

## **Privatization and the Provision of Water Services**

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During the past fifteen to twenty years, problems with the provision of drinking water and sanitation services around the world have been addressed by attempts to recharacterize water as an economic good, rather than as a public good. Within this conceptual framework, the private sector has been perceived as a provider of capital and efficient services. The effort to privatize water and sanitation services has had successes and failures, but as currently structured cannot be accepted as the most appropriate response in most cases, particularly given its overriding emphasis on profit and its inability to account for water as anything more than a commodity. If these services are to incorporate the full range of social, economic and environmental values necessary to sustain water resources over time, public and governmental involvement in providing stakeholder input and setting management policy remain essential to the process.

Humankind has no more complicated relationship to any natural resource than it does to water. Water is essential to human life, life processes and hygiene; it is vital to agriculture and most types of industry; it offers recreational opportunities; it serves as a means of transportation and waste removal; it provides habitat for many of the species we depend on for food and resources; and it has deep spiritual and religious significance. Water has also been the source of untold physical disasters; it has nurtured and transported many debilitating diseases; over the centuries, our efforts to control it have resulted in the massive loss of lives and property. However, there is no question that having reasonable access to sufficient quantities of clean

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water is necessary not only to human survival, but to our livelihoods and our quality of life.

Available fresh water amounts to less than one-half of one percent of all water on earth; the remainder is sea water, or is frozen in glaciers or polar ice. Deforestation, urbanization, massive water diversion projects and industrial farming have all contributed to a situation in which the sustainability of water for human and environmental needs is becoming much less certain. The potential effects of global warming add to this uncertainty.<sup>2</sup> Most informed researchers and policymakers consider the need to supply adequate quantities of clean water for human and environmental needs as one of the most important problems of the 21<sup>st</sup> century.

Currently, more than one billion people on earth lack access to adequate amounts of clean water, while almost three billion lack basic sanitation services. Global consumption of water is doubling every 20 years, more than twice the rate of human population growth.<sup>3</sup> Though about 18 percent of the total arable land in the world is currently occupied by irrigated agriculture, producing more than 33 percent of total agricultural production, irrigation is responsible for 70 percent of global water withdrawals and 90 percent of withdrawals in low-income countries; the FAO recently projected a more than 20 percent expansion of irrigated areas by 2030.<sup>4</sup> Under recent projections, if trends continue, by 2025 approximately two-thirds

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<sup>2</sup>See, Gleick, P.H., *Water: The Potential Consequences of Climate Variability and Change for the Water Resources of the United States: The Report of the Water Sector Assessment Team of the National Assessment of the Potential Consequences of Climate Variability and Change* (2000).

<sup>3</sup>Gleick, P.H., A. Singh, and H. Shi, *Emerging Threats to the World's Freshwater Resources*. A Report of the Pacific Institute for Studies in Development, Environment, and Security, Oakland, California (2001).

<sup>4</sup>Food and Agriculture Organization of the United Nations, *Agriculture: Towards 2015/30*,. Technical Interim Report, Global Perspectives Studies Unit, FAO, Rome (2000).

of the world's population will live in water stressed areas.<sup>5</sup>

Formal international recognition of water as a basic human need and a fundamental human right was slow in developing.<sup>6</sup> The Mar del Plata Action Plan adopted by the United Nations Water Conference in 1977 recognized that "all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs," though the plan had no legal status.<sup>7</sup> Under the International Covenant on Economic, Social and Cultural Rights, the right to water was implied as a precondition for an "adequate standard of living"<sup>8</sup> and the "enjoyment of the highest attainable standard of physical and mental health."<sup>9</sup> But not until the Convention on the Rights of the Child was adopted in 1986 was the human right to adequate and safe water

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<sup>5</sup>United Nations International Year of Freshwater 2003: Factsheet. (<http://www.un.org/events/water/factsheet.pdf>).

<sup>6</sup>Dubreuil, *The Right to Water: From Concept to Implementation*, World Water Council (2006).

<sup>7</sup>Report of the United Nations Water Conference, Mar del Plata, 14-25 March 1977.

