

SulabhENVIS

NEWSLETTER

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Ministry of Environment,
Forests & Climate Change



SulabhENVIS Centre
Patronised by Ministry of Environment & Forests,
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International Institute of
Health and Hygiene



SULABH



Overview

India is endowed with rich water resources.

Approximately 45,000 km long riverine systems criss-cross the length and breadth of the country. These rivers include Himalayan snow fed rivers, peninsular rain fed rivers and coastal short rapids.

The total geographical area of 3.29 million square km of the country has been divided into 12 major river basins, 46 medium river basins and 14 minor and desert river basins. The major river basins account for 78% of total surface area and serve 80% of the population. The

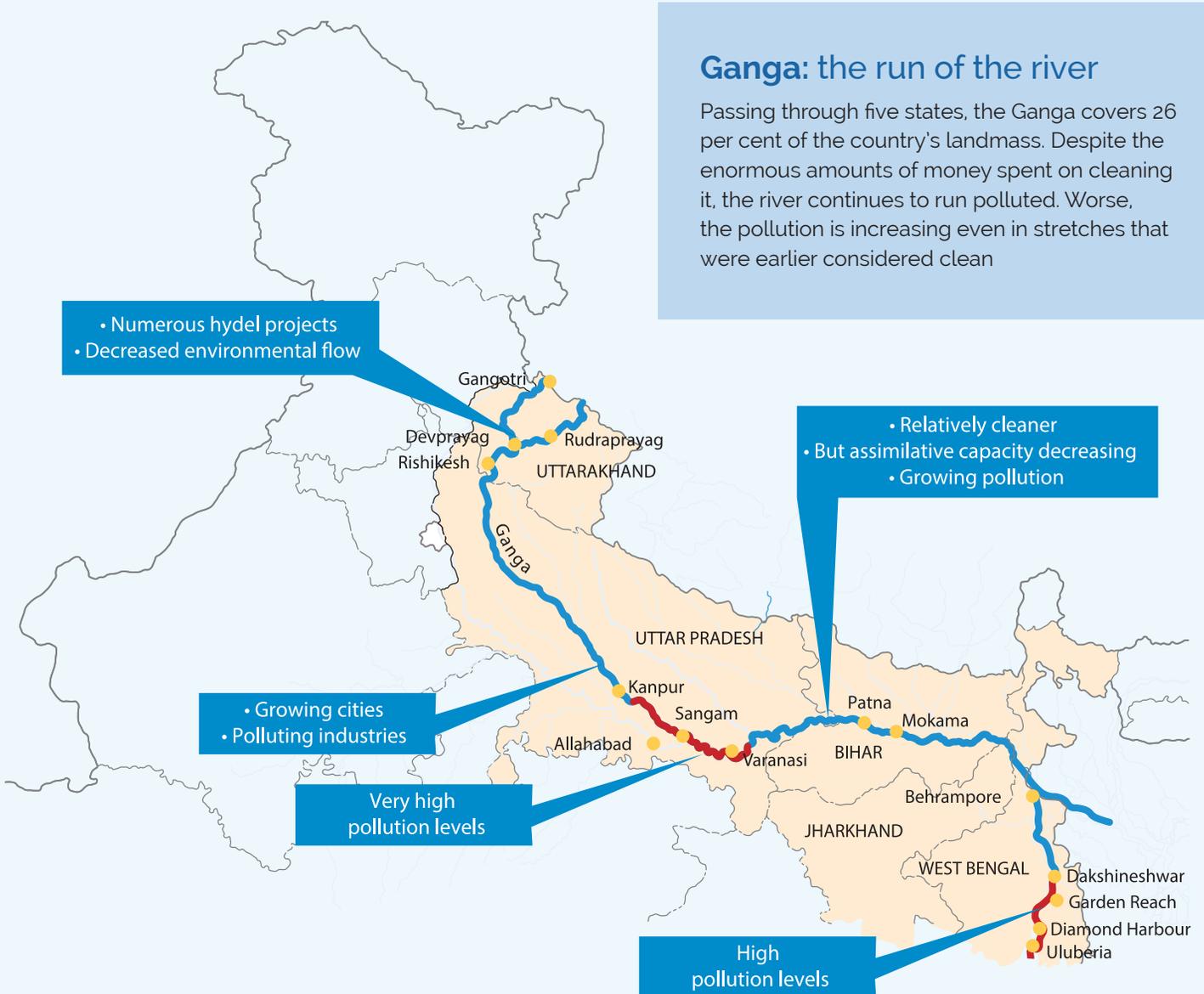
Ganga river basin is the largest of these, extending over the states of Uttarakhand, Uttar Pradesh, Haryana, Himachal Pradesh, Delhi, Bihar, Jharkhand, Rajasthan, Madhya Pradesh, Chhattisgarh and West Bengal.

Rapidly increasing population, rising standards of living and exponential growth of industrialization and urbanization have exposed the water resources, in general, and rivers, in particular, to various forms of degradation. The deterioration in the water quality of the river impacts the people immediately. Many Indian rivers, including

the Ganga in some stretches, particularly during lean flows, have become unfit even for bathing.

Realizing that the rivers of the country were in a serious state of degradation, a beginning towards their restoration was made with the launching of the Ganga Action Plan in 1985. It was envisaged as a comprehensive programme of river conservation with the objective of improving the water quality. It was visualised that in due course, the programme would be enlarged to cover other major rivers of the country.

