

GLOBAL WATER GOVERNANCE- A FRAMEWORK FOR ANALYSIS

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ABSTRACT:

This paper presents a framework for understanding the global water governance in vogue. Traditionally, water has been considered to be a local subject and has been dealt accordingly. When the water problems have crossed the local boundaries, efforts have been made to solve them at sub-national, national, supra-national and global level. There is no global government, but the global governance has influenced the national policy domain in many areas including water sector. An attempt has been made in this paper to analyze the concept of governance, water governance and global water governance framework which has been influencing the national policy domain even though such efforts have not acted as binding principles. There has been very few studies on ‘water sector as a global subject’ and role of global governance in Water Resource Sector(WRS). The global focus for achieving the drinking water and sanitation targets through Millennium Development Goal(MDG)s has almost camouflaged the other challenges of this sector requiring global policy response. The Rio+20, has thrown fresh challenges before the water experts and the policy makers alike to identify the specific role of WRS in its broad agenda of Sustainable Development (SD). In this context, the present study examines the hypothesis “Need for Global Water Governance Architecture for Sustainable Development” to understand the present global water politics and the possible role of global governance in this sector. In the process an attempt has also been made to analyze the various efforts being made worldwide to meet the looming challenges of WRS, its sufficiency/adequacy against the magnitude of requirements and derive broad policy recommendations keeping in mind the Rio+20. This study has a relevance for the countries like India where the water is not a national subject but a national concern.

INTRODUCTION:

Water has been identified to be our most essential natural resource having differentiated use. It is needed by all, hence everybody’s business but managed by none holistically therefore, nobody’s accountability. It has also been described to be a human right, public good, economic good and a heritage. It is difficult to think of life without water. It is a part of environment, backbone of the ecosystems and a survival need for human beings.

Water as a global subject got its recognition through the United Nations(UN) Resolution 44/228, dated 22.12.1989 calling for UN Conference on Environment and Development(UNCED), at Stockholm in which all the environmental issues listed in paragraph 12 of Section I were directly or indirectly related to water. At the Rio, 1992 the famous Agenda 21 carried a separate chapter on fresh water issues (Chapter-18) calling for integrated approaches to development, management and use of water resources. But global governance of water in the form of regime building has always eluded the global policy planners. Traditionally, water issues have been managed locally or at sub-national level. But whenever the problems have crossed the local boundaries it has been taken up at national level for necessary policy response. There are also supranational policy responses like European Union Water Framework Directive(EUWFD) and the United Nations Economic Commission for Europe(UNECE) Convention. The declaration of Drinking Water and Sanitation Decade of UN from 1981 to 1990 and the Millennium Declaration in 2000 or the UN Declaration on ‘water for life’ decade from 2005 to 2015 can also be viewed as the global policy responses to the problems of global dimension. But such global policy responses have been limited to Water Supply and Sanitation(WSS) sector, which is more about fulfilling the social objectives rather than the governance of WRS. The role of WRS is yet to find its place in the broad global agenda for SD.

An attempt has been made in this paper to understand the terms like ‘governance’, ‘global governance’, ‘water governance’, ‘water management’ and to identify the global dimension of water as well as existing global water governance frameworks and their sufficiency to meet the challenges of WRS. Effort has also been made to identify the criteria for possible global water governance framework that may evolve in the context of SD.

GOVERNANCE, WATER GOVERNANCE AND GLOBAL WATER GOVERNANCE

The term ‘Governance’ is now-a-days widely used by governments, international organizations, private operators, civil society, donors and the aid agencies. Though the term was originally being used to connect the politics and administration of a government, it was subsequently extended beyond government to encompass relationships between a range of state and non-state institutions. It is defined as “*the reflexive self-organization of independent actors involved in complex relations of reciprocal interdependence, with such self-organization being based on continuing dialogue and resource-sharing to develop mutually beneficial joint projects and to manage the contradictions and dilemmas inevitably involved in such situations*” (Bob Jessop). ”

