncertaininty, Fragmented, Organized irresponsibility. Demand side management governance, seasonality, and resilience are the issues. Norrm dictated governance- 135 l/ person that needs to be managed (100 l/ person in Europe) Water reuse not practiced much due to organized irresponsibility. grey water management issues. 226 amrit sarovar, 20 drains, 100s RWH, 2700 wetlands are tried to be interlinked. Future water governance- multiple sources, jal sanchay, certainity, audit, inter connectedness, community awareness, hydro-social concepts.	NA
2	**Andhra Pradesh**	Nimmala Rama Naidu	Minister of Water Resources	The rice bowl of India, 62% population depends on agriculture. 966 mm rainfall average. 5 major rivers, 35 medium and minor rivers. 108 reservoirs Issues- Bifurcation in 2014 affected resources and economy, no capital city, no major industries, recurring droughts, lower riparian state, limited storage, frequent floods and cyclones. Only 50% area is cultivable, 39 TMC water conservation structures. **Vision:** make the state droughtproof, reduce IPC-IPU gap, increase water use efficiency, tap surplus flood flows, modernization, etc. Dr KL Rao- Interlinking of rivers. Polavaram Irrigation in Godavari project- multipurpose terminal reservoir- 960 MW power, 1,128.4 m spillway. 86 ongoing projects. 28.78 TMC for industrial purposes. Veligonda project- for fluoride-affected and drought-prone areas of Prakasam district, etc. HNSS project- Water to Ananthapur and 5 drought-prone districts of Rayalaseema. 85 projects are ongoing. Groundwater and micro-irrigation. 1st to have geotagged borewells. 710,000 acres of irrigable area stabilised. Adopting technology- APWRIMS. Storage improved by 53%. By the end of the Khariff season 135% of reservoir capacity was utilised.	State Reorganisation and Resource Constraints: IPC-IPU Gap. Interlinking of rivers and the large dam, Polavaram. Improvement of the storage facilities
3	**Arunachal Pradesh**	Mama Natung	Minister Home & Inter State Border Affairs, Public Health Engineering (PHE)	Himalayan range - perrenial source. 300 m conservation act in Arunachal Local water sources are exploited. Igam project to recharge water bodies. Trenches in mountain to conserve water causing rehabilitation in dry villages.772 amrit sarovar. 1st state to achieve JJM mission in Feb 2024. Household done, schools left. No issues of funding.	Transfer of blame to the centre completely. Efficient in implementing of the JJM.

4	**Bihar**	Niraj Kumar Singh Santosh Kumar Mall	Minister of Public Health Engineering Principal Secretary	Bihar government launched a tap water supply mission in 2016, when only 2% of households had access to tap water. Working in mission mode, Bihar provided tap water to all rural households, achieving in 2019 what was later adopted as a national campaign. The Public Health Engineering Department and the Panchayati Raj Department constructed 12,936 water supply schemes, providing 1.74 crore household connections. Special efforts were made to ensure safe drinking water in arsenic, fluoride, and iron-affected areas, benefiting 30,207 rural wards. About 50% of these schemes employ women as pump operators, promoting women empowerment. Panchayat-level repair teams ensure real-time issue resolution, reducing service interruptions. "Office Day Zero" mandates officers to inspect projects at the grassroots level instead of sitting in offices, ensuring proper implementation. The initiative has transformed Bihar's economic, social, and cultural landscape, enhancing social harmony and significantly improving public health by reducing waterborne diseases like diarrhea and hepatitis, leading to a decline in child mortality rates. Additionally, the project has created over 2 lakh direct employment opportunities for rural youth and women. The Bihar government's MBS water supply scheme, already implemented in 12 locations, benefits around 20 Panchayats per installation. The state aims to provide 135 liters of water per person per day, ensuring sustainable water conservation in alignment with Mission 207, a vision for long-term water security. The Bihar government's MBS water supply project operates in 12 locations, benefiting 20 Panchayats and 350,000–400,000 households per plant. 11 more plants are in progress, with a goal of 150 before 2047 to shift from groundwater to surface water supply using modern technology and smart meters. Bihar's water levels vary: North Bihar: Water at 10 feet. Central Bihar: Water at 100+ feet. South Bihar: Water at 2,300+ feet. To tackle scarcity, Ganga water is transported 200 km to South Bihar, but challenges remain. North Bihar faces annual floods, with the Kosi River frequently changing course, causing erosion and destruction. Embankments exist but weaken yearly, leading to crop and property loss. A long-term solution requires India-Nepal collaboration to build high dams in Nepal. Strengthening embankments also needs central support. The conference highlights India's growing water crisis, even in rain-rich states like Meghalaya, stressing the need for sustainable water management. BEAMS (Bihar Embankment Asset Management System) is a GIS-based web portal developed under the National Hydrology Project for scientific planning, flood forecasting, and disaster impact assessment of Bihar's 3,800 km embankments.	Success and Innovation in Jal Jeevan Mission. Floods and Erosion and the Central Objective of the Kosi High Dam. Asset Management is a need of the hour, especially for embankments.
		Shravan Kumar	Minister for Rural Development	major efforts since 2019. 47000 water resources marked. 24000 old water sources were renewed and new sources were established. 64000 resources for transfer of high to low water region. More than 12000 check dams have been made. Rainwater harvesting and water conservation structured are being constructed. 37000 wells and 2,03,000 hand pumps have been installed. 25000 acres land is being irrigated. 17,80,00,000 plants have been planted. Awareness events are also planned. Religious stature of rivers is also considered and treated accordingly. Awarded with numerous prestigious prizes for conservation efforts. Jeevika didi.	NA
5	**Chhattisgarh**	Arun Sao	Deputy Chief Minister	62,844 cubic m water- 48,296 cubic m surface water - 14,548 cubic m ground water. Rivers like Mahanadi, Shivnath, Arpa but in reality there is ground water level problem, due to political reasons there was a 2 year delay in the Jal Jeevan mission despite which it is actively progressing. 50,03.552 families was the target kept. 40,21,116 i.e. 80% target has been achieved. 4,313- Har ghar jal ghoshit villages, 2,857 har ghar jal pramanit villages. 1,04,935 women water checking volunteers have been trained and equipped. State level water quality commission set up. 27 districts have been equipped with research labs. Toll free number generated.	Discussed about JJM.
