



National River Conservation Directorate

Ministry of Jal Shakti

Department of Water Resources, River Development and Ganga Rejuvenation

Government of India



VISION

Cauvery

April 2024



Centre for Cauvery River Basin Management and Studies

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National River Conservation Directorate (NRCD)

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

www.nrcd.nic.in

Centres for Cauvery River Basin Management and Studies (cCauvery)

The Centre for Cauvery River Basin Management and Studies (cCauvery) is a Brain Trust dedicated to River Science and River Basin Management. Established in 2024 by IISc Bengaluru and NIT Tiruchirappalli, under the supervision of cGanga at IIT Kanpur, the centre serves as a knowledge wing of the National River Conservation Directorate (NRCD). cCauvery is committed to restoring and conserving the Cauvery River and its resources through the collation of information and knowledge, research and development, planning, monitoring, education, advocacy, and stakeholder engagement.

www.ccauvery.org

Centres for Ganga River Basin Management and Studies (cGanga)

cGanga is a think tank formed under the aegis of NMCG, and one of its stated objectives is to make India a world leader in river and water science. The Centre is headquartered at IIT Kanpur and has representation from most leading science and technological institutes of the country. cGanga's mandate is to serve as think-tank in implementation and dynamic evolution of Ganga River Basin Management Plan (GRBMP) prepared by the Consortium of 7 IITs. In addition to this, it is also responsible for introducing new technologies, innovations, and solutions into India.

www.cganga.org

Acknowledgment

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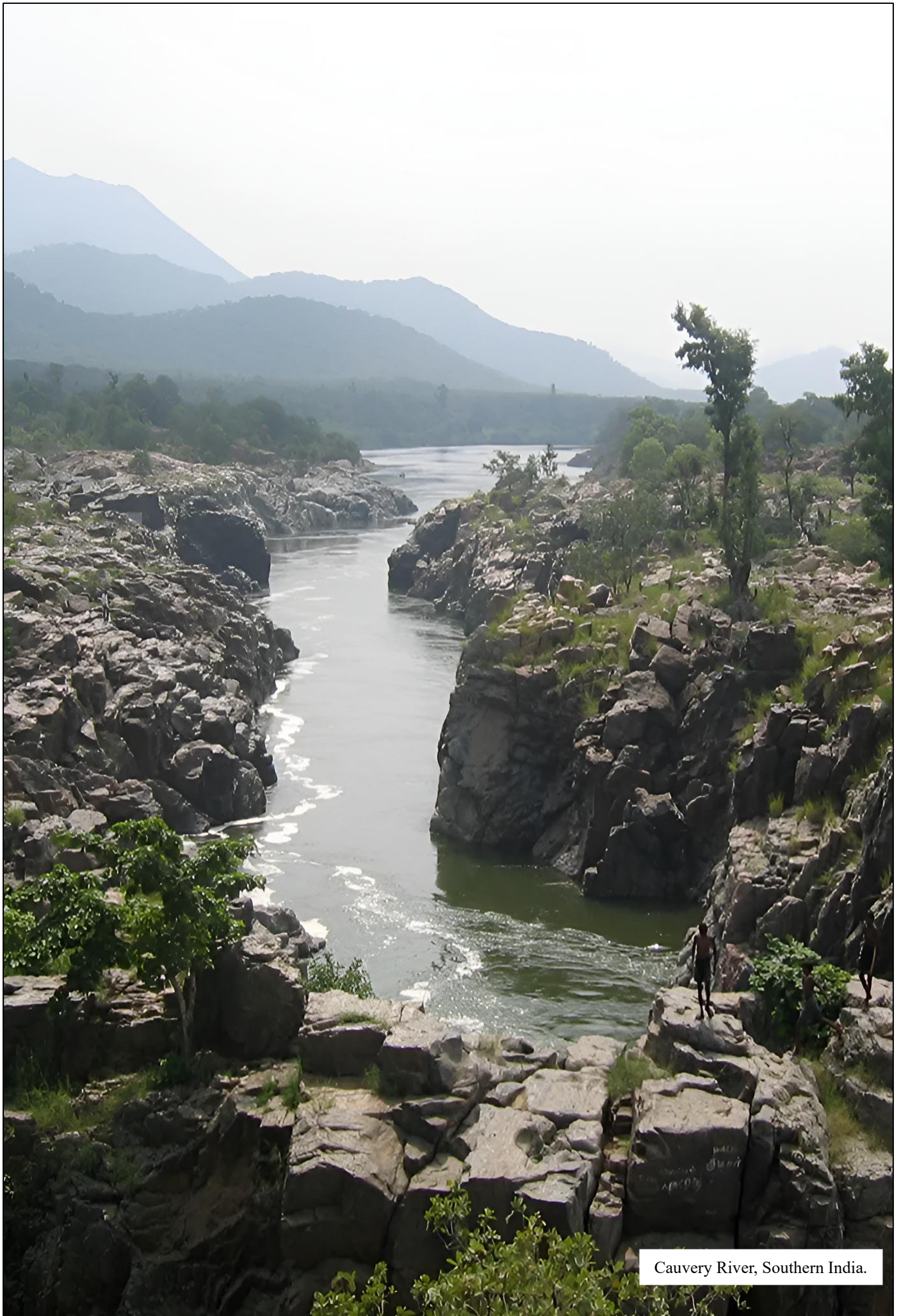
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Cauvery River, Southern India.

