

Water Privatization and Implications in India

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Introduction

The United Nations has recognized access to water as a basic human right, stating that water is a social and cultural good, not merely an economic commodity. Since ancient times, water has been recognized universally as an invaluable resource. Water has been harvested in India since the dawn of civilization. The Ramayana, Mahabharata and various other Vedic, Buddhist and Jain texts contain several references to water harvesting structures in existence and water being revered as a life giving and sustaining force. The bible quotes, 'I am the Alpha and the Omega, the beginning and the end. To the thirsty I will give water without price' - Revelation 21:6. In Islam, the *Sharia* law in Koran literally translates to laws of sharing water.

Today, due to increasing consumption patterns, water is becoming scarce and this scarcity is an emerging threat to the global population, rendering the adages of the Bible and Koran irrelevant. Global consumption of water is doubling every 20 years, more than twice the rate of human population growth. At present more than one billion people on earth lack access to fresh drinking water. By the year 2025 the demand for freshwater is expected to rise to 56% above what currently available water can deliver, if current trends persist.¹

To solve the growing water crisis, the solution that is proposed and pushed by world bodies such as the WTO and International Monetary Fund IMF through international agreements such as GATS is privatization of water, which in effect leads to treatment of water as a commodity. The argument put forth for water privatization is that increased cost for water will promote conservation. This commodification of water has already happened in several developed countries and is being pushed in many developing countries through structural adjustment policies. The control of water by private companies takes away this resource from the public and puts it in private control.

In this paper, we argue that privatization of water is a violation of basic rights of citizens and that privatization creates water monopolies and brings about more disparity in access to water. This paper is divided into three main sections. Section I discusses consumption patterns, water availability and its management in India. Section II examines water privatization in the context of national water policy and using the experience gained from several case studies around the world refutes the arguments for privatization that are usually put forward by the pro-privatization lobby including, national governments, water corporations, World Bank and IMF. Section III discusses several alternate models for water conservation through rainwater harvesting, community based participatory initiatives and holistic watershed management.

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Section I - Water resources, consumption and management

Water Resources

Rainfall: India can be broadly divided into 15 ecological regions. The vast ecological diversity of this country is reflected in the diversity in available water resources. With an average annual rainfall of 1,170 mm, India is one of the wettest countries in the world. However, there are large variations in the seasonal and geographical distribution of rainfall over the country. At one extreme are areas like Cherrapunji, in the northeast, which is drenched each year with 11,000 mm of rainfall, and at the other extreme are places like Jaisalmer, in the west, which receives barely 200 mm of annual rainfall. Though the average rainfall is adequate, nearly three-quarters of the rain pours down in less than 120 days, from June to September.

Groundwater: India's groundwater resources are almost ten times its annual rainfall. According to the Central Groundwater Board of the Government of India, the country has an annual exploitable groundwater potential of 26.5 million hectare-meters. Nearly 85% of currently exploited groundwater is used only for irrigation. Groundwater accounts for as much as 70-80% of the value of farm produce attributable to irrigation. Besides, groundwater is now the source of four-fifths of the domestic water supply in rural areas, and around half that of urban and industrial areas. However, according to the International Irrigation Management Institute (IIMI), the water table almost everywhere in India is falling at between one to three meters every year. Furthermore, the IIMI estimates that India is using its underground water resources at least twice as fast they are being replenished.² Already, excessive ground water mining has caused land subsidence in several regions of Central Uttar Pradesh.³

Surface water: There are 14 major, 44 medium and 55 minor river basins in the country. The major river basins constitute about 83-84% of the total drainage area. This, along with the medium river basins, accounts for 91% of the country's total drainage. India has the largest irrigation infrastructure in the world, but the irrigation efficiencies are low, at around 35%.

Consumption Patterns

If per capita water availability is any indication, 'water stress' is just beginning to show in India. This index is based on the minimum per capita level of water required to maintain an adequate quality of life in a moderately developed arid zone country. A region where renewable fresh water availability is below 1700 cubic meters/capita/annum is a 'water stress' region, and one where availability falls below 1000 cubic meters/capita/annum experiences chronic 'water scarcity'. The annual per capita availability of renewable freshwater in the country has fallen from around 5,277 cubic meters in 1955 to 2,464 cubic meters in 1990. Given the projected increase in population by the year 2025, the per capita availability is likely to drop to below 1,000 cubic meters i.e., to levels of water scarcity.^{4,5}

According to Professor Malin Falkenmark of the Swedish International Water Institute,⁵ 100 liters a day (36.5 cubic meters a year) is the minimum per capita water requirement for our basic domestic needs. In India, of the urban population, 84.9 percent had access to clean drinking water in 1993 as compared to 69 percent in 1985, but for rural population the figures fell from 82 percent in 1985 to 78.4 percent in 1993.⁶

Agriculture, industry and energy usage are roughly 5-20 times of domestic usage. Even within a particular industry, the quantity of water used is different for different players. For instance, the water consumed by a landless laborer is far less than that consumed by a rich farmer growing a water-intensive crop. Similar patterns of inequality in consumption are prevalent in industries as well.

Water demand and resource management

Water availability on the Indian subcontinent is strongly influenced by a number of climatic and geographic factors. Together these combine to provide India with enough freshwater to meet the various demands arising from the agricultural, industrial and domestic sectors. However, the actual distribution of water resources over space and time limits access to certain geographic regions and during a few months of the year. Government policies and economic incentives have also influenced the water distribution and consumption across India.