GANGA: The run of the river



UTTARAKHAND
450 km
14 drains
440 MLD

UTTAR PRADESH
1,000 km
43 drains
3,270 MLD

BIHAR
405 km
25 drains
580 MLD

JHARKHAND
40 km

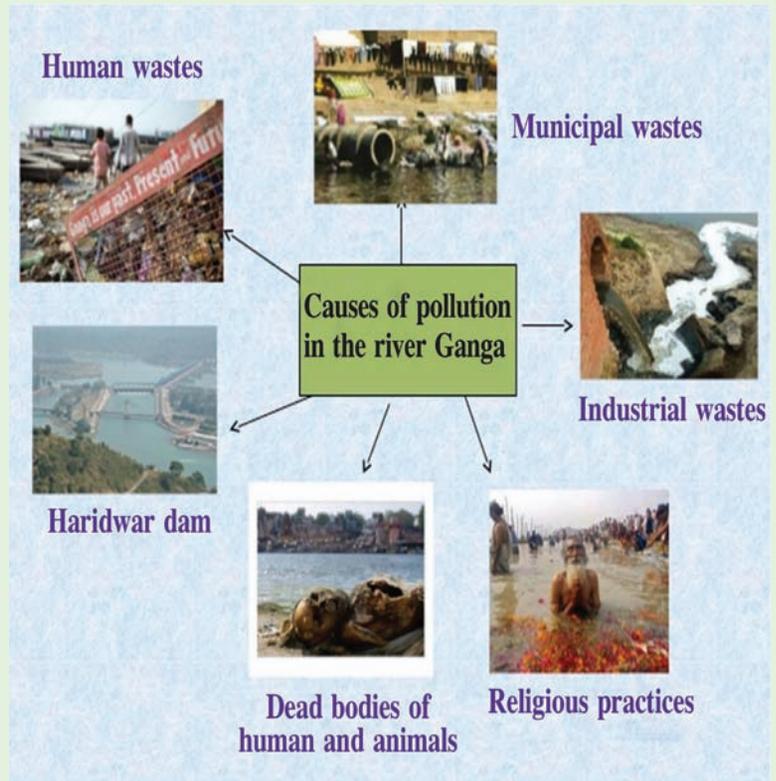
WEST BENGAL
520 km
54 drains
1,780 MLD

Note: MLD: million litre per day (the figures refer to the collective discharge from the drains into the river)
Source: CPCB 2013, Pollution Assessment: River Ganga, Central Pollution Control Board, MoEF, July

