

WATER FOR THE TWENTY-FIRST CENTURY: CHALLENGES AND MISCONCEPTIONS¹

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SUMMARY

This paper critically reviews some of the global debates and narratives concerning water scarcity, water ‘crises’ and water resources management and shows what they are obscuring. It also examines the various positions on water ranging from those viewing water as an economic good to those viewing water as a human right and the commons. The paper demonstrates how global debates and perspectives tend to draw on rather vague political, economic or theoretical assumptions rather than on empirically grounded facts and realities. Due to their rhetorical and speculative character, their claims tend to be apolitical and divorced from socio-political realities. For example, the narratives of water ‘crises’ and water wars tend to obscure issues concerning unequal access to and control over water. The ‘water as an economic good’ narrative which monopolises the debates risks obscuring the cultural, social and symbolic dimensions of water. It also fails to adequately address questions concerning equity and justice. Similar malaises are to be found in the current debates around the privatisation of water services.

The paper argues for the need for a greater pluralism in the debates and for more attention to the multifaceted dimensions of water and its various expressions in the everyday contexts within which people live their lives. Thus, there is the need for critical research to map out the mismatch between rhetoric and reality across macro, meso and micro realms, calling for explicit links to be made between water and power and politics.

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INTRODUCTION

At the beginning of the twenty-first century, despite all the advances in information technology and science, policy makers and practitioners in international development are increasingly aware of the sober reality that vast populations on the globe still lack access to water and continue to be victims of poor sanitation and water provisioning. Despite all the impressive targets of the previous water decades (the Decade's goal of 'Water and Sanitation for All' by 1990, and New Delhi's reaffirmation of the same goal by the year 2000), the global situation is still wanting. It is estimated that over one billion people lack access to safe water and around two and a half billion lack access to adequate sanitation having serious consequences for health and well-being.

There are several global processes, which are currently addressing the issue of water in the new millennium. One of them is the World Water Vision process, under the aegis of the World Commission on Water for the 21st century. Others are Vision 21, spearheaded by the Water Supply and Sanitation Collaborative Council and the Social Charter for Water, developed by the French Académie de l'Eau. With the exception of Vision 21, the several processes around water seem poised to prescribe market remedies and privatisation solutions for water scarcity in the next millennium². At the same time, however, these visions assert the rights of the poor to water. For many these two positions are congruous (e.g. key players around the Framework for Action process and the Global Water Partnership). For others it is unclear whether market forces can lead to the fulfilment of goals concerning social justice (e.g. southern NGOs such as the Centre for Science and Environment, New Delhi and academics such as Belgium-based Riccardo Petrella). In this paper, I examine both positions and raise questions concerning their main premises and what they end up obscuring.

Water is a key area in social and public policy and is acquiring a growing importance in international development. The current vision processes around water seek to place water firmly in the arena of international development concerns and this is only to be applauded. However, the global statements and visions concerning water tend to have a normative and prescriptive character, containing scenarios of best practice and of the worst possible outcomes. Many of the arguments and prescriptive claims contain little or no supporting evidence. On what are the assumptions of these visions based? What are the challenges that emerge for the research, policy and activist community? What are the misconceptions? The aim of this paper is not to present a comprehensive overview of all the global visions and future scenarios around water, but instead to go beyond the normative character of the various global statements to raise questions concerning their underlying assumptions, possible outcomes and highlight what they are obscuring.

² Vision 21 promotes 'equitable financing', with cross subsidies to ensure services for the poor and grants to assist capital development. It argues that the costs of not providing services are higher than the costs involved in provision (2000: 10).

1. DIFFERENT NOTIONS OF WATER SCARCITY

From once being considered an abundant resource, water is increasingly seen as a 'scarce' resource, which needs to be managed judiciously. The statistics are well known: Only three per cent of water on earth is fresh and most of this is locked away in the ice caps of Antarctica and Greenland or deep in underground aquifers. As a result only 0.3 per cent of global water is available for human consumption (Gleick 1993:3).

But, what is it that makes water scarce? It is because all but three per cent of the earth's freshwater is locked in ice caps? Is it because of the rapidly dwindling aquifers? Is it because a billion people lack access to clean water? Clearly, water supplies are limited and finite, but does this make water scarce in absolute terms? Water scarcity, as it is constructed in global declarations and debates, is often presented in absolute and monolithic terms, obscuring the complex nature of scarcity and its linkages with ecological, socio-political, temporal and anthropogenic dimensions. Let us review some of them.

One, unlike other environmental resources such as forests and coal, water is a renewable resource, which means that its availability is constantly subjected to variation depending on its state in the hydrological cycle. (One exception is groundwater, which is less renewable than other water sources.) Not only is its state variable (e.g. solid, fluid, or in gas form) but it is also variable across time and space, depending on factors such as climate, season and temperature. These are the *biophysical and ecological* attributes determining water availability.