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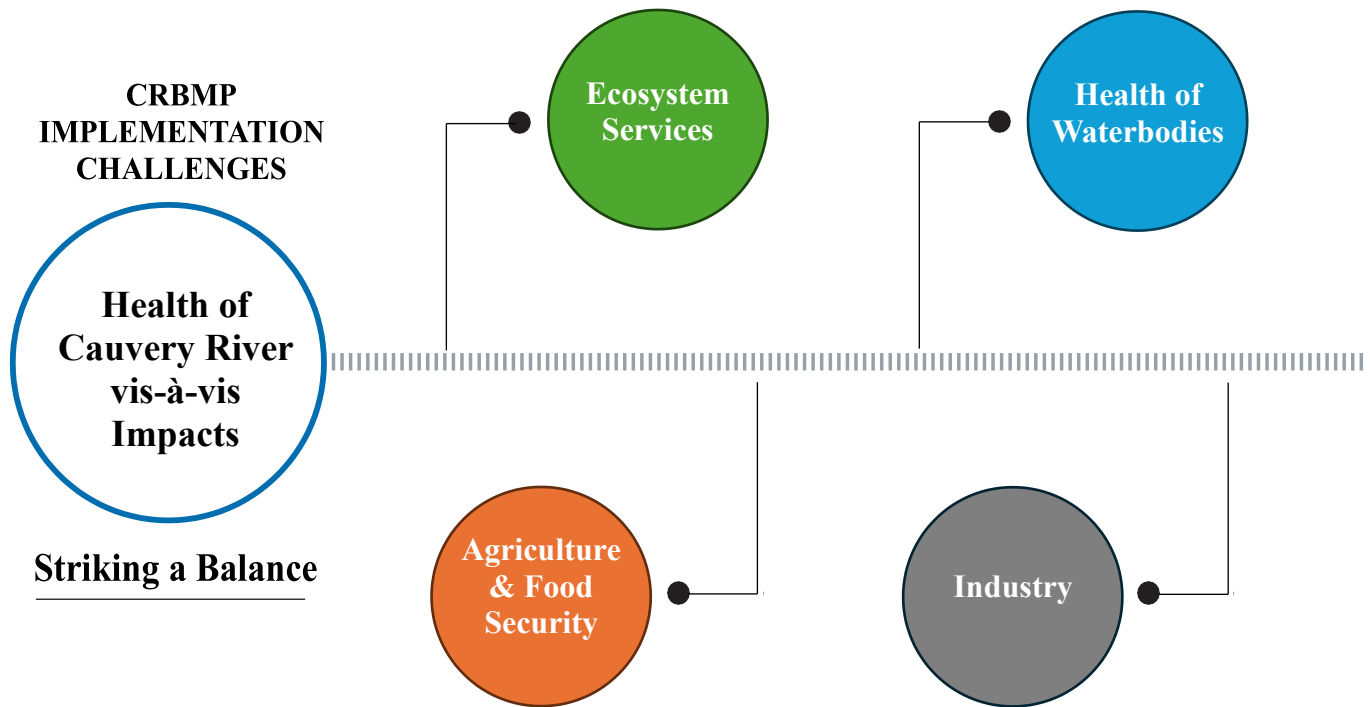
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River Cauvery in Indian Consciousness

The Cauvery River holds a deeply significant place in Indian consciousness, especially in the southern states of Karnataka and Tamil Nadu, where it flows. Revered as a sacred river and often referred to as the "Ganges of the South," the Cauvery is intertwined with mythology, religion, culture, and politics. Its importance transcends mere physical presence, becoming a symbol of sustenance, spirituality, and identity.



Approach to Cauvery River Basin Management & Studies (CRBMS)

पारंपरिक ज्ञान के साथ आधुनिक विज्ञान और प्रौद्योगिकी
जन ज्ञान + ज्ञान धारा

The basic approach of CRBMS is: “Apply modern science and technology in conjunction with traditional wisdom”.

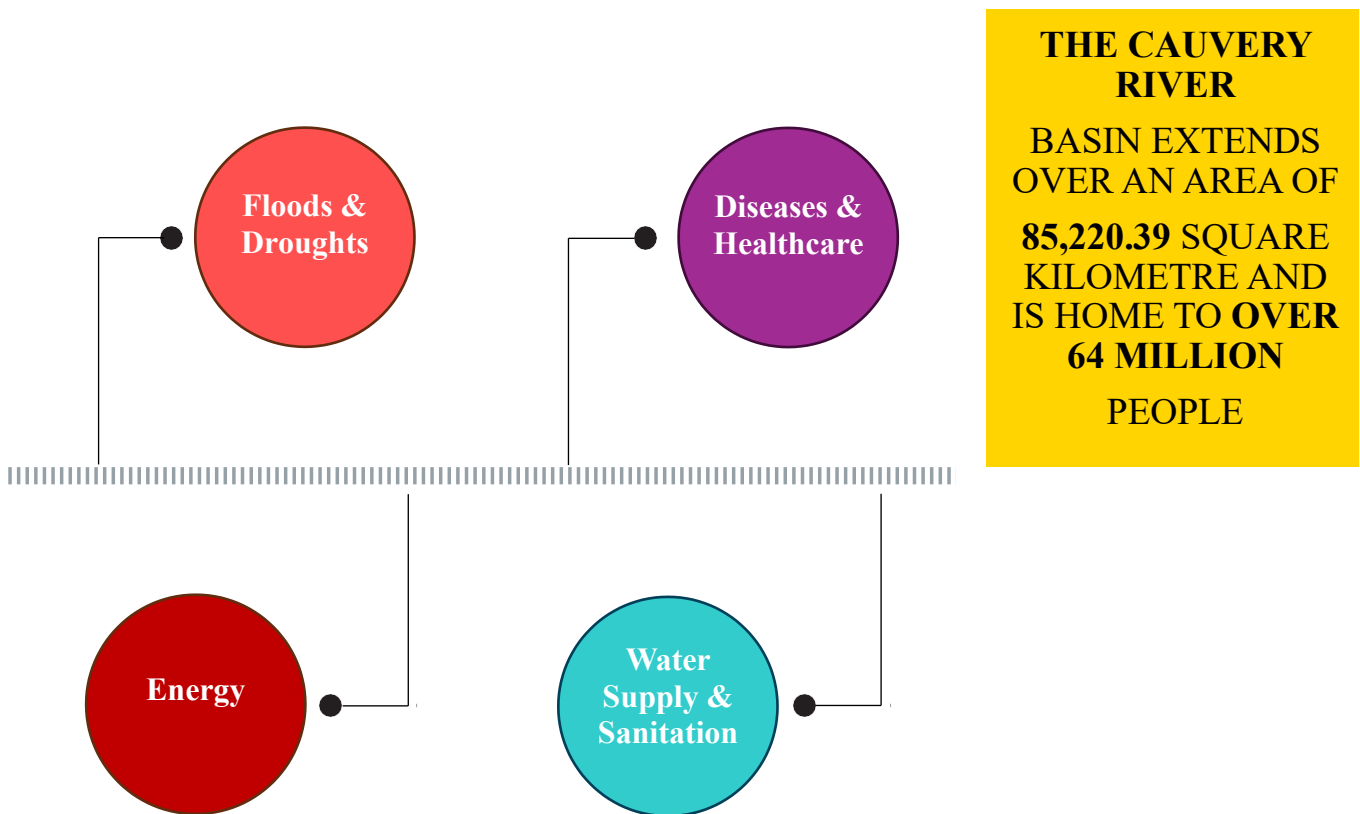
MODERN SCIENCE AND TECHNOLOGY

The Cauvery River basin comprises valuable physical resources (such as soil and water) and biotic resources (plants, animals and micro-organisms) in a dynamic balance achieved over millennia. The river network, the numerous surface water bodies and the groundwater in the basin are closely interconnected by hydrological linkages (such as surface runoff, groundwater flow, river flooding, and local evapotranspiration-precipitation cycles) as well as ecological connections (from complex food webs to activities of biological agents). Thus, functionally,

