

Deccan Herald- 15- December-2021

## For poll gains, a leap into the unknown?

**E**lectoral considerations may have quickened the government's decision on the Ken-Betwa river-linking project, which is the first major venture of the kind in the country. The Union Cabinet gave its approval for the project last week, six months after the Centre and the state governments of UP and Madhya Pradesh signed an MoU to execute it. The project aims to transfer water from the Ken River in Madhya Pradesh to the water-starved and drought-prone Bundelkhand region in UP. It is expected to irrigate over 10 lakh acres of land, generate 103 MW of hydroelectric power and 27 MW of solar power, and bring drinking water to about 6.2 million people. The project is expected to be completed in eight years and cost Rs 44,605 crore. The electoral appeal of the project will not be missed, as the government is inaugurating or announcing the start of a series of mega projects in UP in the run-up to elections in the state.

There is no agreement on the idea of river-linking as such, and planners, engineers, environmentalists, conservationists have all expressed different views on it. Studies of merits and demerits and costs and benefits have varied. In the case of specific projects, specific objections and reservations have been expressed and protests



**2.3 m trees,  
4,000 acres of  
tiger reserve  
will be lost**

have taken place. The Ken-Betwa project has evoked a lot of opposition ever since the project was conceived. A dam is to be built on the Ken River in the Panna reserve forest, and it will submerge over 4,000 acres of the reserve and affect the Ken Ghariyal sanctuary. It is estimated that about 2.3 million trees will perish and a large number of people will be displaced from villages. It is also alleged that many structures which were not part of the MoU were added later without

an impact assessment. It has also been pointed out that there are as yet no forest, environment and wildlife clearances for the project.

Every river is a unique ecosystem made of the water it carries, the life forms that it sustains and the trees and plants and even the human lives that it supports. The nature and quality of water is also different. The transfer of water from one river to another and from one place to another may have unexpected consequences because a river is not just the water it carries. There is a paucity of data about rivers as they have not been properly studied. The impact of the transfer of water across basins is still less understood. The apprehensions over such transfers are especially relevant when there are serious concerns about climate change and because the damage done by such projects is likely to be irreversible.

The Times of India- 15- December-2021

# K'taka dumps 1,746m litres sewage into rivers each day

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**Bengaluru:** Every day, rivers and water bodies in Karnataka collectively take in at least 1,746 million litres of sewage as consecutive state governments have failed to put in place systems to treat it. This is when all the 140 sewage treatment plants work at full capacity, when they don't, a lot more untreated sewage is dumped into the rivers.

Data for urban areas from the Central Pollution Control Board (CPCB) shows that Karnataka, on average, generates 4,458 million litres of sewage every day and has an installed treatment capacity for 2,712 million litres, leaving around 40% of the waste generated to flow into rivers untreated.

This means that at least 6.3-lakh million litres of untreated sewage flows into rivers annually. This is affecting water bodies across the state leaving tens of habitations struggling with highly polluted water. Nationally,

Photo for representation



Data shows Karnataka generates 4,458 million litres of sewage every day

72,368 million litres per day is generated against which a treatment capacity of 31,841 million litre is available.

Magsaysay awardee Rajendra Singh, known as India's Waterman had earlier told **TOI** that there is no "foreseeable solution to the problem", while experts, blaming industries for most of this pollution, argue that successive governments have been short-sighted in letting factories come up close to rivers.

► 17 rivers highly polluted, P 2



The Times of India- 15- December-2021

# K'taka's 17 river stretches are highly polluted, shows study

► Continued from page 1

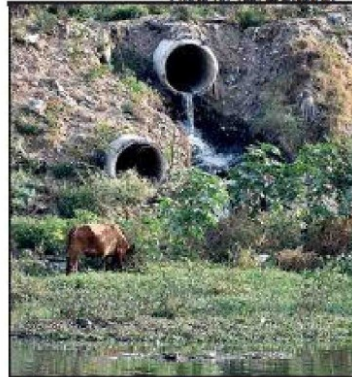
A senior scientist from the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) pointed out that Karnataka was not the only state where river beds are not protected.

"...There are no proper inspections and due diligence before granting of permissions," he said.

In line with observation, the data shows that not even one state/UT in the country has a treatment capacity that matches the generation, while seven of them — Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Lakshadweep, Manipur, Meghalaya and Nagaland — have zero installed capacity.

