



Water

MOVES

A Quarterly Newsletter on Water Governance

CONTENTS

1

Uttar Pradesh Water Management and Regulatory Commission (UPWMRC) Act, 2008: Need for Civil Society Attention

Subodh Wagle and Sachin Warghade

8

Book Review

Resisting Reform? Water Profits and Democracy : Kshithij Urs and Richard Whittell
SAGE Publications, 2009

10

Book Review

Kosi Deluge: The Worst is Still to Come; The Report of the Fact-Finding Mission on the Kosi;
September, 2008

13

Report

Asia's Next Challenge: Securing the Region's Water Future

Vol.II Issue 02 | May 2009
For Private Circulation Only

Uttar Pradesh Water Management and Regulatory Commission (UPWMRC) Act, 2008: Need for Civil Society Attention

Subodh Wagle, Professor and Dean, IITB-TISS School for Habitat Studies, TISS, Mumbai (subodhwagle@gmail.com) and **Sachin Warghade**, Senior Research Associate, Resources and Livelihoods Group, PRAYAS, Pune (sachinwarghade@gmail.com)

Introduction

Under the rubric of reforms, fundamental, comprehensive, and often, irreversible changes are taking place in almost all economic and social sectors. These changes are predicated on market-based principles, which are accepted as part of the agenda for economic liberalization and globalization. The changes are also affecting governance of water, the most fundamental need of all life. The most disturbing fact is that most of these changes are taking place without adequate and informed public debate. As a result, even irreversible changes, like changes in the legal framework governing the water sector, are taking place without the knowledge of either the public or the elected representatives (many laws are passed without adequate debate in state legislatures).

The 'Uttar Pradesh Water Management and Regulatory Commission (UPWMRC) Act, 2008' passed recently in the legislative assembly of Uttar Pradesh (UP) is a latest addition to the legal reforms pursued in various states in India in the water sector. It was the state of Maharashtra that first enacted a similar law for establishment of 'Maharashtra Water Resources Regulatory Authority'

(MWRRA) in 2005. Arunachal Pradesh followed suit in 2006 and now Uttar Pradesh has taken the decisive step in 2008. Other states are planning for establishment of similar regulatory authorities in the water sector.

Establishment of a regulatory authority in water sector will have wide-ranging impacts on the public interest¹ in the water sector. This article attempts to give a brief introduction to the new regulatory law in UP and highlights the major areas of public concern. Since, the UP Act draws largely from the Maharashtra law, though with certain crucial differences, a comparison between MWRRA Act and UPWMRC Act is also provided.

Genesis of UPWMRC Act

The genesis of the UPWMRC Act can be traced to the processes related to market-oriented reforms in the water sector that are under way in different parts of the country. These reforms are guided by the principles of water governance popularly known as 'Dublin Principles', which were articulated and accepted by participants of the 'International Conference on Water and Environment' held in Dublin, Ireland

in 1992. One of the 'Dublin Principles' states that 'Water has an economic value in all its competing uses and should be recognized as an economic goal'. This particular principle proposes water to be considered as an 'economic good'. This perspective to water makes the management and governance of water amenable to market principles similar to those applied to any other economic good or commodity. Prescriptions such as 'privatization' and 'full cost recovery'² emanate from this market-oriented perspective of water governance.

In the post-globalization era, the national as well as state governments in India are taking forward various market-oriented reform initiatives in the water sector. The reforms, which began as part of development projects, are now gradually encompassing the policy and legal framework for water governance. From the recent changes in the regulatory frameworks in water governance, it is clear that the latest frontier of the reforms is the legal system for water sector in India. Majority of these reforms are driven by the technical and financial support from international aid agencies like the World Bank (WB). New laws like UPWRC Act and MWRA Act are poised to change the entire regulatory structure of water governance. Looking at the irreversible and fundamental changes that these legal reforms can bring, it is high time that citizens and water users groups, which are at the receiving end of these reforms, wake-up to address the issues of public interest.

Fundamental Change in Regulatory Framework

It is important to understand that the establishment of water regulatory authorities or commissions in states like Maharashtra, UP or Arunachal Pradesh is aimed at the establishment of what is called as 'Independent Regulatory Authority' or IRA. Such IRAs are already established in India, mainly in infrastructure sectors like telecom (Telecom Regulatory Authority of India), electricity (State Electricity Regulatory Commission), and also in service sectors like insurance. The Securities and Exchange Board of India (SEBI) also functions as an IRA for the securities market.

Within the given policy and regulatory framework, these IRAs are supposed to balance two things, viz., (a) interests of the service users, and (b) interests of the market, including the private sector players in the market. In doing so, the IRA is expected to ensure that a conducive environment is created for free and fair competition in the sector. To achieve this objective, naturally the IRA should be empowered

enough to take decisions and give orders regarding key economic matters like the terms of competition, price of services, distribution of various services or other benefits among various stakeholders. Hence, the IRA is often entrusted with powers equivalent to courts and as such these institutions are quasi-judicial in nature. Due to their quasi-judicial nature and due to the responsibility of regulation vested in them, these institutions are supposed to be 'independent' in their decision making process. Thus, the assumption is that by isolation from undue political influence, such independent institutions having sectoral expertise combined with judicial powers, can bring economic efficiency in the sector as a whole.

Before the IRA comes into existence, the key sector-level decisions are taken by government departments and ministries, thus making the decisions amenable to various political influences including genuine politics, vested interest politics and politics related to whims and fancies of particular ruling parties or ministers. Thus, in effect, the establishment of an IRA leads to transfer of a big chunk of regulatory function from the government departments and ministries to the newly established IRA. This brings in a fundamental change in role of the government towards regulating the sector. These changes may have multiple adverse effects such as:

§ Complete de-politicization of crucial public interest issues involved in regulatory functions of the IRA. This may limit the scope for influence on key sectoral decisions through legitimate and just political activism.

§ Unaccountable behavior of the IRA, since the IRA is not directly accountable as the government is through electoral process.

§ Market capture of the IRA, since the market and market players with their strength of financial and knowledge resources can have higher influence on the techno-centric and judicial proceedings of the IRA. This may lead to reduction in space for raising genuine concerns relating to public interest including the interests of the poor and other disadvantaged sections.

But at the same time, IRAs can also be instrumental in bringing public interest at the center of governance of the sector. For example, the IRAs have the capacity to bring transparency to the otherwise opaque decision making processes in the sector. Similarly, IRAs can play a key role in ensuring intensive and meaningful participation of all stakeholders including the marginalized

sections of society. But these gains certainly get overshadowed if the law for establishment of the IRA does not favor development of effective public control on the regulation of the sector. Also, if the basic framework for governance, especially in a life-sustaining sector like water, is totally 'market centric', then it is hard to expect that the IRA will always keep public interest over and above the private interests of the players in the market.