		Kedar Nath Kashyap	Minister of Water Resources	More than 2 lakh water conservation structures. learn from tribes. Reduce water wastage. Mindful consumption.	NA
6	**Delhi**	Shilpa Shinde	CEO Delhi Jal Board	integrated water management, population of around 30 million, migration of around 200,000 people to Delhi. present water demand is around 1250 MGD while it is getting 990 MGD. does not have its own source.388 MGD from Yamuna around 255 MGD from Ganga River Around 221 MGD from Ravi Bias and Delhi has around 4800 tubewells from wich we get 126 mgd of Water. increasing Demand Due To unplanned urban growth but the water supply is not matching with the demand mainly Because the supply from external sources has remained constant. 40 to 52 non-revenue water. private partner who can not only bring in the fund part but also the Technology Delhi's 52% water is non-revenue water is mainly because of the ageing Infrastructure and mismanagement. The Model of O&M 123 Primary UGR 480 Secondary UGR and around 15000 plus kms of Distribution Network it Requires Lot of any repair or replacement and Augmentation Requires Lots of fund- Malaviya Nagar Water Services. Malaviya Nagar project was funded in The ratio of 70:30 70 was invested by Delhi Government for Capes Works and 30 But was invested by the O&m Partner. Plan for Improvement Station and Replacement of old and leaking damaged networks are also the formation of District Meter Area- o&M helps in the same. Dashboard for customer complaint Management. house service Connection increase from 35000 to 58000 and The NRW reduce from 70% to 34%. Project Funded Under JICA. cover all the houses to the sewer line 100% sewer coverage of all the Areas, treatment of sewage aggregates. 600 mgd unused.	Inter-State Water and external water supply is a vexing challenge to meet Delhi's water needs. Asset Management and reducing non-revenue water in the urban context. The conversation mostly focused on DW supply.

		Rajesh Kumar Topu	Secretary Department of Water Resources	5 elements- water, state, civil society, private buisiness, farmers. Rajnandgaon template- many naxal affected areas, primarily agrarian, mostly depends on paddy. Significant water stress. Paddy needs ground water extraction. More than 42000 borewells used. Attempts to convince farmers for crop diversification- 10 point programme for both demand and supply side of problems.- Multi village scheme, Lineament fracture zone, water scarcity villages, drainage network villages. Community involvements, plantations and building structures. Post implementation- more than 51000 structures, 32% crop diversification etc. Ground water levels rose by nearly 2.04 mbgl. 12 departments worked together. Chhattisgrah ranks 1st in India across most categories in JSJB. Reform. Perform. Transform. ABIS created demand for maize with renumerative prices above MSP. Behaviour change.	NA
7	**Gujarat**	Mukeshbhai Patel	Minister of Forest, Environment, Climate Change	Challenges- Unequal distribution of water resources. GJ has 6% of total geographical area of India but 12.36 % of water stressed area of India. 58.6% of total area of Gujarat is subject to water stress due to arid, semi-arid, and saline conditions. 20 major, 90 medium and 1,006 minor irrigation schemes. 1.87 lakh check dams, 3.23 lacs farm ponds, 0.37 lacs ponds deepened. Local level issues- stress on resources, difficulty in land acquisition. governance practices adopted. More than 1 lakh projects completed. 200 lakh man days employment generated. Jal Shakti Abhiyan also in progress and yielding positive results. Case study of Navsari district. Amrit sarovars made. River rejuvenation with help of NGO launched. check dams made, capacity increased.	NA
		Kunwarjibhai Bavaliya	Minister of Water Resources and Water Supply	gujarat faces semi-water scarcity. Sardar Sarovar dam was completed under Narendra Modi's term. Narmada's water is used in the dry areas of Gujarat like Kutch, Saurashtra. Water conservation and management processes are in progress. Various check dam, tubewells, ponds etc have been made for water conservation. Old rivers have been revived and improved. Sujalam sufalam yojana has been fruitful in raising water levels and imporvement in the agricultural output and the lives of farmers as well. People are using rainwater harvesting, micro irrigation and water conservation methods. The cleanliness of water resources is also being maintained. Check dam, pond mud has increased productivity, given employment and increased water levels. Since sep 24, Jal Sanchay Jan Bhagidari initiative has been launched with more than 24,000 beneficiaries. Atal Bhujal Yojana aims at increasing ground water level.	Narmada Project illustration.
8	**Harayana**	Shruti Choudhry	Minister of Irrigation & Water Resources	Water secure Haryana. Youth, poor, women, famers are pillars of the futuristic mission. As non-riparian state, Haryana has holistic approach with 544 canals with Bhakra dam system for north western and western parts, Western Yumana for its north-eastern and central parts. Water is a scarce resource especially in southern parts of Haryana. Lift canal systems in the southern parts is implemented to meet the challenge. Fragmeneted governance was a major challenge. Systematic approach of governance was taken up. Haryana water resource conservation and management authority, Haryana pond and waste water management authority, and Haryana Saraswati board and were established. Haryana has formulated reuse of waste water policy which aims at 100% reuse of waste water by 2028. Model state integrated water managemnt system will help amen Haryana water resources act 2020. Integrated water resources plan was formulated on basis block level data of demand and supply in 2023.	Governance challenges highlighted Non-riparian status and external dependency from inter-state project such as Bhakra
		Ranbir Singh Gangwa	General Minister for Public Health Engineering	Committed to ensuring "Har Ghar Nal, Har Ghar Jal." Issued a notification for the reuse of treated wastewater, with rapid execution. Groundwater depletion is a concern, but Haryana has 177 sewage treatment plants (STPs) with a total capacity of 2137 MLD. Currently, 1487 MLD treated water is being generated, aiming for 1000+ MLD by Dec 2025 and 100% reuse by Dec 2028.Under AMRUT 2.0, 44 cities are covered to improve water supply and reduce non-revenue water (NRW) by installing district metering zones and bulk flow meters. Energy-efficient pumps and equipment with a five-star rating are being installed in 34 approved cities, reducing costs and greenhouse gas emissions. 216 villages in Haryana now receive drinking water through Ranney wells in the Yamuna floodplains. Efforts are ongoing to include water-deficient areas like Mewat in canal-based water supply schemes. Plans to shift water-scarce regions to upstream canal locations, requiring significant investment. Haryana is seeking a special financial package from the central government. Self-help groups (SHGs) are involved in water sample collection, leakage detection, and repairs. Currently active in 13 cities, with 29 more approved under AMRUT Mitra. Haryana urges the central government for additional financial aid under the Jal Jeevan Mission extension to strengthen water security efforts.	AMRUT and JJM Asset Management and improving efficienc y Required funding for JJM