Source: <http://www.gangaaction.org/publications/ganga-water-english.pdf>

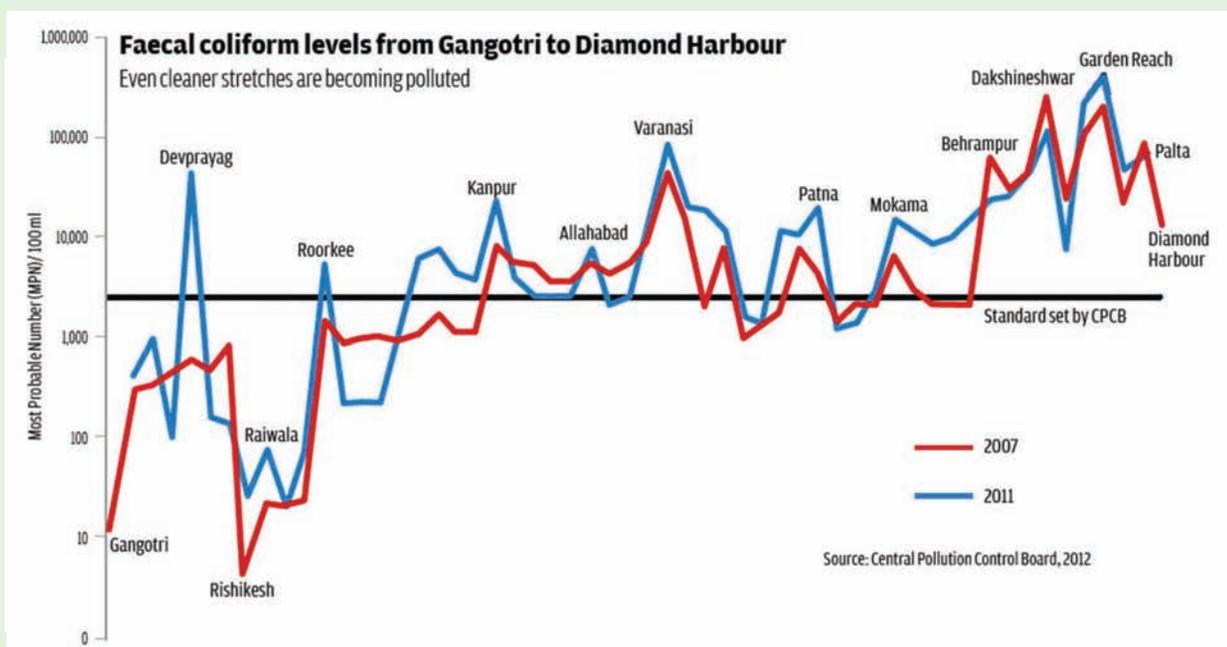


Causes of pollution in the river Ganga



Source: <http://www.slideshare.net/mbacharya203/ganga-action-plan?related=3>

Faecal coliform levels from Gangotri to Diamond Harbour



Facts: River Ganga

- Total distance covered by the river is 400,000 square miles.
- The river Ganga originates at Gangotri glacier on the southern slopes of the Himalayas, some 14, 000 feet above sea level.
- River Bhagirathi and Alaknanda join each other at Devprayag to form River Ganga.
- The mouth of River Ganga forms a vast delta, the Sundarban delta (the largest delta in the world).
- The River covers 29 cities having a population of more than 100,000, flows through 23 cities having population between 50,000 and 100,000 and near about 48 towns.
- The Ganga is considered as the holiest river in India with massive spiritual, religious and ritual significance. Near about 40% of Indian population survive on Ganga by using its water.
- The Ganges tolerates domestic waste such as defecation, untreated industrial waste, and pollution during religious events. Every day 1.7 billion litres of such waste run into the river. Near about 89 million litres of sewage is disposed off in the river daily.
- The Ganges is one of the most polluted rivers in India in which level of pollutants is more than 3000 times than the permissible limit defined by the WHO as 'safe'.
- The Ganges is home to over 100 different species of fish and more than 50 different types of amphibian.
- As per studies carried out by the Uttarakhand Environment Conservation and Pollution Control Board, the Ganges water near Haridwar has Coliform bacteria at 5,500 levels which are 100 times more than the permissible limit. Directly pouring human faces, urine and sewage into river is the major reason of this rise. Coliform bacteria are found human colons but become highly hazardous when found in water or food.
- Harmful pesticides and fertilizers in agriculture run-offs pollute the water. The water of this holy river has become unfit for drinking, bathing and not even safe for agriculture purposes.
- Mercury has also been found in the Ganga river water in the study conducted by the Environmental Biology Laboratory, Department of Zoology, Patna University. Though mercury contamination has not reached to an alarming level but its presence is still worrisome.
- The Ganges basin has very fertile soils and its water is used to irrigate fields growing: rice, sugarcane, oil seeds, lentils, wheat and potatoes.
- The Ganges river basin has the highest population of any river basin in the world. It contains over 400 million people.
- There are two major dams on the Ganga. One at Haridwar and the other dam is a part of the hydroelectric project at Farakka.

Source: <http://www.mapsofindia.com/my-india/india/narendra-modis-mission-to-clean-ganga>
<http://www.varanasicity.com/river-ganga/interesting-facts.html>

POLLUTION ASSESSMENT: RIVER GANGA

Wastewater Generation and Treatment Capacity for Class I and Class II Cities discharging Wastewater into the Ganga River

SEWAGE GENERATION OF CLASS - | TOWN

| S. no | States/UT | City/Town | Sewage Generation in (MLD) | Treatment Capacity (in MLD) |
|------------------|---------------|---------------------------|----------------------------|-----------------------------|
| 1 | Uttarakhand | Haridwar | 39.6 | 18 |
| 2 | | Kanpur | 339.3 | 171.1 |
| 3 | | Varanshi | 187.1 | 141 |
| 4 | | Allahabad | 208.0 | 89.0 |
| 5 | Uttar Pradesh | Farrukhabad cum Fatehgarh | 30.5 | 8.3 |
| 6 | | Mirzapur Vindhyachal | 27.5 | 14 |
| 7 | | Unnao | 23.9 | 19.4 |
| 8 | | Ballia | 18 | |
| Sub total | | | 873.9 | 460.8 |
| 9 | Bihar | Munger | 34.0 | 13.5 |
| 10 | | Katihar | 31.7 | 31.7 |
| 11 | | Bhagalpur | 61.6 | 11 |
| 12 | | Patna | 249.2 | 109 |
| Sub total | | | 376.5 | 165.2 |
| 13 | West Bengal | Kolkata | 618.4 | 172.0 |
| 14 | | Haldia | 24.5 | 24.5 |
| 15 | | Santipur | 18.7 | 18.7 |
| 16 | | Nabadwip | 15.5 | 10 |
| 17 | | Basirhat | 15.3 | |
| 18 | | Bangaon | 13.8 | |
| 19 | | South Dumdam | 53.0 | |
| 20 | | Rajpur Sonarpur | 33.6 | 45.4 |
| 21 | | Kamarhati | 48.8 | 40 |



| | | | | |
|------------------|--|-----------------------|---------------|---------------|
| 22 | | North Dumdum | 29.7 | |
| 23 | | Naihati | 20.5 | |
| 24 | | Ulberia | 27.3 | |
| 25 | | Kanchrapara | 17 | |
| 26 | | Halisahar | 16.8 | |
| 27 | | North Barrackpur | 19.2 | 16.7 |
| 28 | | Rishra | 13.5 | 15.3 |
| 29 | | Ashoknagar kalyangarh | 17.3 | 15.0 |
| 30 | | Haora | 136.2 | 63.9 |
| 31 | | Bhatpara | 59.7 | 28.5 |
| 32 | | Meheshlata | 52.5 | 3.9 |
| 33 | | Serampore | 26.7 | 18.9 |
| 34 | | Chandanagar | 16.1 | 22.7 |
| 35 | | Habra | 17.2 | |
| Sub Total | | | 1311.3 | 548.4 |
| Total | | | 2601.3 | 1192.4 |