Apart from this fundamental change in the regulatory framework that an IRA brings in a sector, there are other changes that are specific to the water sector that the new regulatory laws will bring. These changes are discussed in the following sections.

Water Entitlement Regime

Creation, management and regulation of 'water entitlement system' (WES) is at the heart of the regulatory framework of the IRA in water sectors. As part of the WES, various water users and groups of users shall be allotted certain shares of water as their 'water entitlement'. The UPWMRC and the MWRRA are empowered through the respective legislations to determine and regulate water entitlements to different user groups. UPWMRC Act defines entitlement as, 'any authorization by the Commission to use the water for the specified purpose...' (refer Sect. 2 (h) of UPWMRC Act). MWRRA Act further states that, 'entitlements,...are deemed to be usufructuary rights...' (refer Sect. 11 (i) of MWRRA Act). Water entitlements are certainly not ownership rights but they are 'rights to use' (in short 'use-rights'), which are also called as 'usufructuary rights'³. Thus, 'entitlements' are legally recognized, registered, (near) perpetual and regulated rights over use of water.

There could be two ways to view this new regime. One way could be that creation of water entitlements regime will ensure rights of water users, especially the rights of poor and disadvantaged sections of society over the use of water resources and shall act as a barrier to monopoly control of the dominant groups in the society over the bulk of the water resources. The second way could be that creation of property use-rights over a share of water would pave the way for development of market mechanisms in the water sector, similar to the existence of the land market. The actual impact of establishing a water entitlement regime depends on the finer details of the related regulatory provisions and also the kind of political dynamics that comes into play while implementing the regime.

Equity in Water Distribution

The impacts of the entitlement regime will depend on the level of cognizance and integration of social policy considerations in the regime such as equitable distribution of water. Both the UPWMRC and MWRRA Act specifically mention in the preamble of the laws that the regulator shall ensure judicious, equitable and sustainable management and allocation of water resources. Thus, the legislations accept 'equity' as the key principle that shall guide the allocation of water resources. This acceptance would be expected to lead to equitable distribution of entitlements, thus, making the poor and other disadvantaged sections entitled for due shares of water use-rights allocated by the regulator.

Except for the preamble of the UPWMRC Act, the term 'equity' is not at all mentioned in the legal provisions in the rest of the law. In fact, there has been no attempt to legally define the criteria for 'equitable allocation' of water resources. In the absence of a practically implementable definition of 'equity' the regulator will not be able to implement the principle of 'equitable distribution' in practice.

MWRRA Act states that, 'for equitable distribution of water in command areas of the project, every land holder in the command area shall be given quota', and that, 'the quota shall be fixed on basis of the land in command area' (refer Sect. 12 (6) (a) & (b) of MWRRA Act). Thus, water will be made available to only those people having land in command area and it will be in the proportion of land holding. Hence, in MWRRA Act 'equity' is defined in a manner that only includes all the landowners in the command area of an irrigation project.

Thus, in Maharashtra a vital opportunity is lost to bring into reality an inclusive interpretation of the principle of 'equity' as: 'water to everyone including the landless'. Such legal boundaries on definition of equity are not imposed by the UPWMRC Act and there could be an opportunity in UP to evolve a much more comprehensive and inclusive definition of 'equity' by influencing the rules and regulations that will be prepared for implementation of the law.

The combination of establishing the entitlement regime (legally recognized and perpetual use-rights over water) and the system of allocation of entitlement in proportion to the land owned, will allow big landlords to gain immense control over water resources that would not only have government sanction but also

have legal sanctity. The 'Water Entitlement System' with a narrowly defined principle of 'equity' may thus lead to emergence of 'Water Lords', similar to the existing 'Land Lords'. This will ultimately reinforce the financial and political clout that the dominant group holds today and would lead to further erosion of space for disempowered sections to assert their rights. The problem gets further accentuated when we explore the linkages between 'Water Entitlement System' and the creation of 'Water Markets'.

Water Markets

UPWMRC Act does not include specific provisions for creation of water markets. But there are clear linkages between creation of 'water entitlement systems' and 'water markets'. Hence, the possibility of creation of formal water markets, once the entitlement system is in place, cannot be dismissed.

Strategically, creation of legally recognized 'water entitlement' could be a pre-cursor to creation of 'water markets'. Once established, the water entitlements can then be traded within a market system under a sound legal framework.

It is worth understanding the linkages between 'water entitlements' and 'water markets' from experiences of countries, which have already implemented market-oriented reforms in the water sector. Water access entitlements, allocations and trading have been key elements of water reforms in Australia. The Australian government defines 'water trading' as transactions involving water access entitlements (permanent trading) or water allocations assigned to water access entitlements (temporary trading)⁴. Similarly, in Chile, water use right is treated as a private property independent of land (title) that can be traded, used as collateral, and treated as assets for tax purposes⁵. While the Chilean government grants quantified water rights (entitlements) to all users, an active water market facilitates reallocation of such entitlements both within and across sectors.

Though UPWMRC Act does not provide a clear and direct provision for trading of water entitlements, considering the strong linkage between 'entitlements' and 'markets', there will be efforts in the future to build a market system, once the entitlement system is in place. This concern about creation of formal water markets in India is not hypothetical and based only on some remote international experiences. The provisions in the MWRRA Act suggest beyond doubt that the 'entitlement regime' is established

for the specific purpose of allowing future allocations of water through market mechanisms. According to the MWRRA Act, the regulator has been accorded the powers to fix criteria for trading of water entitlements on the regulator (refer Sect. 11(i) of the MWRRA Act). Further, the law states that, 'entitlements,...are deemed to be usufructuary rights which can be transferred, bartered, bought or sold...within a market system' (refer Sect. 11(i) (i) of the MWRRA Act). Thus, the scenario of emergence of formal water markets is not just a matter of policy debate, but it has already penetrated into the regulatory framework and received legal sanctions in one of the states in India. There will be every possible attempt to replicate this model of creation of 'water entitlement system' and 'water market system' across various parts of the country.

The GoUP was wise enough to avoid any provision for trading of entitlements, but the same may be given a backdoor entry through inclusion in rules and regulations for implementation of the law. A study done on the distributive impacts of water markets in Chile concludes that farmers' share of water rights decreased significantly after formal water markets backed by the system of property use-rights (entitlements) were introduced. This led to deterioration of their standards of living⁶. Such impacts can be detrimental to the agro-economy and the overall rural economy in India.