Separate data from CPCB shows that Karnataka has 17 river stretches — Arkavathi, Lakshmantirtha, Malprbha, Tungabhadra, Bhadra, Cauvery, Kabini, Kagina, Kali, Krishna, Shimsha, AsangiNalla, Bhima, Kumardhara, Netravathi, Tunga, Yagachi — that are highly polluted. Comparatively, in 2017, the state had 15 such stretches.

Photo for representation



Data shows Arkavathi, Lakshmantirtha, Tungabhadra, Malprbha, Bhadra, Cauvery, Kabini, Kagina, Kali, Krishna, Shimsha, AsangiNalla, Bhima, Kumardhara, Netravathi, Tunga, Yagachi river stretches in the state are severely polluted

## WHO DUMPS HOW MUCH SEWAGE

State	Total sewage	Treatment capacity	Untreated sewage dumped in rivers
Kerala	4,256	120	4,136
Andhra	2,882	833	2,049
Tamil Nadu	6,421	1,492	4,929
Karnataka	4,458	2,712	1,746
Telangana	2,660	901	1,759
Maharashtra	9,107	6,890	2,217
All Others	42,584	18,893	23,691
All India	72,368	31,841	40,527

Source: Central Pollution Control Board | All Figures in Million Litres Per Day

Comparatively, there are 351 polluted river stretches across the country, with most states failing in abatement of pollution. In 2017, there were 302 such stretches. The Jal Shakti ministry says that so far as conservation and rejuvenation of riv-

ers go, it has been supplementing efforts of the states by providing financial and technical assistance for abatement of pollution in identified stretches of rivers in the country through centrally sponsored schemes.

Millennium Post- 15- December-2021



## Yamuna: Delhi to treat 95 MGD wastewater from Hry, says Jain

### OUR CORRESPONDENT

**NEW DELHI:** The Delhi government has decided to treat 95 million gallons of wastewater per day from Haryana which falls into the Yamuna in the Capital, Water Minister Satyendar Jain said on Tuesday.

The minister said the government will use in-situ bioremediation techniques to treat the wastewater from Haryana which reaches Delhi through the Badshahpur drain.

The Badshahpur drain flows into the Najafgarh drain, which ultimately falls into the Yamuna.

In-situ bioremediation techniques involve treatment at the site using aquatic plants and microbial remediation methods.

Some common in-situ treatment techniques are microbial bioremediation, phytoremediation, constructed wetland system and root zone treatment.

The Yamuna receives 155 MGD of waste water from neighbouring states, including two large drains in Haryana — drain number 6 and the Badshahpur drain.

Jain, who inspected the Badshahpur drain near Najafgarh during the day, said, "The Delhi government has decided to treat this 95 MGD of sewage coming from Haryana via Badshahpur drain through in-situ technology." Using this technology, the wastewater can be filtered and treated in the drain itself, a statement quoted the minister as saying.

Jain said neighbouring states dump sewage into drains without treatment and this wastewater flows into the Yamuna.

"The Kejriwal government has decided to treat the sewage from other states as well. Although this work belongs to neighbouring states only, we

believe the Yamuna belongs to the country," he said.

"If the wastewater and industrial effluent from neighbouring states can be stopped from falling into the Yamuna, it will be a huge step towards cleaning the river," the minister added.

Jain also said the city government is going to set up a 10-MGD reverse osmosis (RO) plant in Najafgarh from which clean drinking water will be supplied to all nearby villages.

The Delhi government had earlier announced plans to install reverse osmosis plants in areas where groundwater is unusable due to high salinity and high levels of total dissolved solids. With the help of RO plants at Okhla, Dwarka, Nilothi-Nangloi, Chilla, Rohini, and Najafgarh, the DJB expects to augment its water supply by 90 MGD within a year.



Morning Standard- 15- December-2021

# Govt to treat 95 MGD sewage water flowing into Yamuna from Haryana

EXPRESS NEWS SERVICE @ New Delhi

WATER Minister and Delhi Jal Board (DJB) Chairman Satyendar Jain on Tuesday said the Delhi government would treat 95 million gallons of sewage water flowing into the Yamuna from Haryana every day.