SEWAGE GENERATION OF CLASS -II TOWN

| S. no | States/UTs | City/Town | Total Sewage (in MLD) | Capacity of STP (in MLD) |
|------------------|---------------|-------------|-----------------------|--------------------------|
| 1 | Uttarakhand | Rishikesh | 10.7 | 603 |
| 2 | | Roorkee | 11 | |
| Sub total | | | 21.7 | 6.3 |
| 3 | Uttar Pradesh | Najibabad | 7.6 | |
| 4 | | Bijnor | 7.6 | 8.1 |
| 5 | | Mughalsarai | 16 | |
| 6 | | Ghaziपुर | 10.7 | |
| 7 | | Kannauj | 7.0 | |
| 8 | | Deoband | 7.8 | |
| 9 | | Gangaghat | 6.8 | |
| Sub total | | | 63.5 | 8.1 |
| 10 | Bihar | Buxar | 7.6 | 2.0 |
| 11 | | Sitamarhi | 6.5 | |
| 12 | | Begusarai | 8.6 | |
| 13 | | Mokameh | 8 | |
| Total | | | 30.7 | 2 |
| 14 | West Bengal | Ranaghat | 6 | |
| Total | | | 122 | 16.4 |

Source: http://cpcb.nic.in/upload/NewItems/NewItem_203_Ganga_report.pdf

The Polluters: Drains along the Kanpur-Varanasi stretch

| DRAIN | FLOW(MLD) | BOD LOAD (Kg/day) | Stretch |
|-----------------------------|-----------|-------------------|-------------------------|
| Sisamaunala | 197 | 544,980 | Kanpur |
| Bhagwatdas nala | 11 | 1,144 | Kanpur |
| Golaghat nala | 0.80 | 114 | Kanpur |
| Satti Chaura | 1.10 | 97 | Kanpur |
| Loni drain | 41.90 | 4,860 | Unnao |
| City Jail drain | 35.90 | 7,208 | Unnao |
| Permiya nala | 186.00 | 11,485 | Kanpur |
| Dabka nala-2 | 25.00 | 3,475 | Kanpur |
| Dabka nala-1 (Kachcha Nala) | 94.00 | 15,792 | Kanpur |
| Dabka nala-3 (Pakka Nala) | 0.30 | 10 | Kanpur |
| Shehta Bazar (Kachcha Nala) | 29.00 | 12,296 | Kanpur |
| Wazidpur Nala | 54.00 | 45,522 | Kanpur |
| Pandu river | 1,396.00 | 34,900 | Fatehpur to Raibareilly |
| Arihari drain | 34.00 | 127 | Fatehpur to Raibareilly |
| NTPC drain | 60.30 | 1,121 | Fatehpur to Raibareilly |
| Rasulabad-1 (Pakka Nala) | 29.80 | 20,264 | Allhabad |
| Rasulabad-2 (Pakka Nala) | 20.20 | 5,656 | Allhabad |
| Rasulabad-3 (Kachha Nala) | 14.20 | 1,320 | Allhabad |
| Rasulabad-4 (Kachha Nala) | 48.50 | 2,376 | Allhabad |
| Kodar drain | 20.00 | 1,040 | Allhabad |
| Ponghat drain | 8.00 | 161 | Allhabad |
| Solari drain | 34.80 | 1,087 | Allhabad |
| Maviya drain | 65.00 | 3,380 | Allhabad |
| Mualaha drain | 46.00 | 598 | Allhabad |
| Ghore Shaheed drain | 86.40 | 4,121 | Mirzapur |
| Khandwa drain | 62.20 | 5,350 | Mirzapur |
| Nagwa drain | 66.50 | 4,060 | Varansi |
| Ramnagar drain | 23.70 | 963 | Varansi |
| Varuna drain | 304.50 | 3,776 | Varansi |

Source: CPCB 2013

Save Ganga Movement



Report on Save Ganga & Save Himalaya Meeting-cum-Panel Discussion on 12th March, 2015 at Gandhi Darshan, New Delhi

Topic of discussion: What must we do to save the Ganga and the Himalayas in the context of the present extremely eco-hostile, out-and-out consumerist global market culture of unlimited desires?

The Charter of Save Ganga and Save Himalayas Recommendations:

- The Ganga must be constitutionally declared as the National River with statutory provisions that ensure due respect and protection to her, considering her National River status analogous to the 'Prevention of Insults to National Honour Act' for the national flag and anthem.
- We must accept the recommendation of the

consortium of 7 IITs that (A) in place of the present policy of allowing treated sewage into our rivers, we must adopt the policy of zero discharge into the river, and promote Reuse and Recycle of wastewater after proper treatment (tertiary-level treatment); (B) Industrial effluents, hospital wastes, treated or untreated, must never be allowed to enter into the rivers and must not also be allowed to mix with the sewage, which should be converted into valuable manure for organic farming- industries must treat their effluent and use recycled water; and (C) Organic farming should be promoted in a massive way for decreasing the non-point sources of pollution of rivers such as hazardous

chemicals from agricultural run-off into the rivers, and also for maintaining soil fertility, checking the groundwater degradation, reducing water requirement of crops, producing health-friendly food, etc. [Since our rivers are the source of drinking water for crores of our common people and also for the animals and STPs cannot convert sewage into potable water, our Save Ganga Movement has been demanding since long time that we must adopt throughout our country the policy of Zero discharge into the rivers which is also now recommended by the consortium of 7 IITs which is preparing National Ganga River Basin Management Plan (NGRBMP).]