the basin is a closely interactive natural resource system in which the hydrological-ecological linkages provide for extensive material and energy transfer along with intricate biophysical communication between the river and her basin. Hence, interactive resource dynamics governs the health of both the basin and the river system. But numerous and ever-changing human activities have rendered a new dimension to the basin dynamics. Thus, scientific evaluation of the status of the Cauvery River network, its causal connection to natural and anthropogenic activities in river system and the basin, and the planning of appropriate technological interventions to reverse or arrest the river’s degradation lie at the core of Cauvery River basin management & studies (CRBMS).

TRADITIONAL WISDOM

River Cauvery’s water quality is abysmal at present, posing a grave threat to health and life. But tradition has it that the properties of the river waters in earlier times were remarkable for their life-giving properties. And there were strictures on how the river should be treated by humans. Such strictures got diluted over time. But their environmental significance should be obvious to the modern mind. And they convey a sense of deep respect for river Cauvery. Thus, their essential wisdom, plus the common man’s faith in the river’s eternal qualities form the basis of a convergence of ideas and concerns that permeate the



citations on river Cauvery are presented as follows:

EXAMPLE 1

Cauvery River's water quality in ancient literature

The holy Cauvery is born from Brahma's Kamandalu (water pot) and is thus equal to the Ganga. Its waters are pure and sacred, capable of washing away sins. She who flows with purity of the soul brings blessings to those who bathe in her waters, offering the gift of liberation (moksha) and freedom from rebirth.

"कावेरी तु ब्रह्मकुण्डात् समुत्पन्ना गङ्गासमत्वात् पवित्रता
सदा प्रपन्नानाम् पापविनाशिनी मुक्तिदात्री च
सर्वपातकशुद्धिकरी।"

who depend on it. The following ancient edict from the Skanda Purana provides prohibitions on certain human behaviours, ensuring both the protection of the Cauvery River and the safety of those who seek her blessings. This edict includes the restriction of thirteen types of actions: (1) Defecation, (2) Spitting or gargling, (3) Throwing used offerings or waste, (4) Rubbing off filth or dirt, (5) Disposing of dead bodies (human or animal), (6) Engaging in frivolous play or frolicking, (7) Accepting improper donations near the river, (8) Speaking or acting obscenely, (9) Prioritizing other sacred places over the Cauvery, (10) Praising other rivers or sacred spots as superior, (11) Discarding unwanted garments into the river, (12) Bathing recklessly, causing pollution, (13) Causing unnecessary noise, disturbing the sanctity.

EXAMPLE 2

Simple instructions to people for conserving the river

Each river, including the sacred Cauvery, has complex eco-hydro-morphological dynamics, which often go beyond the understanding of the masses. However, when actions are tied to faith and reverence, it leads to the preservation of the river and the well-being of all

Challenges and Opportunities

Despite being nationally revered, river Cauvery has been deteriorating over a long time. It may have started noticeably due to large scale water abstractions by canals that began in the mid-nineteenth century. But, with harmful and increasingly diverse anthropogenic activities in her basin, the degradation gradually became multifaceted. And such harmful activities have accelerated in recent decades, while limited attempts to keep the river healthy through conventional pollution control methods have proved ineffective. The direct impact of the river's degradation on humans have been the significant losses of her "ecosystem services" namely, provisioning services (e.g. food, fresh-water, fibres), regulating services (e.g. flood attenuation, groundwater recharge, prevention of saltwater intrusion), supporting services (e.g. nutrient recycling, soil formation, biodiversity maintenance), and cultural services (e.g. recreation, spiritual fulfilment). The proliferation and diversification of harmful human activities led to rapid degradation of national river Cauvery and her basin since the twentieth century. The reasons for the degradation can be broadly classified in five main groups, viz.: (i) over-use of natural resources of the basin; (ii) discharge of pollutants; (iii) reduction in water-holding capacities and replenishment of water bodies; (iv) mutilation of rivers by piecemeal engineering operations; and (v) threats to geological processes in the basin. The major human activities causing the above damages may also be clubbed under five main heads as shown in adjacent figure, viz.: (i) industrialisation, (ii) urbanisation, (iii) lifestyle changes, (iv) agriculture & other rural activities, and (v) deforestation/ denudation. This broad grouping, however, indicates only the key factors underlying basin degradation. Devising appropriate remedial interventions to counterbalance them requires in-depth analysis of the problems that provide the thrust of CRBMS investigation.

**THE PROLIFERATION
AND DIVERSIFICATION OF
HARMFUL
HUMAN ACTIVITIES
HAS LED TO RAPID
DEGRADATION
OF RIVER CAUVERY
AND HER BASIN SINCE THE
TWENTIETH CENTURY**

Cauvery

The River to Heaven and for Livelihood

The Cauvery River, often referred to as the "Ganga of the South," is not just a waterway but a lifeline for millions across South India. Its sacred status, deep cultural significance, and vital role in sustaining livelihoods make it central to both spiritual and practical existence in the region. Flowing through the states of Karnataka and Tamil Nadu, the river covers over 800 km and irrigates vast agricultural lands, supporting crops like rice, sugarcane, and coffee.

Spiritual Significance

The Cauvery is revered in Hindu mythology and is considered one of the seven sacred rivers of India. Pilgrimages, festivals, and rituals along its banks are common, with places like Talakaveri (its origin) and Srirangam holding immense religious importance. These spiritual aspects of the river have made it a symbol of purity and a bridge to heaven, revered for its capacity to cleanse sins and provide divine blessings.