Jain, who inspected Badshahpur drain in Najafgarh on Tuesday, said: "The Yamuna receives 155 MGD (million gallons per day) of sewage from neighbouring states, which includes two large drains from Haryana. The first is drain

number 6 and the second is the Badshahpur drain. These two major drains contribute to contaminating the Yamuna. Therefore, the Delhi government has decided to clean these drains on its own."

Jain added: "Delhi government has decided to treat this 95 MGD of sewage coming from Haryana via Badshahpur drain through in-situ technology. This technology will be able to filter and treat the water in the drains themselves. This will also save the cost of making new STPs and the sewage water



falling into the Yamuna can also be treated with this technology."

Jain further said: "The sewage water and industrial effluents coming from neighbouring states, if stopped from falling into the Yamuna, will be a huge step towards cleaning the Yamuna. However, neighbouring states dump sewage from their areas without treatment, resulting in the water from the drains flowing directly into the Yamuna."

RO plant of 10 MGD will be set up in Najafgarh, through

which 80% of water can be recovered. The Delhi government is planning to set up a Reverse Osmosis (RO) plant. The scheme will be implemented in areas where the groundwater level is high, but not usable due to salinity and TDS. The Delhi government has selected Okhla, Dwarka, Nilothi-Nangloi, Chilla, Rohini and Najafgarh for this process. The locations for implementing these projects have been strategically chosen, so as to utilize the existing system and save huge costs of laying new pipelines.



The Pioneer- 15- December-2021

# Flood policies that do not wash away



A long-term disaster management policy is essential for minimising the impact of floods in terms of loss of both human and physical capital

In the past few months, the country has faced various natural disasters such as cyclones and floods coupled with the COVID-19 pandemic. On the one hand, where the Government of India is striving to curb the spread of Covid-19 infection and revive the economic activity, natural disasters such as cyclones and floods, on the other hand, are adding to the fiscal burden of the government while also posing severe health hazards to the population. Recently, post-monsoon floods in Tamil Nadu, Andhra Pradesh, and other southern states have wreaked havoc on human life and property, which has become a persistent problem in the states.

Nearly after six years, heavy rains led by the north-eastern monsoon have hit the southern Indian state of Tamil Nadu, causing disastrous floods and claiming 18 lives across the state as per the local officials. At the same time, several parts of Andhra Pradesh have been hammered by heavy rainfall and flooding, resulting in loss of property, including crops, and causing 34 deaths. As per the preliminary reports from affected districts, the flooding with heavy rain has caused damage to nearly 1500 houses, and the estimated crop loss is to be around Rs. 3000 crore spreading over 8 lakh hectares of agricultural and horticulture crops across the state of Andhra Pradesh forcing about 58,000 people to evacuate.

According to a Central Water Commission (CWC) report, floods in Tamil Nadu have cost the state around ₹27,326 crores between 1953 and 2017. Of this, the damage to public infrastructure stood at ₹24,061 crores, followed by crop damage of ₹3,120 crore and houses at ₹145 crores. During this period, 3,705 people were killed, 56 million people were affected, 2.32-million-hectare crop areas were devastated, and 5.49 million houses were damaged. Every year, the loss to Tamil Nadu due to floods is around ₹635 crores, and the state witnesses 81 deaths with a crop loss of ₹94.54 crore.

Natural disasters such as floods, drought, lightning, cyclone, hailstorms, and landslides are recurring phenomena in Tamil Nadu. Due to its unique geo-climatic conditions, the state is highly vulnerable to various natural disasters due to its unique geo-climatic conditions and has witnessed a rise in natural disaster frequencies, damages, and fatalities. Moreover, a high degree of socio-economic vulnerability, inadequate mitigation measures, rapid urbanization, and high dependency on the agricultural sector have further accentuated the damages caused due to natural disasters. Apart from natural factors like incessant and heavy rainfall during the monsoon, man-made factors have also contributed to increased damage due to floods in Tamil Nadu and across the country. Unplanned development, encroachments into riparian zones, failure of flood control systems,



APART FROM TAMIL NADU AND ANDHRA PRADESH, FLOODS ALSO ADVERSELY AFFECT OTHER STATES IN INDIA. BASED ON DAMAGES OF PUBLIC AND PRIVATE PROPERTIES AND POPULATION AFFECTED AND KILLED, INDIA IS THE SECOND MOST FLOOD-AFFECTED NATION OF THE WORLD AFTER CHINA

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poor drainage facilities, deforestation, and unplanned reservoir operations are worsening flood damages. As a result, urban floods could be manifested as a man-made tragedy.