- The bactericidal, health promoting, non-putrefying and self-purifying properties of the water of Ganga should



be restored and conserved. Scientists claim that Ganga has the unique quality of self-purification capacity due to the presence of high levels of bactericidal copper and chromium and perhaps of uranium, thorium in the Himalayan sediments and different types of beneficent bacteria coli phages in the sediments of the river which kill the harmful bacteria coli forms.

- Treatment of the sewage through "Pond System and Plant Based Management of Sewage and Waste Treatment" and using the nutrient rich treated waste water for organic farming, which is the cheapest and durable and need least management and electricity, should be preferred wherever possible.

A massive time-bound plantation programme on the banks of the river Ganga from Gangotri to Ganga Sagar, along with the development of constructed wetlands for sewage treatment in major cities on the banks of the river wherever possible should be undertaken with the help of NBRI, Lucknow, NEERI, Nagpur, along with other prominent research centers of environmental science/ botany/ engineering from our universities/ colleges and various like-minded NGOs and local people. Herbal strip along the river should be promoted under the scheme

of Rural Eco-friendly River Front Development of the Ganga.

The 8 decades old East Kolkata Wetlands constitutes an ideal example of a system of natural bio-treatment of urban waste water through "Pond System and Plant Based Management of Sewage Treatment" and recycling and utilizing the treated waste water for fish culture and agriculture: it provides about 13,000 tons of fish per year from it's about 300 wastewater fed ponds, 150 tons of fresh vegetables per day from the small scale horticulture plots irrigated with the treated wastewater, water for irrigating paddy cultivation and livelihood for about 50 thousand common people and also serves as a natural sponge absorbing excess rainfall.

- The highly earthquake-prone, eco-fragile and ecologically, aesthetically and religiously invaluable Uttarakhand region of the Ganga Basin must be declared "Ecologically Fragile and a Sanctuary for Himalayan Flora and Fauna" and its rivers "wild rivers" and all steps must be taken to preserve its rivers and vegetation in pristine condition. It would be a major step towards the realization of our National Mission of saving the Himalayan Ecosystem as a part of the National Action



Plan for Climate Change and also of the National Action Plan for Preservation of our Biodiversity.

Since crores of our people since ages consider the entire Himalaya region of the Ganga with all its tributaries to be the zone for self-purification and spiritual enlightenment (Tapo-Bhumi and Adhyatma-Bhumi), we should also declare this religiously invaluable Uttarakhand region to be our national Spiritual Heritage Zone.

We must have a high powered National Himalayan Ecology Preservation and Restoration Authority headed by Hon'ble Prime Minister to save the highly fragile invaluable ecology of the young Himalayas. The impending catastrophe



of fast receding of Himalayan glaciers has to be understood and tackled at a regional and global level. At the regional level, it must involve all Himalayan nations. India should take a major global initiative in this direction to tackle this regional and global crisis.

- To begin with we must make Uttarakhand an absolutely eco-friendly ideal Himalayan state and must take time-bound decisive steps to make the Yamuna at Delhi completely and permanently free from pollution, which would set an example for the entire country. An adequate flow of natural fresh water must be allowed to flow on the Ganga bed and the Yamuna bed throughout the stretch of the rivers

throughout the year not only to protect and preserve their ecology but also to meet the basic water needs of the cities, towns and villages situated on their banks and restore their self-purifying capacity. At present in dry season the three large barrages at Haridwar, Bijnor and Narora divert 100% of the river's water into its canals and the Ganga is totally bereft of Gangajal after the Narora barrage. It is highly deplorable that our national capital Delhi is the greatest polluter of the River Yamuna, the largest tributary of our National River Ganga. In dry season no water is allowed to flow in the Yamuna River downstream to Hathnikund barrage in Haryana and what reaches the holy cities of Mathura and Vrindavan is mainly the treated or untreated domestic and industrial waste water contributed by various drains joining the Yamuna at Delhi.

Since the Ganga is our national river and crores of people consider her to be Divine Mother, at least the main stream of the Ganga must be maintained close to its pristine and natural state.

- The Consortium of IITs, which is preparing the National Ganga River Basin Management Plan(NGRBMP) should make a holistic comprehensive scientific study of (a)the problem of construction of extremely

eco-hostile dams for hydropower in the highly earthquake prone eco-fragile Himalaya region of the Ganga Basin.(b) the problem of construction of extremely eco-hostile barrages for Navigation in the River Ganga and (c) the problem of extremely eco-hostile interlinking of the rivers within the Ganga Basin and between the rivers of the Ganga Basin and the Peninsular rivers: it has not made any study of these issues so far. Since such scientific study of the issues is necessary for preparing a holistic comprehensive GRBMP, the Government should provide all the necessary help to the consortium of 7 IITs to make such studies of the issues freely with dignity as soon as possible. Decision on these controversial issues must be postponed till a national consensus on these issues is available on the basis of holistic scientific knowledge about the short-term as well as long-term harmful as well as beneficial consequences of such undertakings. We must look beyond short term economic benefits and have a holistic scientific study about the long term environmental cost of the projects whose victims would be mainly, in addition to the adversely effected local people, our future generations and our dumb and deaf fellow creatures.



What we need to ensure our lasting water security is decentralized basin restoration, recharging and management approaches that consider a host of small and medium ecologically sustainable measures involving participation of local people.