		Keshni Anand Arora	Chairman Haryana Water Resources Authority	Key issues- Depleting water table, water logging, Salinity. Worked on data collection according to CCWB and found 88 over-exploited blocks. Tried to analyze gap analysis at village level. Water scenario was analyzed. Total water availability- 20,93,600 crore l. Total demand- 34.96 BCM Gap- 14.02 BCM which is procured from ground water pressuring aquifers. Agriculture and horticulture require most water. integrated water resource sharing is required. Data shared with Panchayat. 1948 villages were in red category. Datas and maps were analyzed shortly. Action plan worked on formation of IWRAP, required interventions, actionable plan, reducing demand supply gap, and data- based decidion making.Portaal was also made. Mera Paani meri vorasat. Monetary renumeration for people reducing water pressure by diversifying their crops, and water conservation methods. IWRAP aims to bridge water deficit og 6.9 BCM. 75% of targets achieved. Major achievements- crop diversification, direct seeding of rice, varietal interventions, micro irrigations, etc. Working on restoration of water bodies and storages. 27 projects of irrigation based in using treated water. Working for reclamation of waterlogged areas by vertical and horizontal drainage and prawn cultivation. Perceptive increase of 11% in groundwater recharge. Coordinating with world bank for funding. Working on jal shakti kendra, recharging wells, river interlinkings, recharging schemes. Now working on automation and monitoring in water management using SCADA and RTDAS. SWRMS for surface water management. Community participation is emphasized. Eco clubs are trained. New water sources are being created. Formulating new water policy. Shifting from groundwater to surface water. Bulk water tariff fixed.	GW depletion and cropping pattern necessity and focus on agriculture working on automation and monitoring in water management using SCADA and RTDAS Tech deployment
9	**Himachal Pradesh**	Mukesh Agnihotri	Deputy Chief Minister	Devbhoomi. Jall jeevan mission completed. Provided tap to 17 lakh households. climate change, low and unregulated rainfall/snowfall leading to drying of water sources difficulty in providing water. Melting of glacier 20-30 m every year. Due to changes in air-water patterns Pressure on surface water resources increasing water security issues. Measures like ground water recharge, rainwater harvesting, etc. for sustainable water security. Pipelines freeze in tribal areas like Spiti, Kannaur, etc. specifically. Tough geographical conditions in hilly areas. Therefore, need specific funding for heated pipelines, anti-freeze systems, insulated taps, ect. Fulfillment of center's commitments. HP has made a 1300 cr plan for water and snow conservation by cleaning ponds, re-establishment, snow pits, etc. Rainwater harvesting systems establishment needed. Cloud burst has caused heavy damage of about Rs. 2000 cr in past 2 years. Funding for agriculture irrigation systems. 4000 cr is insuffienct for water pipelines and drainage project. Due to high forest cover, building infrastructure is more cost intensive. Specific outlook for hilly states.	Progress in JJM. Environmental Risks such as glacier melting, cloud bursts. Infrastructure suitable for the hillside in the water delivery system. Infrastructure finance is suitable for the hillside.
10	**Jammu and Kashmir**	Javed Ahmed Rana	Minister for Jal Shakti	J&K faces significant water management challenges due to rapid urbanisation, unsustainable agricultural practices, excessive groundwater exploitation, and climate change. A national convention highlighted the urgent need for public awareness and systematic water conservation efforts. J&K has 20 districts, with major water sources including the Wular Lake (the largest freshwater lake in India), Dal Lake, and wetlands like Hokersar and Gharana. However, climate change and ecological imbalances threaten these critical water bodies. Infrastructure projects in J&K have suffered delays, especially in border regions like Pir Panjal, due to frequent ceasefire violations. Many areas were left out of the Jal Jeevan Mission due to instability, and a request has been made for special provisions to include these uncovered areas. The 2014 Kashmir floods caused severe damage, underlining the need for a comprehensive master plan for flood control and erosion management in both Jammu and Kashmir. Restoration of major lakes and wetlands is essential to preserving water availability. J&K has also proposed hosting a water conservation workshop, though the upcoming event was allocated to Odisha. The region is working to revive stalled projects that suffered due to political instability and conflict over the past five years. A special focus is on improving wetland conservation and restoring neglected water bodies. The government has emphasised the importance of ecological balance and sustainable water management for the future of the region. The session concluded with a poetic reminder of the need to protect and preserve natural resources for future generations.	Border area challenges manifest in lower JJM penetration in certain areas. Domestic conflict infrastructural gap.

11	**Karnataka**	D. K. Shivakumar	Deputy Chief Minister	Climate change, water pollution, competition for water, food security, and the number of water users are also increasing. Development of, and water needs improvement. India supports 80% of the world's population with just 4% water resources. India also needs to cope with greater industrialisation.Storage capacity is 253 billion cubic m. Reforms- To curb illegal withdrawal of water Karnataka Irrigation Act 1965 was amended in 2024, to avoid illegal tapping of water so that it reaches the right individuals. Officers conducted an apt enquiry to ensure proper implementation of the act. Provision of a task force to the police. Farmers are not allowed to suck water from canals. A new state water policy was enacted in 2022. New legislation and acts covering water resources need to be addressed for changes/ amendments. 29 legislations need to be covered, 14 at the centre level and 15 at the state level. New administrative governance bodies with a mandate, power, authority, reorganisation aligning to capacities and requirements, new standard operating procedures, tactical management processes, and tools and practices. water infrastructure development. Pending Issue- CWC clearance to the Mekedatu project and the balancing reservoir infrastructure of the Cauveri river, dispute resolution for helping Tamil Nadu. 400 MW of power will be generated from it. A 5,300 cr grant was announced by the government for Upper Bhadra projects for providing irrigation, but no money has been released. Modification of the order of 2011 on the Gazette notification Krishna Water Tribunal. DIrect NBW on the Mahadayi Water Dispute Tribunal and kalasa banduri nala. NWD agency to revisit state-wise distribution of Godavery- Kaveri equitably based on the irrigation needs of Karnataka. 15.89 mc of water is proposed for Karnataka. Bengaluru droughts of drinking water. Upper Bhadra projects for the central Karnataka drought-prone areas. funding. Krishna water dispute.	TN issue seemed fleeting.