The *Arthashastra* by Chanakya (3rd century BC) talks of irrigation systems based on rain water harvesting structures. Ancient Indian history is full of such references to techniques for harvesting all forms of water – rainwater, groundwater, surface water such as streams and river and even floods. These water harvesting structures were based on traditional models which had been refined over centuries to adapt to the prevailing climatic and hydrologic conditions in their area of use. The potential of such water harvesting systems to supply adequate freshwater to all areas and sectors is high. However, since colonial times – and especially after independence in 1947 - these systems have been increasingly abandoned and neglected in favor of large dam and canal irrigation projects. So far, these ‘temples of modern India’ have been successful in providing water to selected portions of rural and urban India; yet high economic, social and environmental costs have reduced their overall benefit.

The highly variable nature of rainfall makes groundwater the most popular alternative for irrigation and domestic water use across India and accounts for over 400 km³ of the annual utilizable resource in the country. This dependence on groundwater resources is particularly critical where dry season surface water levels are low or where wet season flows are too disruptive to be easily tapped. In addition to being accessible, groundwater quality is generally excellent in most areas and presents a relatively safe source of drinking water for Indians in rural and urban centers. Agriculture remains central to the Indian economy and it therefore receives a greater share of the annual water allocation. According to the World Resources Institute (2000), 92% of India’s utilizable water is devoted to this sector, mostly in the form of irrigation. Groundwater alone accounts for 39% of the water used in agriculture and surface water use often comes at the expense of other sectors such as the industrial and domestic supply.⁷

Demand from the domestic sector has remained low and accounts for only 5% of the annual freshwater withdrawals in India.⁸ The demand from domestic sector over the next twenty years will increase from 25 billion m³ to 52 billion m³. However, this increase in the demand from the domestic sector will not be as much as that from other sectors over the next several years.⁷ Currently, only 85% of the urban and 79% of the rural population has access to safe drinking water and fewer still have access to adequate sanitation facilities.

Recognizing that the growing demand for water in agriculture and industries sets a pattern of water scarcity even in areas where there is sufficient water for domestic purpose, the national water policy has rightly prioritized drinking water over other uses. However, in giving subsidies to the industrial and agriculture sectors where the water consumption is highest and allowing these sectors to use more water at negligible prices, the government has effectively contradicted its own water policy. This has resulted in mining of ground water leading to a rapidly falling water table. For example, the bottling companies of Pepsi and Coca-Cola in different parts of India pay very little towards water mining and have practiced unsustainable water mining in these areas to the detriment of villagers and small farmers in the vicinity.

Most urban areas are serviced by a municipal water distribution system. Usually, the municipal water supply originates from local reservoirs or canals, but in some cases water may be imported through inter-basin transfer. Although the major cities in India enjoy access to central water supply systems, these schemes often do not adequately cover the entire urban population and are notoriously inefficient and unreliable. In rural areas, access to water is even more precarious. Over 80% of the rural domestic water comes from groundwater sources since it is more reliable in terms of water quantity and quality. Still, in areas where water is scarce, rural women must travel long distances to wells or streams to fetch water for their daily needs.⁷

In the past several decades, industrial production has increased in India owing to an increasingly open economy and greater emphasis on industrial development and international trade. Water consumption for this sector has consequently risen and will continue growing at a rate of 4.2% per year. According to the World Bank, demand of water for industrial, energy production and other uses will rise from 67 billion m³ to 228 billion m³ by 2025.⁷

The United Nations has warned that by 2025 two-thirds of the world will face severe water shortages if the current pattern of water consumption continues. Water-privatization has been sought as one of the solutions to address the looming crisis.

Section II - Water privatization

Water privatization involves transferring of water control and/or water management services to private companies. The water management service may include collection, purification, distribution of water, and waste water treatment in a community. Traditionally this service has been provided by the local governmental infrastructure such as the municipality or local city council. The pro privatization lobby including water corporations, the World Bank and IMF has aggressively campaigned for water privatization on the grounds that, while water subsidies promote wasteful practices, commodification of water should allow market forces (supply and demand) to set the water tariff, which in turn will reduce water consumption and promote water conservation. Furthermore, it is argued that opening this sector to private providers, will bring in badly needed capital for upgrading and development of infrastructure.

There are several models of water privatization that are currently in vogue in different parts of the world.⁹ Depending on the degree of privatization, these models can be broadly categorized into:

- Service Contracts – In this model, public authority retains overall responsibility for the operation and maintenance of the system, and contracts out specific components. Service contracts last 1-3 years and include services such as meter reading, billing and maintenance. While public ownership is maintained and community accountability structures remain in place, the transparency of operation can be limited. Contracts are often not openly negotiated and regulation and oversight is usually lacking.
- (Design), Build, Operate, Own and Transfer or (D)BOOT – This model of privatization is usually used for system infrastructure development such as water treatment plants that require significant finance. The private operator is required to finance, construct, operate and maintain the facility for a specific period of time (usually more than 20 years). At the end of the term, the infrastructure may be turned over to the municipality or the contract is renewed. This model is more prevalent in developing countries. Examples of (D)BOOT include Tiruppur Project in TN India and Cochabamba experience in Bolivia.
- Divestiture – In this model, the government or public authority awards full ownership and responsibility of the water system including the water source to a private operator under a regulatory regime. This is also done in the form of 10-20 year renewable contracts on the entire system. The government moves operation to private hands thus improving efficiency. Competition is limited through the process of bids on the divestiture. The private sector firm is then expected to take the risks and recoup investment/profits. This model cedes tremendous power over an essential resource to corporations. Examples of divestiture include the Rasmada scheme, under which a 22-year lease over a stretch of the Shivrath River in Chattisgarh was accorded to Radius Water, Inc.