Tariff Regime

Establishing a tariff system and regulation of the same is one of the key functions of the IRA. The UPWMRC Act as well as the MWRRA Act entrusts the responsibility of determination and regulation of water tariff to the respective regulatory authorities. The tariff will be determined based on the principle of 'cost-recovery'. It is necessary to gain critical understanding of the principle of 'cost-recovery' and also analyze the implementation of this principle with respect to the 'levels of cost-recovery' envisaged in UPWMRC Act and MWRRA Act.

The principle of 'cost-recovery' from water tariff emanates from the principle of 'water as an economic good'. It is argued that water has economic value and hence provision of water services should be accompanied by recovery from the users of cost incurred to provide the services. It should be noted that in many parts of India, water charges are based on the (explicit or implicit) criteria of 'affordability' for the water users. As a result, at many places, water is being provided free or at highly subsidised

rates to certain areas or populations. And, expenditure for water services were supported using the revenue generated from general taxes. Thus, historically water services were pre-dominantly considered as 'social services' and water was considered as a 'social good'. The new tariff regime that will be implemented as part of water sector reforms attempts to reverse this principle and replace the same with the principle of water as 'economic good'. There is an emerging consensus that water services should either be run like a business, or become a business⁷. A business-like operation would require 'full cost-recovery' from water tariffs charged to individual consumers. In effect, this requires charging of water services based on market principles. Today, most of the states in India have accepted the principle of 'cost recovery' in their 'State Water Policies'. But, there was no formal mechanism to establish a tariff regime based on this principle. This has been achieved by making relevant provisions in the new regulatory laws such as UPWMRC Act and MWRRA Act, which effectively provide legal sanction to the paradigm shift in the perspective towards economic water services and tariff. Both the laws empower the water regulatory authorities to establish a tariff system based on the principle of 'cost-recovery', and to determine and regulate water tariffs. MWRRA Act restricts the level of recovery to operation and maintenance (O&M) cost whereas UPWMRC Act provides for recovery of part of capital costs (in the form of depreciation) along with O & M costs. Provision of recovery of capital costs paves way for higher commercialization of water services. Recovery of capital costs also creates a conducive environment for privatization in the water sector.

It is necessary to understand that both the regulatory laws have still not made provision of recovery of return on investments or profits from water tariff. Once this level of recovery is reached, it is argued that, the water sector will be able to attract more and more private investors since there will be a provision for a certain percentage of tariff to be collected as profit for the investors. This issue of level of cost recovery defined in the laws (limited to the operation and maintenance cost in the case of the MWRRA Act) and privatization of water services is at the cornerstone of one of the petitions filed by PRAYAS before the MWRRA against the initiative to privatize an irrigation project in Maharashtra⁸. It is surprising that the UPWMRC Act also makes a provision for recovery of cost of subsidy from the water tariffs. Such an attempt will lead to tremendous

pressure on the service providers to reduce the subsidy component of the costs to enhance already limited revenue collected from water tariffs.

This discussion on the tariff regime suggests that the UPWMRC Act seems to be going ahead with the next generation of market-based regulatory reforms. Overall it can be seen that the kind of tariff regime that gets established bears a lot of influence on crucial issues of public interest such as privatization of water services and subsidy to the disadvantaged sections of society.

Licensing Regime for Water Service Providers

A major framework-level departure of the UPWMRC Act from the MWRRA Act is the provision of licenses to water service providers and thereby regulating the functioning of the various water utilities. Unlike the UPWMRC Act, the MWRRA Act is ill equipped to regulate water utilities. The UPWMRC is empowered to regulate the procedure and conditions for granting, revocation, and amendment of licenses, the terms, conditions, and procedure for determination of revenues and tariffs, to determine standards of services and ensure reporting on standards from the licensees. So the UPWMRC Act takes a typical 'utility regulation' approach that exists in other sectors like electricity and telecom. This approach includes not only 'economic regulation' but also 'service regulation'. Hence, the UPWMRC Act ushers in the next generation of regulatory framework with respect to regulation of water utilities.

The attempt done in the UPWMRC Act to bring in comprehensive (i.e. both economic and service) regulation of water utilities can be seen as a welcome proposition, considering the lackluster performance of water utilities in India. But there is a need to further analyze the linkages between the creation of a licensing regime in water services and privatization of the services. It is considered that a major step in the privatization and liberalization process in many countries is the issuance of a license to incumbent operators. Thus, there is a need to dwell more on the issues of public concern surrounding the provisions related to creation of a licensing regime.

Licensing Regime for Groundwater Extraction

Another fundamental departure of the UPWMRC Act from the MWRRA Act, is the provision for regulation of groundwater exploitation through 'licensing' mechanism. Though the specific provisions related to functions of the UPWMRC are quite silent about the regulation of groundwater, there are clear indications about the same from various definitions given in the law.

First and foremost, the UPWMRC Act includes a definition of ‘Ground Water Entitlement’ [refer Sect. 2(j) of UPWMRC Act]. Hence, while determining the allocation and distribution of water entitlements [as per powers given to the commission vide Sect. 12(b)] the UP Regulatory Commission can also go ahead and determine individual or bulk-level groundwater entitlements.

A similar possibility exists in the case of the MWRRA Act also because it includes a similar definition for groundwater entitlements. But the difference is that, the MWRRA Act defines groundwater entitlements [referred as ‘Sub-surface Entitlements’ in Sect. 2(z)] only in relation to the groundwater extracted from a command area of a dam project. The particular definition given in the UPWMRC Act does not actually include such a condition and hence is applicable for all types of groundwater, not restricted to that in the command area of a dam project.

The most fundamental departure of the UPWMRC Act in comparison to the MWRRA Act can be seen in the definition of ‘Licensee’ given in UPWMRC Act. As mentioned earlier the MWRRA Act does not include the approach of ‘regulation through ‘licensing’ and hence there is no such definition in the said Act. The UPWMRC Act defines a ‘Licensee’ as one (individual or organisation) who not only operates a water supply system (i.e. licensing regime for water service provider, as mentioned in earlier section) but also those who exploit and uses groundwater for any purpose.

Overall it can be seen that UPWMRC Act has paved the way for licensing of groundwater users. Though there are no direct functional provisions related to this in the Act, it is clear that this is a beginning of devising mechanisms for regulation of groundwater through ‘licensing’. The concern is whether this will bring in ‘unjust and exploitative license regime (raj)’ in the groundwater sector,

Planning Regime: Integrated State Water Planning

Decisions about the location, size and other aspects of new water resource projects have a very close bearing with the development and growth of particular regions. It is one of the most controversial and highly sensitive issues at the regional level. An attempt to bring these decisions under regulatory purview has been done in both the MWRRA as well as the UPWMRC Act, through the provision for

development of a planning regime in the form of an ‘Integrated State Water Plan’ (ISWP).