		Gaurav Gupta	Additional Chief Secretary	31 districts, 240 taluks, 6.11 crore population 1608 cubic m/ person/ year water availability 191700 sq km drainage area with 7 river systems 3438 annual yield mostly from east flowing rivers which cannot be tapped thus major dependence on Krishna and Cauvery. Irrigation potential of 20.40 lakh Ha (75%) achieved so far. 4 SPVs (KBJNL, KNNL, CNNL, VJNL) 805.95 TMC storage capacity. 52% from major and medium irrigation projects.365 TMC usable ground water with several over-exploited regions for which Upper Bhadra and Yettinahole projects have been put in place for recharge. Modernizing more than 100 years old Krishna Sagar Dam. EAP approved by CWP. 136 sluice gates replaced. Tungabhadra dam restoration- important for Tamil Nadu, Karnataka, Andhra Pradesh. Proposed to restore the loss of capacity of 26.618 TMC. Mekedatu balancing reservoir- planned to have storage capacity of 67.16 TMC. Utilize 4.75 TMC consumptive and generate 400 MW power. Dam rehabilitation project- 22 dams- 452.92 TMC. 4 awards received. Almatti Dam- create additional 100 TMC capacity. Upper Bhadra project- Micro irrigation, water recharge, augmentation. Augmentaation of Van Vilas Sagar- modernization of 104 km canal. Yettinahole project- Water from western rivers is diverted to drier regions. Funded by state alone. Karnataka Irrigation Act 2024- prevent misuse of water, digital monitoring, ABHY for groundwater. KC and HN valley projects.Working on irrigation modernization.	NA
12	**Kerala**	Jeevan Babu. K.	MD of Kerala Water Authority	common person, engineer and government's perspective. Challenges- increasing scarcity, unequal access, environmental degradation, conflicts, large number of stakeholders, climate risk, disasters risk. 35% coastal erosion, pollution, groundwater depletion. Kerala- 859people per sq. km. 26% pop. in coastal belts. 44 rivers. small drainage basins, 590 km coastline. Rainfall- 3000mm. Rapid runoff due to steep terrain. urbanization is heavy with change in lang use and gap in data collection. Cloud bursts cause flooding but droughts are also prevalant. Way ahead- IWRM, Flood forecasting, early warniing systems, sustainable strategies, dtrengtheing governance. RBCMA is in final stage of approval and IRBM is being formed. Kerala WRIS for data collection in 2021 and used for forecasting. Haritha Kerala Mission for community driven water conservation. 914 gram panchayat and 105 block panchayat. focuses on water conservation, watse management, organic farming. Jalasamrudhi Kattakkada model in Thiruvananthapuram to restor water bodies and groundwater recharge sustainably. Navakeralalm Mapathon using technonlogy for physical survey. 230 gram panchayats mapped. Reclamation activities in 44 gram panchayats across 6 districts. Ini Njan Ozhukatte- to revitalize watercourses through mass mobilization and participatory campaigns. Involves local self- govt. institutions, MGNREGS, KSITM and RKI to reclaim wester ghat watercourses to avert disasters. 254 labs sanctioned. 150 operational in higher secondary schools. Neeruravu scheme- joint venture of Haritha Keralam and MGNREGS focus on soil and water conservation in specific areas. Water budgeting- out of 941- 176 gram panchayats followed budget. 36/176 municipalities. Mazha Polima- Rainwater harvesting in Thrissur. Current focus- JJM, RKI, KIIFB, site-specific practice, strengthening canal networks, rejeuvenating rivers and streams, pollution control, desilting tributaries, etc. Support reuired- budget for IWRM and RBCMA, integrated approach, technical expertise, support in human resource, financial model based on topography, interstate coordination,	NA
13	**Ladhakh**	Retd. Brigadier Dr B D Mishra	Governor	High altitude area it is at 11562 feet the altitude, 59146 sq km.	More philosophical than regional.

14	**Madhya Pradesh**	Prahlad Singh Patel	Minister of Panchayat and Rural Development	Is irrigation/ water everything for agriculture? Overuse is wastage. Dispute the conventional ideas of check dams, etc. Apart from technical solution, go for traditional ideas. Pushkar Bhanwar Abhiyaan more than 25000 structures. Irrigation systems. More than 5,000 ponds made. Dry handpumps were used as recharge pumps. Use of gravity for spreading water sources.	Focus on tradition, not on tech.
		John Kingsly	Secretary Department of Water Resources	Doubling irrigated area with same amount of water- 170 pressurized piped irrigation. CCA 46.6 lakh ha. 85% water for agriculture use. canal system require permanent land acquisition. Remote sensing and monitoring. The use of at present this remote sensing Technology is used for theoretical Calculation of Actual Vapor Transpiration And the SCADA system is used in all pressurize pipe irrigation network. Requirement of the particular crop and Particular Soil. WEATHER Soil Type Crop and Planted Area Can Decide what type through our irrigation network what type of irrigation schedule has to be done. guide the farmers to use of the advance crops. later linked to the market. Large Scale ET Estimation Basically Sentinel to satellite is being used for Provides high resolution 10 to 20 meters. surface energy balance model so it use solar energy Transpiration and Energy Reflected Back From Back to the Atmosphere and Also Air temperature change to calculate what is the temperature control and also what type and How the Agriculture That We Use Water for It Will Help in Utilizing The Scarce Resource of Water for Other Purposes	NA
		P Narahari	Principal Secretary, Public Health Engineering Dept	Total number of households to be covered- 1,11,88,511 Total covered= 75,25,838 Multiple single and multi village schemes. Tech through OM-Gatishakti portal. MPJN mapped assets on Jal Rekha. Anushravan Module- RFI and daily inspection, Dhara Module- monitoring volumetric data and DWSR, Panchayat Darpan Portal for bill generation. GIS based tubewell management system. Inventory Management System. Numerous digital monitoring initiatives. Disinfection tech needed.	NA
15	**Maharashtra**	Sanjay Belsare	Secretary Department of Water Resources	5.7 million Hector irrigation potential developed. almost 25 lakh hectare under Microirrigation under various schemes in the Agriculture. irrigation Performance and Service. separate Organization calls Chief Auditor a Headed by Chief Engineer It Independent Organisation under the government of maharashtra. GIS remote sensing. pipe distance Network where there is advantage in Improvement of the service delivery saving of water. Tembu lift irrigation. A Lifeline for the Drought Prone Districts of Sangli, Satara and Solapur water is lifted in five stages From a barrage on the Krishna river near Tembu Village in Satara District a total of 22 TMC water is lifted to create irrigation potential for The total project cost is Rs 856 hectares 488 Cr by December 2024 Over R 3867 crores had been invested completing Headworks and Canal System. A key innovation of this project is the Closed pipe distribution system Cropping Patterns of the Tembu Project Includes 20% grapes and pomegranates 15% Of Vegetables 20% Pulses with The Remaining 45% allocated to ground nuts and other crops. decentralized system Allow farmers to store and use water Efficiently. 50 to 100 hectare blocks. The Annual Agricultural Produce Before irrigation was ₹ 16.50 crore which has now increased to ₹ 2100 crore per year with an irrigation Efficiency of 70 to 75 per it serves as a Models for Future Projects Across Maharashtra. Rewarded with notable awards. Ultrasonic Sensors. Paani Foundation. NGOs, canal cleaning. Private Sector in Capacity Building. 155 Project to improve the canal discharge level to the design discharge and capacity building	NA
	(Navi Mumbai)	Kailash Shinde	Municipal Commissioner	1970-CIDCO 29 Village to directly to The Municipal Corporation. Population of 11.2 lakh in 2011 and today it stands 18.5 Lakh. Water Supply and Sanitation System Morbe dam city water source. WTP Bhokarwada. SCADA. southern side of city 450 MLD capacity 25 Landscape Garden. Minimum human intervention. Reduce the Water Concern by almost 20 to 25% by this year. ERP base and e-governance basis. Tertiary Treated water supply now 45 MLD Water is tested. 80% to agriculture. Future growth 4TTP. next 5 years replace fresh water with treated waste water. Circular water economy. Flood mitigation system.	NA