Water privatization has been recommended by the Indian government's national water policy¹⁰ to address the issue of water scarcity. In its article 13 titled, "Private sector participation" the policy says that "private sector participation should be encouraged in planning, development and management of water resources projects for diverse uses, wherever feasible". This has placed water privatization at the forefront of developmental policies implemented by several state governments.¹¹ While the policy is silent on the kinds of privatization models that will be adopted, as can be seen from the case studies below, most of the privatization that has been done in India follows the (D)BOOT model. The national water policy also encourages interlinking of rivers to improve water availability in water scarce areas.¹² The proposed river linking scheme has water privatization at its heart of funding, which will further isolate the water source and responsible water management from local communities. Many state governments, neighboring nations sharing river waters with India and experts have questioned the merits of such a scheme on numerous grounds including lack of feasibility and impact studies on this project, ecological disasters from river diversion schemes around the world, as well as adverse environmental impact due to submergence, soil salinity and water logging.^{13,14,15}

Selected Case Studies of Water Privatization:

India:

Tiruppur, Tamil Nadu: The New Tiruppur Area Development Corporation Ltd. (NTADCL) was set up by the state government in 1995 to execute a Rs 13 billion (EUR 281 million) water supply project, with financial support from USAID and the World Bank.

NTADCL issued a 30-year BOOT contract for the project to a consortium including Mahindra & Mahindra, United International, North West Water, Larsen and Tubro and Bechtel, which would transfer water over a 55km long pipeline from the river Bhavani and supply 185 million liters of water per day to nearly 1,000 textile units and more than 1.6 million residents in Tiruppur and its surrounding area.¹⁶ According to the project document, United Utilities and NTADCL will run the joint venture at a "fixed operation and maintenance fee" that will be recovered entirely from Tiruppur municipality. However, in an effort to woo further corporate capital investment in the state, the Tamil Nadu government has guaranteed profitability to the investors in the project by creating a hedge fund to pay the interest and operative expenses of the project in the event of a water shortage in the Bhavani river, with no stipulations on amount of water withdrawal from the river for this project.^{17,18}

Shivnath River, Chhattisgarh: The Chhattisgarh State Industries Development Corporation (CSIDC), which is in charge of industrial development in the state, commissioned the project to meet the demand on water in the Borai Industrial area situated on the banks of the Shivnath - a non-perennial river. As part of the project, a 23.6 km stretch of the river was ceded to Radius Water through a 22-year renewable contract, under which the company had absolute monopoly over the stretch of river water. In return, Radius Water would provide water to the CSIDC from the Shivnath during the lean 6 months. The company built an integrated water supply system to control the water flow automatically depending on the level of the Shivnath and set the water tariff at substantially lower rates than that charged by the neighboring states of MP and Maharashtra.¹⁹ The project was initially hailed as a success by the govt. However, the catch was that the agreement assured Radius Water of payment for a minimum of four million liters of water per day by the state government, regardless of the amount of water used and irrespective of whether the CSIDC recovers this amount from the industries.²⁰ The CSIDC lost Rs 12.9 millions between December 2000 and June 2002.²¹ Furthermore, Radius Water's monopolistic deal with CSIDC and the water resources department covered ground water as well in an 18 km-radius covering the Borai industrial area. The company promptly prohibited fishing in the stretch of the river and also charged local farmers for access to water from tubewells. Ultimately, bowing to pressure from several NGOs and adverse media reports, the government had to scrap the deal.²²

Degremont, New Delhi: Degremont – a subsidiary of the French water giant Suez – has been awarded a Rs 2 billion contract under a 10 year BOT agreement with the Delhi Jal Board (DJB) for a drinking water treatment plant in Sonia Vihar near New Delhi. The water treatment plant is expected to yield 635 million liters of drinking water a day. While Degremont is getting the raw water for free through pipelines from the Upper Ganga canal of the Tehri Dam project (near Muradnagar, Uttar Pradesh) the amount it will get as a fee for treating the water will be much in excess of what the DJB will charge the consumers when selling the water. The DJB is also providing Degremont with land, electricity and treatment cost. At the same time, Degremont has been kept free from transmission losses and revenue collection and has also been assured the purchase of treated water and productivity incentives once the plant begins operations.²³ The Sonia Vihar plant has been plagued by controversies since its inception. The leader of the opposition party and some ruling party members have leveled allegations of corruption and irregularities in the allotment of contract to Degremont.²⁴ A Delhi-based NGO - Research Foundation for Science, Technology - has accused the Delhi Jal Board of wasteful

practices.²⁵ The Delhi Jal Board, which does not rule out an increase in water price for the residents of New Delhi,²⁶ has not made public any of the project documents.