If the existing water sector is viewed under the above definition of the governance, it is conspicuous that there are large number of actors in the field involved in reciprocal interdependence and continuing dialogues (as evident from the participation of various stakeholders in national and international water events, bilateral and multilateral negotiations etc.) for resource sharing (sector wise, at multi governance level etc.) for mutual benefits . As per the UN Environment Programme(UNEP), “*Governance is the exercise of the economic, political and administrative authority to manage a country’s affairs at all levels. It comprises the mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences.*” Both the definitions fundamentally differ in their approaches to governance. The UNEP’s ‘Governance’ is more tilted towards governmental actions while the earlier one is focused on the various independent actors of which government is one. In simple terms governance refers to the relationships that can be manifested in various types of partnerships and networks. A number of different actors with different objectives are involved in the process of governance, such as governments and civil society institutions and transnational and national private sector actors etc. An important thinking in the domain of governance is that the development is now increasingly seen as a task that involves society as a whole and not the exclusive domain of governments¹. Taking the cue from the above definition of the UNEP, the GWP² have tried to define ‘water governance’ to be “ *the range of political, social, economic and administrative systems that are in place to develop and manage water resources and the delivery of water services, at different levels of society.* “This definition is more static in nature and completely eliminates the role of the independent actors like civil society, epistemic bodies, cultural organizations, environmentalists, and others. The definition limits itself to the management of water resources rather than the governance which is further visible from its prescriptions of Integrated Water Resources Management(IWRM) tools for governance failures. Even the Asian Development Bank(ADB)³ views the water governance as “*the means for sound management and involvement of stakeholder participation, transparency and accountability.*” During the web search it could not be ascertained if the important actors in the field view water management and water governance differently. But with the growing awareness about the public governance it is now being felt to differentiate these two terms as more and more challenges of the sector are being recognised to be within the domain of the ‘governance’ rather than a part of ‘management’.

As per the Organisation for Economic Cooperation and Development(OECD) , ‘Water Governance’ formally refers to “*the set of administrative systems with a core focus on formal institutions(laws, official policies) and informal institutions(power relations and practices) as well as organizational structures and their efficiency*”; while the ‘Water Management’ “*covers the operational activities for meeting specific targets, such as aligning water resources and water supply, consumption and recycling*”(Water Governance in OECD Countries). Thus the institutional frameworks that foster transparency, accountability, and coordination are part of water governance and those institutions involved in management and delivering of services are part of water management. Hence, water governance is multilevel (local, regional, sub-national, national, supra-national) and multi-dimensional(economic, social

and environmental) phenomena. In this context effective water governance should maximize the economic, social and environmental outcomes.

Before examining the possibility of a global water governance architecture, it may be necessary to understand the term '*global governance*' as understood in the present context. The Commission on Global Governance, 1995 defined the term '*Global Governance*' as: "*Governance is the sum of the many ways individuals and institutions, public and private, manage their common affairs. It is a continuing process through which conflicting and diverse interests may be accommodated and cooperative action taken. It includes formal institutions and regimes empowered to enforce compliance, as well as informal arrangements that people and institutions either have agreed to or perceive to be in their interest.*" As per the World Economic Forum, 2006 '*global governance*' covers the contributions of all types of actions on the global stage: governments, intergovernmental organizations, the business community and the civil society. Global governance is a widely studied subject in the recent times. There are many other definitions on the subject but it is undisputed by all that the global governance does not represent a '*global government*' but interplay of various actors in global arena. Some of the main identified actors are: International Organizations; International Bureaucracies; International NGOs; Hybrid Organizations; state Agencies and Local Communities; Private Foundations; Business Actors; Epistemic Communities; Migrant Communities etc. The global governance requires the performance of functions that promote different forms of systemic cooperation through a variety of steering mechanisms that are highly politicised. For a good global governance, it may be necessary to establish normative benchmarks and functional criteria like its Inclusiveness, its Representative Character for getting legitimacy, Adaptability in order to accommodate changes, Efficient to provide global public good and Fair i.e. equitable distribution (Garth le Pere).

How the above cognitive frameworks of global governance apply to the WRS? Going by the definition, there are conflicting and diverse interests need to be accommodated in a manner that is beneficial to all concerned in the sharing and utilization of the water as a resource of this planet. The sector is populated with various actors who have been identified as the carriers of the global governance like the UN Water, UN Development Programme (UNDP) as part of International Bureaucracies; World Wildlife Fund (WWF), Global Water Partnership (GWP), World Water Council (WWC) etc. as part of International NGOs, Supra-national, National and sub-national governments, local bodies, judiciary etc. as part of State Agencies and Local Communities, International donor/development agencies like World Bank (WB), ADB, European Union (EU) etc.; many Business actors dealing with water services, hydropower generation, multinational soft drink makers etc; a large number of epistemic communities like UN Educational, Scientific and Cultural organisation (UNESCO), UNEP, Intergovernmental Panel on Climate Change (IPCC), Universities, Think Tanks etc. In a normative sense the water sector satisfies all the necessary criteria of global governance as all the required actors are in place except for its proper recognition as a common (global) subject due to which there has been no global water regime to be enforced for compliance although many feel that the Conventions like UN Convention on Biological Diversity (UNCBD), UN Convention to Combat Desertification (UNCCD) or Ramsar Convention etc. are a kind of water related regimes which are in place. The United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (UN Watercourses Convention) is the only convention that was passed by the UN General Assembly on 21st May, 1997, but could not come in to force due lack of required number of ratification. Hence, global water governance in the form of regime building is yet to take shape.