Lifeline for Livelihoods

Economically, the Cauvery River is the backbone of agriculture in South India. It irrigates more than 3 million hectares of land, supporting the livelihoods of countless farmers. The river's water also serves domestic, industrial, and hydropower generation needs, making it integral to regional development.

However, disputes over water allocation between states have also highlighted the river's critical role in ensuring equitable resource distribution. Sustainable management of the Cauvery is essential to balance its spiritual reverence with the pressing needs of a growing population and environmental challenges like water scarcity.

In a broader sense, the Cauvery is both a river of the heavens, inspiring devotion and spirituality, and a river for livelihood, sustaining communities and fostering economic growth. Its preservation is crucial for future generations, ensuring that it remains a source of sustenance and sacred connection for all.

Vision for River Cauvery

In order to preserve and invigorate national river Cauvery, her essential character first needs to be grasped in a holistic manner. After extensive reviews of literature, research, in-house discussions and consultations with stakeholders, the “wholesomeness of river Cauvery”, viewed from a dynamic perspective, was determined in CRBMS to be the sanctity of the river system imbibed in the following four points:

I. “Aviral Dhara” (Uninterrupted Flow)

The flow of water, sediments and other natural constituents of river Cauvery are continuous and adequate over the entire length of the river throughout the year. Hence in-stream barriers, water diversions and barriers to surface runoff must be regulated.

II. “Nirmal Dhara” (Unpolluted Flow)

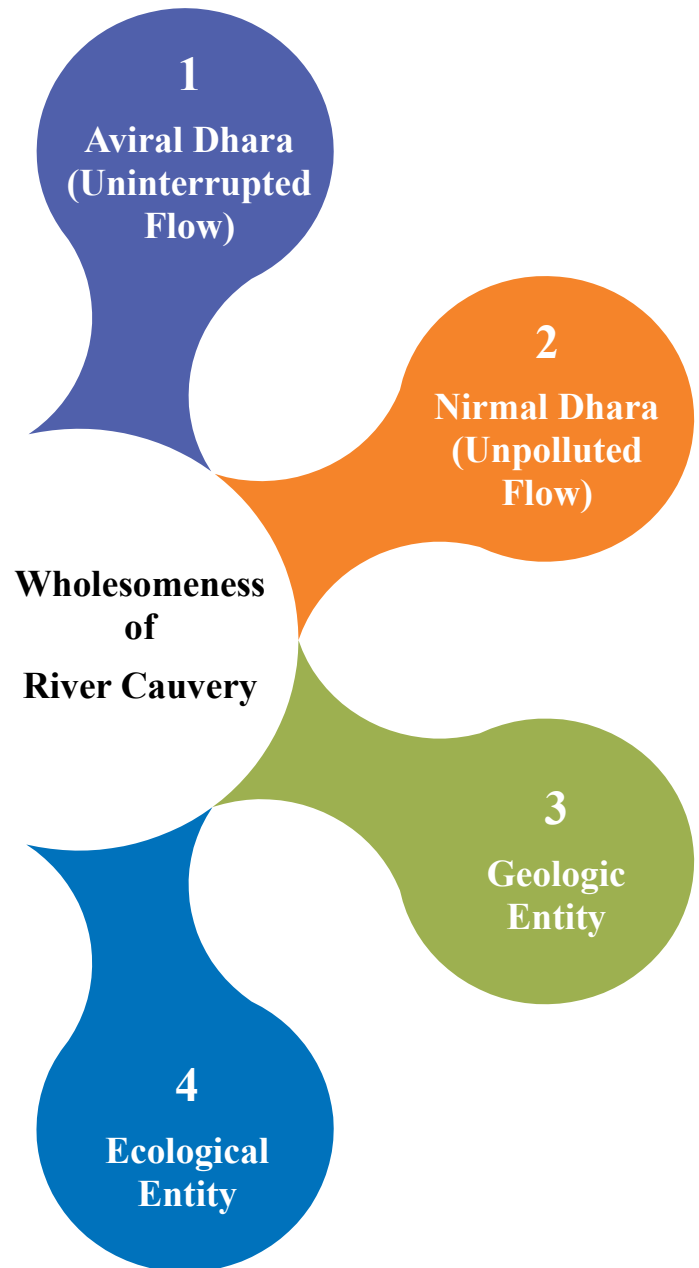
The flow in the Cauvery River network is bereft of manmade pollution. Hence the river waters in present times should also not be sullied by polluting human activities.

III. Geologic Entity

The Cauvery River system is the earth’s creations of ancient times, which may not be repairable if damaged. The geological integrity of the entire basin must therefore be protected.

IV. Ecological Entity

The Cauvery River system is a delicately structured balance between various living species and the physical environment, achieved by nature over thousands of years and vulnerable to irreversible changes. Overexploitation and unhealthy interferences with the biophysical resources of the river system must therefore be abandoned outright.



THE RIVER IS MORE THAN 800 KM LONG, BINDS THREE STATES TOGETHER ALONG ITS MAIN STEM AND ELEVEN IN HER ENTIRE BASIN.