Other Developing Countries:

Bolivia: Responding to the World Bank structural adjustment policies, Bolivia privatized the water subsystem in its third largest city Cochabamba in 1999 and granted a 40-year concession to run the water system to Italy based International Water Company and US based Bechtel, with an agreement that user fees would remain the same in dollars. So every time the local currency fell the price would spiral. Soon after bagging the contract the companies raised the water tariff to \$20 per month and imposed permits for collecting rain water on roofs. For the majority with earnings of less than \$65 per month, the increased tariff meant less water access. Mass local protests organized into a coalition in defense of water and life. After weeks of intense protests, the government cancelled the contract with private companies.²⁷ Bechtel is now suing the nation of Bolivia for \$25 million dollars for canceling the contract.

Nicaragua: To service the past debts of the country, the IMF has imposed several structural adjustment programs including fiscal austerity, privatization of water resources in 4 cities (Matagalpa, Jinotega, Chinandega, and Leon) and full cost recovery (increase in water consumer fee by 1.5% a month) constraints in Nicaragua. The Inter American Development Bank (IADB) has promised an investment of 14 million dollars on the condition that the Nicaraguan government contracts out the water systems in Leon and Chinandega to a multinational corporation. While the IADB says that this privatization contract will expand access to water, the project does not require the companies to invest in any new infrastructure. In Matagalpa and Jinotega where the privatization has been implemented, the water price has increased by 30% for residential customers, thus affecting the majority of the population. This was in violation of existing laws requiring 30-day notice for price increase and requiring that water tariff remained fixed for 5 years. In response to public outcry, the National Assembly in Nicaragua unanimously passed a bill in August 2002 to suspend private profit making in the use of water. However, under pressure from international financial institutions, the president promptly vetoed the bill.²⁸

Ghana: A World Bank “development” loan of \$110 million to Ghana was contingent on implementation of water privatization with an increase of 95% in water consumer fees and 96% increase in electricity fees. The effort to full cost recovery is a prerequisite to privatization. Pressured by the World Bank, the government is planning to lease the Ghana water company to two international water companies for profit. A bucket of water which cost 400 Cedis earlier, costs 800 Cedis now and is inaccessible to the majority of the population who earn less than 7000 Cedis a day and do not have regular income. The proposed water privatization is expected to increase the price further. Various groups in Ghana have started a campaign opposing the privatization.²⁹

The Developed World:

USA: The privatization that has been implemented in USA, UK and Canada exemplify the issues with privatization. Several cities have opted not to privatize their water operations. In Washington DC, when the government owned utility service experienced severe cash flow problems, it considered several privatization options in order to repair and upgrade its infrastructure. Having reviewed the options of full privatization, public-private ownership and

public owned continuous improvement model, the city wisely opted for the latter over private participation. In Atlanta, Georgia, a contract with United Water (a subsidiary of RWE) to provide water to the city was cancelled after numerous consumer protests with low quality water or no water.³⁰

England: In UK, privatization came at with huge government subsidies. The government converted the regional water authority bodies into private profit making entities, wrote off \$8 billion in debt of the water companies before privatization and gave a further \$2.6 billion to help the newly formed companies meet new EU environmental requirements. To complete the deal, the new companies were guaranteed private monopolies for 25 years and were given a special exemption from paying taxes on their profits.³¹ Following privatization, there was an unprecedented water price hike of over 50% in the first 4 years; the corresponding rate of household disconnections due to non-payment also rose three-fold (12% of total households).²⁷ The companies were allowed to increase prices on the basis of their projected capital investment to improve infrastructure. Once the price rises were agreed in 1995, many companies rapidly discovered reasons not to follow the investment forecast, and announced ‘capital efficiencies’, which enabled them to award the money not spent on investments as increased dividends to shareholders. These were substantial amounts, between £50m and £100m for Thames Water, North West Water, and Yorkshire Water (now Kelda), for example.³² Furthermore, as per the Environmental Agency’s 2000 report, seven of top ten polluters in the country are water companies

Canada: In Walkerton of Ontario, Canada, water privatization has not been regulated sufficiently and E.Coli outbreak from contaminated water has caused several deaths in the region. Several bottling operations and transfer of control of water assets such as lakes to water corporations have been stiffly opposed by local population.³⁴ In 1994 the city of Hamilton, Canada privatized its water and sewerage utility works expecting it to be used as a “model” for other cities to open up their public utilities to privatization. However, the fiasco that ensued privatization in Hamilton made it a model for what to avoid. Over a period of six years after privatization, residents saw more sewage spills, environmental fines left unpaid for years, and rising tariffs for water services. The city of Toronto, which also considered water privatization, recently voted to retain control of the waterworks and passed a motion against privatizing water operations.³³

Arguments against Water privatization

The case studies discussed above highlight many of the reasons to oppose water privatization, which are summarized here. These issues are largely generic but here they are presented as specific to India. For a more global picture, the reader is referred to the Public Citizen website and its list of top ten reasons to oppose water privatization,³⁴ from which this document has drawn liberally.