Two, water scarcity has *temporal* and *cyclical* dimensions. People living in arid and semi-arid regions have long since recognised the temporal nature of water scarcity. Periods of dearth are interspersed by periods of abundance. For example, in semi-arid western India, rural people have developed coping strategies and local knowledge systems to survive through drought periods where water supplies are limited (Mehta 1998). Water availability, thus, is characterised by uncertainty in many parts of the world. However, while the contingency on factors such as rainfall, vegetation and grass cover make water availability uncertain, it would be fallacious to see water scarcity as something that is constant and permanent. This is because supplies do become abundant in favourable seasons and climatic conditions. Thus, water supplies are relative to exogenous factors such as rainfall.

The third dimension is the *distributional* and *relational* aspects of scarcity. There is tremendous inequality in access to and control over water resources. Scarcity is not felt universally by all. In water scarce western India, irrigation pumps work twenty-four hours a day, while poor women find their drinking wells run dry. In arid parts of the world, people consume 10 litres of water per day (Mehta 1998). An average American, by contrast, consumes over 700 litres a day (Gleick 1993: 375). It has been estimated that the increase in water consumption is linked to urban growth. But, the urban community is not homogenous. Slum dwellers and poor income households consume far less water than the rich, and often, do not even access half the quantity of water required for maintaining basic health. One could argue that these figures only concern household water requirements, which are very minor anyway. Still, they throw the inequalities in access to water at the global and local level into sharp relief.

The fourth dimension concerns the *anthropogenic* dimensions of scarcity. While water scarcity tends to be naturalised today, its anthropogenic dimensions are whitewashed. It is well known that the degradation of the Aral Sea and the Caspian Sea are largely due to human intervention. Furthermore, many of the silted up dams, broken hand-pumps and defunct water pipeline schemes are indicative of bad management practices and/ or a failure to encourage or create supportive institutional arrangements to govern water supplies. In sum, it is wrong to conceive of water scarcity in absolute terms, but instead there is an urgent need to link water scarcity with socio-political, institutional and hydrological factors.

While it is also important to distinguish between the water requirements of the various sectors of society, the differences between consumptive and non-consumptive uses, and the environmental and ecological requirements (e.g. in-stream and downstream functions), these issues cannot be handled in this paper. I have attempted to show here how water scarcity needs to be looked at in a more nuanced fashion, when it is viewed as relative to ecological, temporal, anthropogenic and distributional factors.

This is being recognised and there are attempts to go beyond blanket notions of the term scarcity. For example, several key players in the Framework for Action processes surrounding the World Water Forum have been reticent to talk of a ‘global crisis’ in water given the tremendous variations in water problems across the globe.³ I have elsewhere argued that it is important to differentiate between ‘real’ and ‘manufactured’ scarcity (Mehta 1999). Real scarcity is an environmental and social problem with biophysical and social manifestations (e.g. dwindling groundwater aquifers, increasing soil salinity, acute water shortage in communal water tanks). The social manifestations include a longer trudge for rural women and the increasing inequality in access to water at the global and local levels. On the other hand, scarcity can also be ‘manufactured’ both due to anthropogenic interventions (e.g. over-pumping of an artificial reservoir) or due to discursive constructions. By the latter, I am referring to ways in which scarcity is often naturalised at the discursive level or constructed by powerful actors to meet political ends (e.g. water-scarce areas are used to legitimise large dams even though these areas might not end up benefiting from the large dam). Other authors have also questioned the absolute notions of scarcity in different ways. Lundqvist & Rockström (1999: 5) identify a need to focus on the social adaptive capacity of societies and individual water in response to changes in water availability.

Why is a differentiated understanding of water scarcity important? For one, it sharpens our understanding of the multi-faceted nature of water scarcity, making us aware of the biophysical, temporal, relational and political aspects. Most important of all it throws the crisis narratives of water scarcity into sharp relief to which I now turn.

³ These views were expressed by Tony Allan, Alan Hall and Khalid Mohtadullah from the Global Water Partnership at a panel discussion on the Framework for Action held at the Overseas Development Institute, London (March 3, 2000).

2. WATER CRISES AND THEIR SUPPORTING NARRATIVES

It has been asserted that the wars and conflicts of the next century will be about water. Consider the following quotations:

‘Many of the wars of this century were about oil, but wars of the next century will be about water’ (Serageldin in Cooper 1995: 1115).

‘The next war in the Middle East will be over water, not politics’ (Boutros Boutros-Ghali in Butts 1997: 65).