According to the UPWMRC Act, the government shall develop the ISWP while the approval to the ISWP will be given by the UPWMRC. In contrast to this, the MWRRA Act accords the power of approval of ISWP to a committee comprising various ministers while the role of the MWRRA is limited to monitoring of implementation of ISWP. Thus, UPWMRC Act envisages the next generation of regulation by bringing the planning regime under direct control of the regulator. Delegating highest order powers relating to a crucial development tool like ISWP to an IRA may have detrimental impacts, especially those related to the concern of de-politicization of water resource planning. There is an urgent need to articulate and address the concern over loss of public control on the planning of water resources.

Public Control on Governance of Regulator: Provisions for Transparency, Accountability and Public Participation (TAP)

Since, the IRA is supposed to be an autonomous body; there are questions of accountability of IRAs. The problem is that the IRAs such as UPWMRC and MWRRA are empowered to take key decisions on water tariff and water distribution but they are not directly accountable to the public. Hence, the only option that remains for exerting public control on the IRA is through ensuring that the process followed by the IRA is transparent, accountable and participatory (TAP). Thus, TAP is a necessary requirement for ensuring some level of public control over the decision making process of the IRA.

The comparative analysis of the provisions of the law for establishment of IRA in the water sector (MWRRA & UPWMRC Act) with the provisions of law for establishment of IRA in electricity sector (Electricity Act) suggests that the provisions regarding TAP in MWRRA and UPWMRC Act are weaker than their counterpart in the electricity sector. For example, there is no provision in UPWMRC as well as MWRRA Act for ‘prior publication’ of regulations that will be prepared by respective regulators for implementation of the law. Provision of prior publication makes it mandatory for the regulator to publish the draft regulations before finalizing the same. Thus, availability of draft regulations opens the opportunity for public scrutiny and influence. It is surprising that the UPWMRC Act does not include the provision of ‘prior publication’ even in the case of rules to be prepared by the government for implementation of the law. Such a provision is included in the MWRRA Act. Thus, the UPWMRC Act neither provides space for public participation in the process of

formulation of regulations nor for rules. It is also surprising that whereas the MWRRA Act provides space for stakeholder consultation in formulation of tariff regulations, the same is not included in the UPWMRC Act. Thus, the UPWMRC Act totally ignores the principle of public participation in regulatory processes.

In the case of transparency, the UPMWRC Act seems to be more progressive than the MWRRA Act because it makes it obligatory on the regulator to issue its decisions, directions or orders accompanied with reasons behind the same (Sect. 10(4) of UP Act). Thus, the UPMWRC will have to disclose the reasons behind each of its decisions. But there is a very regressive provision related to transparency in the UPWMRC Act, which states that information obtained by the Commission with respect to any person or business shall be treated as classified and shall not be disclosed by the Commission without consent of the person or business (Sect. 18 of UP Act), except for information related to tariff. Further, the law also includes a blanket provision making all information in the possession of the regulator to be kept confidential and to be furnished to any person or agency only with the permission of the regulator. These provisions categorized under a separate heading of 'restriction on disclosure of information' are counterproductive to the measures to enhance the transparency of the regulator.

Such lacunae related to TAP resulting in lack of effective public control over the governance of IRAs can potentially lead to un-accountable behavior by the IRA and regulatory capture by vested-interest groups.

Miscellaneous: Penalties, Cess for Flood Management and Water Conservation

Apart from the above-mentioned issues, there is a need to look into the public concerns related to other provisions of the UPMWRC Act. For example, there is a need to look into the level of penalties envisaged in the law. The UPWMRC Act seems to provide for much stricter and heavier penalties as compared to the MWRRA Act. Further, the law also empowers the regulator to impose cess to be charged from owner of lands benefited by flood protection and drainage works implemented under new projects. Such a provision would certainly burden the public, especially, poor farmers.

Considering the failure of State Pollution Control Boards to effectively control the pollution of water

resources, the UPWMRC Act envisages a concrete role for the IRA in water conservation. The MWRRA Act restricts the role of the IRA in water conservation by not giving powers to the IRA to penalize the polluters. In contrast, the UPWMRC Act empowers the IRA to penalize the polluter to the extent of withdrawal of entitlements.

Need for Response from Civil Society

As discussed, the enactment of the UPWMRC Act will have a far-reaching impact on the governance of the water sector in UP. There are serious issues of public concern that emanates from the change in the regulatory framework in water sector. These issues, if not addressed, can potentially lead to severe erosion of public interest associated with a life-sustaining resource like water. Hence, there is an urgent need for social activists, like-minded NGOs, researchers, media persons and other such concerned groups and individuals to evolve appropriate strategies to respond to this new scenario in the water sector. The response should be based on more in-depth analysis, articulation and building of critical understanding on the impacts of the new regulatory framework imposed on us.

PRAYAS has been actively engaged in analysis and awareness generation activities related to the establishment of IRAs in the water sector in various states in India. Our experience in Maharashtra suggests that the IRA, once established through a law, follow the strategy of very slow and gradual progress towards initiating regulation in water sector. This 'slow-go strategy' makes it very difficult for the civil society to envisage the real impacts of the new laws and hence there is a tendency to overlook the developments and wait till the actual impact is felt with relation to water tariff or water distribution. But such a 'wait and watch' tendency can lead to loss of vital opportunity to influence the evolving regulatory framework in its formative stages.

Hence, it becomes necessary for the concerned civil society actors to give urgent attention to these developments and start evolving relevant response strategies in the best interest of the public. Activities aimed at wide-scale awareness generation and consensus building could be the starting point of this process.

Note: The article is an outcome of a Workshop on 'UP Water Management and Regulatory Commission Bill, 2008' on 2nd December 2008 organised by Manthan and Prayas in Lucknow to bring some of the groups

working on water in Uttar Pradesh together to initiate a discussion on the transformations that are being brought about in the state's water sector through the Water Sector Reforms Project funded by the World Bank.