1) Price hikes are unaffordable for the poor: Water privatization has invariably led to price hikes in almost all the regions in the world where water has been privatized. This is because there are considerable costs involved in upgrading water harnessing, purification and distribution systems. For such expensive projects, water companies borrow private money, which is subject to high interest rates from financiers and state taxation. The companies recover

their costs and expenses by charging the consumer. Not only is the capital cost divided among all the consumers but also the interest, taxes and overheads on the capital. Thus, the consumer is forced to bear the burden of higher payments on company loans. In contrast, tax-free public financing results in low costs for such projects in community owned or state controlled water systems. It has been argued that privatization will lead to reduced water consumption and promote conservation. However, while market forces will determine the water tariff and make it costlier in scarce areas, it is doubtful if this can actually reduce consumption. The price hikes following privatization have almost always made water unaffordable to the poor. However the rate increase does not make a dent on agriculture and industries where the price hikes are affordable.

In developing countries such as India, the water price hike is also an indirect consequence of the conditions imposed on the governments by the World Bank and IMF in return for structural adjustment loans. The privatization of public services such as water and electricity is often a *sine qua non* for such loans. Furthermore, full cost recovery is demanded by the World Bank and IMF as a prerequisite to privatization. For instance, during the severe flooding in Orissa in 2001, the World Bank demanded an increase in the water tariffs as a cost recovery measure on the use of water.³⁵ Rates for water irrigation have since doubled or even tripled. Increased consumer fees for water can make safe water unaffordable for the impoverished and vulnerable populations. Families are often forced to make trade-offs between water, food, schooling and health care.

These cost recovery conditions mean that user fees paid by water consumers must cover all water system costs, which usually include the costs of operation, maintenance and capital expenditure, and sometimes the cost of servicing past utility company debt. The World Bank justifies cost recovery requirements by contending that, with higher payments from consumers, private companies will have an incentive, as well as the revenues, to extend pipes to those relying on water trucks or unclean sources. However, there is little evidence of the multinational water companies' commitment to expanding service, especially to poor communities where the ability to pay increased fees is limited. This is because the poor communities offer little or no margins to the water corporations. Instead, the multinationals, which have only recently started their major moves into developing countries, have quickly racked up very poor social and environmental records.³⁶

2) Unsustainable water mining: Many potential risks emerge once a resource as fundamental to life as water is privatized. One of the foremost reasons to oppose water privatization is the threat of unsustainable water mining by the water corporations in an effort to maximize profits. These corporations, which are answerable only to their shareholders, have a declared agenda to make profit. Once water becomes a marketable commodity and a corporation is given sole rights to a body of water, then it is within the corporation's rights to mine as much water as it deems fit. Furthermore in an effort to maximize profits, if the corporation mines an environmentally unsustainable amount of water and deplete the water body at a rate faster than it is replenished, then the government officials and the affected population can do very little to legally prevent the corporation from doing so.

The fact that this is a real and tangible threat is apparent from the increasing number of community complaints against indiscriminate mining of groundwater by Coca-Cola in the Khammam district of Andhra Pradesh, Athur village near Chennai and Plachimada in Kerala.³⁶ Residents from villages in the Palghat district in Kerala surrounding Coke's Greenfield soft-drink bottling factory in Plachimada say that Coke's indiscriminate water mining has dried up many wells and contaminated the rest. Coca Cola's bottling plant was set up in 1999 in the middle of fertile agricultural land, with proximity to a number of reservoirs and irrigation canals. Coke's mining of more than 1 million liters of ground water per day has parched the lands of some 2000 people within 1.2 miles of the factory. The company's usage of agricultural land for non-agricultural purposes has also been questioned by local residents. Due to the indiscriminate mining, the ground water has become contaminated with excessive calcium and magnesium from the dissolution of limestone that is associated with the groundwater deposit. Nearly 100 people have reported recurring stomach aches, which they relate to the brackish and milky white water that they are being forced to drink. Public protest over the issue has only met with violent arrest by the police of local villagers (including women and children) involved in peaceful picketing of the Coke factory.

3) Creation of water monopolies: Privatization by definition eliminates public control of the resource in question. Public control of water is essential not only because water is necessary for survival and human fulfillment, but also because of the severe and ever-worsening water crisis that the world is faced with.³⁷

Once a government agency hands over water systems to a private enterprise, it becomes extremely difficult and prohibitively expensive to reverse the decision. What makes it so difficult is that the global market for water as a commodity is estimated to be over \$500 billion globally and \$2 billion in India.³⁸ Fortune magazine has labeled water as the "oil of the 21st century". With such huge profits at stake, corporations around the world strive to ensure that water as a commodity remains in private control. The water corporations are aided and abetted in their effort by financial institutions such as the World Bank, WTO and IMF, which enforce many free trade agreements and structural adjustment programs on developing countries as a prerequisite for a "developmental" loan. A water corporation can use one of the many free trade treaties to take legal action against the government for withdrawing from an agreement to privatize water systems. Although this has not yet happened in India, there are numerous instances of lawsuits filed by water corporations against local governments that backed out of a contract in countries with a longer history of water privatization.³⁴

Unlike privatization of other sectors such as airlines or telecommunications, privatization of water services (and other essential services) often does not leave the consumers with a choice of provider. Physical reliance on a single water pipe network (and often a single water source) leaves little room for competition, which lends monopolistic attributes to privatization in this sector. This underscores the need for a highly competent, well-funded and politically autonomous regulatory body before privatization is undertaken. Yet in the poorest countries where privatization is promised to bring the greatest benefit, these institutional preconditions are almost always missing. Furthermore, the water corporations demand exclusive service provider rights for periods of 5-20 years claiming long recovery periods for costs involved in upgrading

water infrastructure. The end result is almost invariably a water monopoly sanctioned by the government agencies.