16	**Manipur**	PPT		The government focuses on the rejuvenation and conservation of the Nambul River in Imphal, which has been a lifeline for Manipur. Over time, pollution turned it into one of the most polluted rivers in the state, threatening Loktak Lake, a significant Ramsar site. In 2018, the Central Pollution Control Board (CPCB) identified Nambul as one of the nine most polluted rivers in Manipur, classifying a critical 26.4 km stretch under Priority II in the National River Polluted Stretches report. The river originates from the Kangchup Hills and flows 5,537 km before merging into Loktak Lake. It passes through three key zones: 28.89 km in the upper catchment, 9.14 km through urban Imphal, and 17.34 km in the lower catchment. The biggest challenge was the 9.14 km urban stretch, which had severe pollution, with biochemical oxygen demand (BOD) levels ranging from 4 mg/L to 52 mg/L, far beyond safe limits. Efforts were focused on 14 municipal wards in Imphal, marking the start of a structured approach to restoration. Under the National River Conservation Plan, a major initiative was launched. Chief Minister N. Biren Singh led clean-up efforts. In 2019, the Ministry of Jal Shakti sanctioned ₹977.2 crore for national river conservation. Multiple departments collaborated, focusing on wastewater treatment. A 14.5 km pipeline was laid to intercept waste from 72 outlets along the river. Collected wastewater was treated at a plant with a 16 MLD capacity, with another 1 MLD plant at Iroishemba. Beyond cleaning, 56 traditional crematoriums were modernised, and 20 community toilet complexes were built. By 2021, the CPCB reported significant improvement, moving Nambul from Priority II to Priority IV. The river's revival reflects strong commitment, community participation, and a vision for a cleaner future for Manipur.	NA
17	**Meghalya**	Marcuise N Marak	Minister Soil and Water Conservation	Meghalaya's water conservation efforts emphasize glaciers, ice caps, and soil as crucial water sources. Springs are primary water sources, but climate change, deforestation, unsustainable agriculture, mining, and rapid urbanization are causing water shortages. Only 24% of Meghalaya's forests are classified as "Very Dense," highlighting the need for conservation. Jhum (slash-and-burn) cultivation is expanding, worsening deforestation and soil degradation. The government has mapped 559 springs, with 747 water sources showing declining discharge rates. The Meghalaya State Water Policy (2019) was the first of its kind in India. Under the Jal Jeevan Mission, 6,457 villages are targeted for functional household tap connections, with 2,699 villages recognized as "Har Ghar Jal" and 81.76% of households covered as of February 2025. Community-based water management involves Village Water & Sanitation Committees (VWSCs) and Water User Associations. Land ownership challenges and high implementation costs affect water supply projects, but efforts continue to integrate conservation with infrastructure development for long-term sustainability.	NA
		Dr. Joram Beda	Commissioner Soil and Water Conservation	Meghalaya's primary water sources are springs, which are crucial for sustaining rivers and serve as key indicators of climate change. Over 80% of the population depends on springs, but a 2016 study found that 50% of them had dried up. Within just three years, 84,000 sq km of forest was lost, worsening the water crisis. Meghalaya, a Sixth Schedule Area, relies heavily on community-led conservation efforts. The state's two major river basins are impacted by population growth, as most people live on ridgelines, directly affecting water sources. A micro-watershed approach is being used for water conservation, with 2,076 watersheds identified, 83 of which are prioritized. The Shillong water supply dam, Umiam Lake, nearly dried up last year, threatening the state's 100% hydroelectricity generation and forcing consideration of importing drinking water. Land degradation due to jhum (slash-and-burn) cultivation remains a major issue despite modernization. Under the Jal Jeevan Mission (JJM), progress has been made, but many water sources have dried up, making source sustainability a key concern. The Climate Change Adaptive Project, supported by ADB, involves constructing 532 water harvesting structures to store 9.08 million cubic meters of water. Another initiative, the Payment for Ecological Services program (₹44 crores), incentivizes communities to conserve forests. The externally aided MEGA-RISE project focuses on conserving Greater Shillong's watershed areas. The Spring Shed Management program is integrated into watershed development projects, rejuvenating 5,000+ springs and treating 70,000+ hectares of land. The Critical Source Sustainability Project supports both rural and urban water schemes, covering 67 critical sources and constructing 356 water harvesting structures. Climate Adaptive Community-Based Water Harvesting, supported by ADB, includes 532 structures covering 12,000+ hectares of catchment area. Meghalaya emphasizes community-driven conservation efforts and considers springs as sacred, advocating their protection on the same level as Yamunotri and Gangotri.	NA

18	**Odisha**	Mohan Charan Majhi	Chief Minister	In Odisha the occurance of floods and cyclones is very common. Area of 1.55 lakh sq. km which is 8th largest by area and 11 th in population. 50% of population relies on agriculture. Rainfall is 1500 mm per year. Distribution is uneven. Aim to become water secure state by 2036. To ensure this, the government is working on projects on water conservation and water governance with new digital management and monitoring. 18 billion cubic m storage capacity has been developed. Groundwater capacity has also been developed but this is not enough for the demand. Govt is making new structure by increasing capacity, building dams, rainwater harvesting structures, reservoirs, etc. Pani Panchayat, participitarory irrigation management schemes have been taken up for integrated water management. Irrigation cover has been increased and efforts have been made to develop climate resilience but still it is a serious challenge. Integration of water shed management, soil coservation, aforestion to increase ground water level. Women self help groups are playing a major role in promotion of water conservation practices. More than 40,000 pani panchayats are active in area 24.57.lakh hectare area and 24,500 communities participate. In 2019, only 3.5% rural households had tap water connection while now 76.4% have that connection. The target is to acheive 100% coverage by March 2027. Last mile coverage is being prioritized. 77 fully functional water testing laboratories have been established. 94000 self help groups are also involved in this testing. Technical interventions like desalination, waste water recycle and smart irrigation. National Water Innovation hub has been proposed and startups for the same purpose have been proposed.	NA
	NOT STATE SPECIFIC. Speech as the chair.	Mohan Charan Majhi (2nd address)	Chief Minister	16% population 2.5% land and 4% water 4000 BCM water in India. Out of 1,869 BCM water reservoir only 1,122 BCM can be expected due to topographical factors. Sediment management for reservoir optimization. Numerous sediment removal techniques were discussed. Khushi Sinchai yojana- har khet ko paani. Minimize water wastage in irrigation. UGPL distribution system	NA
		Anu Garg	Additional Chief Secretary of the Departments of Water Resources	Average annual rainfall- 1452 mm. Spatial distribution is intense and rainfall is skewed. water storage- 210 large dams, 89058 public waterbodies. Initiatives- Expedition of ongoing large dams, completion of instream storage structure across areas. Gating 50 ungated reservoirs, intensifying catch the rain, construction of more check dams, renovating water bodies, intrastate river linking. Great progress in MMI projects in last 5 years- involve district collectors from beginning. Piped canals in place of open canals, pumped in a lot of money in these projects. Tender committees. eg. Indravati Lift Canal, Gangadhar Meher LIP, Lower Indra dam, Deo dam, etc 8 projects taken up for irrigating 0.93 lakh ha. Check dams- 16664- all geotagged. Renovation of MIPs, 48% ground water use. 10000 tanks for recharging ground water- Rainwater harvesting. Jal mitras, no critical blocks, many jal panchayats, using undergroung pipelines, rotational irrigation. Way forward- reform measures, adding technology.	The tribal deity is indicative of the issue.