‘Not all water-resources disputes will lead to violent conflict . . . [but] in certain regions of the world, such as the Middle East and southern Asia, water is an increasingly scarce resource . . . In these regions, the probability of violence, due at least in part to water disputes, is increasing’ (Gleick 1993: 108).

Furthermore, it has been argued that the spiralling global consumption of water coupled by the population growth will lead to severe water shortages, having a profound impact on food security, health and human well-being (Postel 1996; Postel 1992).

However, what are the assumptions behind these crises narratives? The assumptions have their roots in neo-Malthusian perspectives concerning environment and development, which posit that increasing population growth will put pressure on the existing shrinking resource base. It has been argued that water scarcity needs to be linked with the exponential increase in demand for water, rather than on population growth. Moreover, water scarcity is often compounded due to poor institutional arrangements governing water. An impressive body of work by common property theorists has successfully discredited neo-Malthusian notions concerning population growth, resource availability and environmental degradation. Many empirical studies have shown how people cooperate in times of resource pressure and scarcity (cf. Berkes 1989; Bromley and Cernea 1989; Ostrom 1990). They have also drawn attention to the importance of institutions in managing resources (see Section 6). Common property scholars have also shown how Hobbesian notions of anarchy where states, regions and people fight over scarce resources may not be an accurate or predictable scenario. For example, emerging research has shown that local people and global actors stakeholders have deep understanding of water in their immediate environment and co-operate with each other in times of adversity to avoid high transaction costs in their failure to comply (Ostrom 1990, Ostrom and Keohane 1995).

This is not to deny that water is embroiled in local, regional, national or international disputes. Lower caste villagers in Indian villages still are victims of local conflicts over water. Several international disputes are around water (e.g. riparian disputes in the Middle East and in South Asia). There exist several conflicts concerning how water should be managed (e.g. battles against large dams) and conflicts concerning the prioritisation of water use (e.g. inter-sectoral conflicts between drinking, agriculture, urban development).

However, in most of these cases it is unclear whether the conflict is due to 'scarcity' per se. Riccardo Petrella argues that it is misleading to blame conflicts on water scarcity and on rising water needs. Instead many international, national and regional conflicts around water are caused by other factors such as ethnic rivalries, nationalism and power politics that extend to the cultural, political and economic spheres (Petrella 2000: 61). In such cases water is used to fuel already existing conflicts. Conflicts also arise due to the ways in which water use is linked with the prevailing social and power relations (be they in the household, in a community or in a region) and to the stakeholders social and institutional positioning which are generally unequal and contested. For example, in India water crises usually emerge because access to and control over water is very unequal and differentiated in micro, meso and macro settings (Mehta 1998). Thus, water crises usually arise due to skewed access to and control over a finite and limited resource. Addressing these inequalities in questions concerning local, national, regional and global control over water is probably a more helpful way to mitigate the water 'crisis', rather than the creation of blanket statements making water out to be the source for all conflicts.

3. WATER AS A HUMAN RIGHT?

In the 1970s, international debates stressed the importance of water in basic needs requirements concerning health and sanitation. Responsibility for public health was seen as a fundamental task of national government, and experience, particularly from the UK in the nineteenth century, demonstrated that improved water supply and sanitation was a key driver in this area. The debates highlighted the role of state, government and donors in providing the basic requirements of water.

Recently, a growing confluence of positions argues eloquently for the need to view water as a human right (for example Vision 21). This advocacy for positive rights such as access to water, food and shelter marks a step change from the negative or liberal understanding of rights (eg the right of free speech is construed as freedom *from* interference in expressing one's opinion rather than the right *to* information and education etc to develop an opinion) that underpins the notions of liberal democracy. Supporters argue that water and sanitation are not just basic needs, but also fundamental human rights following the criteria set out under the Universal Declaration of Human Rights (1948) and made explicit in the Convention on the Rights of the Child (1986). In practice this would entail the creation of specific national and international legal obligations and responsibilities and make water a focus of world attention. In concrete terms, it would entail a stipulation of a basic allocation of a fixed amount of litres per person. Basic water requirements have been suggested by various donor agencies and they range from 20 to 50 litres a day, regardless of culture, climate or technology. Gleick also makes the case for states providing basic water needs (1999). For example, the South Africa White Paper on Water Policy, considered to represent the state-of-the-art in water resource literature fixes the allocation at 25 litres per capita per day. Vision 21 identifies an absolute minimum of 20 litres per capita per day, but recognises that considerations of levels of service, culture and distance between a water source and the user should qualify any estimate of minimum requirement. They point to the additional health benefits felt with house connections, which usually use a

minimum of 40 litres per head per day. In addition Vision 21 identifies a basic requirement that each country promote a limited number of key hygiene practices (2000: 35). World Water calls for universal access to safe water for drinking. Vision 21 links the right to water with a broader vision of human development, poverty reduction and empowerment of the poor, in particular women (2000: 5–6, 13).