4) Water quality compromised: Corporations in search of profits can compromise on water quality in order to reduce costs. This is especially true in a country such as India, where the water quality regulatory boards do not have the teeth to enforce their standards. There have been numerous instances of outbreak of epidemics due to poor quality of water. As discussed earlier, Coca-Cola's indiscriminate mining of ground water has contaminated ground water deposits with excessive amounts of Calcium and Magnesium in the Plachimada district in Kerala, which has led to health problems among the villagers in the area.³⁶ In Walkerton, Canada, seven people died and several became ill as a result of E-coli contamination in the drinking water. The private company, A&L Laboratories, contracted to test the drinking water knew of the contamination but regulations intended to encourage privatization ensured that company was not required to alert the government.³⁴ In India, the bottled water industries and cola industry have been shown to have high pesticide levels in their products.³⁹

These are classic examples of how private companies cannot be expected to provide quality with out regulation. However privatization pushed by IMF and the World Bank is based on free market economy and regulation of any such measure is opposed by these world bodies.⁴⁰ Hence while privatization of essential services is pushed, regulation of these services is being removed through budget cuts.

5) Potential Export of Bulk Water: Fully aware of the \$2 billion water market in India, private companies are in a frenzy to access fresh water sources that they can sell at huge profits. For instance, the huge market for drinking water in the perpetually water starved city of Chennai has prompted several private companies to mine the surrounding villages for groundwater. The residents of Mathur Village in North Chennai sued several bottled water companies in 1995 for illegally extracting groundwater.⁴¹ By the time the case was taken up in 1999, more than 60 private companies supplying water by tanker trucks had sunk additional illegal wells in Mathur. Privatization opens the door to bulk water exports as control over this scarce resource is transferred from local communities to profit minded global corporations. Bulk water exports will have disastrous ecological and environmental consequences.

6) Corruption and lack of transparency: Indian government agencies are notorious for their lack of accountability and transparency in awarding of service contracts to private corporations. The Enron scandal – in which the Maharashtra government awarded Enron a contract for generation and supply of 695MW of electric power⁴² – has epitomized the allegations of bribes and “kickbacks” that have plagued practically every major service contract awarded by governments in India. In many cases the government guarantees against any losses incurred by the water corporation by setting up hedge funds for such purposes or assuring regular payments to the corporations for fixed amounts of water regardless of actual usage (see the case studies above for details).⁴³ Furthermore, the potential for huge profits and long-term monopoly over supply of an essential resource such as water has doubly increased the incentives for private corporations active in this sector to offer bribes in order to secure contracts. Executives of many water corporations have been convicted for bribing government officials world wide.^{44,45}

Often, there is little or no public debate on the project before the decision to privatize is taken. As a result, infrastructure and capital-intensive project contracts are awarded even where there is no need for such projects. For example, in Delhi, the private company Degremont is planning to build pipelines from Tehri Dam for domestic water supply when rainwater harvesting has been shown to work. Similarly the water being brought to Gujarat from the Narmada valley has cost the state more than Rs100 million. The government is planning on higher taxation to recover this cost. Alternate water harvesting schemes have been implemented by NGOs in these areas at a fraction of the cost. Such massive infrastructures where they are not needed are the root cause of the inefficiency and are bound to be a problem with privatization as well.

The arguments given above highlight the dangers and risks involved in water privatization. While government management of water resources is partly responsible for the water crisis we face today, privatization will at best compound the problem. There is a clear need for alternate models which offer equitable, sustainable and efficient management of water resources. Such models exist all over the world and have been quite successful in their implementation and public acceptance.

Section III - Alternate Models

In contrast to privatization, there are several community based small-scale water management and distribution models, which offer cost benefits and long term sustainability over the privatization models. Participatory and co-operative models deliver impressive results by ensuring that water utilities are accountable and responsive to the needs of the local communities. Furthermore, while these models address the same global issue of water scarcity, they tackle it with local solutions tailored to their specific environments.

India:

Rain water Harvesting

The harvesting of rainwater involves the collection of water from surfaces on which rain falls, and subsequently storing this water for later use. Normally water is collected from the roofs of buildings and stored in rainwater tanks or allowed to recharge ground water and thus providing a perennial source of water. In India, with its monsoons, rain water harvesting experience is millennial, born of local wisdom and is widely used today. It is scientific and the focus of innovation in the present, participatory and the basis of people's movements, and the best way to a non-scarce future.^{46,47}

Urban Rainwater Harvesting (Chennai and Delhi):

Rain water harvesting is increasingly being modeled and implemented successfully in urban centers where the likelihood of privatization is the maximum. Traditionally, Chennai city in South India has been dependent on groundwater to a large extent for its water needs. However, large-scale construction activity has led to rapid depletion of the groundwater. Now experts maintain that the silver lining in the clouds that do not bring enough rain lies in a simple, economical and demonstrably successful answer – Rainwater Harvesting (RWH). Chennai gets an average annual rainfall of 1,290 mm per year. A group of concerned activists – of which Shekhar Raghavan, an RWH activist is a founder-member – have now come together under the aegis of the Akash Ganga Trust to popularize rainwater-harvesting.⁴⁸ Based on the success and

potential of this technology, the city has now mandated rain water harvesting in almost all commercial and residential buildings.