19	**Punjab**	Hardeep Singh Mundian	Minister for Revenue, Rehabilitation and Disaster Management of Punjab	2019- 50% household had tap facility in 2019 and had achieved har ghar jal well before target. 2009- grievance redressal system for water related issues was present. 99.70% complaint resolution rate. Toll free number for complaints awailable. Digital tracking also available. IOT and SCADA facilities available. High women participation. Atleast 50% women participation ensures. Groundwater has high Sodium Hypochlorite concentration. 15 Quality Assurance scheme are ongoing. 25 lakh households will get clean and safe drinking water. Require funding for success and smooth implementation of the 15 projects.	NA
		Nilkanth S. Avhad	Principal Secretray Water Supply and Sanitation	50,362 sq. km land, mostly fertile, 3.42 million rural householdshave FHTC. 8,532 rural water supply schemes. 55% schemes are handed over to the panchayat. Commitment for 70 IPCD supply in rural areas in 2014. 382 habitations have 24X7 water supply while 4881 habitations get water supply for more than 10 hours. It helps in careful use of water. Equitable and fair distribution. Supply chain network for Sodium Hypochlorite for disinfection. 59650 women trained to use vials and kits. 31 labs across state and water quality montoring through 3-tier infrastructure. Model bye laws of 2015. GPWSC- 50% women. IEC and capacity building, participation, flexibility, local administration, active and competetnt GPWSC members, handholding. Case studies of villages. Challenges- difficulty in handing schemes to panchayats, devolution vs privatization. Low cost recovery, perception of difficulty of management schemes, enforcement issues. SNK system for greivance mGramSeva	NA

22	**Tamil Nadu**	PPT		Gulf of Mannar Conservation (Tamil Nadu) Tamil Nadu's southeastern coast has the Gulf of Mannar, a shallow bay with 21 uninhabited islands, extending from Rameswaram to Kanyakumari. It has rich biodiversity, including coral reefs, seagrass beds, and mangroves. In 1989, the Indian government declared it a Biosphere Reserve, covering 10,500 sq. km, supporting tourism and livelihoods. Climate change, rising temperatures, and human activities like overharvesting, industrial waste, and destructive fishing have severely affected the ecosystem, leading to coral bleaching. To protect it, the Tamil Nadu government has undertaken conservation measures with expert reef researchers. Coral rehabilitation is done using fragment transplantation and artificial substrates. Multi-purpose artificial modules were installed around sinking islands to prevent submergence. Seagrass and mangrove plantations have shown positive results. Alternate livelihood programs support fishermen shifting away from unsustainable fishing. A unique initiative, plastic check posts, prevents plastic entry into the Gulf of Mannar, promoting eco-friendly alternatives. Tapi River Rejuvenation (Gujarat) The Tapi River, flowing for 700 km, has been a lifeline for Gujarat. It nourishes Surat before merging into the Arabian Sea. However, rapid urbanisation has led to pollution. The Ministry of Jal Shakti launched the Tapi River purification project to control pollution and restore the river. The project covers an 85 km stretch from Kakrapar Barrage to ONGC Bridge in Surat. Objectives include preventing further damage, improving water quality, and implementing long-term wastewater management for villages and towns along the river. The plan ensures treated wastewater is reused for irrigation and horticulture. Measures include preventing riverbank erosion and afforestation along the banks to enhance groundwater retention. Initially, 44 identified drains discharged 370 MLD of untreated wastewater into the river. The Surat Municipal Corporation (SMC) intercepted this and upgraded existing sewage treatment plants (STPs). SMC and Surat Urban Development Authority (SUDA) expanded sewer systems in surrounding towns and villages. The project, costing ₹972 crore, is a collaboration between the central and Gujarat governments, SUDA, and SMC. Future plans include supplying treated water for industrial use to generate revenue. Surat, with its growing population of 8 million, ensures clean drinking water and aims to secure potable water for the next 50 years. Under the "Catch the Rain" initiative, SMC constructed a 33 km freshwater reservoir to prevent groundwater contamination and improve recharge levels. Public awareness campaigns ensure community participation in river purification. A dedicated machine is used to remove water hyacinth from the river, and plans are in place to convert it into vermicompost for agriculture.	NA
23	**Telangana**	Nalamada Uttam Kumar Reddy	Minister for Irrigation, Food & Civil Supplies	312 per sq. km population density. 276.94 lakh acres 166.98 lakh acres. Irrigation potential 73.57 lakh acres. 906.3mm rainfall. 54 lakh acre balance IP to be created. 34 major and 39 medium projects taken till date. 42 completed 31 ongoing. 2.98 lakh crores expenditure incurred. balance 90,100 crore. capacity of IP 904 TMC. AMRSLBC 13.6 TMC capacity. Dindi LIS 25.641 TMC capacity. Palamuru Ranga Reddy LIS approx 68 TMC. modernizing canal networks. minor irrigation works. 5,300 crores. desilting, check dams, off takes, micro-irrigation. Vanmahostavam cover from 24% to 33%. 3.29 m rise in ground water from 2014-15 to 23-24. Requests- KWDT 2 intervention for dispute settlement, water allocation for projects like seetaram sagar etc. funding request in place of high interest short term loans. Cleaning Musi river, interventions in NDSA approval. Resolution between Telangana and Andhra for solving issues.	NA
		Dansari anasuya	Minister of Rural Water Supply	100 l per capita per day. Floods and droughts- both abundance and scarcity. Mission maryada. Borewells, handpumos, peipelines, etc. 149 multi village scheme. Stabilize water supply. Identifying and utilizing local water sources. 4 lakh houses not covered in mission maryada- govt has brought that also under the scheme. Flood management. Toll free number. Funding for the missions. 5000 cr annually on water. Did not get money from center. Want 16000 cr atleast from govt.	NA

20	**Rajasthan**	Bhajan Lal Sharma	CM	Rajasthan Ram Jal Setu Link Yojana was inaugrated for irrigation in 4 lakh hectare of land. Joining of rivers and tributaries as method for sustainable water management. Rajasthan has water scarcity but in Karmbhoomi se matrabhoomi plan, 1,60,000 tubewell in 45000 villages installment plan has been established. Thanked Madhya Pradesh and Haryana for their cooperation wrt their rivers with Rajathan. Rajasthan is skilled in water management due to historical scarcity of water. Need well-planned road map for water management at national level. Long term policies are the requirement of the hour. Sprinkler and other micro irrigation system has been highly effective in Rajasthan. About 50% water can be saved by these techniques. Villages should be educated about the same to promote agricultural output as well. Crops that require lesser water should also be promoted like Bajra, dal, etc. This will also increase the earnings of the farmers. Urban water planning is another aspect where due to over population density where water demand increases needs to be accepted and adapted to accordingly. Futuristic planning needs to be done when laying down pipelines, etc. Water recycling and quality improvement should also be promoted. Mixing of traditional ways with modern technology. Rajasthan govt is also following the same for Rainwater harvesting by incorporation traditional techniques like khadil, taka, nadi, etc. are being used.	NA