WATER AS A GLOBAL SUBJECT

Water as a global subject gained importance towards end of the 20th century. The UN Watercourses Convention can be said to be the direct recognition of the global dimension of the water governance. However, recently many new forms of the global dimension of water has been identified which goes beyond traditional basin level approach. The UNESCO-IHE Institute for Water Education, Delft, the Netherlands⁴ has published a report titled 'Value of Water Research Report Series No.20' has brought out the nine reasons to justify why a global governance approach may be possible in water sector i.e. (1) The effect of global climate change on local water conditions; (2) Local water pollution is often inherent in the structure of the global economy; (3) Multinationals in water supply; (4) Inter-basin water transfer; (5) Domestic water saving through virtual water import; (6) Global water use efficiency; (7) Externalisation of

water footprints; (8) Fairness and sustainability of large water footprints; (9) Water as a geopolitical resource.

The main argument is that the water governance is no more in the domain of the water managers as the challenges have gone beyond the river basin boundaries, hence it should be examined how societies as a whole can manage their water resources in a wise manner as a part of effective water governance (Arjen Y Hoekstra, 2011). All the reasons stated above do establish the global dimension of water, but not necessarily warrant global policy response in water sector. For instance the effect of global climate change is not restricted to water sector, requiring global policy response except perhaps for the cases where water sector contributes towards emissions. The IPCC and other institutions have already studied this and advised for development of mitigation and adaptation strategies for water sector. Similarly, global pollution is no doubt a product of global economy, but it is not specific to water. Hence a water specific policy response will not solve the problem. In the same way presence of multinationals in water supply sector or fairness of water footprints may not justify global policy response at present. But the issues like inter basin transfer of water, externalisation of water footprints and the global water use efficiency may require global policy response in the broad agenda of SD.

The Report further talks of various kinds of institutional framework that may be needed for global water governance like (i) International protocol on water pricing, (ii) Water labelling of water intensive products, (iii) A disposal tax and international nutrient housekeeping, (iv) Minimum water rights (v), Maximum allowable water footprints and tradable water footprint permits (vi) Implementation of water neutral concept etc. It advocates for full cost water pricing protocol with minimum water rights, water labelling on products etc. may not be practicable at the moment when the national governments do not have any such initiatives within their territory nor a global level negotiation on above issues have yet been felt by nations. Moreover, water is not a human product nor can be controlled fully like any other economic commodity. Hence, a commodity model as advocated may not be agreed to by the world community.

EXISTING GLOBAL WATER GOVERNANCE FRAMEWORKS

Going by the definitions, the world is not deprived of global water governance frameworks though the same has not yet formalized in the form of any kind of binding rules or regimes except for the areas where the use of water is non-consumptive like the UN Convention on the Law of the Sea (UNCLOS), 1994. The only regime that was brought out in the area of consumptive use of water is the UN Watercourses Convention, 1997, which could not come into force due to lack of sufficient number of ratifications. Since the hypothesis of this study is relating to the consumptive use of water, meaning the fresh water, it will examine the existing formal and informal arrangements of the existing global water governance framework with reference to its sufficiency to meet the challenges of the water sector and also try to examine possible future global governance architecture.

FORMAL APPROACHES

UN Watercourses Convention

Considering the fact that there are 276 international watercourses which contain key freshwater supplies and sustain rich ecosystems in 145 countries, covering half of the earth's surface and home to around 40% of world's population, generating 60% of the global fresh water flow, the UN Watercourses Convention was adopted by the UN General Assembly on 21 May 1997 (Alistaire et al). This was culmination of the long standing efforts of the International Law Commission (ILC) of the UN as well as a beginning of a global regime building in WRS. But its failure to come into force with the required number of the ratifications (19 ratified till now, 16 more required) itself is an indication of its inadequacy to meet the expectations of nations. It is difficult to understand the failure of a Convention which articulated the principles of equity like the right of every state in a river or lake basin to be party to any agreements governing the entire basin; the 'equitable and reasonable use' of a water course as it passes through a state's territories; an obligation not to cause significant harm to other watercourse states; regular consultation and exchanges of information; peaceful means of dispute resolution; environmental protection; ecosystem preservation; and the prevention, reduction and control of pollution failed to impress the policy

makers though the convention is referred to in the bilateral, multilateral negotiations and dispute settlements. The acceptance of more comprehensive water regimes like Water Framework Directive and the UNECE Convention in Europe perhaps heralds emergence of a new robust global water paradigm.

