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INDIA'S WATER FUTURE

NEED FOR A PARADIGM SHIFT IN LEGAL AND POLICY FRAMEWORK

Webinar Booklet

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Webinar Booklet

India's Water Future

'Need for a paradigm shift in legal & policy framework'

Friday, 09 October 2020 | Time: 5.00 PM IST | Zoom Webinar

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Moderated by **Mr. Sanjay Sen**, Senior Advocate (SOLPO Research) and **Mr. Subrat Ratho,** IAS (Retd.)

The Society for Legal and Policy Research (SOLPO Research) is organising a webinar on matters of the law, policy, and administration concerning the use of water and its other crucial dimensions such as human rights, human health and social and environmental concerns. The theme of the webinar is as follows: 'India's water future: Need for a paradigm shift in legal & policy framework'.

INDIA AND HER WATER SECTOR

India suffers from crippling water poverty being home to 18% of the world population and with only 4% of the usable water resources of the world. Further, about 71% of India's available water resources are located on 36% of the country's land[1]. Besides, India's water crisis is exacerbated by politics, poverty and inequality[2].

With rapid population growth, India's demand for water resources is increasing alarmingly. By 2030, India's water demand will be twice the available supply. While ground water level is declining at the rate of 10 cm per year, almost 75% of surface water is contaminated due to discharge of wastewater into the water bodies[3]. Climate change has increased repetitive cycles of flood and drought occurring at the same time in different parts of the country. The water scarcity problems of a developing India are compounded by water pollution issues. Population growth and rapid industrialization have turned large rivers into fetid sewers. There is an urgent need to adopt sustainable water programs that can help India use her water resources in a judicious and effective way. India's cities and industries need to use water more effectively, and there needs to be massive investments in sewers and wastewater treatment plants.

Though the Indian economy has grown and strengthened since economic liberalization in the 1990s, India has failed to make proportionate strides in developing her water and sanitation sector. India has been slow to urbanize and as of 2010 30 % of India's population is conservatively

[1] P. Pandey, Bangladesh, India, and Fifteen Years of Peace: Future Directions of the Ganges Treaty, Asian Survey, 54(4), 2014, pp. 651-673, 651
[2] P. Cullet, Water Law, Poverty and Development: Context for water law and water sector reforms, Oxford University Press, 2009
[3] Saba Ameer , Aqsa Rafi and Areeb Ahmad, Interlinking of Rivers: Concerns and Benefits, Journal of Civil Engineering and Environmental Technology, 3(6), 2016, pp. 544-548, p. 546 @http://www.krishisanskriti.org/vol_image/11Jun201610063714%20%20%20%20%20%20%20Saba%20Ameer%20(End%20main%20dalna%20hai%20%20%20%20%20%20544-548%20%20%20%20%20%20%20%202.pdf

classified as 'urban'[4]. Only 48% of the Indian urban population has access to piped water supply through house connections, compared to 58% in Pakistan, 67% in Sri Lanka, and 95% in China[5]. 4,861 of the 5,161 cities in India do not have even a partial sewerage network, and only 21% of the wastewater generated in the country is treated[6].

THE GOALS SET BY THE NDA GOVERNMENT

In 2008, the Ministry of Urban Development of India had set a national service benchmark goal of continuous, around-the-clock water supply services for all cities in India by 2031, and the supply of 135 litres/per day for all households. Underground sewerage systems are to be provided for all cities, and 100% of wastewater will be collected and treated. Recently and unsurprisingly, when the world's largest democracy went to vote in the 2019 elections, water was an inescapable issue[7]. The current political party in power, Bharatiya Janata Party's manifesto for the 2019 elections promised the "Jal Jivan Mission" that would ensure piped water to every household by 2024. The BJP Manifesto 2019 provides the following goals with respect to water:

"1. *Water is a critical resource but its management is spread across various departments, even at the Central level. We will form a new Ministry of Water unifying the water management functions to approach the issue of water management holistically and ensure better coordination. The Ministry will take forward the ambitious program, conceptualized by Shri Atal Bihari Vajpayee, for linking rivers from different parts of the country and ensure a solution to the problems of*

