> Hon'ble Prime Minister's vision urged us to develop the "need for new thinking for river cities." Cities should be responsible for rejuvenating their rivers.

In conversation with

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STRENGTHENING PEOPLE-RIVER CONNECT TO SPUR THE NEXT PHASE OF NAMAMI GANGE

*In an exclusive conversation with Water Digest, **Shri G Asok Kumar**, Director General of National Mission for Clean Ganga (NMCG) shares a holistic view of measures taken by NMCG for prevention, control and abatement of environmental pollution in river Ganga while increasing the livelihood opportunities of people living near the river and its tributaries.*

WATER DIGEST (WD): Urban20 (U20) is a major government initiative under the ambit of India's G20 Presidency. One of the thrust areas of U20 is to promote urban water security. India is working to provide safe drinking water to every household, reducing water loss, improving groundwater management and recharge, and focusing on aquifer mapping and river rejuvenation. What are your views on all of these initiatives?

G Asok Kumar (GAK): The Government of India's urban agenda, especially towards urban water security, was manifested much prior to India acquiring the G20 Presidency. In 2014, the current government had announced several key policies and schemes that can be understood as a definite step towards promulgating urban water security. These include the announcements for the *Namami Gange* Mission, Swachh Bharat Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), and Smart Cities, among others. Another pathbreaking step was the establishment of the Ministry of Jal Shakti as a separate entity with all water-related schemes, departments, and policies under its aegis. This was critical, as it was reflective of the government's stand of seeing all water as one, i.e., surface water, groundwater, drinking water, and storm water.

All these varied initiatives have begun to bear fruit in the last eight years, with definite strides taken in the right direction. In fact, two months ago, in January 2023, the Ministry of Jal Shakti organised the first "All India Annual State Ministers Conference on Water" with the theme "Water Vision@2047" in Bhopal, Madhya Pradesh. This was part of the Hon'ble Prime Minister Shri Narendra Modi's India@2047 plan. During the conference, thematic sessions were conducted on water security, water usage efficiency, water governance, water infrastructure, and water quality. The 5P mantra that we follow includes: political will, public financing, partnerships, public participation, and persuasion for sustainability - reinforcing the necessary standpoints to achieve desired goals.

WD: How do you see the success of the National Mission for Clean Ganga (NMCG)? Please share some of the biggest objectives that you have achieved, and updates on your flagship projects.

GAK: The success of the efforts made by the National Mission for Clean Ganga lies primarily with the people residing in its basin, who have wholeheartedly supported the *Namami Gange* Mission and transformed into a *Jan Andolan* or people's movement. This is achieved due to the continuous support of all stakeholders and the dedicated cadre of *Ganga* saviours which include 3,500+ *Ganga Praharis*, 22,000+ *Ganga Doots*, 700+ *Ganga Mitra*, and other such groups.

Since its launch, *Namami Gange* Mission has sanctioned over 423 projects worth Rs 35,346 crore under various project components, of which 236 projects have been completed and the remaining are in various stages of execution. With regard to sewerage infrastructure, 182 projects worth Rs 28,685.54 crore have been sanctioned to create or rehabilitate a cumulative treatment capacity of 5,658 Million Litres Per Day (MLD) and laying of 4,309 km sewer network. Additionally, innovative best practices such as the Hybrid Annuity Model (HAM) under the Public-Private-Partnership (PPP) Mode, and One-City-One-Operator (OCOP) Model of NMCG have not only enhanced accountability in wastewater infrastructure creation, service delivery, and accountability, but have also increased private sector participation in the sector.

The holistic and scientific interventions under the *Namami Gange* Mission have led to improved water quality and overall health of the river. The stretch up to Haridwar has reached Class A, which is the highest standard for water quality. In 2014–15, there were two polluted stretches in category V and one each in category II and III. In comparison, in 2022, two of the stretches (Haridwar to Sultanpur and Buxar to Bhagalpur) are now identified as 'unpolluted' and the remaining two are in category V (Kannauj to Varanasi and Triveni to Diamond Harbour), wherein they are exceeding the accepted range by minor points.