Objectives of Cauvery River Basin Management & Studies

**THE PLAN IS
PREPARED WITH THE
OBJECTIVE OF
RESTORING THE
WHOLESOMENESS OF
THE RIVER
CAUVERY.**

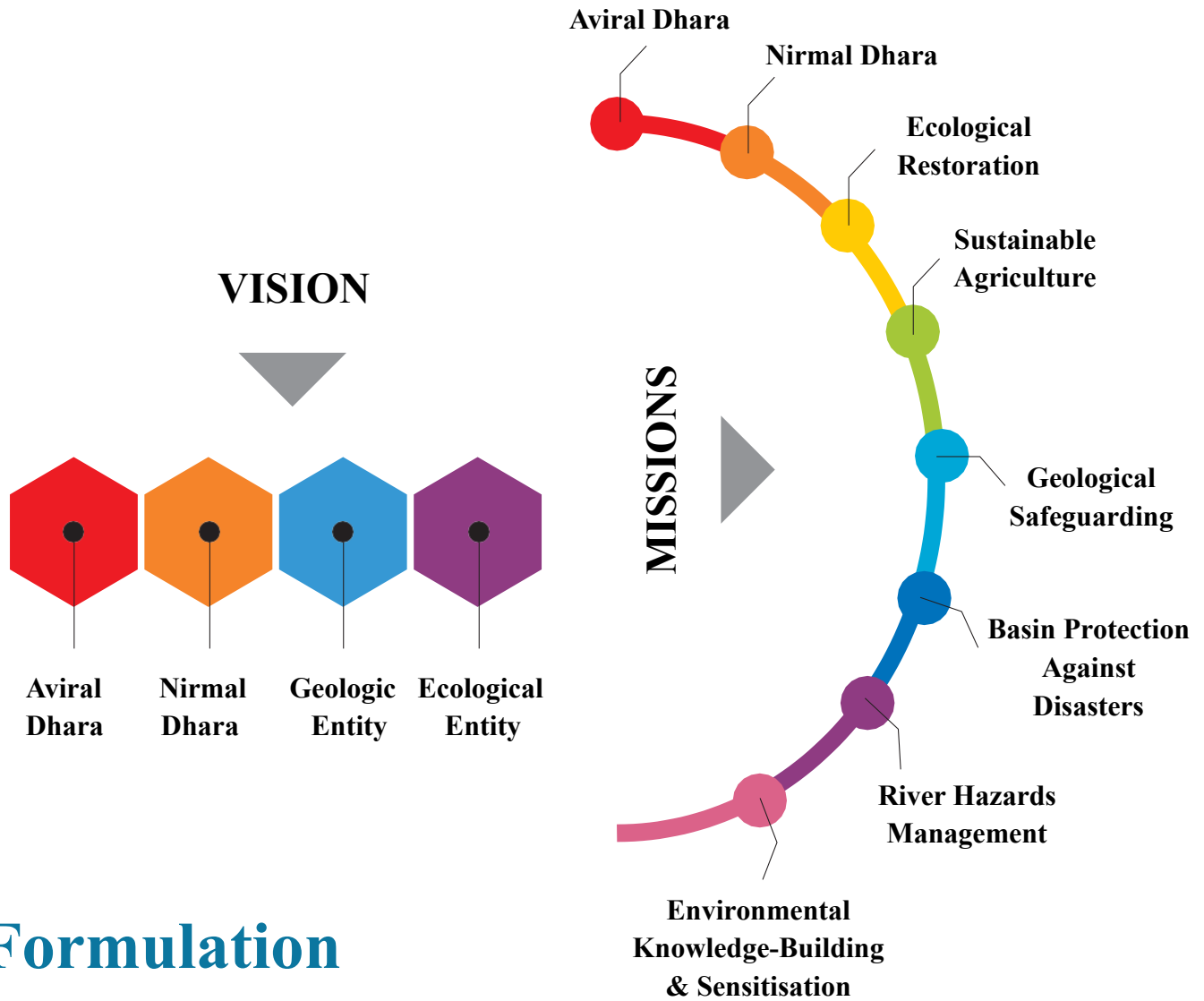
Based on the vision and societal needs, the main objectives of Cauvery River management have been identified as the following:

A. Environmental flows shall be maintained in all rivers and tributaries of Cauvery River system to fulfil their geological, ecological, socio-economic and cultural functions.

B. Water quality in all rivers and tributaries of Cauvery River system shall be consistent with their governing geological, ecological, socio-economic and cultural functions.

C. Water and other aquatic resources of the Cauvery River system shall be used judiciously to enable sustainable development in the entire basin.

D. All existing, ongoing and planned anthropogenic activities in the basin shall be reviewed or scrutinised in a transparent, inclusive manner (with consensus of all affected people and stakeholders) for the overall health of the basin.



Formulation of Missions

Given the escalating impacts of human activities on the Cauvery River basin, the vision and objectives have guided the formulation of eight important areas where the focussed corrective actions need to be carried out in mission mode, viz.: “AVIRAL DHARA”, “NIRMAL DHARA”, “ECOLOGICAL RESTORATION”, “SUSTAINABLE AGRICULTURE”, “GEOLOGICAL SAFEGUARDING”, “BASIN PROTECTION AGAINST DISASTERS”, “RIVER HAZARDS MANAGEMENT” and “ENVIRONMENTAL KNOWLEDGE-BUILDING AND SENSITISATION”. The vision of a wholesome river Cauvery and the missions needed to be taken up to achieve this vision are depicted in figure

**CAUVERY RIVER
HAS CULTURAL AND
SPIRITUAL
SIGNIFICANCE
THAT FAR TRANSCENDS THE
BOUNDARIES
OF HER BASIN**

Strategic Steps and Actions

Strategic Steps and Actions for revival and long-term security of River Cauvery are grouped under the different Missions.

MISSION 1

Aviral Dhara

- i. Accurate determination of CRBMS hydrological status.
- ii. Water resources planning with emphasis on wetlands, forests and distributed groundwater and surface water storages.
- iii. Increase in water use efficiency through: (a) realistic pricing of fresh water; (b) incentives, technical assistance, and allocation of water rights and entitlements to consumers; and (c) reuse and recycling of water.
- iv. Policy shift with emphasis on water resource preservation, stakeholder control, expert guidance and regulation.
- v. Ensuring longitudinal river connectivity and e-flows at dams, barrages, etc., and new criteria for approving such projects.
- vi. regulating water withdrawals in water depleting regions.
- vii. assessment and monitoring of sediment resources of the network including their quantity, quality and nutrient value.

MISSION 2

Nirmal Dhara

- i. Management of solid and liquid wastes generated from domestic/ commercial sources.
- ii. Riverfront development, floodplain management and rejuvenation of water bodies.
- iii. Management of industry-generated solid and liquid wastes. iv. management of polluted agricultural run-off.

MISSION 3

Ecological Restoration

- i. Restoration of longitudinal connectivity along with e-flows at dams, barrages and other obstructions.
- ii. Maintenance of lateral connectivity across floodplains.
- iii. Restoration of unpolluted rivers.
- iv. Regulation of riverbed farming and sandmining from riverbeds.
- v. Regulation of plying of noisy ships, dredging, and river modifications.
- vi. Control of alien species invasions, overfishing and fishing during spawning seasons.
- vii. River nutrient assessment and release of sediments trapped behind dams/barrages into downstream river reaches.
- viii. Long-term biomonitoring of the Cauvery River network.
- ix. Synergising actions with the dolphin conservation action plan-2010.
- x. Comprehensive research on ecological dynamics of the river system.