ENDNOTES

1. Public interest could be defined as the sum total of the interest of the poor and disadvantaged sections as well as the interest of the society as a whole.
2. Full cost recovery means recovery of all costs associated with water services from the water tariff charged to the water users. This typically includes capital as well as operational and maintenance costs including return on investment.
3. The dictionary meaning of the term 'usufructuary' is the right of using and enjoying all the advantages and profits of the property of another without altering or damaging the substance (Webster's New World Dictionary).
4. Source: Government of Australia, (2005). Water Access Entitlement, Allocations and Trading. Australian Bureau of Statistics, Australia
5. Source: Saleth Maria R, Dinar Ariel, (1999). Water Challenge and Institutional Response: A Cross-Country Perspective. World Bank
6. Source: Romano D, Leporati M, (undated). The Distributive Impact Of The Water Market In Chile: A Case Study In Limarí Province, 1981 - 1997.
7. Source: Kessler Timothy, (2005). Social Policy Dimensions Of Water And Energy Utilities: Knowledge Gaps And Research Opportunities. World Bank.
8. Petition filed in Jan 2008 before MWRRA. The petition was against by-passing of the MWRRA Act and related tariff provision while initiating process of privatization of one of the irrigation projects in Maharashtra. In its order issued in Nov 2008, MWRRA directed the proponents of privatization to withdraw the proposal until the privatization policy is revised to limit the recovery level to O&M cost and in order to ensure the role of the regulator. Details of the petition can be sent on request to PRAYAS (reli@prayaspune.org or sachinwarghade@gmail.com).

Book Review: Resisting Reform? Water Profits and Democracy : Kshithij Urs and Richard Whittell, SAGE Publications, 2009

"Resisting reform?" a book by Kshithij Urs and Richard Whittell subtitled "Water Profits and Democracy" gives a disconcerting account of the coming together of powerful interests to profit out of a situation of water crisis by means of influencing state-furthered institutions wherein decision making has increasingly come to rest, and which are unaccountable to the people they are meant to serve. The book takes the wraps off the terms and phrases employed to justify and execute the water 'reform' policy and practices. The three purposes of writing the book as stated by authors are (a) to debunk the arguments that are used to justify water 'reforms' (b) to describe how these 'reforms' have entered government policy in Karnataka (c) to shed light on how these have been resisted.

The book, though about attempts to 'reform' water supply specifically in Bangalore, provides insights into the current general policy formulation environment. It describes how a few government officials (politicians and senior bureaucrats) who share the same ideas as development agencies like the World Bank, work through parastatal agencies formed especially to further their ideas, and in the process keep not only concerned citizens and their elected representatives but also relevant departments away from decision making. Efforts are made to legitimize policies by attempting to make non-participatory policies look participatory through having officials excluded from actual decision making on Steering Committees where they have nothing to do once decisions on policy matters have been made by others, and by making citizens participate in implementation of given 'no-

alternative' programmes. Non-compliant officials are transferred and non-participating citizens are left without services.

The book locates water 'reform' in the context of Bangalore city's broader development. The city with its rapid growth has extended into adjoining rural areas. It hosts businesses and residential accommodations ranging from those of the very rich to tarpaulin tents of the homeless. The extension has occurred without much needed corresponding infrastructure. Till the creation of 'Greater Bangalore' in 2006 under the jurisdiction of Bruhat Bengaluru Mahanagara Palike (BBMP), the main city was administered by Bangalore Mahanagara Palike (BMP) and the rest of the extended area was divided into eight Urban Local Bodies (ULBs) governed by their corresponding City Municipal Councils (CMCs). The CMCs did not have the same administrative powers as the BMP and had little revenue base, as their tax collections were very low. There is a marked difference between BMP and CMC areas in terms of roads and other basic services. In response to the situation a World Bank supported Karnataka Municipal Reform Project came up that aimed at changes in Bangalore's governance systems through establishing improved institutional and financial frameworks at the urban local body and State levels. Karnataka Urban Infrastructure Development Corporation (KUIDFC), a parastatal body, set up in 1993 to assist urban agencies in the State in planning, financing and providing expertise to develop urban infrastructure became a nodal agency overseeing the implementation of many of the major infrastructure projects that ideally should have been with government departments. All kinds of urban projects - roads, water, slums and governing institutions like local municipalities came under its supervision. KUIDFC, an unelected nodal agency, controls central government grants provided under Jawaharlal Nehru Urban Renewal Mission (JNNURM) and also grants and loans from the central and state governments under Greater Bangalore Water and Sanitation Project (GBWSP) that are meant for ULBs. The ULBs get grants on condition of accepting mandatory 'reforms' and are supposed to raise additional loans required for the projects. Thus decision making and dispersal of funds is centralized while repayment of loans is decentralized. In this way 'reforms' are pushed in a manner that opens up new avenue for finance and business and create conditions that would keep elected bodies moving on the 'reform' path.

What does 'reform' mean? The authors have put it succinctly thus "In a perfect situation where water supply is based on the 'reform' view, costs are covered so that the service can run as an autonomously financing unit and does not have to be subsidized by other government funds, which could be used for other purposes. A big, subsidizing government is bad, while small, efficient government is good (and privatized government is even better). The state is a collection of autonomous independent organizations that run themselves without political involvement (or interference as it is called). One propitious consequence of this is that less tax needs to be collected." Thus in the 'reform' view, water is a commodity and economic efficiency should determine its provision. People should get water as consumers and not as citizens. In view of that "Six thousand public taps in Bangalore have been shut since 1997 (Connors 2007), as the government has refused to pay for them, since it wants the water board to become financially self-sufficient. This--- shows the consequences of treating water as a commodity, and running a supply on cost-based principles---." This view does not take into consideration the people who cannot afford to pay. The authors challenge not only the privatization aspect of water 'reform', which is most controversial, but also, and more fundamentally, a cost-based water service. As they put it "Water, being fundamental to life and it being an obligatory duty of the government to supply water to all citizens (both of which are specified in the Indian Constitution), should be an automatic assumption. The choice then is not between 'no supply to the poor' or a 'cost-based supply', it is between a cost-based supply or a rights-based supply (a supply in which the foundation principle is that water is a fundamental right)." This is a very important point as many well-meaning people get carried away by an argument that 'water supply costs money', to which the authors' response is "Of course, it costs money to supply water--- and of course, these costs have to be covered, but putting the stress on recovering costs directly from all 'consumers', can easily lead to inequities in the supply--- where many people cannot afford to pay the amount it costs the service to supply water to them." The authors also oppose a suggestion of following the principle of 'full cost recovery' with subsidies for those who could not afford to pay enough to cover the costs as this would end up serving first and foremost those who can help recover cost. The authors have made a case for a formal, comprehensive water supply that serves all citizens equally.