INFORMAL APPROACHES

Effect of World Commission on Dams(WCD)

The other major global effort in water sector could be the WCD, which submitted its report in November 2000 called '*A New Framework for Decision-Making*'. Unlike the traditional path of international policy making like establishing international environmental regimes, with nation states being the decisive actors, the WCD has followed a different non-state centred approach for developing global norms (Waltina Scheumann). The WCD was established as per the agreement at the workshop at Gland, Switzerland in 1997 (jointly organised by International Union for Conservation of Nature and the WB) as an independent commission with non-state members who acted in their individual competencies and capacity. Though the report was rejected by the various countries, it continues to influence their decision making as a non-binding framework for guidance through self-commitment of governments, bilateral and multilateral finance institutions and private companies; coalitions of international and local actors, campaigning of national and international NGOs, parliamentarians, multilateral and bilateral donors; and the conditionality for approving export credit guarantees (Waltina Scheumann).

Water in Millennium Development Goals

The Millennium Declaration⁵ of the General Assembly, adopted on 8th September 2000 declaring Millennium Development Goals (MDGs)⁶ is intimately linked to WRS. The declaration talked of fundamental values essential to international relations in the twenty-first century like freedom, equality, solidarity, tolerance, respect for nature and shared responsibility as well as developmental goals. It adopted the target to halve, by 2015, the proportion of the population without sustainable access to safe drinking water. In addition to the above it was also resolved to stop the unsustainable exploitation of water resources by developing water management strategies at the regional, national and local levels, which promote both equitable access and adequate supplies. Though the MDGs are not binding in nature, it did influence the national policy framework of almost all the countries, which is evident from the large scale monitoring at national and international level.

Human Right based Approach

The human right dimension of water gained importance during the first decade of 21st century when the Committee on Economic, Social and Cultural Rights (CESCR) issued its General Comment No.15(GC-15) in 2002 where it stated that, "*The human right to water is indispensable for leading a life in human dignity. It is a prerequisite for realisation of the other human rights.*" In paragraph 2 it further stated that, "*The human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses.....*" For justifying this the CESCR mostly relied on Article 11 & 12 of the ICESCR, Article 14(2) of International Convention on the Elimination of All Forms of Discrimination Against Women (1979), Article 24(2) of the Convention on the Rights of the Child, Mar del Plate Action Plan 1977, the Dublin statement 1992, Agenda 21 of Rio Earth Summit, 1992 as well as the Action Plan for Johannesburg Summit on Sustainable Development (SD) 2002 etc. Hence the right to water is an inferred right through the GC-15 of CESCR without altering the provisions contained in the ICESCR (Salman). To avoid any confusion the CESCR clarified that the GC-15 included the water for drinking, personal and domestic use within its purview excluding the non-domestic like irrigation etc which had been considered under Right to Food (GC-12). To this the UNDP Report 2006, used two terms i.e. '*water for life*' for domestic use of water and '*water for livelihood*' for agriculture and industry. As per the Fact Sheet No.35 of the UN Human Rights⁷, UN habitat and the WHO, "*A human rights approach brings a new paradigm to the water sector: the provision of safe drinking water is no longer perceived as a charity, but a legal entitlement with individual at its centre.*" Through this approach the states have three types of

obligations i.e. respect, protect and fulfil and the same has already influenced the domestic policies and planning of nations even though it is not binding on them and thus contributing to the framework of water governance.

Water in Rio 1992

The well known Agenda 21 of UNCED (popularly known as Rio 1992) carried a full chapter on the protection of the quality and supply of fresh water resources: application of integrated approaches to the development, management and use of water resources (Chapter 18). It talked about linkages of water to other environmental and developmental issues, which needed to be studied as the availability of the fresh water had almost become the limiting factor for development. It mentioned about cooperation among the riparian states on transboundary issues in conformity with existing agreements, and/or other relevant arrangements, taking in to account the interests of all riparian states. It advised for priority to sustenance of land/water ecosystems, wetlands, biodiversity and the satisfaction of basic human needs for drinking water, health protection and food security. For any further water utilization, fresh water resources have to be considered an economic good with an opportunity cost in alternative uses. It recommended IWRM including the integration of land and water related aspects at the level of catchment, basin or sub-basin level. In case of transboundary water resources it advised for formulation of water resources strategies by the riparian states and their harmonization (*Agenda 21, Rio Declarations and Hannah*). The Agenda 21 did not carry any contentious issues that could be objected to by the nation states nor any concrete steps towards considering water as a global resource. Therefore, the impact of the Agenda 21 of Rio 1992 on the global water governance paradigm is minimal though it generated sufficient awareness about sustainable use of water as a resource.