MISSION 4

Sustainable Agriculture

- i. Adoption of conservation agriculture (no tillage, crop diversification, and mulching), especially in degrading lands, to enhance soil fertility and agricultural output with resource conservation.
- ii. Promotion of organic farming where needed or economically feasible.
- iii. Beneficial water and nutrient application techniques in rice cultivation, such as SRI (System of Rice Intensification) and urea deep placement.
- iv. Promoting other established resource conservation technologies.
- v. promoting regional (landscape-scale) resource conservation steps to counter monotonous agro-ecosystem impacts.
- vi. Experimentation, adaptability and flexibility in agriculture to synthesise traditional knowledge with ongoing and future scientific discoveries.
- vii. Suitable policy measures and strengthening of institutional framework.

Note on Mission Nirmal Dhara: Project planning for urban works should begin with preparation of detailed Urban River Management Plans (URMP) for Class I towns, and subsequently also for Class II and Class III towns. The URMPs should be followed by preparation of DPRs, following which funds should be allocated for project implementation. Fund allocation should be prioritised for projects designed to prevent direct discharge of large quantities of liquid waste into the River System (Priority Level I), followed by projects designed to prevent direct discharge of large quantities of solid waste into the River System (Priority Level II), followed by projects concerning river-frame development and restoration of floodplain in urban areas along the Cauvery River System (Priority Level III). Other projects under Mission Nirmal Dhara may be executed at still lower priority depending on availability of funds.

MISSION 5

Geological Safeguarding

- i. Control/regulation of geologically hazardous activities including deep groundwater withdrawals, underground excavations, explosions, tunnelling, mining, hydraulic rock fracturing, and operation of large reservoirs.
- ii. Restrictions on geomorphologically harmful land-use practices such as deforestation and construction activities on hill slopes and floodplains, excessive tillage, riverbed mining, and riverbank modifications.
- iii. Improved drainage of low-lying areas and disturbed areas stabilisation.
- iv. Mapping river migration zones and geological monitoring of basin.

MISSION 6

Basin Protection Against Disasters

- i. Routine hydrometeorological and biological events should not be countered.
- ii. Ecosystems should be strengthened against catastrophic disasters by preserving wetlands, promoting mixed vegetation and indigenous forests, and curbing human land use disturbances and encroachments.
- iii. Floodplain regulations and vegetative measures to combat extreme river floods are preferable to embankments/ levees.
- iv. The ecology of forest fires and epidemics & biological invasions need to be studied extensively. until then, active interventions to counter such events should be limited.
- v. Deforestation, road and building constructions, and unsafe debris disposal need to be strictly checked in the upper Cauvery basin and other hilly regions to minimise landslides and landslips.
- vi. Early rejuvenation of disaster-struck ecosystems should be aided by re-introducing indigenous species resistant to the specific disaster types and re-creating an enabling

MISSION 7

River Hazards Management

- i. Basin scale flood-risk maps should be prepared and linked to an online data base and flood warning system.
- ii. Drainage improvement and land reclamation in low-lying areas should be taken up systematically and urgently.
- iii. Assessment of soil salinity and its mitigation strategy to be taken up with use of salinity resistant crops and soil improvement practices.
- iv. Alternatives to embankments for flood management with emphasis on 'living with the floods' concept must be emphasised; this may include floodplain zoning and other non-structural approaches.
- v. Research needed on sediment dynamics and its application in river management projects for sustainable river management strategies.
- vi. Some pilot projects may be undertaken in partnership with state governments.

MISSION 8

Environmental Knowledge Building and Sensitisation

- i. Establishment of a comprehensive data bank by continuous collection, processing and storage of information on the basin's natural resources, anthropogenic activities, and environmental monitoring of basin.
- ii. Preparation of secondary results (representative parameters, charts, tables, etc.) based on primary data.
- iii. Preparation of documents and materials for easy understanding by non-specialised people.
- iv. Peeping the above information in open domain for easy access by interested individuals and institutions.
- v. Conducting educational workshops and campaigns with stakeholders and interested citizens to enable their sensitisation and comprehensive understanding of basin processes.
- vi. Conducting ground level monitoring and field research of the Cauvery River basin's environment with stakeholder

IMPLEMENTATION MECHANISM

The implementation, monitoring, review and evaluation of the Cauvery basin's problems and interventions on a long-term basis are difficult through multiple central and state organisations unless they are coordinated and overseen by an independent agency. Hence an independent institution is recommended to be set up for this purpose. Moreover, since rivers are prima facie inter-state subjects as per the Constitution, the said institution would need adequate resources and authority (under relevant provisions of the Constitution) to oversee the activities of multiple sectoral organisations and informal sectors of society insofar as they affect River Cauvery. CRBMS, therefore, includes the functional requirements of such an institution that needs to be established by an act of Parliament, to enable an enduring mechanism for maintaining a wholesome River Cauvery and sustainable growth in her basin.

Strategic Initiatives

The present-day River Cauvery provides a plethora of learning opportunities as much as challenges. The river offers an unparalleled opportunity to synergise developmental aspirations and cultural diversity with deep learning and visionary entrepreneurship.

MOVING TOWARDS

AN EVIDENCE BASED POLICY MAKING

1

This requires significant improvement in our understanding of the surface and sub-surface hydrological systems. By mining past data sets and through expanding current data collection footprint we can massively increase the knowledge of the system. By then providing intelligent interfaces to critical stakeholders, policy making can truly evolve from reactive to proactive having the ability to scenario plan various eventualities.

2

A seamless single window mechanism that will allow the technology companies from around the world to participate in the river clean-up programme through a process that will take their companies from technology verification to pilot projects and to commercial scale-up.

ACCELERATING TECHNOLOGY TRANSFER

3

Cauvery basin provides phenomenal entrepreneurship opportunity to the most creative technical, scientific and business minds. Whether it is establishing an advanced sensor network with big data analytics, rejuvenating a small rivulet/ drain (nallah), or rolling out drinking water systems to communities, the Cauvery basin has a plethora of challenges for entrepreneurs to solve. A dedicated platform for entrepreneurs that includes technology innovation fund and other special incentives will provide a launchpad to those with a passion to address the big environmental challenges.