<sup>8</sup>International Covenant on Economic, Social and Cultural Rights, adopted and opened for signature, ratification and accession by General Assembly on 16 December 1966. Entry into force, 3 January 1976. (*Art. 11: 1. The States Parties to the present Covenant recognize the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing, housing, and the continuous improvement of living conditions. The States Parties will take appropriate steps to ensure the realization of this right, recognizing to this effect the essential importance of international co-operation based on free consent.*)

<sup>9</sup>International Covenant on Economic, Social and Cultural Rights, adopted and opened for signature, ratification and accession by General Assembly on 16 December 1966. Entry into force, 3 January 1976. (*Art. 12: 1. The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health. 2. The steps to be taken by the States Parties to the present Covenant to achieve full realization of this right shall include those necessary for: (a)... (b) The improvement of all aspects of environmental and industrial hygiene; (c) The prevention, treatment and control of epidemic, endemic, occupational and other diseases.*)

explicitly recognized as an international right.<sup>10</sup> In 1992, the UN General Assembly provided additional support by adopting Chapter 18 of Agenda 21, which emphasized integrated water resources management, protection of water quality and aquatic ecosystems, and provision of adequate amounts and quality of water for human development.<sup>11</sup> In 2000, the UN's adoption of the Millennium Development Goals formalized a commitment 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, and to halve, by 2015, the proportion of people without sustainable access to safe drinking water.<sup>12</sup> In 2002, the World Summit on Sustainable Development added a commitment to halve, by the year

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<sup>10</sup>Convention on the Rights of the Child, adopted and opened for signature, ratification and accession by General Assembly on 20 November 1989. Entry into force, 2 September 1990. (*Art. 24: 1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services. 2. States Parties shall pursue full implementation of this right and in particular, shall take appropriate measures: a) to diminish infant and child mortality; b)... c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution.*)

*See also, Convention on the Elimination of all Forms of Discrimination Against Women, adopted and opened for signature, ratification and accession by General Assembly on 18 December 1979. Entry into force, 3 September 1981 (Art. 14: 2. States Parties shall take all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development and, in particular, shall ensure to such women the right: (h) To enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications.)*

<sup>11</sup>Report of the United Nations Conference on Environment and Development, Agenda 21, Chapter 18, Rio de Janeiro, 3-14 June 1992.

<sup>12</sup> United Nations Millennium Declaration, New York, 8 September 2000.

2015, the proportion of people who do not have access to basic sanitation.<sup>13</sup>

International recognition of the importance and increasing scarcity of safe water resources has been established, but there is little consensus on how to manage water in an effective and sustainable manner, and competition among different users of water continues to increase. In the developing world, particularly, this has increased the numbers of people without sufficient access to water and sanitation, has increased the costs for providing these basic necessities and has increased stress on water-related resources. The problems are complex; their solution will necessarily require place-based analyses and a carefully constructed mix of approaches, all falling under the general category of “integrated water resources management” (IWRM). IWRM not only deals with water supply and wastewater treatment, but also addresses flood control and drought management, agriculture and poverty alleviation, ecosystem function, and overall sustainability. Effective implementation of IWRM requires a broader, basinwide focus which includes consideration of the range of human and environmental requirements for adequate water quality and quantity, effective stakeholder input, and a clear governmental involvement.<sup>14</sup>

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<sup>13</sup>Johannesburg Declaration on Sustainable Development, World Summit for Sustainable Development (2002); Johannesburg Plan of Implementation, World Summit for Sustainable Development (2002).

<sup>14</sup>Rahaman and Varis, *Integrated Water Resources Management: Evolution, Prospects and Future Challenges*, 1 SUSTAINABILITY: SCIENCE, PRACTICE & POLICY 18 (Spring 2005) (<http://ejournal.nbii.org>). See also, Ministerial Declaration of the Hague on Water Security in the 21<sup>st</sup> Century, Second World Water Forum, The Hague, Netherlands (2000). (“[IWRM]...includes the planning and management of water resources, both conventional and non-conventional, and land. This takes account of social, economic and environmental factors and integrates surface water, groundwater and the ecosystems through which they flow. It recognizes the importance of water quality issues....[IWRM] depends on collaboration and partnerships at all levels, from individual citizens to international organizations, based on a political commitment to, and wider societal awareness of, the need for water security and the sustainable management of water resources. To achieve integrated water resources management,

Though there is general acceptance of IWRM as the most effective approach to achieving water resource sustainability,<sup>15</sup> beginning in the late 1980s much of the debate became more single-mindedly focused on how to simply achieve efficiencies in the use of water. In 1992, the International Conference on Water and the Environment held in Dublin established four guiding principles for action to reverse the trends toward excessive consumption, pollution and rising threats from drought and floods. The conference reports set out recommendations for action at the local, national, and international levels, based on the following, known as the Dublin Principles:<sup>16</sup>

- Principle 1 recognized fresh water as a finite, vulnerable, and essential resource, and suggested that water should be managed in an integrated manner.
- Principle 2 suggested a participatory approach, involving users, planners, and policymakers, at all levels of water development and management.
- Principle 3 recognized women's central role in the provision, management, and safeguarding of water.
- Principle 4 suggested that water should be considered as an economic good.

Though Principle 4 also acknowledges the basic right to have access to clean water and sanitation at an affordable price, in the international water supply and sanitation sector, recent debate has interpreted it in the context of a demand-responsive approach to water supply and sanitation projects, with demand measured in communities' willingness and ability to pay for capital, operating and maintenance costs. Particularly for urban water supply, the argument made was that pricing policies needed revision in order to reflect the true costs of water and to

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there is a need for coherent national and, where appropriate, regional and international policies to overcome fragmentation, and for transparent and accountable institutions at all levels.”).

<sup>15</sup>The World Summit on Sustainable Development, Plan of Implementation, Johannesburg, South Africa (2002).

<sup>16</sup>International Conference on Water and Environment, The Dublin Statement on Water and Sustainable Development, Dublin, Ireland (1992).

recover most of the costs of providing it. The fourth principle became highly controversial and was opposed by water professionals from the developing world, who argued that no water development initiatives could be sustainable if water was considered an economic good without considering the issues of equity and poverty.

This theme was echoed and expanded in Chapter 18 of Agenda 21,<sup>17</sup> which recommends the following economic measures for water management:

- Promoting schemes for rational water use through levying of water tariffs and other economic instruments, including the need for evaluation/testing of charging options that reflect true costs and ability to pay and for undertaking studies on willingness to pay.
- Charging mechanisms should reflect true cost and ability to pay.
- Developing transparent and participative planning efforts reflecting benefits, investment, protection, operation and maintenance costs, and opportunity costs of the most valuable alternative use.
- Managing demand based on conservation/reuse measures, resource assessment and financial instruments; changing perception and attitude so that “some for all rather than more for some” be fully reflected in valuing water.
- Developing sound financial practices, achieved through better management of existing assets, and widespread use of appropriate technologies are necessary to improve access to safe water and sanitation for all.
- In urban areas, for efficient and equitable allocation of water resources, introducing water tariffs, taking into account different circumstances and, where affordable, reflecting the marginal and opportunity cost of water, especially for productive activities.
- In rural areas, providing access to water supply and sanitation for the unserved rural poor will require suitable cost recovery mechanisms, taking into account efficiency and equity through demand management.<sup>18</sup>

The issue of water valuation was also widely discussed during the Expert Group Meeting on Strategic Approaches to Freshwater Management held in Harare, Zimbabwe in 1998.

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<sup>17</sup>Report of the United Nations Conference on Environment and Development, Agenda 21, Chapter 18, Rio de Janeiro, 3-14 June 1992.

<sup>18</sup>United Nations Department of Economic and Social Affairs, *Recognizing and Valuing the Many Faces of Water*, Chapt. 13 in First UN World Water Development Report: Water for People, Water for Life, United Nations Educational, Scientific and Cultural Organization (UNESCO), and Berghahn Books (2003).

The meeting considered valuing water within the broader context of integrated water resources management and came up with specific recommendations for discussion by the sixth session of the UN Commission on Sustainable Development, which specifically dealt with water resources issues. The meeting agreed on major guiding principles in valuing water:

**Economics:** Water planning and management needs to be integrated into the national economy, recognizing the vital role of water for the satisfaction of basic human needs, food security, poverty alleviation and ecosystem functioning, and taking into account the special conditions of non-monetary sectors of the economy.

**Allocation:** Water needs to be considered as a finite and vulnerable resource and a social and economic good, and the costs and benefits of different allocations to social, economic and environmental needs are to be assessed. The use of various economic instruments is important in guiding allocation decisions.

**Accountability:** It is essential to ensure efficiency, transparency and accountability in water resources management as a precondition to sustainable financial management.

**Covering Costs:** All costs must be covered if the provision of water is to be viable. Subsidies for specific groups, usually the poorest, may be judged desirable within some countries. Wherever possible, the level of such subsidies and who benefits from them should be transparent. Information on performance indicators, procurement procedures, pricing, cost estimates, revenues and subsidies needs to be provided in order to ensure transparency and accountability, maintain confidence and improve investment and management capacities in the water sector.

**Financial Resources:** Increased financial resources will need to be mobilized for the sustainable development of freshwater resources if the broader aims of sustainable economic and social development are to be realized, particularly in relation to poverty alleviation. Evidence that existing resources are being used efficiently will help to mobilize additional finance from national and international sources, both public and private.<sup>19</sup>

Though they have different emphases, and couch their language in different terms, most of these approaches are grounded on the assumption that water should be treated as an economic good, and that consumer behavior and market forces will naturally allocate water to its highest

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<sup>19</sup>Extracts of Proceedings of the Expert Group Meeting for the United Nations Commission for Sustainable Development 6, Harare, Zimbabwe (1998).

and best use. Its value as a social good with important environmental values and functions is not well addressed. In support of assigning higher prices to water, water professionals in the developed world argue that, traditionally, water has been regarded as a free resource of unlimited supply with zero cost at the point of supply, and with all associated externalities downplayed. Water users have been charged only a percentage of the costs of extraction, transfer, treatment and disposal, and thus have little incentive to use water efficiently. With the costs of water delivery escalating, it is clear to these professionals that economic measures such as pricing in and other tools for demand management must be used in order allocate and use water more efficiently.<sup>20</sup>

In fact, water has a unique combination of characteristics that makes it different from any other economic good and suggests that it should be considered differently:<sup>21</sup>

- Essential: there is no life without water, no economic production, no environment.
- Scarce: it is limited by the amount of moisture circulating through the system; though plentiful in places, it is unequally spread in place and time.
- Fugitive: it is constantly changing from form to form and moving from place to place.
- Indivisible system: the annual water cycle from rainfall to runoff is a complex system where several processes (infiltration, surface runoff, recharge, seepage, re-infiltration, moisture recycling) are interconnected and interdependent with only one direction of flow. If interfered with upstream, there are downstream implications, externalities and third party effects.
- Bulky: it is difficult to move large amounts from place to place inexpensively and efficiently.
- Non-substitutable: other economic goods have alternatives, but not water; there is no substitute.

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<sup>20</sup>First UN World Water Development Report, *Water for People, Water for Life*, United Nations Educational, Scientific and Cultural Organization (UNESCO), and Berghahn Books (2003).

<sup>21</sup>Savenije, H.H.G., *Why Water Is Not an Ordinary Economic Good*, Value of Water Research Report Series No. 9 (October 2001) (presented at the Second WaterNet/WARFSA Symposium on Integrated Water Resources Management: Theory, Practice, Cases, Cape Town, South Africa, 30-31 October 2001.)

- Not freely tradeable: its characteristics and its bulk make it difficult to be traded freely. Water markets can only function if they are very localized and take account of the fact that water flows downstream (e.g. in a micro-catchment or within a subsystem, such as an irrigation project).
- Complex:
  1. Water is essentially a public good.
  2. It is fugitive but bound within a system that freely crosses human borders; there are different political authorities that are responsible for the supply and demand of these waters.
  3. It has high production and transaction costs, primarily related to its bulk.
  4. The market for water is not homogeneous; some users have a high willingness to pay, consuming small amounts of water (domestic users, industries), others have a low willingness (and ability) to pay and use large amounts of water (farmers), and others have no ability to pay (environment, the very poor).
  5. There are macro-economic interdependencies between water-using activities; water use in agriculture affects industry, services, etc. Since water affects all economic activities, the relations are complex.
  6. There is always the threat of market failures in water supply, due in part to water's bulk; to reach economies of scale, large investments are required, which lead to natural monopolies in virtually all water services.
  7. Water has a high merit value, often not expressed in monetary terms; water relates to our perception of beauty, well-being and health.<sup>22</sup>

These factors strongly suggest that the pricing of water and the policies regarding access to it should be much more sophisticated, taking into account not only its value as an economic good, but also its value as a social, cultural and environmental good. Private sector dominance of water pricing policy has not served this purpose.

Another area of concern involving privatization has to do with service provision and the relative involvement of public and private entities. Privatization, and public-private partnerships, were extensively discussed at The Hague forum,<sup>23</sup> the Bonn conference,<sup>24</sup> and the

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<sup>22</sup>*Id.*

<sup>23</sup>Ministerial Declaration of the Hague on Water Security in the 21<sup>st</sup> Century, Second World Water Forum, The Hague, Netherlands (2000).

<sup>24</sup>Bonn International Conference on Freshwater, Facilitator's Report on Working Group A: Governance, Integrated Management and New Partnerships, Bonn, Germany (December

World Summit on Sustainable Development.<sup>25</sup> Models of private sector participation in water and sanitation services can be divided into four general categories.<sup>26</sup> *Full privatization* or divestiture is less common, especially in developing countries, since among other things, the private entity takes on full liability for the project. *Partial private-sector responsibility* includes all situations in which responsibility is shared between the private and public sectors through one of several contractual forms, including service or management contracts, lease contracts or concessions. Multinational corporations often utilize these contractual arrangements in order to act through local subsidiaries. *Co-operative models* typically take the form of a government-owned public limited company. *Informal sector provision* involves local, small-scaled operations which are tend to occur in low and middle-income countries. The most common form of private sector participation, in terms of numbers and investment size is the concession contract.<sup>27</sup>

Until recently, water supply and sanitation services in developing countries were provided by national and municipal governments, since generally, these services have been viewed as public goods and basic needs. The private sector was considered an inappropriate fit because it is not normally focused on issues of poverty and underdevelopment. Its primary emphasis is on commercial contractual relationships and making profits by providing physical infrastructure and services, not for encouraging a community's sense of ownership over a water

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2001).

<sup>25</sup>The World Summit on Sustainable Development, Plan of Implementation, Johannesburg, South Africa (2002).

<sup>26</sup>Budds, J. *PPP and the Poor in Water and Sanitation: Interim Findings*. Water, Engineering and Development Centre (WEDC), Loughborough University, Leicestershire (2000).

<sup>27</sup>*Id.*

project, or engaging with poor communities in the longer term process of development.

Essentially, the privatization of water systems is based on arguments that: a.) the private sector is more likely than public entities to maintain natural resources because it possesses more financial resources; b.) the private sector has the technical expertise to efficiently manage resources; c.) private sector contracts have incentives built in which encourage better performance and service; d.) increased investments improve access and availability, particularly in rural areas; e.) consumer user fees encourage responsible use of scarce resources.<sup>28</sup>

The equally powerful arguments against privatization are that: a.) those funding privatization projects may not adequately plan for sustainability, leaving low income rural areas suffering because long-term investment becomes infeasible and unprofitable; b.) increased prices of essential resources can lead to increased social conflict and unrest; c.) the commercialization of resources and operations can lead to increased risk of corruption; d.) requiring the poorest members of society to pay for essential resources rather than providing it to them based on need is fundamentally unfair and unjust.<sup>29</sup>

In the last fifteen to twenty years, governments have been less capable of financing the capital, operation and maintenance costs of water and sanitation systems, including expansion and rehabilitation. The perceived advantages of the private sector with regards to capital access and efficiency have led many to argue that it can reduce costs while it increases service quality and coverage. Though at least one World Bank study has demonstrated no efficiency advantage

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<sup>28</sup>Webreck, E., *The Challenge of Battling Privatization: A Case Study of Swedish Water Companies*, 5 SUSTAINABLE DEVELOPMENT LAW AND POLICY 30 (Winter 2005).

<sup>29</sup>*Id.*

for the private sector in water service provision,<sup>30</sup> these perceptions, and a general worldwide infatuation with market-based approaches to solving development related problems, have stimulated a significant increase in the transfer of such services to the private sector. Between 1990 and 1997, cumulative expenditures by the private sector in water and sanitation projects in developing countries was \$25 billion, compared with \$297 million from 1984–1990.<sup>31</sup>

The privatization concept discourages public subsidies, but this overlooks the fact that, in many developed nations, initial water infrastructure development was based on massive subsidies. Another of the concerns involving privatization is that it may encourage a fragmented perspective on interconnected issues. Focus on marketable aspects of the resource may result in single-purpose water planning and management policies, raising additional concerns for developing and maintaining information channels and transparency. For the developing world, in which basic infrastructure will require trillions of dollars in additional construction, the question has to be raised whether applying full cost recovery is ethical or practical.<sup>32</sup>

The case of Cochabamba, Bolivia serves as an example of the types of problems that

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<sup>30</sup>Estache, Perelman and Trujillo, *Infrastructure Performance and Reform in Developing and Transition Economies: Evidence from a Survey of Productivity Measures*, World Bank Policy Research Working Paper 3514, February 2005.

<sup>31</sup>Thompson, J., *Private Sector Participation in the Water Sector: Can It Meet Social and Environmental Needs?* Sustainable Development Opinion, International Institute for Environment and Development (May 2001). *See also*, Beecher, Janice A., *Privatization, Monopoly, and Structured Competition in the Water Industry: Is There a Role for Regulation?* In Proceedings of the Annual Conference of the American Water Works Association, Washington, D.C. (1999). (There are several rationales for the privatization of services, but the four most often put forth are ideological, populist, pragmatic, and commercial. Ideologues argue for less government, populists want a better society, pragmatists want effective solutions, and commercial interests want more business.)

<sup>32</sup>Rahaman and Varis, *Integrated Water Resources Management: Evolution, Prospects and Future Challenges*, 1 SUSTAINABILITY: SCIENCE, PRACTICE & POLICY 18 (Spring 2005) (<http://ejournal.nbii.org>).

privatization can create. In 1998, as part of conditions to guarantee a large loan to refinance water service in Cochabamba, the World Bank required the government to sell the public water system to the private sector. With only one bid to consider, the Bolivian government transferred the operation to Aguas del Tunari, a subsidiary of a conglomerate led by Bechtel. Soon after the sale, Aguas del Tunari doubled the price of water, pricing it higher at close to half a month's income for those on minimum wage or unemployed. The Bolivian government also granted monopolies to private water suppliers, advocated full-cost water pricing, and agreed with the World Bank that none of the loan would be used to subsidize water service to the poor. Water from any source, including that from captured rainwater, could only be accessed after purchasing a permit. Service and system connections remained at low levels. The public reacted very strongly against these measures, and after several marches and protests, arrests, violence and the death of one boy, the government revoked its authorization of the program.<sup>33</sup>

This, and several other high profile cases, indicate that free-rein privatization of public water services runs the risk of rejection when water pricing and services are approached with an emphasis on profit rather than the provision of high value public service. Governmental and stakeholder involvement in the planning and oversight of privatizations is essential, but does not, in and of itself, guarantee success in achieving sustainable and integrated water resources management. The values of water as a social and environmental, as well as economic, good must be observed in all institutional and operational aspects of water management. It is an inherently local process that should take advantage of all management tools available, not just those prescribed as general solutions by powerful private institutions.

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<sup>33</sup>Barlow, M. *Blue Gold: The Global Water Crisis and the Commodification of the World's Water Supply*, Committee on the Globalization of Water, International Forum on Globalization (Spring, 2001).