Another case is of New Delhi, where as the city's water table plummets to dangerously low levels, the government is making desperate efforts to stave off the water crisis. Having tried it in the chief minister's residence, the government has now made rainwater harvesting mandatory for every new house or hotel being built in the Capital. The Delhi Development Authority and the Municipal Corporation of Delhi have made amendments in the existing building bylaws, making it compulsory for every house or hotel, which is 200 yards and more in area, to undertake rainwater harvesting.⁴⁹

Bhal, Gujarat:

When Utthan, a non-government organization, started gender empowerment development work in the region of Bhal, it quickly realized that access to water is a key issue that needs to be tackled for women empowerment. This region in Gujarat suffers from a hostile geo-climatic environment, highly saline shallow ground water and erratic monsoon rains. Through a highly effective community mobilization and organizational work, Utthan and Mahiti (a sister organization) were able to initiate women's movement in Bhal focused around the issue of access to safe and regular supply of drinking water. This movement graduated to create such a powerful pressure on the local and state level bureaucracy that even the hardened policy makers had to sit back and take a serious notice of it. These women in Bhal pressurized the Gujarat Water Supply and Sewerage Board (GWSSB) to approve a project that sought to promote highly decentralized rain water harvesting structures such as plastic lined ponds and roof top water collection tanks in the villages of Bhal. The overall contribution of Utthan and Mahiti in Bhal, therefore, can be viewed in terms of their having initiated a social movement in this area which focused on community managed drinking water resource development within a gender sensitive framework.⁵⁰

Watershed Management, Kothapally, Andhra Pradesh:

Kothapally village in the Ranga Reddy district of Andhra Pradesh is blessed with rich black soil but little rain. The village's watershed management program, which is run by a consortium of partners under the leadership of the international crop research institute (ICRISAT), has become a model for community involvement in watershed development. The consortium includes the Government of Andhra Pradesh, the Drought Prone Area Program, the Central Research Institute for Dryland Agriculture, the National Remote Sensing Agency, and the Farmer's Association. Under this project, several techniques for soil and water conservation and crop improvement were implemented to the benefit of the small farmers. These farmers saw the value of water harvesting and joined the consortium of project partners in constructing 13 check dams and 51 mini percolation tanks, which has increased water levels, expanded green cover and enhanced the productivity of crops.⁵¹

Tarun Bharat Sangh, Rajasthan:

Tarun Bharat Sangh (TBS), a non-government organization, has been working wonders in drought-prone Rajasthan, where agriculture output has doubled and forest cover increased substantially - thanks to their water harvesting systems.⁵² TBS started mobilizing villagers to reconstruct a damaged Johad (dam) at Gopalpura. The 426 meter Johad was reconstructed in the

next monsoon season. It took the villagers almost a year to complete renovating the Johad. When the Johad was finally renovated, more than 600 “Bighas”ⁱ of land became suitable for agriculture. TBS now helps villages to build water harvesting systems. So far, 4,500 *Johads* have been built in 850 villages covering 6,500 sq kilometers in the last 15 years. According to Rajendra Singh(founder of TBS), they only propagate the idea of water harvesting through Pani Yatras, where they select a group of villages to spread the word about this system. They make the villagers aware about water harvesting. When a village approaches TBS, they tell them what the whole system is about. Then it is up to the villagers to draw up plans and implement the project. Once a village decides to implement the project, a meeting of the gram sabha is held to discuss the details of the project. Every villager contributes when funds are collected in cash or kind for the project. If there is a dearth of money, the TBS contributes up to 67 per cent of the required funds. The villagers have to pay a minimum of 33 per cent for the project.

Ralegaon Siddhi, Maharashtra:

In 1975, when Anna Hazare retired from the army and went back to his village in Ahmednagar district, Maharashtra, he found the village reeling under drought, poverty, debt, and unemployment. He decided to mobilize the people and with the collective support of all the villagers, he began to introduce changes. Today Ralegaon Siddhi is being taken as a role model for other villages by the Maharashtra government and by other states too. Massive tree plantation has been undertaken, and hills have been terraced to check erosion. Large canals with ridges on either side have been dug to retain rainwater. As a result, the water table in this area is now considerably higher and the wells and tube wells are never dry, making it possible to raise three crops a year where only one was possible before.^{53,54}

Rest of the World:

Porto Alegre (Brazil): Participatory Water Management

Water has been under public control in Porto Alegre (Brazil) for the last 15 years. Department of Municipal *Do Agua e Esgoto* (DMAE) a publicly owned *not for profit company*, is financially independent of the state. It reinvests profits into improving water supply. This model is one of the reasons that poor communities have gained access to clean water; their needs are prioritized because they participate directly in deciding about new projects. Comparable participatory models are in place all over Brazil and have been very successful.⁵⁵

Santa Cruz (Bolivia): Consumers Co-operative

Consumer co-operatives have proved an excellent way to deliver clean water in smaller communities around the world in both rural and urban slums where the state fails to supply basic services. Santa Cruz has proved that the model can be successful in major urban centers too. The city’s water utility has been run by a consumer co-operative since 1979 and is registered as one of the best-managed water utilities in Latin America. As a part of it’s socially responsible approach the co-operative charges lower price for the first 15 cubic meters of water consumed per household each month and customers failing to pay are not disconnected. Studies have shown that it has an efficient and transparent administration appears to have virtually eliminated corruption.⁵⁵

ⁱa measure of land area (~ 0.39 acres) in India.