PROVIDING A PLATFORM FOR WATER ENTREPRENEURSHIP

8 Strategic high economic impact initiatives planned to achieve the complete potential of the Cauvery River basin

4

DEVELOPING MARKET BASED MECHANISMS

Whilst the Government is putting tremendous capital behind the river clean up and rejuvenation, it is equally important to develop market-based mechanisms that bring about a paradigm shift in how different riparian consume water. The first and foremost intervention is to establish the true cost of water so that all users can appreciate its value. This coupled with other mechanisms such as water rights, water trading will bring about equality and parity in water sharing and availability.

MAKING INDIA A GLOBAL HUB FOR EXPORT OF WATER INNOVATION

Through a sustained and intensive activity in the Cauvery River basin, India stands to become one of the major export hubs of knowledge around water and river basin management. The knowledge will not just be restricted to technical advancement but involve governance and community engagement aspects.

5

GLOBAL WATER STEWARDSHIP

India's global aspiration to be a champion of water security cannot be attained without a comprehensive outreach programme. Through the support of Indian diplomatic missions the establishment of international chapters shall help India attracting the best technical and scientific brains as well as in reaching out to solve water crises in many parts of the world through strategic partnerships.

6

7

The magnitude of the capital-spend needed to restore the River Cauvery to its pristine glory is exceptionally large. Without additional other sources of finance, it would be difficult for any Government to create a budgetary allocation to provide

INNOVATIVE FINANCING MODELS

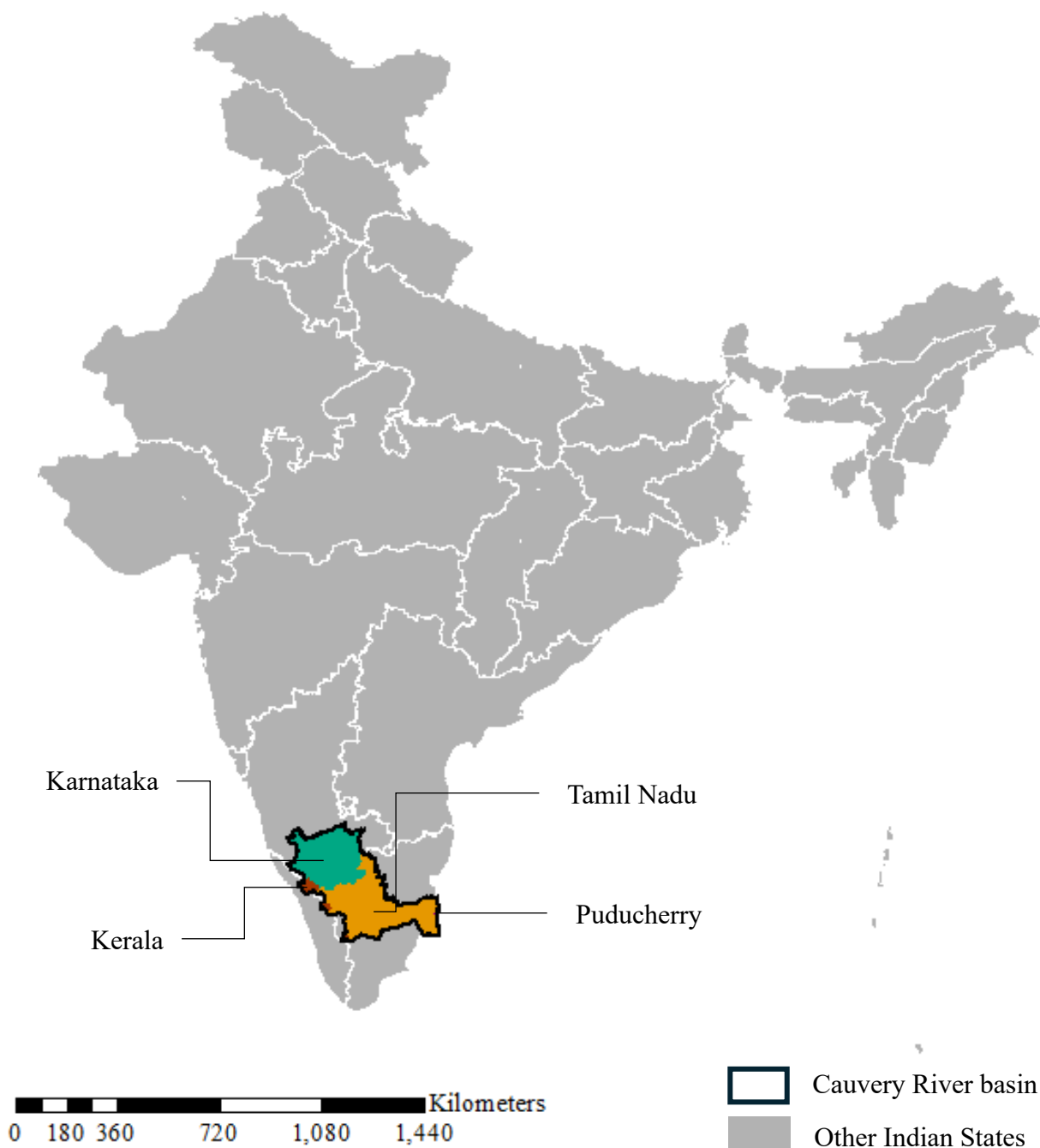
Innovative financial models are needed to attract additional sources of capital from both domestic and international sources. These include but are not limited to technology transfer funds, low cost, long-term and nonrecourse financing, development risk capital and take-out financing in form of Yield-Co or through bond markets (Rupee denominated – Cauvery/Blue bonds).

8

The communities lie at the very heart of the rejuvenation exercise. It is the anthropogenic activity set that led to the degradation of the river and it will require the collective will of all people to bring transformation in the state of the river. A range of community engagement initiatives including digital interfacing, practical education and most importantly empowerment through provision of custodianship will bring about the much-needed change.

ENGAGING COMMUNITIE

State Cauvery Missions





KARNATAKA

As the source of the Cauvery River, Karnataka is a crucial state for ensuring the integrity and sustainability of this lifeline for South India. The river, originating from the Brahmagiri hills in the Kodagu district, is not only revered as sacred but also serves as a vital natural resource that supports agriculture, drinking water, and hydroelectric projects. The picturesque setting of the Western Ghats adds to the state's appeal, drawing tourists for its scenic beauty and spiritual significance. Preserving the Cauvery's near-pristine flow in its origin region is critical for Karnataka, especially as the state balances the demands of urbanization, deforestation, and development. While industrialization and lifestyle shifts have been moderate, the pressure from agricultural needs, hydroelectric projects, and increased tourism are growing concerns. These factors have started to impact the Cauvery system, and the need for sustainable management and conservation efforts is more pressing than ever.

KEY MEASURES REQUIRED AT THE STATE

1

Ensuring longitudinal connectivity with provision for E-Flows along with development of sustainable hydro power.

2

Preparation of comprehensive URMPs for Class I, Class II and Class III towns of the state, and establishing comprehensive sewage and solid waste handling/ treatment facilities at all urban and tourist centres.

3

Ensuring proper transport, food and fuel facilities to handle peak tourist loads without stressing the region's ecosystems.

4

Afforestation and slope stabilisation along with regulation of road and building constructions in disturbed areas.

5

Regulation of sand and gravel mining from riverbeds.

6

Widespread dissemination of knowledge, ground-level monitoring, and increased sensitisation and participation of stakeholders.



TAMIL NADU

Tamil Nadu holds immense significance as a major beneficiary of the Cauvery River, which serves as a lifeline for the state's agriculture, drinking water, and energy needs. Flowing through the fertile plains of Tamil Nadu, the Cauvery supports extensive irrigation networks, especially in the delta region, which is often referred to as the "Granary of South India." The river is central to the state's agricultural economy, sustaining crops like rice, sugarcane, and cotton, making it vital for rural livelihoods. Beyond agriculture, the Cauvery holds deep cultural and spiritual value in Tamil Nadu, with numerous temples along its banks, particularly in cities like Thanjavur and Srirangam, where it is revered in religious practices. The state's dependence on the Cauvery has led to long-standing water-sharing disputes with Karnataka, making its management crucial for maintaining interstate relations and ensuring sustainable development. The Cauvery is not just a river in Tamil Nadu; it is a symbol of life, heritage, and identity for millions.

KEY MEASURES REQUIRED AT THE STATE

1

Preparation and implementation of comprehensive URMPs for all Class I, Class II and Class III towns of the state, and establishing comprehensive sewage and solid waste handling/treatment facilities at all urban centres.

2

Ensuring longitudinal connectivity with provision for E-Flows at dams, barrages and other structures.

3

Developing Canals and Urban Natural Drains for multipurpose applications such as recreation and surface transport, groundwater recharge, hydropower, irrigation, etc.

4

Promotion of sustainable agriculture with resource conservation measures.

5

Regulation of riverbed farming and sandmining from riverbeds.

6

Water resources planning with emphasis on wetlands, forests and distributed groundwater and surface water storages.

7

Increase in water use efficiency through: (i) realistic pricing of fresh water; (ii) incentives, technical assistance, and allocation of water rights and entitlements to consumers; and (iii) reuse and recycling of water.

8

Widespread dissemination of knowledge, ground-level monitoring, and increased sensitisation and participation of stakeholders.

KERALA

Though Kerala is not a major beneficiary of the Cauvery River compared to Karnataka and Tamil Nadu, it holds significance for the river's ecosystem due to its geographical proximity and shared watersheds in the Western Ghats. The eastern regions of Kerala, particularly the Wayanad district, form part of the river's catchment area through smaller tributaries that feed into the Cauvery. This contributes to the overall health and flow of the river system. Kerala's rich biodiversity and forest cover in the Western Ghats play a vital role in maintaining the ecological balance of the region, supporting the rainfall and water cycles that nourish the Cauvery. While Kerala's direct use of the river is limited, its responsibility in preserving the upstream environment is crucial for the sustainable management of the Cauvery, benefiting the downstream states of Karnataka and Tamil Nadu. Therefore, Kerala plays a supportive but essential role in the broader Cauvery basin ecosystem, contributing to its health and sustainability.

KEY MEASURES REQUIRED AT THE STATE

1

Preparation and implementation of comprehensive URMPs for all Class I, Class II and Class III towns of the state, and establishing comprehensive sewage and solid waste handling/ treatment facilities at all urban centres.

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5

Promotion of sustainable agriculture with resource conservation measures.

6

Widespread dissemination of knowledge, ground-level monitoring, and increased sensitisation and participation of stakeholders.



PUDUCHERRY

Puducherry, though a small Union Territory, holds significant importance as the final destination of the Cauvery River before it empties into the Bay of Bengal. The river flows through the Karaikal district of Puducherry, which is highly dependent on the Cauvery for its agricultural needs, particularly for paddy cultivation. The river's waters are essential for sustaining local agriculture, which forms a core part of Karaikal's economy and food security. Additionally, the Cauvery has cultural and historical importance in the region, with local festivals and rituals centered around its waters. The river also shapes the landscape and ecology of Puducherry's coastal areas. However, due to its location downstream, Puducherry faces challenges related to water shortages, especially during disputes over water-sharing between Karnataka and Tamil Nadu, making the equitable distribution of Cauvery waters vital for the region's sustainability.

KEY MEASURES REQUIRED AT THE STATE

1

Preparation and implementation of comprehensive URMPs for all Class I, Class II and Class III towns of the state, and establishing comprehensive sewage and solid waste handling/ treatment facilities at all urban centres.

2

Ensuring longitudinal connectivity with provision for E-Flows at dams, barrages and other structures.

3

Developing Canals and Urban Natural Drains for multipurpose applications such as recreation and surface transport, groundwater recharge, hydropower, irrigation, etc.

4

Flood management through floodplain zoning, drainage improvement, other non-structural measures and scientific sediment management.

5

Promotion of sustainable agriculture with resource conservation measures.

6

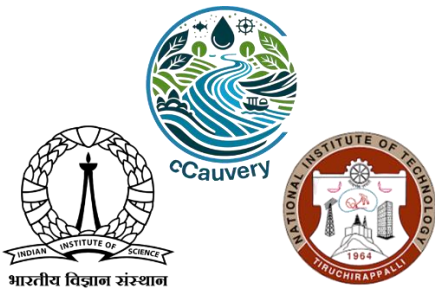
Regulation of deep groundwater extraction to control arsenic contamination spreading across the basin.

7

Control of alien species invasions, overfishing and fishing during spawning seasons.

8

Regulation of river dredging and plying of noisy vessels, especially around Kolkata and near the river mouth.



Centre for Cauvery River Basin Management and Studies

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