On privatization, the authors maintain that private companies cannot make big profits by supplying water to the poor. "...the same companies that have to justify investors' confidence by making as much money as possible are touted as the solution to the world's water crisis - a crisis that is felt most severely by people who do not have enough money to ensure returns for those investors." The authors cite examples from different parts of the world to present the ill effects of privatization like severe price rise, increased disconnections for people who cannot pay and a decrease in water quality. Many of the privatization projects have been terminated because of public protest and many water companies are decreasing their activities in developing countries as the risks involved cannot be easily justified to shareholders. In the given situation, instead of focusing on reforming public provisioning what is suggested is Public Private Partnership (PPP) whereby the state would bear all the risks. Two different types of systems - private company managed for elites and community managed 'new approach' for the poor have been suggested. The authors raise a point that "If the goal is piped water supply to every household then how would it work if the 'elites' had their water managed by a private company and

the poor by a 'new approach', considering that they are all getting water from the same source, and that water is sharing the same pipes for much of its journey from the river to the tap? The companies selling to the 'elites' would therefore be charging a higher price for providing the same service as the 'new approaches'. This would not be even to subsidize it for the poor as the higher prices would be going straight back to the company." Only five percent of the world's population is served by private companies; most of the people in the developed world are served through public services. There are many successful, comprehensive systems of public provision around the world that follow different models in accordance with local circumstances without relying on cost based principles. The authors accept all the ills associated with states and governments but maintain that "if we accept that there has to be a formal, overall supply, to which everybody should have access, the question becomes how to reform the state, not how to bypass it."

The book looks at 'reform' from a human right perspective and makes a strong case for human rights oriented redistributive governance practices.

Hardeep Singh, SPWD

Book Review: Kosi Deluge: The Worst is Still to Come; The Report of the Fact-Finding Mission on the Kosi: September, 2008

The report has been written and edited by Sudhirendar Sharma and Gopal Krishna for the Fact-Finding Mission to the Kosi river basin in North Bihar, March 1-9, 2008. The multi-disciplinary Fact-Finding Mission comprised of noted flood expert Dr. Dinesh Mishra, Dr Sudhirendar Sharma (development analyst), Pandurang Hegde (ecological campaigner), Gopal Krishna (environmental researcher), Rakesh Jaiswal (river ecologist) and Laxman Singh (landscape architect), and other associate members of the mission

The report has been prepared after the team conducted detailed investigation and visits to various reaches of the Kosi River in Bihar. It covers a thorough understanding of the critical issues and the problems faced by the inhabitants of the area for several decades. This brief report comprises of revealing findings in the sections: **Unveiled prophecy, 'The Worst is still to Come', Band-aid Dilemma, Changed Course, Killer Embankments, Lessons Unlearnt, Blunder Galore, Omissions and Commissions, Compelling Question** and an **Annexure** that briefs readers on the Flood Committees and their Reports. Apart from these, the report also throws light on the Kosi Empire, the Issues raised by Kathmandu and a case of Benipur's seizure (a

village's account of misery during the course of time).

The basic objective of the mission was to account for the altered landscape as a result of misguided engineering that has caused several calamities in the past decades. The mission reveals that the people of north Bihar still continue to consider the river as 'mother', contrary to the fact that the ministers, bureaucrats, hydrocrats and engineers still entertain the thought of 'taming the river', despite several failures. The mission believes that the solution to the Kosi's deluge lies in the mix of short-term measures and long term strategies to be put in place through creative pooling of expertise into a new institutional

mechanism that may not only promise but deliver on a timeline too.

Unveiled Prophecy

The fact finding mission has an opinion that 'worse is still to come'. It believes that the barrage at Bhimnagar could not carry 9.5 lakh cusecs of designed discharge, because of the silt deposition on both the canals from the barrage. The mission also released a press note warning that the floods in Bihar are man-made and worse is still to come if the political economy of flood control is governed by the theory of embankment construction for flood control. And this was proved in August 2008, as the breach took place with a discharge that was one-seventh of the carrying capacity. With a record of eight breaches over five decades of embankment construction, flood-relief-flood cycle has been turned into a lucrative engagement for a failed state and an apathetic society.

Band-aid Dilemma

The mission has a metaphorically denoted the dilemma caused by Kosi deluge as 'Band-aid dilemma'. The whole machinery appears to be engaged in flood relief activities, though no sound policy level decisions are taken to avoid the occurrence of such a massive disaster, i.e. there is a total lapse in precautionary measures and the work progresses again towards plugging of the breached structure to revert the river on to its 'original' course. The mission has also raised serious questions over decisions to strengthen the 'embankments' by plugging the breach as over time they have proved to act as temporary structures for flood relief and also that they have outlived three times their estimated age.

Changed Course

The mission iterates the fact that the natural change in course was not only subtle but has a definite purpose to extend its ecological services to uncovered areas. The mission observed that through its gentle meander the river was engaged in the 'act' of enriching the land by depositing rich silt; but simultaneously it was steadily corroding its embankment to liberate itself from its jacket. Kosi is one of the significant land-building rivers of the region, but the river has lost its 'freedom of expression'. It is for this reason that the river Kosi tries to liberate itself from the jacket.

"The Fact Finding Mission witnessed that besides the Kosi, other rivers like Kamala, Bhutahi Balan

*The report gives an account of village Benipur, located along the Bagmati river which is the ancestral place of proclaimed poet Ram Briksha Benipuri, whose poems reveal that people wanted floods to occur. In his acclaimed piece **Barh Ke Beta (Son of Flood)**, Benipuri equated relief seeking with begging and wrote- do not be afraid of floods. In the absence of floods there will be no fishes and no fertile land. Do not look at skies that are laden with politicians, engineers and officials on calamity survey for the salvation of the victims!*

and Bagmati too face the same problems. The team was bewildered to note that the business of embankment construction has resumed for taming the Bagmati and the tributaries of Mahananda. Clearly, the lessons from human misery have not been learnt. It also advocates to revamp the treaty signed in 1954 with Nepal, and emphasises that Nepal's sense of grievance on the poor quality of design, inefficient implementation and bad maintenance of structure on Kosi may not be fully justified because the treaty turns out to be outdated and unfair to both the parties. The treaty must be made realistic in admitting that there can be no technology that can find a 'permanent' solution for a river whose silt yield is highest in the world."

Killer Embankments

Citing the vision of a British Engineer, Captain F.C.Hirst's remarks in 1908 on the issue of embankment construction in Purnea (which he predicted to be a menace to future welfare), the mission states that such wisdom has often been neglected. It has also been found that the river bed was several feet higher than the adjoining land, these being separated by the ubiquitous embankment and in turn making the other side permanently water-logged. The fact stated by the mission reveals that an estimated 1 million people in 380 villages are permanently trapped between the Kosi embankments and an estimated 8 million are faced with acute water-logging outside of the embankments. This grave situation arouses a crucial question: *Is there an annual drainage management plan for this region inhabited by these people?* The mission also observed that there is a general discontent among people about the disastrous impact of embankments and there has been lack of consensus on what must be done with these failed structures. The mission was surprised that the powerful people living within the two embankments do not exist as

per the Government records and those outside of the embankments remain at the mercy of occasional breaches on the one hand and the rising waters on account of obstruction of drainage into the river on the other.

Lessons Unlearnt

The discussions with the villagers in various parts of the affected areas led to a conclusion that no political party both within the state and at the center can be absolved of acts of omission and commission that have brought perennial misery to north Bihar. Even after a series of such vast disasters, neither the central or the state Government conducts any survey to assess the effect of flood control measures on socio-economic conditions. The mission believes that though the District Collectors acknowledge that repeated losses occur due to floods, embankments exist as the 'only' solution for the Government.

Blunders Galore

The mission believes that the hydrocracy of the country continues to mislead the Government about the role of embankment as flood control measure. The mission was shocked to note that there has been no significant shift in the way the Kosi issue was perceived in the 1950s and in 2008. The mission cites the varying statements of the then Union Minister for Planning and Irrigation and Power during the periods 1954, where he was convinced that the floods can be controlled and managed and later in 1956 where 'doubts' were aroused and his belief that 'we shall have to learn to live with floods to an extent'. The mission also mentions the doubtful statement of the Union Water Resources Ministry: '*Government of India has initiated steps for creation of storages in the Nepalese territory, which will help in mitigating the problem of floods being faced in north Bihar.*' The Mission has observed that several proposals for flood control, including the interlinking of rivers would encourage massive land use changes in the region that would bring about an ecological imbalance. This indeed is like proposing one catastrophe to solve another.

Omissions and Commissions

The mission questions the effectiveness of the flood forecasts, if any, by the Central Water Commission (CWC) and suggests a need to assess its response time. It also mentions the recommendations of the National Flood Commission, which observed that: '*Any assessment of the partial negation of these*

benefits, due to accumulated drainage water over the protected area from year to year, were also not done. The annual benefits from embankments were, therefore, by and large, a matter of overall opinion of some individual, with no supporting data. We were, therefore, reluctant to draw any conclusion from the trend of such opinions.' It then mentions the critical points in the Report of the Government of India's National Commission for Integrated Water Resources Development on the issue of 'Flood Control and Flood Management' (1999); and the Expert Committee's (set up in October, 2001) findings to review the implementation of the recommendations of the National Flood Commission. The mission also expressed its dissatisfaction over the fact that *so far there has been no performance evaluation* in order to justify the expenditure incurred on various flood control works and their impact on socio-economic development of the so-called 'protected area'. The mission has mentioned that failure to adopt Integrated Flood Management approach and inaction in the implementation of the recommendations of National Flood Commission and all the 11 Five Year Plans with regard to citizens' participation, land-use plan, drainage and flood plain zoning has created a manmade disaster, multiple displacements and almost unfathomable migration that remains unacknowledged.

Compelling Question

After all the findings and revelations, the Mission has raised a critical question to the hydrocracy: '*Can the hydrocracy, which contributed to the present crises have answers to undo it?*' It has become an annual ritual for politicians/ or any government functionary in Bihar to reiterate that Nepal has released water and that a high dam on the Kosi in Nepal is the only solution to control floods. *But little do the unsuspecting masses realize that if there is no dam how water could be stored upstream.*

The mission is convinced that given the geo-morphological and hydrological characteristics of the entire Kosi basin, it is the river that has to be understood. Consequently, engineering solutions to the enigma of the Kosi need radical and multi-layered steps: *i) Dismantling Embankments and ii) Providing Room for the River.* Although opinions are divided within the Kosi basin, amidst engineers and amongst social activists, general perception does favour removal of embankments provided the act of demolishing does not create undesired conditions; and also to the fact that embankment demolition is not new to India. The mission has

argued to adopt the Dutch model to adopt spatial flood protection measures called 'room for the river'. Measures like these should be discussed and negotiated with communities in north Bihar, but only after the Government machinery at both the Centre and the State are cleansed of their misconceptions.

The Fact-Finding Mission has also demanded a white paper whereby the erring officials and institutions are held accountable. The mission believes that a complete overhaul of the existing institutions is a dire necessity. Apart from other issues included in the white paper, it argues for uncovering the state's pretensions of colossal ignorance regarding the primary function of floodwater-draining out excess water and the fact that no embankment has yet been built or can be built in future that will not breach.

The annexure gives an account of the reports of the Flood Committees. Bihar government appointed a committee in 1962 to look into the problems of the flood-affected area. The other committees include - Kosi Technical Committee in 1965; Kosi Board of Consultants in 1974; High Level Committee on Patna Floods in 1975; Committee to look into the economic rehabilitation of the embankment victims in 1981; Committee to look into the causes and remedy of floods in the state in 1987; a high-level specialist committee for suggesting measures to check recurring flood in Bihar in 2007. Central level committees include Central Flood Control Board in 1954, four flood commissions including the Ganga Flood Control Commission, the Brahmaputra Flood Control Commission, a Flood Commission for Central and North-West India and one for Deccan area, a High Level Committee on Floods in 1957, Committee on Scientific Forecasting of Floods in 1963, a Minister's Committee on Flood Control in 1954, a Committee on Flood Control in the Adhwara Group of North Bihar in 1964, a North Bihar Drainage Committee in 1965, Minister's Committee on Floods and Flood Relief in 1970, Gandak High Level Committee in 1971, Report of the Working Group on Flood Control in 1978, five Task Forces on flood related issues in 1996, Expert Group in 1998, Multi-disciplinary Committee to study the silting of rivers in 2002, proposal for Integrated Flood Management Commission by the 10th Plan but this has been deferred for consideration in the 11th Plan.

Surya Prakash Rai, SPWD

Asia's Next Challenge: Securing the Region's Water Future

Brought out by the leadership group on Water Security in Asia in April 2009, this report seeks to look at Asia's need to secure its water given the fact that despite more than half the world's population resides in the continent, it's annual per capita fresh water availability (3,290 cubic meters) is among the least in the world. United Nations projections for the years 2025 and 2050 estimate that from half the countries facing water stress it is likely to affect nearly seventy five percent people respectively.

Asia, the world's most populated continent, is bound to witness a spurt in population of approximately 500 million within the next ten years the report estimates with urban populations projected to go up by an astounding 60%. Given the demands this growth could potentially pose on the water resource along with adverse impacts brought on by climate change, this report highlights how security in the region could be a major concern and consequence of water stress in the future.

Among the effects of heightened urbanisation and climate change recognised by the report, issues

of hindered food production, livelihood security, large scale migration both nationally and internationally as well as increased economic and geopolitical tensions and instabilities have been forecasted. These effects in the long run are estimated to hamper security and degree of civility in the region.

Using the Asian Water Development Outlook 2007, brought out jointly by the Asian Development Bank and Asia Pacific Water Forum, as its base document; the report takes into consideration the viewpoint that it is not issues of availability but of governance and management that served as the backbone of the continent's water problems. Thus taking on the outcomes of the Outlook, this reports seeks to understand the angle of security in relation to decreased water access in the continent in the future.

Security questions existence and involves aspects of health, wellbeing, livelihood, food security, as well as the *realisation of the sub national jurisdictions and nation states*. The report highlights the importance of water as a 'source of livelihoods, a vector of pathogens, a potent force

behind extreme events and natural disasters, and also a mechanism for cooperation among governments and communities.'

Demonstrating through various water conflicts all over the continent, the report goes on to show how regardless of the role water may play, be it as a life saver or one that puts many lives in danger, politics surrounding water are going to gain increasing predominance in the dialogue between neighbouring states in times to come. Simply securing water resources by reinforcing boundaries would not be a viable solution to this developing scenario and it is strongly urged to encourage a reevaluation of potential security

measures with a view of possible humanitarian conditions that could crop up in the future.

The authors seek to highlight that it is the combining of various forces that will help build a positive future for the resource. The coming together of politics, infrastructure, national level planning and policies, economic incentives will help countries tackle issues existent within their own countries as well as inter-country disputes that are most likely to escalate in the future. Involving all sections of society both government and non-government as stakeholders is viewed as important in order to tackle the issue at hand in an amicable manner as it involves all sections of society.

The Report States:

"The debate about water scarcity and security has centered largely on whether countries will 'go to war' over water. The Leadership Group does not find this to be a useful way to frame the problems that confront us and instead advocates a more nuanced view. Greater rates of change and uncertainties related to water availability and the perception of insecurity may cause individuals, communities, and nations to react in ways that we have not seen in the past. Therefore, a relevant question to ask is, how will the water disputes of tomorrow look different from today? Given the fundamental importance of water to human existence, and ultimately to health, food production, livelihoods, energy security, poverty reduction, and economic growth, the Leadership Group sees an urgent need to begin planning for change now and to seize opportunities to forge a cooperative water future."

Asia Society's Leadership group has come up with a ten point agenda to best avoid the impending water crisis:

§ **Raise the profile of water security on the political and development agendas of national governments in Asia** - Emphasis on investments, policies and preventive diplomacy with respect to the water resource amongst Asian nations to promote good governance

§ **Include water in security policy planning** - Propagating the liaisoning of defence and water management agencies in order to prevent and better handle water conflicts as well as develop disaster warning systems

§ **Encourage investment in and increased collaboration on water management technologies** - Having identified development of water based infrastructure it is suggested that investments are encouraged with incentives to further the resource's development.

§ **Generate better policies through dialogue** - Encourage multi-stakeholder ownership and participation with respect to the resource while attempting to

include local models of conflict resolution and governance wherever possible.

§ **Address the emerging water crisis through a post-2012 climate agreement** - Green house gasses reduction commitments from various countries as well as long term policies needed to minimise the impact of changing climates on water resources.

§ **Utilise the Intergovernmental Panel on Climate Change data on water and climate change to develop early warning systems** - Employ the data to study and project future trends and vulnerabilities generated by climate change and help in the building of early warning systems.

§ **Develop concrete ways of implementing existing statements and regional agreements such as the Asia Pacific Water Summit Declaration of 2007** - Encourage such multipartite conventions to push towards better water security.

§ **Expand the Water Financing Partnership Facility initiated by the Asian Development Bank** - Use this as a platform to address rural and urban water issues and encourage partnerships with other bodies such as the private sector for more effectiveness.

Country	Total Internal Renewable Water Resources (km ³)	Total External Renewable Water Resources (km ³)	Dependency Ratio (%)
Afghanistan	55	10	15
Australia	492	0	0
Bangladesh	105	1,106	91
Cambodia	121	356	75
China	2,812	17	1
India	1,261	636	34
Indonesia	2,838	0	0
Iran	128	9	7
Japan	430	0	0
Kazakhstan	75	34	31
Kyrgyzstan	46	-26	0
Laos	190	143	43
Malaysia	580	0	0
Mongolia	45	0	0
Myanmar	881	165	16
Nepal	198	12	6
Pakistan	55	170	77
Philippines	479	0	0
South Korea	65	5	7
Sri Lanka	50	0	0
Thailand	210	200	49
United States	2,800	51	8
Uzbekistan	16	34	77
Vietnam	366	525	59

Table 1: Asia Water Resources and Dependency

Source: *Asia's Next Challenge: Securing the Region's Water Future Report*

§ **Harmonize the Millennium Development Goals that pertain to water under a unified United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) task force on rapid implementation to meet the 2015 targets in Asia** - The need for a strategy to link the goals to water management in Asia.

§ **Improve data quality in order to generate better policies** - Need for better data to be collected and suggestions to incorporate indices in relation to water management to best study different governance practices across the continent.

The report has covered in detail transboundary water issues such as the Mekong River Commission, the effect of population on water resources by citing India's example and experiences with water security,

Issues of human health such as access to safe drinking water and has cited China's example of water conflicts catalyzing change in the country. The topic of ever increasing interest - climate change has been covered with its possible impacts on the resource and the report is rounded up by institutional responses to the issue of water security while proposing a way forward.

Put together by authors from different water institutes in Asia, the report serves as a comprehensive update on Asia's current water scenario including issues at hand, ongoing programmes and initiatives as well as potential situations that could arise given the nature of the resource and changing dynamics that surround it.

Alisha Vasudev, SPWD

Corrigendum

In the last Issue of WaterMOVES (Vol. II, Issue 01) on Page 11, Left column, Under the section on impacts of climate change identified by the National Water Mission point number 2 should read:

*'Increased drought like situations due to overall **decrease** in the number of rainy days over a major part of the country'*

We regret the error and thank our readers for pointing this out.

Water MOVES is a quarterly published by **Society for Promotion of Wastelands Development** under a **Sir Dorabji Tata Trust** supported **Water Governance Project**. All views and opinions presented in the newsletter are solely the author's and in no way reflect opinions of the project.

We look forward to your feedback and in case of wanting to subscribe/unsubscribe, do write in to us at **info@watergovernanceindia.org; wgp_spwd@yahoo.com**

**Society for Promotion of Wastelands
Development**
14-A, Vishnu Digamber Marg
New Delhi - 110002, INDIA

Printed by: Ideas 2 Images
3087, 2nd Floor Sangtrashan,
Paharganj, New Delhi - 110055, INDIA

Editorial Team: Hardeep Singh
Amita Bhaduri
Surya Prakash Rai
Alisha Vasudev

Editorial Advisor: Rajesh Ramakrishnan

Photographs: Surya Prakash Rai
Alisha Vasudev

Design and Layout: Alisha Vasudev