The success of NMCG can also be witnessed in the return of biodiversity and the rejuvenation of the riverine ecosystem. There has been a significant increase in biodiversity sightings of species such as Gangetic Dolphins, Otters, Hilsa, Gharials, etc., along with afforestation activities conducted in increasing the green cover, which extends over 30,000 ha of area in the *Ganga* River basin.

Some of the other key achievements include the release of the 2018 Ecological Flow (e-Flow) notification issued for the River *Ganga* to ensure that the river has at least the minimum required environmental flow of water

even after the river flow is diverted by projects. This was necessary to regulate the minimum flow in the river and to ensure river health in the long term. The 100-year-old *Sisamau Nala* (140 MLD of wastewater generation) in Kanpur has been fully tapped, along with the interception and treatment of the untreated sewage entering the *River Ganga* from *Assi Nala* at the upstream of famous ghats at Varanasi by the 50 MLD Ramana STP (Sewage Treatment Plant).

WD: Please tell us about the scope and focus of Phase-II of *Namami Gange* program.

GAK: Phase II of the *Namami Gange* program will focus on the convergence of different schemes, the piloting of new projects, augmenting the interventions taken up in the first phase with a focus on the ongoing projects with O&M, and interventions on the tributaries and sub-tributaries of the *Ganga*. There will be a focused emphasis on enhancing the treatment capacity of the *Ganga* tributaries such as the River *Yamuna*, *Gomti*, *Kali*, *Hindon*, etc. Alongside, Phase II will also continue to monitor and implement ongoing projects, with the overarching goal to scale up the river rejuvenation in the entire *Ganga* basin comprising of the eleven basin states.

Furthermore, *Arth Ganga* will be a major intervention area under *Namami Gange* Program II. In line with the Hon'ble Prime Minister's vision of *Atmanirbhar Bharat*, interventions are being envisaged and implemented to increase skill development opportunities. For this, training workshops on natural farming are being carried out throughout the basin, and *JALAJ*-based livelihood models have been implemented in 36 locations already. Moreover, innovative concepts such as *Ghat Pe Haat* are also being promoted to enhance livelihood opportunities and strengthen people's connection with the river.

The other priority areas include scaling up of public-private-partnership efforts, circular water economy model, faecal sludge management, and septage management.

WD: Please enlighten our readers about the objectives of *Arth Ganga*. What is the mandate given to this initiative?

GAK: The *Arth Ganga* concept was envisioned by the Hon'ble Prime Minister of India Shri Narendra Modi, during the first National Ganga Council on December 14, 2019 at Kanpur, Uttar Pradesh. This self-sustaining economic model is based on the symbiotic relationship between nature and society by strengthening people-river connect and adopting an ecologically conscious sustainable development framework. The model strives to contribute at least 3% of the GDP from the basin itself.

The mandate comprises multi-sectoral interventions ranging from the development of natural farming to livelihood interventions that are to be achieved through synergies at different institutional levels, coupled with the adoption of decentralised governance practices. Various ministries, departments, and organisations have been brought on board to realise the vision of the model. In fact, the interventions envisaged and being implemented are in support of the country's commitments towards the UN Sustainable Development Goals (SDGs).

The key verticals of intervention for the *Arth Ganga* model, along with select activities, are Zero Budget Natural Farming (ZBNF), monetisation of reuse of sludge and treated wastewater, promotion of livelihood generation opportunities, revival of cultural heritage and tourism, increased public participation, and institutional building.

Some of the key milestones achieved since the announcement in 2019 include collaboration with the Ministry of Agriculture and Farmers' Welfare, Art of Living, and Patanjali for the promotion of natural farming; MoU (Memorandum of Understanding) with Sahakar Bharati for setting up "75 *Sahakar Ganga Grams*"; regular training workshops on natural farming for farmers in the *Ganga* Basin and beyond; release of 65 lakh+ IMC (Indian Major Carp) and Mahseer fingerlings, 76,000+ adult Hilsa, and 5.8 lakh spawns; release of the National Framework for Reuse of Treated Wastewater; the Commissioning of 20 MLD Tertiary Treatment Plant for supply of treated wastewater to IOCL's Mathura refinery; launch of *JALAJ* Livelihood Model (biodiversity sensitive livelihood) at 36 locations; regular activities for strengthening the people river connect with 30,000 *Ganga Doots* and 3500+ *Ganga Praharis*; historic establishment of River Cities Alliance with 107 member cities, including one international city (Aarhus, Denmark); collaboration with the Ministry of Tourism, the Ministry of Culture, and IWAI (Inland Waterways Authority of India; the Ministry of Ports, Shipping and Waterways for promotion of tourist circuits, development of *Gangotri Dham* (under

the PRASAD scheme), recreational activities, and development of community jetties by IWAI.

WD: How are you addressing the 'urban element' of river management programs? Tell us more about your projects that support 'river sensitive development' in the cities of the *Ganga* River basin.

GAK: Cities are often described as engines of economic growth, and *Namami Gange* has pushed the envelope for a strong urban agenda in its 100+ *Ganga* Basin River cities. Under its River Management Programs, it endeavours to engage with city administration, planners, policymakers, and other relevant stakeholders and help them take collective responsibility for being river-sensitive and water-sensitive cities.

The initiatives undertaken are in alignment with the Hon'ble Prime Minister's vision, which urged us to develop the "need for new thinking for river cities". Cities should be responsible for rejuvenating their rivers. It has to be done not just with the regulatory mindset but also with the developmental and facilitatory outlook.

The key initiatives include the framing of strategic guidelines for "Making River Sensitive Master Plans", in collaboration with the Town and Country Planning Organisation (TCPO). The guidelines titled "Making River Sensitive Master Plans" help city planners understand how to integrate river-sensitive thinking into a master plan and guide how planning tools and instruments within the master plan are to be used effectively for planning and managing urban rivers. Similarly, the framework titled "Urban River Management Plan" advocates a 10-point agenda for all river cities to follow. A third guideline titled "Urban Wetland/ Water Bodies Management Guidelines" is a toolkit to maintain urban floodplain wetlands by mapping wetlands/waterbodies and their attributes for the identification of critical wetlands and the finalisation of action plan for wetland conservation/ restoration.

The urban agenda has also been emphasised in the *Arth Ganga* activities. Key activities include the development of a National framework for water reuse under the India-EU Water Partnership; establishment of NMCG-TERI Centre of Excellence on Water Reuse which is the first of its kind in India; MoUs signed with countries like Netherlands, Denmark, Japan, Norway and Israel to promote circular water economy through technology, policy and water quality; establishment of 20 MLD Tertiary Treatment Plant established in Mathura IOCL for the supply of treated wastewater for non-potable purposes; MoUs signed with various ministries such as railways, power and agriculture for using treated wastewater for non-potable purposes; and MoU with Bhabha Atomic Research Centre (BARC) for using innovative technologies like DC Electron Beam Accelerator Technology for treatment of effluents discharged.

Finally, the historic "River City Alliance" is a significant step taken towards river sensitive urban development. It provides its 100+ member cities with a platform to discuss and exchange information for sustainable management of urban rivers.

WD: Which new international collaborations and partnerships are poised to boost the *Namami Gange* program further?

GAK: The *Namami Gange* programme has always actively engaged in international collaborations and partnerships to boost the program. For instance, the World Bank, in its second phase, has extended its support to finance sewage networks and treatment plants in select urban areas to help control pollution discharges.

The mission is also working closely with the Japan International Cooperation Agency (JICA) for select projects in Varanasi and under the *Yamuna* Action Plan. There is also a focus on sharing advanced skills and technologies, such as Johkasou technology for decentralised wastewater treatment.

Several countries, such as the Netherlands, Japan, Germany, the UK, and Israel, have shown interest in extending their expertise and cooperation. For instance, under the India-Israel collaboration, a Memorandum of Understanding (MoU) is signed for cooperation in water resource management and development in areas including techniques in the efficient use of water resources, recycling/reuse of wastewater, desalination, aquifer recharge, and in-situ water conservation techniques. Similarly, the Indo-Dutch partnership focuses on strengthening the collaboration between the two countries in the fields of water, delta management, and water technology.