[4] High Powered Expert Committee for Estimating the Investment Requirements for Urban Infrastructure Services, Report on Indian Urban Infrastructure and Services, Ministry of Urban Development, New Delhi, 2011, http://icrier.org/pdf/FinalReport-hpec.pdf (accessed 28 May 2019)
[5] X Wu, R. Peri, Public-private partnerships (PPPs) in water and sanitation in India: lessons from China, Water Policy, 18, 153–176, (2016) https://www.researchgate.net/publication/311709104
[6] Ibid, p. 153
[7] The citizens of Kerala's Kuttanad refused to vote altogether, unless they are provided with regular piped water, a threat that seems to echo from villages around the country. In Chennai, a federation of residents associations along the IT corridor have asked all candidates to explain how they intend to provide drinking water and better sewage, See https://scroll.in/article/919991/the-election-fix-what-have-indias-politicians-promised-to-do-about-the-water-crisis

drinking water and irrigation. We will initiate work on this programme by constituting an authority;

2. 'Jal Jivan Mission' under which BJP will introduce a special program, 'Nal se Jal' to ensure piped water connection to every household by 2024.

3. We will ensure 100% disposal of liquid waste water and reuse of waste water under the swacch bharat mission.

4. We will ensure sustainability of water supply through special focus on conservation of rural water bodies and ground water recharge.

5. We are committed to ensure a clean and uninterrupted flow of river Ganga from Gangotri to Ganga Sagar. We will ensure that the sewerage infrastructure to deal with 100% of the waste water from the Ganga towns is completed and is functioning effectively, and take steps to enhance the river ow.

6. Ensure access to safe and potable drinking water for all households."

However, the same political party had made an identical promise in 2014, though since then, they have only steadily cut funding for its rural drinking water program[8].

DISCUSSION REGARDING THE JAL JEEVAN MISSION

The Central Government assistance to States for rural water supply began in 1972 with the launch of Accelerated Rural Water Supply Programme. It was renamed as National Rural Drinking Water Programme (NRDWP) in 2009, which is a centrally sponsored scheme with fund sharing between the Centre and the States. Under NRDWP, one of the objectives was to *"enable all households to have access to and use safe & adequate drinking water within premises to the extent possible"*. It was proposed to achieve the goal by 2030, coinciding with the United Nation's Sustainable Development Goals. The present government has restructured and subsumed the ongoing National Rural Drinking Water Program (NRDWP) into Jal Jeevan Mission (JJM), the umbrella scheme to provide Functional Household Tap Connection (FHTC) to every rural household i.e., '*Nal Se Jal*'

[8] In 2014-15, only 0.6% of total government funding was allocated for national rural water development agency and by 2018-19 even this had shrunk to 0.2%, See https://www.livemint.com/politics/policy/under-nda-rural-drinking-water-takes-a-back-seat-1554649311653.html

by 2024. The goal of JJM is to provide functional household tap connection to every household with service level at the rate of 55 litres per capita per day[9]. There are many fronts to the umbrella Jal Jeevan Mission including river interlinking, water and sewage treatment, and irrigation, which also need government capex.

In the seven months of 2019-20, around 84.83 lakh rural households were provided with tap connections. However, the government figures suggest that out of 19.04 crore rural households in the country, only 3.23 crore households have tap connections while the remaining 15.81 crore households are yet to be provided with tap connections[10].

A. Primary issues regarding the Jal Jeevan Mission

I. The current budget has earmarked ₹28,261.59 crore for the scheme. There are wide variations in the estimated investments across states and would depend on the quantity of available drinking water, quality of water for drinking purposes, geography and terrain. The cost could vary from INR 18,000+ in hilly state of Uttarakhand to INR 3,000 in Karnataka[11].

   The investments would be towards the key components in a piped drinking water project which are - (a) EPC or the civil work related activities – Construction of reservoirs, other civil structures etc. (b) Water treatment – Based on the quality of water in the area, water is treated and then sent across for drinking purposes (c) Pumps / valves – Used for transferring water from source to reservoirs and also in the distribution network (d) Distribution – From the mains to village level and then to the house-holds through the pipes. The overall cost across segments would vary based on the projects (access to drinking water, quality of water, terrain etc.), but

[9] https://jalshakti-ddws.gov.in/sites/default/files/JJM_note.pdf (accessed on 5.10.2020)
[10] Ibid
[11] Arshad Perwez, Suhas Harinarayanan, Aishwarya Pratik Sonker & Manish Agrawal, India Strategy Nal Se Jal-Piped water for all, JM Financial Institutional Securities Limited, Mumbai, India, 2019, https://www.jmfl.com/docs/default-source/default-document-library/india_strategy_water_05july2019.pdf?sfvrsn=0 (accessed on 5.10.2020)

on aggregate, the major cost would be on distribution pipes (40%), followed by on EPC-Civil work (25%), Water treatment (25%) and Pumps and valves (10%)[12].

The major issues impeding the successful implementation of the Jal Jeevan Mission could be the following:

- Water is a state subject, making it that much more challenging to implement plans. With less than 18% of the country covered by a piped water supply network, this means the task of connecting unserved rural areas, especially in states run by the 'opposition' parties will not be easy. Multiple local government agencies will be involved, making the task even more challenging.

- Successful implementation of the Jal Jivan Mission would amount to the spending of at least ₹5.6 trillion-6.3 trillion over FY 20-25 which would be almost double of the spending on water and sanitation over FY14-19[13].

- The Government has only two sources of financing infrastructure development in the sector- tax revenues and user charges which are not efficiently used[14]. To solve the growing water crisis, the solution that is proposed and pushed by world bodies such as WTO and IMF through international agreements such as GATS is privatization of water, which in effect leads to treatment of water as a commodity[15].

- The National Water Policy (NWP) 2002, encourages private-sector participation in the planning, development and management of water resources. The NWP was motivated to encourage private interest in the water sector to introduce innovative ideas, generate

[12] Ibid
[13] Supra, Note 11
[14] John Briscoe and RPS Malik, India's Water Economy: Bracing for a turbulent Future, The World Bank, Agriculture and Rural Development Unit, South Asia Region, New Delhi, India,2006, http://web.worldbank.org/archive/website01291/WEB/0__CO-64.HTM (accessed on 28 May, 2019)
[15] Sampath, Anitha & Kedarnath, Balakrishnan, Water Privatization and Implications in India, 2016, @https://www.researchgate.net/publication/238078636_Water_Privatization_and_Implications_in_India/citation/download (accessed on 28 May, 2019)

financial resources, introduce corporate management, and improve service efficiency and accountability[16]. This position has been watered down by the National Water Policy, 2012 which laid emphasis on water resources being managed with community participation and that government may associate with private interest to improve water delivery and services on a sustainable basis [17].

- The private sector can be involved in the following manner- (i) though service contracts executed between the government and private parties lasting for 1-3 years; (ii) through concession agreements, which is a public-private partnership (PPP) model; and (iii) complete transfer of government interest to a private party.

- A deep dive into India's experience with PPP in the water sector may provide some answers regarding way forward in implementation of the Jal Jeevan Scheme. Maharashtra and Gujarat can be looked at for a few examples. Firstly, Nagpur's municipal body (a city in Maharashtra) launched a series of initiatives towards an integrated development of its water sector including a continuous water supply project for 10% per cent of its population. The municipal body partnered with private entity, Vishvraj enterprise to supply potable and reused water to the city population. The city municipal body decides on the water tariff and the private partner gets paid a fee for every unit (metre cube) of water supplied, billed and collected. The PPP model was to ensure that every urban household gets tapped water that is metered and for 24 hours. Secondly, Rajkot's municipal body (a city in Gujrat) revamped its entire solid waste

[16] Clause 13, National Water Policy, 2002 - Private sector participation should be encouraged in planning, development and management of water resources projects for diverse uses, wherever feasible. Private sector participation may help in introducing innovative ideas, generating financial resources and introducing corporate management and improving service efficiency and accountability to users. Depending upon the specific situations, various combinations of private sector participation, in building, owning, operating, leasing and transferring of water resources facilities, may be considered. See, Government of India, Ministry of Water Resources, National Water Policy, 2002, @ http://mowr.gov.in/sites/default/files/nwp20025617515534_1.pdf (accessed on May 29, 2019).

[17] Clause 12.3- Water resources projects and services should be managed with community participation. For improved service delivery on sustainable basis, the State Governments / urban local bodies may associate private sector in public private partnership mode with penalties for failure, under regulatory control on prices charged and service standards with full accountability to democratically elected local bodies., See Government of India, Ministry of Water Resources, National Water Policy, 2012, @ http://mowr.gov.in/sites/default/files/NWP2012Eng6495132651_1.pdf (accessed on May 29, 2019).

management system, making it one of the cleanest cities in the country. Rajkot partnered with Hanjer Biotech Energies Pvt. Ltd. (HBEPL) for establishment of the waste processing plant on BOO basis. The plant started full- fledged operations in 2006. The municipal body's contribution was acquiring land and leasing it to HBEPL for 200 years @ Rs. one per sq meter per year (1/71 of $1). The successes/failures of these partnerships have to be studied.

II. The second issue is regarding availability of water. India has usable water of 1,101 BCM (billion cubic metres), with 63% sourced from surface water and 40% from the ground-water sources. The country generates 410BCM of ground-water annually. In India, availability of surface water is greater than ground water. Ground water is used for 85% of rural domestic water requirements and for almost 50% of urban requirements, indicating its importance[18].

- At an aggregate level, there is higher supply of ground water in the country then demand, but there are high variations among the region leading to stress in water levels. The incremental areas added under irrigation has been due to expansion of tube wells and a decline in areas under traditional mode of irrigation such as wells, tanks etc. which also used to conserve water and ensured no decline of ground water levels. Incentives such as credit for irrigation equipment and subsidies for electricity supply have enabled higher usage of pumps for irrigation and thereby increased the usage of ground water for irrigation. Major usage of ground-water is towards irrigation 90%, while domestic and industrial use constitute only 10% of the ground water usage. The ground water levels have shown decline and as in Jun'17 pre-monsoon data, 61% of the measured wells reported decline in water levels (as compared to decadal averages), while 39% showed, largely marginal increases[19].

[18] Supra, Note 11
[19] Supra, Note 11

- In addition to issues of water demand, the quality of water also remains a concern due to various contaminations. Overall, 70% of the fresh water sources in the country are contaminated and as per Niti Aayog, India ranks 120 out of 122 countries in terms of water quality. The sources of contamination include pollution by landfills, septic tanks, leaky underground gas tanks, and from overuse of fertilizers and pesticides.

- To what extent can efforts such as micro irrigation, Namami Gange Project and re-charging of ground-water ease water stress?

III. Another issue that requires deliberation is whether water supply and consumption that requires to be based on some economic pricing model? While there may not be a consensus on pricing of water, particularly the principles that requires the user to pay the economic value of water, there a general recognition that failure to price water has led to wastage of an exhaustible natural resource. The policy documents evolved since 1987 onwards have not directly addressed this issue. Is it possible to evolve a mechanism that is both equitable and reduces wastage of water? While many States have a water tariff of sorts, such tariff does not fully recognize the economic cost / value of water. Therefore, the first endeavor should be towards recognition of the cost / economic value of water, while the more contentious issue of recovery of cost may be the second step. In this context the following issues emerge:

    - A graded water charge where the basic human rights elements are adequately factored can provide a base model for pricing of water. The reason why recognition of cost is important is because several authors and experts working in this area have felt that commercial and industrial use of water has been inadequately priced. In fact, there is no disclosed/ transparent method of pricing for industrial use. In Sahibabad Industrial Area, Ghaziabad (NCR Region), there are several micro-industrial units occupying no more than 500 Sq. Ft. for producing mineral water using Reverse Osmosis Units[20]. This industrial activity

[20] Sarika Malhotra, The real cost of water, Business Today, 2016, https://www.businesstoday.in/magazine/cover-story/economics-of-water-can-have-a-debilitating-effect/story/232047.html(accessed on 5.10.2020)

extracts ground water runs it through the RO unit, and sells it in jars or pouches. A RO unit that purifies about 1500 litres of water per hour costs about Rs. 2.75 lacs. The entire enterprise costs around Rs. 10 lacs[21]. The depletion of water table in the region is telling. It has now fallen from 16.35 MBGL in 1998 to 54.23 MBGL in 2013. It appears that no charges were levied for such extraction of ground water[22].

- In the agricultural sector, Government policies have encouraged reckless water consumption. Between 1951 and 2009 the number of electric pump sets in use from 26000 to 16.2 million and diesel pump sets from 83000 to 9.2 million[23]. States like Andhra Pradesh, Tamil Nadu, Karnataka, and Punjab, which are ground water stressed are known to provide either free power to farmers or charge farmers on a fixed rate and not on actual consumption[24].

- Industrial consumption of water in the energy sector has the potential of causing a catastrophe. Approximately 40% of India's thermal power plants are located in highly water stressed areas. Between 2013 to 2016 several power plants have shut down operations on account of water shortages. It appears that about 4000 Litres[25] of water is required to produce 1 MWH of coal based thermal electricity. If a power plant runs for 24 hrs. over 365 days, the usage of water for generating electricity can then be estimated. India has about 200 GW of coal based thermal generation as on today. The current MoEF norms specifies use of about 3500 Lts for 1 MWh (35 Cu. M / 1 MWh) of coal based electricity generation. From some of the documents it appears that the power companies who utilize such water as essential raw material pay an insignificant amount towards their water bills.

[21] Ibid.
[22] ibid
[23] Tianyi Luo & Giulia Christianson, Water Shortages Cost Indian Energy Companies Billions, World Resource Institute, 2018, https://www.wri.org/blog/2018/02/water-shortages-cost-indian-energy-companies-billions#:~:text=New%20WRI%20research%20finds%20that,hindering%20returns%20to%20their%20investors. (accessed on 5.10.2020)
[24] Ibid.
[25] Supra, Note 19

While this differs from State to State depending on the source of raw water, it appears that in most cases the water cost in the overall generation cost / tariff is between 0.2 to 0.6 percent. For example, JSW (Vijaynagar) pays Rs. 20 per Cubic Meter of water, which translates to 0.9% of the price at which it sells electricity[26].

- On the issue of pricing, there are several possible economic modules. Ramaswamy R. Iyer, while rejecting the two extreme views that water being a basic need and a right and therefore, must be free versus that water is an economic good and must be priced accordingly (to ensure full cost recovery), takes a middle path. In his view no one should be denied the basic water requirements because he/ she cannot afford to pay the price. Therefore, a minimum quantum of water must be free to all or at least priced in a manner that is affordable. However, beyond that, the full economic price even for domestic use should be recovered[27]. The economic or fully allocated cost principle determined through a transparent basis, based on normative parameters (along with principles of cross subsidy and subsidy, wherever necessary) can be applied to ensure recovery of cost from sectors like agriculture (with exemption / subsidies for marginal and small farmers), industry and commerce.

- To allow recognition of cost or economic value of water, there is a need for an overarching water law. While the debate in relation to the jurisdiction of the Centre v. the State about water is open and far from any immediate resolution, is it still possible to create a coercive legal framework on the subject? While the Centre has limited jurisdiction to the extent provided in Entry 56 of List I, there are instances of Central interventions such as legislating the Water (Prevention and Pollution) Control Act, 1974. The said legislation was introduced under Article 252 of the Constitution of India. Apart from such possibility, ability to control water usage and pricing by the Central Government can be established in

[26] Supra, Note 19
[27] Ramaswamy R. Iyer, Water and the Laws in India, Sage Law, Delhi, 2009, p.606

various Entries under List III, such as, Entry 20, Entry 32, Entry 33, Entry 33A, Entry 34, Entry 36 and Entry 37. Further, pursuant to Supreme Court direction in the M C Mehta's case (Civil Writ Petition No. 4677 of 1985), the Central Government in 1997 notified the Central Ground Water Authority (CGWA). The CGWA is exercising jurisdiction across India. This coupled with the expansive jurisdiction of the NGT has provided a fillip to the Central Government's ability to regulate the water sector.

- Recently, on 24th September, 2020, pursuant to directions issued by NGT, the Department of Water Resources, RD and GR notified a set of new guidelines to regulate and control ground water extraction. While the guideline exempts the agricultural sector[28] along with domestic and certain other sectors, it is surely indicative of how Central government has proceeded on a subject that is politically contentious and it has limited legislative powers.

- At the outset, the 2020 ground water guidelines will apply pan-India, to States and UT that are not regulating groundwater. Further, norms specified in the Central guidelines will prevail over the State guidelines. However, nothing will prevent the State from having more stringent norms or conditions. The regulations (disguised as guidelines) is primarily based on securing right / permission to use water on the basis of certain disclosures made in the form of an application, which is then driven by grant / non grant of NOC by the CGWA or the State Authority (who will then follow Central norms if the State has norms that are less stringent). The guidelines provid that NOC to new industries (with exceptions to MSME) will not be granted in *over exploited assessment units*. There are guidelines for usage of ground water in mining and infrastructure sector. In the later, an interesting provision for over exploited units reads – that *"use of ground water for construction activity shall be permitted if no treated sewage water is available within 10 Kms radius of the site."*

[28] Major usage of ground-water is towards irrigation 90%, while domestic and industrial use constitute only 10% of the ground water usage.

- The 2020 groundwater guidelines also provide a schedule of Rates of Ground Water abstraction / restoration charges based on the category of user / usage. While pricing principles are not available in the public domain, it appears to follow a nature / purpose of use and deterrent model –firstly, different uses have different charges and then the areas are classified as *safe, semi critical and critical* and the charges progressively go up depending on criticality of supply / source.

- Hence, it is not entirely correct to say that constitutional limitations have restricted the ability of the Central Government to regulate water. The efficacy of this method of regulation and enforcement has to examined to appreciate whether this will achieve what the Central Government has in mind.

B. STATE WATER REGULATOR

In India, a few states have established water regulators, primarily modelled based on laws that were promulgated in Maharashtra. The preamble of the Maharashtra Water Resources Regulatory Authority Act, 2005 will tell us that the regulator has been tasked with the following:

- Regulate water resources within the State
- Facilitate and ensure judicious, equitable and sustainable management, allocation and utilization of water resources
- Fix rate for water use for agriculture, industrial, drinking and other purposes
- & to do all matters connected therewith or incidental thereto

The powers and functions of the Regulator is quite expansive and is captured in Section 11, which, inter alia, includes the *power to determine the distribution of entitlements*, *establish water tariff system*, *fix criteria for trading of water entitlements and quota*, to *determine and ensure cross subsidies between categories of use*, if any, given by the Government are totally offset by stable funding from such cross-subsidies or Government payments of the water management and delivery system within the State, *power to revise*

water charges every 3 years etc. In the 2011 by an amendment (Section 16A) the State Government has now allocated to itself the power to determine sectoral allocation of water.

The other states that have set up a regulatory structure are AP (2009), Arunachal Pradesh (2006), UP (2008), J&K (2010), Kerala (2012) and Gujarat (2012, by GoG notification). The Planning Commission had examined various State laws and had suggested a Model State Water Regulatory System Act, 2011. Further, a draft National Water Framework Bill, 2016 has been in circulation, which in Section 22 provides principles of pricing of water and establishment of Independent Water Regulatory Authority at the State level. On matters of principles of pricing, the draft bill provides as follows:

- Pricing of water shall be based on differential pricing system in recognition of the right to water for life and its multiple roles, being part of history, culture and religion;
- Since water is a part of life, it cannot be denied to anyone on the ground of inability to pay;
- Water used for commercial agriculture and for industry or commerce may be priced on the basis of full economic pricing, or higher if needed;
- Water used for subsistence or vulnerable livelihoods may be priced at such rates as may be considered appropriate in the relevant socio-economic circumstances and may be left to transparent, participatory and equitable community decision;
- For domestic water supply, a graded pricing system may be adopted, with full cost recovery pricing for high-income groups, affordable pricing for middle income, and a certain quantum of free supply to the poor;

There are several insightful studies on this subject[29] that analyses the regulatory mandate from various perspectives, including principles of pricing – based on cost recovery (O&M cost) and management of subsidies, economic interest v. community rights, environmental concerns, regulatory independence etc.

The comity between State authority and the Central authority may be a matter of concern as more and more States legislate and create their own an intra State water regime. The

[29] Swaniti Initiative (Oct, 2017); Independent Water Regulatory Authorities In India: Analysis and Intervention, Prayas, Pune; Water Regulatory Authorities In India, Koonan and Bhullar (IELRC Policy Paper 2012-04)

Central groundwater guidelines 2020 will have a direct and substantial impact on economic activities in certain parts that are now recovering from the onslaught of Covid19. It has already resulted in stoppage / suspension of industrial activity in some parts of India and this may lead to some levels of stress that will have socio-political implication. In this context, the following issues need to be discussed:

- Is the present system of partial regulation of the sector (based on Central groundwater guidelines, EPA, NGT orders etc.) an adequate and efficacious way forward?
- Is it possible that the Central Government on the basis of NGT directions and other Central environmental laws be able to steer a larger reform in the Water sector?
- The legislations - State or Centre (including the central ground water guidelines and the draft Central bill, 2016) do not fully provide principles of pricing, is that an important gap in the present regime?
- Why is the quality of water – particularly potable water not touched upon in the mandate given to Water regulators?
- Should the laws provide for a Universal Supply Obligation when it comes to water supply?

C. The National River Linking Project or creation of a National Water Grid

The Union Government is developing the world's largest infrastructure irrigation project - the National River Linking Project (NRLP)[30]. The mission of this project is to ensure greater equity in the distribution of water by enhancing the availability of water in drought prone and rain-fed area. The NRLP will achieve this objective by transfer of water from water 'surplus' river basins where there is flooding to water 'deficit' river basins where there is drought/scarcity, through inter-basin water transfer projects.[31] The following issues need to be considered :

[30] Formally known as the National Perspective Plan.
[31] Swati Bansal, *National River Linking Project: Dream or disaster?*, Indiawaterportal. Read original document here: https://www.indiawaterportal.org/articles/national-river-linking-project-dream-or-disaster

- The project has been criticized for being based on faulty or outdated concepts of *surplus* and *deficient* basins, faulty ecological understanding, the ill-effects of dams, the human, ecological and economic costs involved, and for being technically implausible. Jayanta Bandopadhyay in an article in the Economic and Political Weekly[32] has stated that *Global experience shows how damaging such plans of large-scale water transfer are to the environment, economy and livelihoods of the people. Such plans have also proved a failure to either prevent floods or provide water on a sustainable basis. It is unfortunate that water policy in India remains a prisoner to such obsolete ideas.*
- Whether the present regulatory framework is sufficient to deal with an increase in inter-state water-sharing disputes?
- What are the international legal implications of the NRLP caused by the diversion of river water that is shared with neighboring countries to the NRLP?

[32] Jayanta Bandyopadhyay, *"Water Science in India Hydrological Obscurantism",* EPW, Vol. 47, Issue No. 16, 21 Apr, 2012

The SOLPO Roundtable Discussions

SOLPO Research is organizing a series of roundtable discussions to bring together legislation and policy makers, opinion creators and members of civil society to interact and engage on vital legal and policy issues.

The discussions in the initial phases will be more exploratory, towards creating an environment and direction for further research and analysis. SOLPO proposes to complete this assignment in structured phases with hard deliverables in the form of notes and suggestions, draft legislations, publications on policy and administrative imperatives. Limited stakeholder consultation in select regions is also being proposed. We hope that the roundtable series will spark conversations and encourage innovative multi-disciplinary thinking amongst the participants, whose opinion and comments will form an integral part of SOLPO's deliverables.

About SOLPO Research

The Society for Legal and Policy Research (SOLPO Research) is a New Delhi-based not-for-profit legal research institute. SOLPO Research serves as a centre for research, analysis and debate on laws, regulations and policies.

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