21	**Sikkim**	Ven. Sonam Lama	Minister of water resources and public health engineering	Hilly area. 2023 cloud burst. Help for the water resource restoration from that. 6 months frozen ice. 6 months landslide etc. Bijli Paani, sadak. Organic water. Water donation.	NA
		Lhendup D. Lamtha	Secretary Department of Water Resources	7096 sq km. 227 high altitude lakes, more than 100 rivers and streams. 2 major rivers- Teesta and Rangit. High to very high rainfall. Dhara Vikas mission- 100 pits per hectare. More than 80% householdss depend on springs for water. Gravity flow supply systems. Isolated mid hills- sensitivity needs to be considered. 2008 onwards- recharge of spring water initatives have been taken. Local capacity building- Para hydrogeologists. People are trained for water testing. 8 steps methodology from resource mapping to monitoring and evaluation. Collection of baseline information manually. Multiple hands-on field experiences required. Aquifer focus after 2011. Isotope studies for recharge area. Critical springs hydrograph. Concretization of Tamley Pokari. Revival of Suke Phokari. Recharge structures under MGNREGA. Village water security plan carried out. RS & GIP planning. Android application for mapping. Handbooks provided. Places where implementations were not possible.	NA
		Kiran Gurrala	MD JJM	649 Urban Local bodies. water requirement Greater than 70 lpcd for regular needs.water demand is higher than potential. The Tamil Nadu government is focusing on restoring water balance as 73% of the state is hard rock terrain, with 47% of its water sources categorized as over-exploited or critical. The hydrological stress is being addressed by promoting wastewater reuse and a circular water economy. A wastewater reuse policy launched in 2019 aims to reduce reliance on freshwater, with urban sewerage schemes, STPs, and greywater usage being expanded under various government initiatives. Chennai was the first city in India to supply secondary treated water to industries in 1991, and since 2019, wastewater supply to industries has significantly increased. The state plans to set up 14 TTRO plants with a 1002 MLD capacity, along with a 10 MLD ultrafiltration plant for lake recharge. Jal Jeevan Mission initiatives include centralized smart metering systems to improve water management and revenue collection. Tamil Nadu has been a pioneer in rainwater harvesting since 2002 and is now strengthening efforts with technical solutions, making rainwater structures mandatory in building regulations. Hydrogeological management maps have been created for groundwater conservation and handed over to relevant departments. Policies focus on reducing leakages, improving efficiency, and conducting energy audits for high-power pumps, revealing potential savings with energy-efficient replacements. Comprehensive planning integrates rural and industrial water supply to optimize costs and sustainability. The state received the First Prize in Functional Assessment 2022 from the President of India. Future plans include small desalination plants to ensure water security, with Chennai expanding its desalination capacity. The Tamil Nadu Water Supply Board maintains 1,286 borewells for groundwater assessment to aid sustainable water resource management.	NA

24	**Tripura**	Manik Saha	Chief Minister	Tripura 3rd smallest state. 10,491 sq km area. more than 70% forest covered. Primary occupation-agriculture. State is giving priority to more irrgiation projects to boost agriculture and help farmers double their income. Total cultivable land is only 25%. Irrogation cover is only in 47% of cultivable land. Target is to achieve 80% irrigation cover. Due to first flowing rivers and limited water storage capability, there is little scope for surface water based irrigation projects. Therefore, there are structures for minor dams, and rainwater harvesting systems. There are 98 identified sites for minor project across 30000 hectare and 14 initiated projects. Tripura is blessed with abundant ground water due to long rainfall periods and high forest cover. Rate of extraction is also 9.48% as compared to 60.50% national average. Deep and small tubels have been used for irrigation as well as drinking purposes. Since the launch of Jal Shakti mission, the state groundwater has increased from 1.063 billion cubic m in 2023 to 1.18 billion cubic m. More than 45000 water structures have been developed under tha jal shakti mission. 975 amrit sarovars have been developed in the 8 districts of the state. Several 14th century heritage structures have been restored making them place of leisure and tourist attraction. In 2019, only 24000 i.e. 3.26% households had tap water connection.. In 2025 6.38 lakh i.e. around 84.85% households had tap water connection which is greater than the national average of 79.76%. It has enhanced the ease of living in rural areas. Innovative water supply ideas based on local availability of resources have been established. Till now 303 innovative schemes have been commissioned and 251 are in progress. Most of ground water is high in Iron concentration. The acceptable limit is 0.3 mg/l. As a result Iron removal plant is being installed. Due to this financial burden on the state has increased. To bridge the gap, 1262 jal mitras have been trained. 4347 schools- 96.34% and 8435 - 96.10% anganwadi centers have freshwater availability and the target is to achieve 100% coverage by Sept 2025. Assistance from Asian Development Bank has been ensured. 10 major rivers are present in Tripura. First flowing and cause flooding and erosion during rainfall. In August month state witnessed record rainfall since 1983 and the state is still recovering. Govt has made 43 flood protection embankments and is taking other safety measures. For integrated and sustainable planning, a state specific action plan is being prepared with integrated vision. SWIC has already been set up.	NA