Role of UN Water and its Partners⁸

The UN Water and its partner organizations play an important role in global water governance as coordinators, facilitators, repository of global data, information and knowledge about water. The UN water was established to promote coherence and coordinate various UN system initiatives relating to water like Millennium Declaration, 2000 and WSSD, 2002. Its scope of work includes all aspects of fresh water and sanitation including surface water and ground water resources and the interface between freshwater and seawater and water related disasters. The UN water coordinates the activities of various partner organizations in water like Food and Agricultural Organisation(FAO), UNDP, UNESCO, International Atomic Energy Agency(IAEA) etc. . All these organizations are engaged in generating worldwide awareness on the subject bridging the information gap of global governance framework.

Role played by International Water Conferences

International Conferences have played very important roles in global water governance by providing a platform for knowledge exchange, establishing an epistemic community and in some cases for decision making. They examine the global perspectives of a local action as well as the local perspectives of a global action. The water sector came in to such informal global engagement in an effective manner in the UNCED,Stockholm,1972 where water was considered as a part of the environment and it was decided to protect the environment for the benefit of the present and future generations through careful planning or management as appropriate. The Stockholm summit gave birth to UNEP having its headquarter at Nairobi, Kenya. Thereafter, it was considered as a part of UNCED at Rio , 1992; where it was decided to have global management of fresh water and the integration of sectoral water plans and programmes within the framework of national economic and social policy. The international water conferences like that of World Summit for Children(Health and Food Supply), New York, 1990; The Global Consultation on Safe Water and Sanitation, New Delhi, 1990; Ministerial Conference on Drinking Water Supply and Environmental Sanitation, Noordwijk, 1994; World Summit for Social Development, Copenhagen 1995; UN Fourth World Conference on Women, Beijing 1995, UN Conference on Human Settlements (Habitat II), Istanbul, 1996; World Summit on Sustainable development, Rio+10, Johannesburg, 2002 etc focused on drinking water and sanitation issues. Even the UN launched the Drinking Water Supply and Sanitation Decade from 1981

to 1990 and the same also found place in the United Nations Millennium Declaration 2000 under Goal No.7 as Target 3.

The first international forums in which the water was the central subject was at Mar del Plata, 1977 (Biswas, 2008) where water was considered as a '*common good*' and right to safe drinking water was also identified. It also approved an action plan for systematic assessment of water resources. The next such event was the International Conference on Water and the Environment at Dublin, 1992 where the major decision was identification of water as an '*economic good*' besides recognizing the role of women, link with environment and need for a participatory approach, which is popularly known as 'Dublin Principles'. The international conference on fresh water at Bonn also tried to establish the link between the water and the livelihood, health, economic growth and ecosystem. The successive international conferences of the World Water Forum tried to promote the concept of Integrated Water Resources Management (IWRM) besides bringing other water related issues like efficiency in use, gender equality, involvement of all the stakeholders, full cost pricing of water services, innovation, investment and good governance etc to the forefront. A general overview of the issues taken up in the various international events show that the supply of drinking water has been the most important consideration. In other words the management issues have taken precedence over global water governance in all the water conferences. On the other hand, it has helped in consolidation of information, knowledge and ideas through interaction of various stakeholders and facilitated in identifying the trend; thereby bridging the information gap. It has also helped in thinking outside the sovereign framework and has helped in generating ideas and frameworks which has influenced the national water policies like IWRM, SD approach etc.

IWRM based Approach:

The concept of IWRM is an offshoot of the Dublin Principles, 1992 which also found its mention in the Agenda 21 for Rio, 1992. It talked of appropriate mechanisms at the global, regional, national and local level for implementing, coordinating and funding the related strategies and action programmes and envisaged that management of water resources should, as far as possible, take place in a river basin context. A body called GWP was established by the WB and UNDP to propagate this principle and was generally considered to be a panacea for all water related management/governance problems. The GWP defined IWRM as "*Integrated water resources management is a process, which promotes the coordinated development and management of water, land and related resources in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems*" (GWP, 2000) and promoting this concept since then. It has also developed a toolbox for its practical application⁹. The ADB³ has identified 25 different elements for putting IWRM in to practice and around 65 countries have accepted this as the principle for their water governance and management. The concept of IWRM is best understood from its toolbox developed by the GWP. It recognizes three broad action points i.e. (i) Enabling Environment, (ii) Institutional Roles and (iii) Management Instruments. The concept of IWRM is considered to be the *nirvana* for water sector by all concerned. The IWRM toolbox does mention that '*...IWRM has no fixed beginnings and will probably never end*' and '*a concept that is hard to disagree with*' to explain the concept.. It advises policy makers to start somewhere as doing nothing is not an option. It mentions that '*policy makers should think in terms of gradual, incremental change; identify opportunities for reform as circumstances alter and use all windows of opportunity to nudge the reform process forward.*' IWRM is a conceptual approach to water problems, planning and practice. It talks of three interrelated themes i.e. recognition of the full range of social, economic and ecological uses of water, cross sectoral management of water and water management at multiple levels (Ken Conca). The opponents of this concept argue that the concept is vague and therefore popular (Biswas); generic eliminating specific actions, validating all need based actions under one umbrella, giving false notion to the developing nations that they were not lagging behind (Biswas) etc. It has also been described to be '*a solution in search of its problem*' (Manfred Matz). In spite of various criticisms the IWRM remains the common reference point for water sector worldwide though not a binding principle.

Water, Energy and Food Security Nexus Approach

The concept which is gaining importance during past few years is the Water, Energy and the Food security Nexus approach. This was discussed in OECD Conference¹⁰ in OCT'11 the same month followed by the Bonn conference¹¹ in Nov'11, which had exclusive focus on this aspect. As per this approach, water, energy and food security can be enhanced through focus on nexus rather than each sector, thereby increasing efficiency, reducing tradeoffs, building synergies and improving governance across sectors. It recognizes that despite progress of the human civilization in many areas, it has been inequitable and damaging to the earth system through over exploitation of the natural resources and degradation of the ecosystem services. In this context, ensuring water, energy and food security to the burgeoning population, expanding middle class, urbanization, changing lifestyles and the diets etc. will require a new policy paradigm of growth which could sustain increase in agricultural production by 70% by 2050, increase in primary energy production by 50% by 2035 and increase in water supply by 40% by 2030 under the impending threat of climate change is possible through this approach. It considers water to be the essential input for the growth of all biomass hence all ecosystem services and therefore, advocates for improved water services and intact ecosystems (called natural infrastructure) for synergy. The focus of this approach is on system efficiency rather than productivity of each sector. The approach calls for considering waste as a resource, economic stimulation in the form of pricing of resources, and ecosystem services, water markets and tradable rights, regulation, policy coherence, investment in natural capital, integrated poverty alleviation and green growth. The proponents of this approach claim that the nexus approach can be a part of GE and hence be an instrument towards achieving SD. The nexus approach is yet to be testified in the field. Moreover, its policy implications are yet to be derived. But the concept may help in developing a global water governance framework as it holds water to be the central to all the three securities.

WATER IN RIO+20

The Rio+20 is the UN Conference on SD, being organised in pursuance of UN General Assembly Resolution 64/236, at Rio de Janeiro from 20-22 June 1992, to mark the 20th anniversary of the 1992 UNCED held at Rio and the 10th anniversary of the WSSD in Johannesburg. The objective of the conference is to secure renewed political commitment towards SD, assess the progress made and address new and emerging challenges. The conference will focus on two themes i.e. (1) Green Economy in the context of SD and poverty eradication and (2) institutional framework for SD. The conference has generated lots of debates as to the role of various sectors in the green economy. In spite of diversity of views and perspectives, there is growing convergence of understanding and approaches towards GE in the context of poverty eradication and SD; and institutional framework for SD (Mr. Sha Zukang, Secretary General, Rio+20, as a part of keynote address at Bonn Nexus conference). The Rio+20 will try to integrate the economic, social and economic pillars of the SD; identify the implementation gap since 1992 and take policy decisions which should lead to coherent policies and programmes. In the pursuit of GE it may consider country specific policies like common but differentiated responsibilities. Some countries have proposed for SD goals post MDG i.e. 2015 including goals on energy, sustainable production and consumption and other critical priority areas. In this context it is extremely important to examine if the WRS will be a part of development agenda post MDG or a part of sustainable development agenda post Rio+20.

WAY FORWARD

The broad global governance agenda on future development is not a secret. Since, the publication of the '*Limits to Growth*' by Club of Rome, 1972 and '*Our Common Future*' by the World Commission on Environment and Development (also called the Brundtland Report), 1987 and the UNCED, 1992; the SD has been the most important concept of global development agenda. The outcome document of the Earth Summit, 2005, New York referred to the economic development, social development and the environment protection to be the three interdependent and mutually reinforcing pillars of SD. Water is not only the basic need for survival but a necessity for social development and protection of environment; but yet to be considered as part of the economic activity even though almost all the products are dependent on it directly or indirectly. The report '*Our Common Future*', had very little to say about water except for passing references to the problems of water supply and water quality, improved water management for agricultural productivity and potential conflict on the scarcity of water resources(Ken Conca). The Agenda 21 of Rio

1992 also failed to recognise water as a global resource and therefore, restricted itself to the basin level water management issues. The preparatory meetings on water to Rio+20 also have missed this broader picture for the sector and have rather confined the discussions to the management issues of WSS sector, water sector reforms etc.. However, the nexus conference at Bonn, tried to identify the links between water, energy and food security issues but fell short to bring out how this could be linked to the sustainable economic development model which is of interest for the world leaders after the recent successive financial shocks.

At Rio+20 the world leaders will search for a viable economic model for growth towards achieving social objectives like eradication of poverty through generation of more employment. It would be extremely important to demonstrate that the brown development is fast reaching its boundaries and hence requires a paradigm shift. With the declaration of the Food and Water to be the human rights, its security has only become a corollary to it. The threat of climate change has added the dimension of uncertainties to it resulting in alignment in the national policy paradigms even without any global binding regimes. In other words, the water is fast being recognised as a global concern if not a global subject, which is evident from the earlier discussions.

The core issue of the present study is to examine if there is a need for global water governance framework in the context of SD. The Brundtland Report, 1987 defined SD as: *“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”* The Earth Summit, 2005 recognized social development, economic development and the environment protection as its three pillars. Water, cuts across all the pillars and it has been established that poverty is endemic to the water scarce areas and economic development of any area is strongly linked to availability of water besides the vital dependence of environment on it. It is widely advocated that the Green Economy(GE) is the path to achieve SD and poverty eradication. The UNEP¹³ defines GE as *“one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive.”* In practical sense the GE implies economic growth with low carbon emissions, low pollution, energy efficiency, resource use efficiency, prevention of loss to biodiversity and ecosystem services. The Bonn Conference, 2011 proposed water, energy and the food security nexus approach with water at its centre to be the transition to GE. In this context water could be seen as the key to sustainability as it sits at many nexuses and is not produced by human beings like energy or food. It is mostly the product of the hydrological cycle and is vital for social development, economic growth and environment protection. In other words, the stability of hydrological cycle holds the key for stable growth in all the areas. Hence it may be necessary to identify the controlling parameters of the hydrological cycles and the adverse human impacts to devise a globally binding framework for its protection in the same way as being done for carbon emissions.

Besides the above, there could be other global frameworks on the issues like prevention of the overexploitation of water resource beyond its sustainability in any region through effective trade barriers in the same line as the Convention on International Trade on Endangered Species; globally agreed benchmarking for the water use efficiency to allow more water for the environment and prevention of the scarcities in lower riparian states due to the inefficient use by upper riparian states; global norms on protection of vital land and water resources which are crucial for water and food security (in view of declaring them to be the human rights); global norms for protection of trans boundary ground water recharge zones; global norms for virtual trade on water fixing limits to externalization of water scarcities; international norms for facilitating inter basin water transfer and formation of water grids, physical trade on water to avoid carbon emissions from desalination plants or exploitation of deep ground water etc. In other words, the global water governance architecture may have principles that are binding and those which are voluntarily agreed ones like MDGs.

NATIONAL IMPLICATIONS OF GLOBAL WATER GOVERNANCE

Traditionally water has always been considered a local subject worldwide. Therefore, most of the countries do not have the requisite constitutional mandate to deal with the subject. As a result, the sector has always missed the advantage of integrated planning and development. In the past few decades the subject has attracted the attention of the scientists and the leaders alike and thus the sector has been populated with the studies from various dimensions like environment, ecology, climate change, water services like supply of drinking water and sanitation, pricing issues, water use efficiency, irrigation and cropping pattern, desertification, water politics, water and development cooperation, water governance, watershed management, river basin management, aquifer management, integrated water resource management; and the water, energy and the food security nexus, awareness and capacity building etc. The UN has also adopted various water related conventions like UN Watercourses Convention, UNCCD, UNCBD, Ramsar Convention for protection of wetlands etc. during the past few decades. However, a holistic global view for this sector is yet to take shape, which is evident from the various institutional frameworks that are working separately at global as well as national level reflecting the fragmented policy dimension of this sector. Since, water is a finite resource and fresh water availability for human use is limited and considering the uneven distribution of the resource in time and space coupled with the climate change uncertainty, it is felt necessary to have innovative approaches to meet the challenges with necessary global and national policy responses within the broad framework of SD.

The present study demonstrates the existing global water governance frameworks in place and their inadequacy to bridge the various gaps in a multilevel governance model (Charbit, OECD). The same is also applicable in a national context. The study also established a wide gap in the perceptions of European countries and the developing countries about the challenges of this sector. In Europe the water sector is mostly focused on WSS services, while in developing world it is agriculture or industry depending upon their contribution to their GDP. This gap in the perceptions has not allowed the water resource sector to consolidate and get the benefits of the integrated planning. An appropriate governance mechanism should reconcile this fragmented approach that has brought detrimental effects in the field in terms of wastages, duplication of works lack of sustainability etc. In this context the nexus approach offers a fresh idea which should be translated in to field practices. For this it may be necessary to have a common conversion language for optimization of the benefits. Since, energy for human comfort is the main reason for damage to the environment it should be appropriate to consider energy footprints in all the products and services including that in water and priced accordingly to link it to the broad framework of sustaining economic growth, creating spaces for energy efficiency innovations in water use.

The vice president of the WB Mr. Ismail Serageldin had stated that “ *The wars of the next century will be over water*” in 1995. The similar sentiments were echoed by many others including the influential British publication ‘*The Economist*’ by stating that “... *the conditions are ripe for a century of water conflicts*”. Though no major armed conflict has yet taken place on water, there is wide spread uneasiness over the future prospects of this sector with countries playing cards close to their chest. At this moment it is necessary to use the wealth of information created by the UN Water and its partner organizations for pushing global water governance architecture as a pre cursor for the GE and poverty eradication.

The most important argument against a global approach for water could be its present status i.e. if the world could manage without any such framework till now why to have it now? Such advocacy only supports a ‘*business as usual approach*’ resulting in no action. It has been well identified by the scientific community that ‘*no action is no more an option*’ at this stage when the earth is fast moving to its planetary boundaries. As stated by Dirk Messner, Director, DIE at the Bonn nexus conference “*The way the world community accepted that the child labor was unacceptable, slavery was unacceptable the same way world community should accept that the unsustainable development to be unacceptable.*” The call for Rio+20 by the UN only vindicates this stand. It has also been argued that the water related challenges are best taken care of through environmental governance. The present frameworks under environment like UNCBD, UNCCD or Ramsar Convention on wetlands will not solve the water scarcity problems, trans-boundary water issues i.e. its equitable sharing, integrated development, sustenance of vital ecosystems, carbon sequestration, reduction in the GHGs, combating cross border pollution, externalized effects of the water footprints, water use inefficiency resulting in loss of opportunity for others, promoting global trade in water, international

financing and developmental cooperation etc. except for providing the points of linkages. Any approach to global water governance from environment side will be partial and incomplete as it will miss the social and economic dimensions of water use. An approach based on the nexus of the vital planetary resources within the framework of environment interacting with the global economic framework with the objective of social equity and environmental sustainability may take shape. But it will require sufficient political will to move forward. The wisdom of Albert Einstein i.e. 'We cannot solve our problems with the same thinking we used when we created them', may help in this effort.

POLICY RECOMMENDATIONS

1. Water should be declared as a '*Global Heritage*' to recognize rights of voiceless stakeholders like future generations, animals, plants and to induce change in the perspectives of national water policies from its focus on 'exploitation' to 'protection and preservation'.
2. The oceans and the seas should be considered as the rightful owners of the water as *a priori*. This should help in devising the legal frameworks for water use by all the stakeholders and reduction in the trans-boundary conflicts.
3. The water governance should be clearly be differentiated from the water management and the WRS from the WSS sector as discussed in the paper. It would be appropriate to consider WSS under social goals and WRS under SD goals.
4. It would be prudent to recognize water as a human survival need, food for sustenance and energy for human comfort for the purpose of necessary global policy responses for the WRS.
5. There is a need for developing global water governance architecture clearly differentiating the areas where water to be considered as a global subject and the areas where it would be seen as a global concern.

CONCLUSION

The problems of water sector are now being recognized as the outcome of poor governance. The paper brings out clearly that the regime building through binding principles need not be the only means of water governance. The water governance in an informal manner holds the key to solve the global water problems in the broad set up of sustainable development.

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