- No encroachment should be allowed on either side of the banks of Ganga within 200-300 meters. Construction of permanent structures for residential, commercial or industrial purposes in the active flood plains of any river must be prohibited.

We must have a law protecting River rights, and River Guards to prevent crimes against rivers and River Courts to try crimes against rivers.

- There should be disincentives in the form of proper fines to the states in the Ganga basin in proportion to the quantity and quality of pollution a state adds to the river in the state. The NRCD must have a monitoring mechanism to regularly monitor the water quality of

the rivers at the entry and exit points of each state.

Similarly there should be disincentives in the form of proper fines to the cities/towns in proportion to the quantity and quality of pollution a city/town has added to the river which flows through or near it. There should be a monitoring mechanism to monitor regularly the water quality of the rivers at the entry and exit points of each major polluting city/town.

- The National Ganga River Basin Authority (NGRBA) must take the full responsibility of the protection of our national river. Since the Ganga flows through many states, it would be the best course if NGRBA takes the full responsibility of making and keeping the Ganga and its tributaries completely and permanently free from pollution through time-bound steps, leaving no scope for the central and state government authorities blaming each other for the failures.

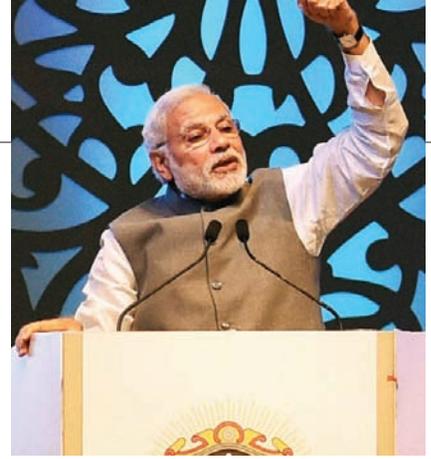
The Expert Members of NGRBA must be given due role and importance

in this organization both in decision-making and in implementation. NGRBA must have transparency and accountability in every sphere of its activities.

- There is no scarcity of money, knowledge and skills with us to save our rivers including the Ganga. There is lack of will due to our moral bankruptcy. Environmental ethics should be taught as a part of the syllabus on ethics which must be taught as a compulsory subject, both at the school as well as at the college level. Teaching environmental ethics without discussing various fundamental questions concerning ethical values, the value and means of an ethical life would be of little significance. We must study critically the views of great religions and of great teachers and thinkers of mankind about various fundamental issues of ethics concerning ethical values and the value and means of ethically good life, which would be a major step in the direction to overcome our present deep rooted moral and spiritual crisis.



Source: http://www.savegangamovement.org/index.php?option=com_content&task=view&id=gg&Itemid=133



Need a mission-Mode approach to clean Ganga: PM

www.dnaindia.com, March 27, 2015

Ensuring minimum ecological flow of River Ganga into the plains of Bihar and Jharkhand and silt management were some of the key issues discussed by Ganga-basin states during their meeting with prime minister Narendra Modi on Thursday. The PM was chairing the fifth meeting of the National Ganga River Basin Authority (NGRBA) to take stock of progress on the government's Clean Ganga Project. The meeting saw Nitish Kumar, Harish Rawat and Raghubar Das, chief ministers of Bihar, Uttarakhand and Jharkhand respectively attend the meeting along with Union ministers Arun Jaitley, Uma Bharti, Prakash Javadekar, Nitin Gadkari, Piyush Goyal and NITI Aayog Chairman Arvind Panagariya.

- According to sources from the Bihar government, the Ganga plain states have been bearing the brunt of low natural flow of the river due to issues of sedimentation and siltation up north. During the meeting, the chief ministers

presented these issues and discussed single-window clearances for proposals.

- The PM urged his ministerial colleagues and the three chief ministers to adopt an "uncompromising mission-mode approach" to halt pollution of River Ganga. Already in January this year, the PM had directed the water resources, river development and Ganga rejuvenation ministry to prioritise pollution control and taking remedial steps. But, on ground, the progress has been rather slow and effluent treatment plants have still been found wanting.
- In the meeting, the PM also called for harnessing the potential economic activity provided by the Clean Ganga project and urged states to pay special attention to development of towns and villages located on the banks of the River Ganga, and to ensure sufficient awareness in these areas to stop pollution. The water resources ministry recently submitted the Indian Institute of Technology

consortium report on Ganga River Basin Management that proposed working in three different missions. When asked about the IIT report and its recommendations, Uma Bharti, minister for water resources, river development and Ganga rejuvenation said, "We have gone through the report's interim version and I have asked them to narrow down the recommendations. Hence, it will take some more time to shape up."

- The minister also added that a new and stringent legislation is being worked upon to aid the Clean Ganga project. "A committee has been set up (for the legislation) and states will be duly consulted on the new legislation."
- Rs 2,017 crore - The funds allocated in the Union Budget for the Ganga cleaning and rejuvenation project 3,636 million litres of sewage generated per day by 118 urban local bodies 1,027 -The capacity in million litres of the sewage treatment plants 700- The number of industries across Uttarakhand, Bihar, West Bengal, Uttar Pradesh and Jharkhand that have been served notices to submit fresh action plans on pollution control.



Environmentalists for declaration of Ganga as World Heritage

IBN Live, April 22, 2015

Lucknow: With Prime Minister Narendra Modi taking keen interest in cleaning of Ganga, a group of environmentalists will be petitioning him on to pursue with UNESCO for declaration of upper region of the holy river as a World Heritage Site.