Dhaka (Bangladesh): Trade Union Co-operative

A different cooperative model has proven successful in Dhaka, the capital of Bangladesh with over 10 million inhabitants. In 1997 the proposed privatization of the water supply in a part of Dhaka (imposed by the World Bank) was met with strong trade union opposition. In response, the Dhaka Water Supply and Sewerage Authority (DWASA) decided to contract out one zone to the DWASA Employees Union, while another zone was given to a private water company, on a trial basis for one year. At the end of one year the union cooperative's results were so much better that DWASA handed over the private sector's contract to the union. The union cooperative's achievements included a considerable expansion of the number of people with access to running water as well as a sizable reduction in water losses.^{55,56}

Communities pursuing their own democratic and people-centered models of water supply should be supported and nurtured. These solutions are more likely to succeed than any global policy, since global policies, however fine grained, cannot consider each and every problem of local nature. These community managed models remain simple, equitable, sustainable and transparent; they offer a participatory approach with decision making in the hands of local people. Needless to say they have been successful wherever they have been tried so far.

Conclusion

Water is synonymous with life. Water corporations, through world bodies such as the World Bank and IMF, are influencing national governments to push privatization and commodification of water as “the chosen” alternative to manage the growth in water consumption and the severe water scarcity. However, the growth in water consumption is highest in the agricultural and industrial areas, where the resources to buy water are readily available with rich farmers and industries. This increase in consumption will be satisfied through the market dynamics often at the cost of the poor who cannot afford the increased water tariffs.

Furthermore, due to the nature of this sector, water privatization, instead of bringing in healthy competition, results in a monopoly sanctioned by the government agencies. Numerous case studies around the world highlight the other ills of water privatization such as poor quality of water, unsustainable water mining and lack of transparency and accountability. From the various studies outlined here, we consider the proposed privatization of water as a violation of basic rights of Citizens of India and oppose any means to privatize water in India.

Better and socially responsible alternatives can be found by investing in community based participatory approaches to water management that ensures equitable and sustainable use of this precious natural resource. All over the world, alternate models such as rain water harvesting, check dam and bund building, holistic watershed management, integrated river basin management and irrigation efficiency improvement have all been demonstrated as low cost successful alternatives to privatization.

Responsible water usage can only be achieved by empowering local communities and creating local accountability. Hence, we oppose the kind of privatization that is being pushed by the national water policy and call upon the government to develop policies that protect water

resources, promote sustainable watershed management and invest in technologies that will increase efficiency in irrigation, industrial usage and improve water harvesting techniques.

References:

1. Maude Barlow, "Blue Gold – The Fight to Stop the Corporate Theft of the World's Water," New Press, April 2003
2. Alex Kirby, "[World Water Shortage Threatens Harvests](#)," BBC World News, February 7, 1999
3. Rain water harvesting.org website: <http://www.rainwaterharvesting.org/index.htm>
4. Sudhirendar Sharma, "[Water Resources: Background and Perspective](#)," InfoChange News and Features, April 2003
5. Falkenmark, Malin and Carl Widstrand, "Population and Water Resources: A Delicate Balance," *Population Bulletin*. Population Reference Bureau, 1992
6. "[State of India's Environment \(A Quantitative Analysis\)](#)," The Energy and Resources Institute, Report No. 1995EE52, 1996
7. "[Too Much Too Little – The Characteristics of Water in India](#)," Development Alternatives Website.
8. World Resources Institute, 2000
9. Citizens' Network on Essential Services, "[Democratizing Local and National Governance of Water](#)", paper no. A2, Feb 2003
10. National Water Policy (2002) for India at <http://wrmin.nic.in/policy/nwp2002.pdf>
11. For a more detailed analysis of the national and state water policies refer to Sanjeev Ghotge, "[India's Water Policy – A Perspective Paper](#)," National Centre for Advocacy Studies, Pune, October 2002.
12. More on information about interlinking of rivers is available at: <http://riverlinks.nic.in/>
13. Manas Dasgupta, "[Experts raise doubts about river linking project](#)," The Hindu, Jan 31, 2003
14. Keya Acharya, "[India's River Linking Scheme Worries the Region's Journalists](#)," Planets-Voice.org, July 14, 2003.
15. Sudhirendar Sharma, "[Interlinking ? No, thanks](#)," India-together.org, Oct. 2003
16. "[Tirupur Water and Sewerage Project, India](#)," Water Technology Website, Industry Project Reports.
17. Ann Ninan, "[Private Water, Public Misery](#)," CorpWatch India, April 16 2003
18. "[Constraints to Developing Commercially Viable Urban Environmental Infrastructure Projects](#)", Indo-US FIRE(D) Project Notes, Note No. 21, November 1999
19. Ashwani Sharma, "Water Colour of Money" The Sunday (Indian) Express, July 14, 2002
20. Sonu Jain, "A River gone private is drying up" The Sunday (Indian) Express, April 13, 2003
21. "Deal Shelved," Down to Earth, vol. 11, no. 24, May 15, 2003
22. Aarti Dhar, "Chhattisgarh to cancel water supply contract" The Hindu, April 12, 2003
23. Naunidhi Kaur, "[Privatising Water](#)," Frontline, vol. 20, issue 18, Aug 30- Sept 12, 2003
24. