An Important Step in Reforming Water Governance

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While appreciating that restructuring two of the most important water institutions in the country is embedded in the alternative agenda proposed for the water sector in the Mihir Shah Committee report, this article asserts that new ideas and vision need new institutions.

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> The overthrow of opinion is not immediately followed by the overthrow of institutions; on the contrary the new opinions dwell for a long time in the desolate and haunted house of their predecessors, and conserve it even for want of a habitation
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> —Friedrich Nietzsche (1909–13)

Efforts at reforming the water sector, in general, and its governance, in particular, began during the time of the second United Progressive Alliance (UPA-2) government as part of the preparations for the Twelfth Five Year Plan in 2012. Mihir Shah, member of the then Planning Commission, had put several working groups in place to look at different aspects of the water sector—all headed by persons from either academia or civil society, instead of bureaucrats. Probably this was the beginning of a "paradigm shift," to borrow a term from Shah, in the water sector.

Ideally, the report under discussion, "A 21st Century Institutional Architecture for India's Water Reforms," needs to be looked at along with two other important reports that came out recently—the Draft National Water Framework Bill, 2016 and Draft Model Bill for the Conservation, Protection, Regulation and Management of Groundwater, 2016 (both of May 2016). However, space constraints may not allow us to do it here. The two reports had their origins in working groups of the Twelfth Plan, and two subgroups of the larger working group on water governance brought out the first versions of the National Framework Law and the Model Groundwater Bill. I would say that these three reports together constitute the water governance reform package. Interestingly, all these efforts were led by Shah, irrespective of a change in the government, ensuring continuity of ideas as well as approach.

The present report, to a great extent, reflects the issues, concerns, concepts, principles, values, and approaches articulated by many in academia and civil society for some time now. The suggested restructuring of the Central Water Commission (CWC) and the Central Ground Water Board (CGWB), and the creation of a National Water Commission (NWC) as "the nation's apex facilitation organisation dealing with water policy, data and governance" could be considered a necessary condition, though not a sufficient one, to restructure the water sector along more equitable, sustainable, efficient, and democratic lines.

Crisis and Possible Ways Out

A significant section of the report is devoted to analysing the deep-rooted crisis plaguing the Indian water sector and how to remedy the situation. It is to be appreciated that the proposed restructuring of the CWC and CGWB, two of the most important water institutions in the country, is embedded within this rigorous diagnosis and alternative agenda to reform the water sector. New institutions need new agenda. Or, to slightly modify the quote from Nietzsche above,[1] new ideas and vision need new institutions to house them. Probably nobody can disagree with the statement in the report that "20th century solutions would not work for 21st century problems." Of course, a complete break with the past may not be possible, not even desirable—history does teach us important lessons, and provides pointers to the future.

The diagnosis engages with most of the critical issues confronting the water sector today. They include the lack of integration of surface and groundwater; increasing gap between irrigation potential created and utilised; depletion of groundwater; pollution; conveyance loss and inefficient use; impact of increasing urbanisation and industrialisation; water conflicts; and climate change.

Probably the important issue of growing uncertainty in the water sector is something that needed a discussion in the report. Things are no more definitive the way we all imagined, say, 10–20 years ago. Things are in a flux. The whole rainfall regime (especially its pattern) is changing, as are land use–land cover, cropping patterns, and upstream abstractions, and all of them together are affecting the precipitation-run-off relationship. Climate change has exacerbated this uncertainty. In short, things are no more stationary, which is very often assumed in water management plans. There are significant knowledge gaps too.

An adaptive management approach is being posited as an effective way of dealing with increasing uncertainties, especially where there is a significant knowledge gap. Adaptive management allows us to make changes in the water sharing plan in the light of an improved understanding of the biophysical and social systems, new information resulting from changed or unforeseen circumstances, and new or updated models. It provides space to review and make changes in the principles that embed the water-sharing plan in accordance with the changing context and stakeholder preferences. It encourages stakeholders to discuss disputes in an orderly fashion while environmental uncertainties are investigated and better understood. It uses uncertainty as an important factor in decision-making.[2] If the suggested institutional architecture has to deliver what it promises, it probably needs to adopt something like an adaptive management approach to water sector issues and the institutions need to function within this approach.

As the report itself brings out, we have, till now, not been able to agree on how much water we have. We have different estimates and the report also provides two different numbers, without saying much about which one we should rely on for planning our water use. The official figure says we have 1,123 billion cubic metres (BCM) of water (see Section 1.1: Demand and Supply of Water in India, pp 22–23 of the report). Narasimhan, a researcher, says it is only 654 BCM. The difference in estimation is the order of 100%. Why this difference? Because they used different evapotranspiration (ET) rates—the Ministry of Water Resources used 45% ET and Narasimhan used 65% ET, which is supposed to be in line with global estimations. Mind you, we are already using 634 BCM. Apparently, by 2025, the demand for water would go up to 1,093 BCM and by 2050 it might touch 1,200 BCM. It is rather strange that the CWC, the main agency responsible for hydrological data, could not come with more empirically verified water availability figures. So one does hope that the NWC, through its Data Management and Transparency Division, would set up a nationwide process to monitor the important factors that have a bearing on ET, and come up with empirically verified values for different agroclimatic zones (or for basins and sub-basins) so that we know how much water we have in store for use.

Another area where the report could have been a little more forthright is the growing water reallocations from rural to urban and agriculture to industries. Of course, it does talk about increasing urbanisation and industrialisation and its impact on the water footprint, both in terms of quantity and quality. Also, it talks of the way water is used in coal-based thermal power plants and calls for a shift from an open-loop system to closed-loop system so that water can be saved (p 66). This is welcome.

However, we also need to ask more fundamental questions. For example, the report seems to agree with the current high growth paradigm through the industrialisation route. So it suggests ways to bring in more efficiency, and ways to fix pollution. Granting that these are important in themselves, should we not ask the question whether this high growth paradigm is, first, desirable, and second, whether it can be sustained given our limited water resources? Do we really need to increase our thermal power capacity? How and in what way is water getting reallocated from agriculture to industries and urban areas? What are the implications for rural livelihoods? What are the institutional ways to engage with these issues and the conflicts around them? These are core water governance issues, and the report does not sufficiently engage with them. The suggested institutional set-up would have to increasingly deal with these issues as we advance into the 21st century.

Equitable distribution of water does not seem to have got the same level of emphasis as some of the other concerns, for example, efficiency. Knowing some of the members of the committee personally and their viewpoints, this is not to imply that this has been purposeful. The issue of equity is seen basically in the context of providing water to each farm (*har khet ko pani*), which is a catchy slogan of the present government in Delhi. There is a preoccupation in the report with "har khet ko pani"—I could count it being used seven or eight times. Equating equity with "har khet ko pani" ties access to water or water rights to land rights, meaning how

much water one gets depends on the size of one's holding.

Delinking land rights and water rights, both in terms of surface irrigation and groundwater, has been one of the important demands from civil society since the pioneering efforts at equitable water distribution by Pani Panchayat in Maharashtra. Pani Panchayat, for the first time in the country, talked about per capita water allocation in the context of irrigation water. A few years ago, the South Maharashtra movement for equitable water distribution forced the state government to agree to partially restructure the massive Tembhu Lift Irrigation Scheme on the Krishna on equitable lines as a pilot. Thus, the preoccupation with "har khet ko pani" will keep large sections of the landless and rural artisans, who also depend on water for their livelihoods, out of the purview of productive water.

Institutional Architecture

The terms of reference (ToR) to the committee in a way assumes that the CWC and CGWB would continue to exist, and hence the mandate to the committee was more to suggest ways to reorient and restructure them at the basin and sub-basin levels; assess their capacity building needs; delineation of tasks, roles and responsibilities from the point of integrated and efficient water management; and financial implications. It has to be said to the credit of the committee that the report goes beyond this brief by suggesting the setting up of the NWC with eight divisions, which in a way abolishes both the CWC and CGWB.

However, the committee has been pragmatic enough to take on board the functions and personnel of both the organisations as part of the NWC. The first three divisions—Irrigation Reform Division, River Rejuvenation Division, and Aquifer Mapping and Participatory Groundwater Management Division—follow the two parent organisations pretty closely. Though the report talks about having multidisciplinary teams (and not just engineers and geohydrologists) in the NWC and in each of the divisions, with a proviso to recruit people from the open market, the bulk of the people would be from the parent organisations, coming with mindsets, interests, and ethos and culture shaped by the parent organisations. Breaking all these and making them carriers of the paradigm shift is going to be a difficult task.

The suggestion of a Data Management and Transparency Division and Knowledge Management and Capacity Building Division be created as full-fledged, separate divisions is to be welcomed. Also, the suggestion that both these divisions do their job in partnership with academic institutions and civil society organisations is a significant one, which is also in line with recommendations of the Twelfth Plan Working Group on Water Database Development and Management led by A Vaidyanathan.

However, there is scope to have a relook at some of the other suggested divisions and their mandates. For example, having an Irrigation Reform Division, River Rejuvenation Division, Aquifer Mapping and Participatory Groundwater Management Division, and Water Security Division as separate divisions may go against the grain of integrated water planning, use, and management, which is one of the core ideas of the paradigm shift. Adopting water security and ecosystem needs as the key organising principles, we can integrate all these four separate divisions into one that could be called a watershed division. This division through its own centres in each of the river basins/sub-basins, and in partnership with academic institutions and civil society organisations, can prepare water security plans, starting from micro-watershed to milli-watershed, sub-basin to basin in a nested manner by integrating surface and groundwater and also local and exogenous water coming from outside that particular hydrological unit (primarily from the exiting medium and major dams).

This integrated institution can also make environmental flows an integral part of the water security plan. All what is said to be done under these separate divisions like irrigation reforms, participatory groundwater mapping, and so on, could be taken up in a much more integrated manner under this watershed division. By treating all these as separate divisions, especially having separate divisions for surface irrigation and groundwater management, there is a danger of slipping into sectoral silos. It is also against the spirit of Clause 4.1.3 of the report (pp 117–18) that talks about the need to treat surface and groundwater together. It says,

> The organisation needs to view both groundwater and surface water in an integrated, holistic manner. CWC and CGWB cannot continue to work in their current independent, isolated fashion.

Probably it also reflects a tension between what is ideal and what is practical—the present structuring provides the existing CWC and CGWB their own separate spaces and areas of operation, and probably takes care of likely opposition from these well-entrenched institutions to any form of institutional reforms.

The title of the report, "A 21st Century Institutional Architecture for India's Water Reforms," promises more than what is in it. Institutional architecture for water sector reforms would entail much more than the NWC and its eight divisions. We need different participatory institutions at different scales. Such as integrated water users' associations at the primary level (going beyond the present-day water user associations, which are primarily canal-based irrigation associations that do not deal with non-irrigation needs and do not include non-irrigation users), their federations at different scales for management functions, and micro-watershed, sub-basin and basin organisations with representations from all stakeholders to perform governance functions such as water allocations, pricing, and conflict resolution.

The claim in the report that "River Basin Organisations have also been set up" (p 52) is not correct as there are no such organisations on any of the river basins in the country, except maybe the Tungabhadra Board, that too with a very limited mandate of managing the Tungabhadra dam and its waters. There are independent regulatory authorities in some of the states and more are likely to come up in others. The report does not talk about all these institutions and

how the NWC and its eight divisions would relate to them as part of a broader institutional architecture needed for water governance. Thus, the institutional architecture presented in the report could be considered a necessary condition, though not a sufficient one, for restructuring the water sector along the more equitable, sustainable, efficient and democratic lines that the report promises to do.

Finally, the question is—given the experience with various such reports, as well as the entrenched interests of the water establishment in general and of these two powerful organisations in particular, will Nietzsche be proved right once again?

NOTES

1 Nietzsche (1909–13): Section 8, Number 466, as quoted in Connick S and J Innes (2003): "Outcomes of Collaborative Water Policy Making: Applying Complexity Thinking to Evaluation," *Journal of Environmental Planning and Management*, 46 (2), pp 177–97.

2 For a detailed discussion on adaptive management, see Newsom, Malcom (1992, 1997, 2009): *Land, Water and Development: Sustainable and Adaptive Management of Rivers*, Oxon and New York: Routledge.