"I have already written to the Union Ministry for Water Resources and now we will petition the PM to pursue the case. I will write a letter to the Prime Minister in this regard," noted environmentalist Ranjit Bhargava told PTI. "This is important as the PM is himself keen on Ganga River Conservation," he said.

Bhargava, who has been associated with Ganga cleaning campaign for the last 20 years and is a Padma Shri awardee. Bhargava said he had already written to the PMO last year in this regard. "In my letter, I said that unless there is a fully empowered agency to clean the Ganga, directly under the PMO assisted by Ministry of Ganga Rejuvenation, it will not do any good".

Narendra Modi Government had launched the 'Swachh

Ganga' campaign in 2014 to clean the holy river. Bhargava said he suggested that a well structured Territorial Army

Division, consisting of Eco Task Force Units of ex-servicemen, should be set up to clean and rejuvenate the Ganga.

"Some measures have been taken, but a key suggestion that is yet to materialise is that powers to take action against defaulters must be absolute and concentrated in the hands of task force unit with a final appeal only to the Green Bench of the Supreme Court," he said. Bhargava said he wrote to Union Minister for Water Resource Uma Bharti on the issue of World Heritage site status for Upper Ganga region from Gaumukh to Haridwar in Uttarakhand.

"But in response Union Minister of State for Water Resources Sanwar Lal Jat



said the proposal has to be steered by Utrakhand government", Bhargava said. "I suggested that keeping in mind Modi's deep passion for ensuring Ganga her due, his senior minister Uma Bharti may apprise the Prime Minister," he said. Bhargava said now he has decided to take the issue directly to the doors of the Prime Minister.

"We want that PM should directly take initiative in this regard. Ganga river is revered by crores of people in India and the issue is not related to one particular state. It should be ensured that the river is restored to its pristine glory, made clean and pollution free. Even the apex court has expressed concern over the issue," Bhargava said.



Ganga will be pollution-free by October 2016, says Uma Bharti

The Hindu, GARGI PARSAL, June 5, 2015

Minister says project "delayed" as Centre decided to bear entire funding River Ganga will show first signs of being pollution-free by October next year and the first project on inter-linking of rivers (Ken-Betwa) will take off within a year, Water Resources Minister Uma Bharti said here on Thursday.

She said the "Namami Gange" project had been "delayed" as the Centre decided to bear the entire funding, instead of asking States to give a matching grant, and thus had to re-work its financial plans and approvals. A sum of Rs. 12,000

crore has been set aside for the project.

Asking the Congress not to politicise the Ganga and inter-linking of rivers, she denied the charge of a saffron agenda and said that the river was connected with the livelihood of 50 crore people and the entire economy of populous States such as Bihar and Uttar Pradesh were dependent on it.

Union Minister Uma Bharti says 'Namami Gange' project is delayed as Centre decided to bear entire funding- Photo: Sandeep Saxena

Speaking on the one year of her Ministry, she said the

government would have to enact a law or bring a policy that would ensure sustainability of pollution-free Ganga. "We are moving in that direction and need wider consultations," the Minister said.

Criticising the Congress for finding holes in the Damanganga-Pinjal and Par-Tapi river links, Ms. Bharti offered to make "presentations" on the Ganga and river-linking before Congress president Sonia Gandhi, party leader Mallikarjun Kharge and Samajwadi Party chief Mulayam Singh to enable them to explain the factual position to their party leaders.

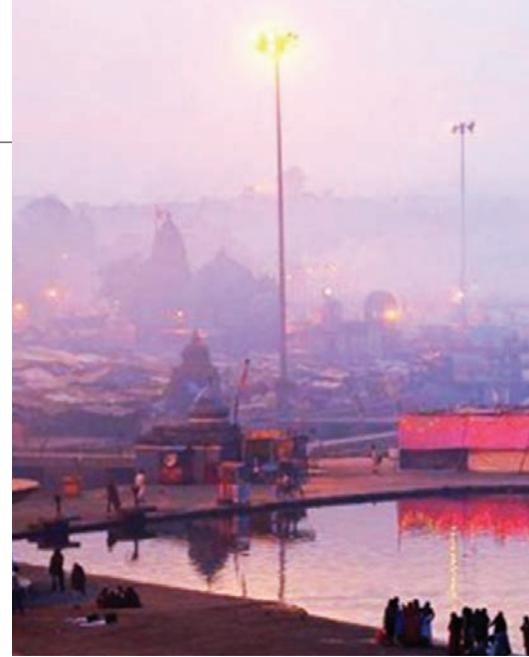
"If you say that it is a saffron agenda, then you should re-think. I am ready for a presentation at their residence," the Minister said.

Asked about displacement of people that the rivers linking project will bring, Ms. Bharti said not a single person would be removed if he/she was not convinced about a better life and four-times the compensation.

Ground water management

The Centre would send teams of young entrepreneurs abroad to study river and ground water management and how to do more irrigation from less water. The teams would be sent to Israel, Australia and the United Kingdom.

Ms. Bharti said the government was aware of lowering of ground water levels and was working on better management.



Namami Gange: River surface cleaning to begin, backed with public monitoring app

The Economic Times, Anubhuti
Vishnoi, May 25, 2015

NEW DELHI: Going full steam ahead with the Namami Gange project, the Modi government will this week kickstart an effort to bring 'visible change' to the Ganga waters. Intensive river surface cleaning is set to begin at ten identified cities along the banks of Ganga backed with a Bhuvan Ganga mobile application.

This ISRO-backed India specific GIS tool will ensure real-time and public monitoring of river surface pollution on ground situations. The government will invite global tenders this week for river surface cleaning at ten chosen cities — Haridwar, Varanasi, Allahabad, Kanpur, Mathura & Vrindavan, Garhmukteshwar, Patna, Kolkata, Sahibgunj and Nabadwip.

The idea is to have floating debris collected and cleaned off the Ganga river surface to ensure people can see and feel a visible difference in the cleanliness levels of

the river waters. A complete work package including river surface cleaning, ghat cleaning and drain-river confluence for ten priority locations is being prepared by the National Mission for Clean Ganga (NMCG). River surface cleaning boats, trash skimmer machines and trash booms will be pushed into service at all these ten cities to arrest floating material and tackle river surface pollution.

Aerators will be plied into action at river ghats to keep the gathering moss away — steps identified as those that will also convince the masses that the Ganga cleaning project is taking off in a real and visible manner, officials in the ministry of Water Resources, River Development and Ganga Rejuvenation told ET.

The ministry has also written to the Central Pollution Control Board to install real-time monitors at 118 locations on Ganga where a nallah meets

the river (drain-river confluence) to ensure that the cleaning is actually taking place and water quality is maintained. 10 of these have already been started on pilot basis.

That apart, the government is set to launch a Bhuvan Ganga app whereby real-time images of the Ganga can be captured by the public through smartphones and uploaded right away to check for any river surface pollution. Once the image is uploaded and received by the central database, the contractors in charge of the surface cleaning at that particular location will be held accountable in case of laxity.

The Rs 20,000-crore Namami Gange project that was approved by the Union Cabinet last week specially focussed on 'strengthening public participation' and improved inter-ministerial and centre-state coordination for the cleaning of the Ganga.

Part of the public participation element will be the Ganga Volunteer Corps - another soon-to-be launched



initiative to channelise public volunteer services for cleaning of ghats and generating awareness. The Nirmal Ganga Bhagidaari project will see NGOs being involved in Ganga cleaning.

The primary thrust of the Namami Gange project is pollution abatement and building sewerage infrastructure with special focus on the critical Kanpur to Varanasi stretch. Pious refuse management is also a key element of the exercise and the requests for proposals have already been invited and firms shortlisted for the purpose.

Source: http://articles.economictimes.indiatimes.com/2015-05-25/news/62624797_1_ganga-rejuvenation-clean-ganga-namami-gange

Clean Ganga Mission will Utilize Geospatial and Crowd-Sourcing Technologies for Pollution Monitoring of River Ganga

To effectively plan and monitor the Government of India's flagship program for Ganga Rejuvenation – "Namami Gange", the National Mission for Clean Ganga (NMCG), Ministry of Water Resources, River Development and Ganga Rejuvenation and National Remote Sensing Centre (NRSC), Indian Space Research Organizations signed a Memorandum of Understanding MoU on 23rd June 2015, at New Delhi. The objective of the MoU is to utilize the geospatial and crowd-sourcing technologies for pollution monitoring in river Ganga. Shri TVSN Prasad, Mission Director, NMCG and Shri PG Diwakar, Deputy Director, Remote Sensing Applications Area, NRSC, Indian Space Research Organization (ISRO) signed the MoU in the presence of Union Minister of Water Resources, River Development and Ganga Rejuvenation Sushri Uma Bharti. Speaking on the occasion the Minister said ISRO's participation in the Clean Ganga Mission is need of hour. She emphasized on focusing the key issues related with the cleaning of river Ganga as per the situation demanded.

After signing of MoU, the Minister launched Bhuvan Ganga Mobile Application and Web Portal. Bhuvan Ganga Portal is an exclusive web portal deployed in ISRO Bhuvan's geoportal with all geospatial layers related to river Ganga. It will be used as a tool to support decision making and planning for the Clean Ganga Mission. Bhuvan Mobile App is a user-friendly android based application to enable public to collect and report information on various pollution sources that affects the water quality of river Ganga. This mobile app will provide a platform for crowd sourcing to monitor pollution in river Ganga and enable decision makers to prioritize interventions. The first version of the application is made available for download in the Bhuvan Ganga web portal (<http://bhuvan.nrsc.gov.in/ganga>).

NMCG has identified the need of utilizing the space and other cutting-edge technologies for effective planning and monitoring the activities taken up for Clean Ganga Mission. NMCG and NRSC have found it mutually rewarding to partner for utilizing space technology in the Clean Ganga Mission and have agreed to have a long term partnership through this MoU. Both the parties would work together in the areas of applying geospatial technology in the various aspects of Clean Ganga initiative. The areas of mutual interest as identified include, use of geospatial technology for water quality monitoring, development of mobile application for enabling community participation in monitoring / up-linking of field data, customizing Bhuvan geoportal for visualizing, query and analysis of datasets related to Ganga basin and Co-ordinate and initiate necessary linkages with other agencies, with regard to geo-spatial database and web-based applications for river water quality monitoring.

Source: https://nmcg.nic.in/writereaddata/fileupload/0_MOUNewsRelease.pdf

SulabhENVIS Centre on: Hygiene, Sanitation, Sewage Treatment Systems and Technology



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