25	**Uttar Pradesh**	Swatantra Dev Singh	Jal Shakti Minister	remote Sensing Based Irrigation Collaboration with Government ISRO, NRC Sharda Saryu and Ganga Canal in the state Drone mapping and satellite in the system Monitoring irrigation. Distribution was improved to save water and water is made available to farmers on time. Mata dam situated on Betwa river in Hua state in the system on Tala Dam and Sar Canal Automatic gate control system has been installed. The flow is controlled in real time This brings transparency in water distribution. Smart Drip and Sprinkler systems are promoted which consumes water has decreased by 30 to 40 per cent and the crop Production has increased. There are more than 1400 water consumers. water Consumer committees have been formed in The committees decided which villages When and how much water should be supplied to the ensuring the availability of water and Disputes have reduced. There are several major canal systems in the state Such as Ganga Canal, Sharda Eastern Yamuna Canal. Digital flow meters have been installed. Combined various govt. policies. More than 500 Ponds have been reconstructed. The water level has risen by 10 feet. Development of Bandhav Jala as a sustainable tourism spot. The State Government has started a programme to develop the tourist centers of water sources. boating, fishing, water sports etc are popular. This was encouraged to help the local people. Employment was also found. socio-economic development and water-based Ajeev's vote bank was transferred to Uttar Pradesh government. Similarly 1500 people are staying at the banks of Navavi Ganga Mission. Developed more than 50 organic farming villages	NA
		Swatantra Dev Singh	Jal Shakti Minister	identified floodplain zones for major rivers to control encroachment and pollution. The National Green Tribunal's directives have led to scientific determination of flood zones for rivers like Ganga, Yamuna, Gomti, Ramganga, Betwa, Ghagra, and others, using high-resolution remote sensing and hydrological data. The government is working towards economic and social development through water security, promoting rainwater harvesting, and strengthening community-based water management. Under Water Vision 2047, India aims to set a global benchmark in water conservation. The National Mission for Clean Ganga (NMCG) and the National Institute of Urban Affairs (NIUA) launched the Urban River Management Plan (URMP) in 2020, focusing on sustainable river-sensitive urban development. Five Indian cities have developed URMPs, with Chhatrapati Sambhaji Nagar's Kham River Restoration Initiative receiving global recognition. The River Cities Alliance (RCA), launched in 2021, provides a platform for Indian cities to collaborate on sustainable river management. Starting with 30 cities, RCA has grown to over 145 river cities, developing knowledge resources and capacity-building initiatives. Supported by the World Bank, RCA aims to implement 60 new URMPs, advancing urban river rejuvenation and fostering sustainable urban development.	NA

		PPT		Flood plain zoning in Uttar Pradesh divides its rivers into eight basins for management, with 58 rivers flowing through the state. The process involves satellite maps and hydrological data from the Uttar Pradesh Remote Sensing Application Centre, Lucknow. Surveys analyze flood levels over five, 25, and 100 years using mathematical models and hydraulic studies. Floodplain areas are determined by superimposing satellite and hydrological data. So far, zoning has been implemented for 22 rivers, including the Ganga, Yamuna, and Solani, with 15 more in progress and four yet to start. Zoning classifications include the Private Zone (no permanent activities, only temporary ones like parks), the Regulatory Zone (permanent structures allowed for public institutions), and the Warning Zone (flood-prone areas for 25 to 100-year floods).	Flood Plain Zoning
26	**Uttrakhand**	PPT		Uttarakhand, a hill state, is the origin of major rivers like the Ganga and Yamuna, which sustain North India by providing drinking water and supporting agriculture. However, climate change, erratic weather patterns, and natural disasters have led to the depletion of water sources, creating challenges for people in mountainous regions. To address this, the Uttarakhand Government established the Spring and River Rejuvenation Authority (SARA) to protect and revive various water bodies, including small and large rivers, reservoirs, and rain-fed streams. SARA focuses on scientific identification of rainwater storage, sustainable management of water sources, and local community participation for conservation. The initiative employs modern GIS technology, GPS, and drones for terrestrial assessment, monitoring flow rates, and water quality. Geo-hydrological studies and mapping help identify recharge areas, forming the basis for long-term conservation plans. To ensure effective implementation at the grassroots level, Stream Naula Conservation Committees are being established in villages to identify and rejuvenate water sources with community involvement. Water being essential for human life, the Uttarakhand government's efforts in natural resource conservation through SARA will play a crucial role in addressing water scarcity, ensuring sustainable irrigation, and securing the future of both drinking water and agricultural needs in the state.	
27	**West Bengal**	Manas Ranjan Bhunia	Minister for Irrigation and Waterways	Three Major Basin Areas on the North Side Brahmaputra the major part is Ganga and South West Side is swarnarekha. Major Flowing from north to south if you look into the Agro Climatic Zones The State Can Be Divided into six zones starting from north hill zones than terai Teesta Elwill Zone. Old Elvil Zone, Gazette, laterite zone, coastal saline zone.agroclimatic conditions help in planning of all the major and minor irrigation Schemes The Crop Diversification Water Management the Value Added Services. The irrigation system in the state is divided into major and minor is looked after by the Irrigation Water Ways Department and the the minor is looked after by water Resources Investigation Development Department. Use of Remote Sensing Data. 77% cultivable by irrigation 60% surface water. difficulties is the lack of Maintenance Lack of Accountability Performance Monitoring Absence of Stakeholders Participation. Registered under the Society Act 8000 schemes have been Implemented through the Water Use Association. 3500 WUAs. 1.5 Lakh farmers participation. Women participation. support services. eduction in Single Crop area increased in double crop area and increase in triple crop area the Cropping intensity has gone up from 190 to 204%. on pilot bais- private participation in Damodar Valley Corporation. divided into 11 components All components have been given to the irrigation Service providers. KPI And KMI Have Been Very Clearly Identified. Kharif increase from 1.78 lakh to 3.52 hectare in case of Ravi the increase is 57 per in case of burrow it is Around 32%. knowledge gap. Digital Dashboard. Remote sensing	Discussed significantly on WUA
		Pulak Roy	Minister of Public Health Engineering	Jal Dharo Jal Bharo, matir srishti project to make unused land fertile. Problems- recycling of water lost in distribution, grey water management. Legislation on different water governance, enforcement and implementations. Recovery of natural and traditional bodies for water storage.	Streamlining water-related legislation.