The capital of Tamil Nadu, Chennai has experienced catastrophic floods in 1943, 1976, 1985, 1998, 2002, 2005, and 2015 due to heavy rains associated with the cyclonic activity. The 2015 South India floods resulted from heavy rainfall generated by the annual northeast monsoon in November-December 2015 that affected the Coromandel Coast region of the South Indian states of Tamil Nadu and Andhra Pradesh. As per the CWC report, the December 2015 floods in the city and its suburban areas claimed 421 lives and affected 3.04 million populations. Moreover, 0.38 million hectares of crop were devastated, and 3.01 million houses were damaged, leading to total damage of ₹25,913 crore. It caused massive damage to public and private property and brought the city to a standstill for several days.

Apart from Tamil Nadu and Andhra Pradesh, floods also adversely affect other states in India. Based on damages of public and private properties and population affected and killed, India is the second most flood-affected nation of the world after China (Emergency Events Database (EM-DAT)). According to the CWC report, 107 535 people were killed due to floods, and 2,088 million people were affected over the period 1953-2017. During this period, damage due to floods, including crops, houses, and public infrastructure, stood ₹3,78,247 crores, damage to crop ₹1,11,225 crores, damage to

public infrastructure 2,12,060 crores and damage to house ₹53,774 crores. In addition, every year, the country lost around 0.46% of GDP due to floods and damage to crops around 0.18% of GDP (Parida et al., 2021). Flood impact also increases fiscal pressure of the state Government through government disaster management activities.

Moreover, frequent floods adversely affect the employment opportunities in the rural agricultural sector, increasing poverty, rural inequality, and food shortage due to crop damage and income loss. Similarly, urban flooding has become a common threat for city residents due to poor town planning and a lack of investment in infrastructure. Rapid urbanization, arbitrary encroachment of waterways in cities and towns, poor drainage facilities, and illegal constructions have led to growing urban flooding. Besides this, poor waste management is annoying the hassle through blockading drains and canals while ill-planned road projects are slicing off flood flows.

To mitigate the impact of floods, adequate disaster adaptation measures and better disaster management policies are essential in the flood-prone areas. First, greater spending by district disaster management authority on rehabilitation and evacuation during flood disasters would help to mitigate flood fatalities. Second, improved flood warning systems, particularly in coastal districts, and accurate forecasting of rainfall and floods might allow for timely measures and constrain disaster impacts. Third, pre-flood measures like developing disaster-resilient infrastructures, such as construction and maintenance of river

embankment, canals, roads, bridges, river connectivity, and construction of multi-purpose shelters in low-lying areas, may help mitigate flood fatalities.

Finally, as the problem of urban flooding is becoming more severe, and losses are escalating each year, the issue of urban flooding requires exclusive attention with appropriate implementation of the NDMA guidelines on Urban Flooding 2010. The Coastal Regulation Zone (CRZ) notification issued in 1991, subsequently revised in 2011 and 2019, intended to address coastal zone management issues. However, it has not been able to regulate development in coastal areas over the years. Therefore, strict implementation of the CRZ norms in coastal cities is the need of the hour.

Also, the Government should create a massive community awareness campaign regarding the impacts of natural disasters, their causes, and mitigation measures. In addition, Government should also undertake district-wise flood inundation mapping using advanced techniques and ensure better coordination among all departments or agencies in evicting encroachments along with waterways and inside water bodies. Overall, a long-term disaster management policy is essential for minimizing the flood impact in terms of loss of both human and physical capital. The time to effectively implement the Sendai Framework for Disaster Risk Reduction 2015-30 focuses on reducing disaster risk with the state in the primary role and shared responsibility with other stakeholders, including the local government and the private sector. The aim is to protect the development gains from the risk of the disaster.