Why this emerging call to see water as a human right? A significant improvement in water and sanitation could reduce the spread of diseases, improve health and well-being, enhance poor household's sense of dignity and independence and reduce the drudgery of women and children who are responsible for water collection and free up time spent for water collection (1–4 hours a day) for other activities. However, most of the statements arguing for the need to see water as a human right have a rather speculative and normative character. Several questions still remain unanswered. For example:

1. Who would assume responsibility for ensuring that water is provided to all as a basic human right? Would it be the community, state government or the international world system? Who, for example, would be penalised if human rights to water were violated?
2. Can a universal basic water requirement be conceived, independent of cultural norms, technology or climate?
3. How would the present stipulation of water as a human right be different from the spirit of the 70s and 80s where efforts were made to provide water to all? Is there any guarantee that the defunct hand pumps and broken pipes are things of the past?
4. How would these basic rights be enforced? Would there exist an international body to which people could turn if their human rights to water are being violated (e.g. International Court of Justice for Water)?
5. Would questions of redistribution also be addressed? For example, would limits be set on the amount of water someone could consume? (e.g. could it be a criminal offence to have a private swimming pool in a semi-arid region?)

Some of these Visions have attempted to answer these questions. For example, the 20/20 Initiative recommended by the 1995 World Summit for Social Development which is aimed at achieving universal access to basic social services speaks of taxing the rich and allocating 20 per cent of official development assistance (ODA) and 20 per cent of the budget in developing countries to these basic social services (UNICEF 1994). Vision 21 talks of cross-subsidies, swapping debt relief for basic service delivery and the reallocation of resources away from high-cost high-technology projects. Nonetheless, several of the afore-mentioned questions remain unanswered, in particular with respect to redistribution. Furthermore, the declaration of water as a human right might lead to the strengthening of the role of the state as opposed to, say, civil society members or the private sectors. This move would go against the arguments of both those who seek to empower local communities as well as those who seek to encourage private sector innovation.

In practice, the discourse concerning water as a human right is still very abstract. Not only is there a lack of empirical research but its practicalities still have to be worked out.⁴ It still has to gain widespread support from the powerful actors shaping global water discourses who would rather see water security for all as a goal rather than as a universal right⁵. The reasons for their reluctance to pick up this discourse are not hard to guess. Rights usually go hand in hand with responsibilities. And if the responsibility for water provisioning is slowly being moved away to a variety of actors with strong market leanings, clearly the human rights of the poor might not be a topmost priority as opposed to the goals of efficiency and profit maximisation. Furthermore, the notion of the universal right to water could be interpreted as calling for free access to water which would contradict the wide spread idea of water as an economic good. Let me now turn to investigate this discourse.

4. WATER AS AN ECONOMIC GOOD?

Since Rio and Dublin, water is increasingly being seen as an economic good. Indeed the Fourth Dublin Principle which advocated consideration of water as an economic good suggested that the basic human need for safe water to drink could no longer be regarded as a sufficient criterion for providing an engineered supply (Black 1998:55). Water supplies are considered scarce, calling for the judicious use of water and shifting to demand management. In terms of domestic water supply and sanitation the demand-led discourse requires a range of water supply and sanitation options to be offered, from which potential consumers can then, apparently, make a free choice. Latrines, for example, must now be seen as a consumer good (Cairncross 1992).

Seeing water as an economic good and the shift to demand management have generally been interpreted to mean that water must have a price. Free water is considered ‘wasted water.’⁶ The lack of pricing or inadequate pricing is largely seen as key factors in water use efficiency. The market is thus evoked as a way to solve water scarcity problems. The underlying assumptions in most donor discourses are that there is a congruity between viewing water as a right and as an economic good. For example, UNICEF (e.g. Nigam and Rasheed 1998:3–7) and the World Water Council mention economic efficiency arguments and rights based arguments in the same breath. It is argued that even if something is a right, there is no denying the need to pay for it.⁷

Public policy at the international level has focussed on the neglect of demand management in water supply and sanitation, in particular in developing countries. By contrast, in countries such as India, water supply is free of cost as a social welfare measure (Reddy 1999:80). However, due to liberalisation etc. there has been a push for cost recovery in the water sector. Much has been made in the literature of households willingness to pay (WTP)

⁴ I imagine that South Africa, with its new water policy encompassing both right-based and market approaches, would be a good place to test out the rights-based aspects of water.

⁵ Environmental and labour groups at the World Water Forum in The Hague criticised the formal declaration of the ministerial conference for stopping short of declaring safe water a universal right, reported in a press release of the Environment News Service 22/3/2000.

⁶ Mohamed El-Ashry – Chairman of the Global Environment Facility. Cited in a press release of the Environment News Service.

for water (*cf.* Altaf *et al.*, 1992; Whittington *et al.*, 1992). It is estimated that the WTP is about one to ten per cent of the total household expenditure, usually about five per cent of the total consumption. Recent studies are challenging these assumptions. They speak of linking willingness to pay to ability to pay (Reddy and Vandemoortele 1996, Ghosh and Nigam 1995). For example, in water-limited arid Rajasthan, Reddy (1999) has shown that WTP is much less than 5 per cent. Usually, WTP proponents tend to treat households as black boxes, ignoring the power dynamics within them, the naturalisation of women's water-related tasks and the low opportunity costs attached to women's time.⁸

This is not to say that poor households do not pay for water. It is estimated that in some parts of the world poor households can pay up to a staggering 25 per cent of their household income on water (Barlow 1999). In India in rural areas it is well known that private water markets continue to co-exist with public provisioning (e.g. neighbours act as water vendors, enterprising villagers sell water with donkey carts along side state supplied sources of water). Sometimes, the poor are more willing to buy water from a neighbour or water vendor than pay fixed rates towards communal water supply. In other contexts, the poor may not want to pay for communal water supplies when they can get it for free from a local water hole. For them, free water is desirable water (Mehta 1998).

This discussion points to the fact that there is a tremendous plurality in the ways in which rural and urban men and women make choices about their water supplies. In everyday contexts water can simultaneously be a free good, an economic good and a social good. Public and private systems often co-exist side by side with rural and urban people often making opportunistic choices between different types of water provisioning, depending on a variety of reasons that might not seem entirely rational to outsiders. A blanket and non-discriminatory water pricing policy may not capture all these institutional dynamics and may also unduly affect the poor, in particular women. Furthermore, externalities such as health issues are not really addressed. If people were unable to pay for water, their lack of access to clean water and sanitation could lead to the spread of diseases, having health implications, especially for children, women and the elderly. Also the low opportunity costs attached to women's time in many parts of the world, combined with their low decision-making power in the household, may not lead to a pressing desire of household heads to support better water supply systems for which they would be willing to pay. Thus, prevailing cultural practices and social and gender relations will also influence water-pricing systems. This indicates that market forces do not operate in a vacuum but are instead linked to the social practices, cultural norms and local institutional settings.

There is another practical issue. Despite the various global discourses concerning demand management, for all practical purposes in most developing country settings, water resources management is still supply driven. For example, in Zimbabwe despite the interventions of DFID, NORAD etc. and the encouragement of the World

⁷ Secretary of State, Clare Short, at a meeting organised by the Overseas Development Institute and SOAS in London, March 14, 2000. Similar arguments are made in the case of food.

⁸ There are several similar and perhaps more sophisticated debates concerning user fees in primary health and primary education and many lessons can be learnt from these two sectors.

Bank led Economic Structural Adjustment Programme ‘entrenched interests in Central Government are supported by a [supply-driven] discourse which is then repeated at District level’ (Briffa 1999:58). Interviews with government staff at these different levels indicated that the government is still largely seen as a provider. The supply-driven discourse of the Decade, thus, still remains a firm reality (1999:58).

The Zimbabwe study shows that the rational management approach is proving difficult to put into practice. For one, it is a systemic one that requires coordinated long-term action across a range of disciplines and departments from local to central government. Moreover, it implies the delegation of authority away from elected representatives to technical experts who advocate coordinated management and planning at a decentralised level (i.e. a catchment or sub-catchment level) rather than at a national level (1999:72). Thus, there is a clear lag in policy and practice. Demand-driven discourses, which are popular at the international level, are yet to be translated into practice in many developing country contexts.

To view water merely as an economic good is a reductionist way to view a multifaceted resource. Water has cultural, spiritual and symbolic dimensions for many people. However, the economic lens could undermine its embeddedness in the everyday social, cultural and symbolic contexts within which people all over the world live their lives. In some contexts, water will primarily be a cultural or symbolic good, seen as free and bereft of economic valuation. In other contexts, it needs to be viewed in economic terms. However, the co-existence of these multifaceted aspects of water is not being allowed by global discourses, which are privileging the economics paradigm over others. In the wake of increasing privatisation the non-material aspects of water are largely being dismissed as esoteric and meaningless. In doing so water is being robbed of its multifaceted meanings. Furthermore, localised visions concerning water and water resources management are being ignored. Good examples are recent declarations from dam-affected river communities who have come up with statements concerning alternative ways to view river basins and their resources.

Finally, could the mere declaration of water as an economic good lead to its more prudent use? Clearly some kind of demand management is required to curb the perverse overconsumption of water by powerful actors (e.g. swimming pool owners in desert Arizona or irrigator water lords in western India who are responsible for a declining water table). Thus, demand based approaches, which do not unduly tax the poor and prevent the rich from being exonerated from water thefts are very necessary. However, it would be flawed to think that the acceptance of water as an economic good is the only way to solve the problems of water shortages or lead to a more efficient use of the resource. As I have demonstrated above, market forces do not operate in a vacuum. Instead, they build on existing social and power relations. Thus, there is the danger that pricing mechanism might tax the poor instead of the rich. Unless redistributive mechanisms are also introduced with demand-led measures, nothing will change questions concerning the skewed access to and control over water resources, one of the key problems contributing to water shortages. I return to this point in the next section on privatisation.

5. THE COMMODIFICATION OF WATER

The World Water Vision seeks to make water everybody's business. While issues concerned with water security should be everybody's business, should the business interests of large monopolistic water companies be promoted by global visions concerning water? For example, the World Water Council (secretariat in Marseille) and the World Commission on Water (secretariat at UNESCO in Paris) have close partnerships with French based utilities and water companies such as Vivendi.⁹ These close partnerships could be interpreted as the active promotion of the interests of powerful corporations in current water debates.

The World Bank is also actively promoting private sector involvement in water and sanitation, especially in the developing world and has developed the 'Business Partners for Development Water Cluster' which is jointly hosted by WaterAid and Vivendi. The main argument is that the state has hitherto been unable to provide basic infrastructure in water and sanitation and market solutions might be a better option. In these debates, the private sector emerges as efficient, flexible and necessary whereas the public sector is made out to be bureaucratic, inefficient and corrupt. Thus, according to Ismail Serageldin, Chair of the World Commission on Water for the 21st Century, the turning over of water to a private corporation is one of the best ways to provide good services to the poor at a suitable price (Petrella 2000: 72).

The polarised state v/s market debates as promoted by the Global Water Partnership and other actors seem to be missing a crucial point. If we accept that the basic aim is to enhance the water security of the poor, then enhancing people's access to water and questions concerning justice emerge as high in priority. The driving question thus needs to be: would privatisation promote justice and enhance people's access to water? Emerging data show that we have no real reason to be sanguine. Even today, the poor pay much more than the rich for water. In South Africa, for example, the Water Affairs Minister stated that in some areas the people living in rural areas pay about 10 times more for water than the rich, yet often consuming just a tenth of their more wealthy compatriots (Kasrils 1999). Would private sector involvement reverse this process? Experiences with the privatisation of water do not always appear to be very poor-friendly. Firms have tended to focus on richer customers; prices have often been raised beyond agreed levels and people who cannot pay have been cut off (Barlow 1999; Petrella 2000). In Britain, for example, the people disconnected from water for non-payment escalated after deregulation in the 1990s (Barlow 1999). Furthermore, research on French water companies has revealed a marked lack of transparency and several scandals concerning corruption (Petrella 2000: 99).

Moreover, the privatisation of the water sector appears to have worked best in those areas, which had benefited from earlier state subsidies. In countries where strong state investments are absent, it remains to be seen how private corporations will ensure water provision to the poor, particularly during periods of economic insecurity and recession. Privatisation models have also tended to have a strong urban bias and have focussed largely on drinking water provision. It remains unclear how they can be applied in rural areas where people make

⁹ Also known as Compagnie Générale des Eaux employing 260,000 people in 100 countries world-wide with net sales of 31.7 billion Euros, <http://www.vivendi.com/> 13.10.99.

and sustain livelihoods in a diverse and holistic manner, where reliance on the state, donor agencies and NGOs is also greater.

Proponents of neo-liberal policies in the water sector often base their claims on exaggerated or incomplete claims, drawing on political or theoretical beliefs instead of empirical support (cf. Bauer 1997). The Chilean water markets have been praised by the World Bank as a success story for free markets in water use and management (Hearne and Easter 1995). However, researchers feel there is no reason to be overly confident. Bauer (1997) argues that establishing markets in water is harder than it seems, given that markets are not simple, automatic or self-maintaining mechanisms. They are instead dependent on wider legal and institutional frameworks, political, economic and geographical conditions. In Chile the water code separated water rights from land ownership which reflected an ignorance of prevailing tenure systems where land and water rights are inextricably linked. However, overlapping tenure and legal arrangements, the country's geography and cultural and psychosocial factors led to very limited success in water trading systems. Moreover, price regulation did not take place and the poor peasant farmers seemed to have been made worse off since the introduction of the water code. Hearne and Trava's (1997) study of water markets in Mexico, which accepts the water markets approach in theory, also identifies a number of serious constraints that served to raise transaction costs and limit the potential benefits of this approach.

The World Commission on Water has drafted public policy guidelines and a list of private investment opportunities to be adopted by the Second World Water Forum at The Hague in March 2000. Clearly we are just beginning to witness the globalisation of water. It is not inconceivable that in the near future national governments could be made to surrender their sovereignty over water. For example, trade and treaties such as NAFTA or EU regulations could demand that corporations mine the water of water-rich areas to transport it to water-poor areas (e.g. water exported from water-rich Canada to California or from Austria to drier Southern Europe). Moreover, corporations such as Monsanto are moving into the water sector and establishing water businesses in India and Mexico, thus capitalising on the acute water shortages encountered in these countries (Shiva 1999). Clearly public money in the water sector is staggering. For example, the Indian government spent over \$1.2 billion between 1992 and 1997 for water projects whereas the World Bank spent \$900 million during the same time period (Shiva 1999). If this public money were to be diverted to the private sector, the control of this crucial resource would be a guarantor to profits in an age of grave water scarcity (both 'manufactured' and 'real'). It is unlikely that corporations will be in the water business and encourage the mass transportation of water purely out of humanitarian reasons or out of concern for the human rights of the poor to water and sanitation. In sum, from being the last bastion of state intervention, water is increasingly emerging as the 'last infrastructure' or 'blue gold' for private investors. Thus the globalisation of water is likely to have far-reaching implications for questions concerning the rights of people to this life-giving resource and the national protection of environmental resources. Far more nuanced research is required to study the nexus between livelihoods, rights and environmental integrity in issues concerning the privatisation of water services.

6. GOVERNING WATER¹⁰

In recent years, community management has become a buzzword in the water sector. There is a growing consensus that water scarcity often arises due to bad water management practices that can be overcome with alternative forms of management. Within policy circles, participatory decentralised farmer-managed irrigation systems, indigenous techniques of water management and local water user committees are being promoted as the best alternatives to the failed top-down centralised water management systems of the past. The Vision documents also highlight these institutional approaches (e.g. World Water Commission 2000: 2; Vision 21 2000: 21).

A vast body of work has documented the various institutional arrangements employed by rural people in managing their water supplies, often under conditions of water scarcity. For example, early pioneering work on irrigation by Coward (1985) and Uphoff (1992) highlighted the various strengths of indigenous systems and the fallacies committed by planners who assumed that they were working *de novo*, instead of investigating and building on existing institutional structures in water schemes. Similarly, work by authors such as Wade (1988) and Ostrom (1990), drawing on collective action theory (see above), has analysed the factors enhancing collective action in irrigation systems and the conditions under which local institutions are employed to manage local water resources. Another strand of work has turned its attention to the flaws and failures of public water management systems and processes and consequently advocated a shift to devolve management to local farmers, thus increasing economic efficiency and transferring the responsibility of resources management to local users (cf. Sengupta 1991; Meinzen-Dick *et al* 1994).

While these approaches have shown that institutions matter and that water scarcity situations can be averted due to community management systems, a growing body of work points to the limitations of some of these institutional approaches (e.g. Mosse 1997; Mehta, 1997; Cleaver 1998; Potkanski and Adams 1998). Anthropological and sociological studies have highlighted the flaws in the tendency to valorise the virtues of indigenous institutional arrangements without understanding their complexity. Criticism is also levied toward the use of ahistorical and apolitical understandings of local institutions, static notions of the dynamic relationship between individuals and institutions and the ignoring of overlaps between state and local institutions. Moreover, conventional community-based management approaches have based their analyses on simplistic notions of the 'community' and community management. These simplistic notions tend to obscure questions concerning social differentiation in water resources management and the power relations that shape water use, even at the 'community' level. Instead, emerging work argues for the need to see institutions as embodiments of social practice, which are moulded by social and power relations (Mehta *et al* 1999). Often the distinctions between formal and informal arrangements are blurred. A failure to understand these aspects might lead to the proliferation of simplistic interventions for 'community' management – increasingly promoted in donor discourses – which both obscure local on-the-ground realities and undermine the flexible and dynamic character

¹⁰ This section draws from Mehta *et al* (1999).

of local institutional arrangements and the socio-cultural, economic and political contexts within which they are embedded.

7. WATER FOR PEOPLE; WATER AS COMMONS?

Critics of the commoditification of water call for the declaration of water as the commons (e.g. Robert 1993, Shiva 1999; Barlow 1999; Petrella 2000). They argue that water should be seen as a ‘common good’ and that its management and ownership should be done collectively largely determined by local water users. Thus, local people need to be endowed with rights over the water resources in their own river basin, catchment area or watershed. This stance is a reaction to notions that the state or private corporations can appropriate the water resources of a particular area in national interest or in the interest of other stakeholders. Such notions legitimise water management interventions that call for the mass transportation or the centralised control of water, often denying local people’s rights over water resources in their own locality. By contrast, the declaration of water as commons would discourage the idea that water could be owned, controlled or appropriated by powerful actors.

While I am sympathetic to these people-oriented approaches in water resources management, it is not entirely clear how water can be unproblematically viewed as the commons. Usually, proponents of the ‘water as commons’ claim tend to have a very idealised view of the local community. A growing literature has shown that natural resources management in local contexts can be conflict-ridden, exclusive and characterised by competing knowledge claims (Mehta *et al*, 1999; Leach *et al* 1997). Empirical research has shown that members of a society have very different forms of access to and control over land and water resources. For example, common property resources in the village Merka where I conducted detailed research on water scarcity are a highly contested terrain. Their use is determined by factors such as feudal legacies, gender, class, caste and power relations (Mehta 1998). In such a situation it is impossible to speak of water as common good, because there is no common or ‘collective’ community. Thus, there is an urgent need to unpack the notion of water ‘users’ – usually disparate groups with diverse institutional and social positions. While it would be foolish to deny the urgent need for people-oriented perspectives in water resources management, the ‘water as commons’ discourse needs to pay attention to the diverse nature of local communities managing water as commons. Failure to do so would both gloss over and perpetuate existing inequalities and conflicts governing common property resources such as water at the local level.

8. CONCLUSION

The opening ceremony of the World Water Forum in March 2000 was disrupted by streakers protesting against privatisation trends and large dams. In fact, the whole Forum was marked by debates around contrasting perspectives concerning water management and the ownership of water. This paper has attempted to raise some

of the questions underlying these debates. It has discussed some of the current narratives shaping global debates concerning water and shown what the globalised discourses are obscuring.

For example, the narratives of water ‘crises’, water wars and water shortages obscure issues concerning unequal access to and control over water. The rhetoric viewing ‘water as a human right’ still needs to be worked out in practice, given that rights go hand in hand with responsibilities. The notion of ‘water as commons’ – though people centred – can often use a simplistic and romantic model of the community as its starting point. Finally, the ‘water as an economic good’ narrative which has gained tremendous currency in the past few decades tends to monopolise the debates. However, it risks obscuring the cultural, social and symbolic dimensions of water and also fails to adequately address questions concerning equity and justice. Thus vigilance is required to ensure that the marketisation of water services serve the interests of the poor and water-needy, in particular women.

I have also argued for the need for a greater pluralism in the debates. Water is a multifaceted resource and in the everyday contexts within which people live their lives it has different faces and meanings. It can be simultaneously perceived as a free, social, economic, cultural or symbolic resource. Similarly, access to water in everyday contexts is highly differentiated, usually shaped by power and politics.

Sadly, global debates concerning water scarcity and water management have tended to draw on rather vague political, economic or theoretical assumptions rather than on empirically grounded facts and realities. Many of the claims in global discourses concerning water tend to, at best, be normative, rhetorical and speculative and, at worst, be apolitical and divorced from socio-political realities. Thus there is the need for critical research to map out the mismatch between rhetoric and reality across the macro, meso and micro realms. At the global level, it would be necessary to investigate the key assumptions by tracing the history and development of ideas in water-related debates and linking these assumptions with particular actors. Take the recent trends towards privatisation. It would be necessary to ask who the key actors are, understand what the driving force is in their declarations and understand their institutional and financial positionings. At the national and local levels, case study examples need to chart processes concerning decision-making, politics and the institutional organisation around water resources. Finally, there is an urgent need to understand how different local water users understand water scarcity and how water is governed and managed in a variety of ways at the local level. More importantly the links between water use/ management and power and politics needs to be made explicit. If the concern is really ‘water for all’ interventions and investigations must ask questions concerning people’s entitlements to water and understand the diverse institutional settings, knowledge claims and organisational forms that shape water use and water management in a variety of contexts amongst diverse water users.

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Water Supply and Sanitation Collaborative Council: <http://www.wsscc.org/>

World Water Vision: <http://www.watervision.org/clients/wv/water.nsf/WebAdmin/wHomePage>

Social Charter for Water: <http://www.oieau.fr/academie/>

The Water Academy and the Social Charter: <http://www.oieau.fr/academie/presentation>

Global Water Partnership and the Framework for Action: <http://www.gwpforum.org/>