The Pioneer- 15- December-2021

# गंगा-यमुना में घटा प्रदूषण, सरयू भी हो रही निर्मल

● नमामि गंगे

परियोजनाओं का दिखा बड़ा असर, प्रदेश की प्रमुख नदियों को मिला नवजीवन

पार्यनियर समाचार सेवा। लखनऊ

प्रदेश में कानपुर और वाराणसी में गंगा, अयोध्या में सरयू और मथुरा वृंदावन में यमुना प्रदूषण मुक्त होने की ओर हैं। इन नदियों में गिरने वाले नालों को टैप कर दिया गया है और एसटीपी से जोड़ते हुए नालों के पानी का ट्रीटमेंट कर शोधित किया जा रहा है। इन प्रमुख शहरों के 37 नालों को नदी में गिरने से रोका गया है। अब इनके किनारों पर नए-नए एसटीपी बन गये हैं। इनमें नालों के सीवेज को आईएण्डडी विधि द्वारा टैप कर शोधित किया जा रहा है।

प्रदेश सरकार की महत्वाकांक्षी योजना नमामि गंगे ने आस्था और



विश्वास की प्रतीक नदियों को नया जीवन दिया है। नदियों को निर्मल और स्वच्छ बनाने के लिए दूषित नालों को रोकने के साथ प्रदूषण मुक्त करने का बड़ा काम किया है। वाराणसी में इसका असर दिखाई देने लगा है। यहाँ 161.31 करोड़ की लागत से रमना में 50 एमएलडी का नया एसटीपी तैयार हो चुका है जिसमें गंगा नदी में गिरने वाले 3

नालों को आईएण्डडी के माध्यम से टैप किया गया है। नालों के पानी को एसटीपी में ट्रीटमेंट कर शोधित किया जा रहा है। इसी तर्ज पर मथुरा-वृंदावन में यमुना नदी को भी प्रदूषण मुक्त बनाने के लिए सरकार ने नमामि गंगे कार्यक्रम के तहत मथुरा में 460.45 करोड़ की लागत से 20 नालों को टैप करने के साथ-साथ 30 एमएलडी के एसटीपी का

निर्माण एवं वृंदावन में 42.82 करोड़ की लागत से 5 नालों को टैप करने के साथ-साथ 4 एमएलडी के एसटीपी के नवीनीकरण और उच्चिकरण का कार्य पूरा कर लिया है। नमामि गंगे एवं ग्रामीण जलापूर्ति विभाग के प्रमुख सचिव अनुराग श्रीवास्तव ने बताया कि नदियों को प्रदूषण मुक्त करने के लिए युद्ध स्तर पर अभियान चलाया जा रहा है। खास तौर पर वो बड़े महानगर जहाँ से गंगा, यमुना और सरयू जैसी प्रमुख नदियां गुजरती हैं। वहाँ नालों को टैप करने के साथ-साथ नए एसटीपी शुरू किए जा रहे हैं। नदियों की स्वच्छता से जुड़ी हर योजना और हर कार्य की त्रिस्तरीय निगरानी की जा रही है। नमामि गंगे कार्यक्रम के तहत धार्मिक व पौराणिक नगर अयोध्या में पवित्र नदी सरयू में गिरने वाले सभी नालों को टैप कर दूषित जल को सीवेज ट्रीटमेंट प्लांट में पहुँचाया जा रहा है। इससे अयोध्या में पवित्र नदी सरयू के जल

की गुणवत्ता में सुधार हुआ है। यहाँ 37.67 करोड़ की लागत से 5 नालों को आईएण्डडी विधि द्वारा टैप करने का बड़ा काम किया गया है। साथ में 12 एमएलडी के एसटीपी का निर्माण कार्य भी पूरा कर लिया गया है। कानपुर नगरी में गंगा नदी का रूप बदल चुका है। यहाँ बिठूर में 13.40 करोड़ की लागत से 7 नालों को आईएण्डडी विधि द्वारा टैप किया गया है। नालों के पानी को एसटीपी में ट्रीटमेंट कर शुद्ध किया जा रहा है। इससे गंगा नदी का प्रदूषण अब ख़ात्मे की ओर है। यहाँ नमामि गंगे कार्यक्रम के तहत सीवेज योजना पर भी तेजी से काम हुआ है। 430.49 करोड़ की सीवेज योजना से 106.67 किमी सीवर लाइनों को बिछाने का काम पूरा कर लिया गया है। इसके साथ ही 10350 सीवर हाउस कनेक्शन किये गये हैं और गंगा नदी में 182 किमी लम्बाई में गाद निकालने का काम पूरा कर लिया गया है।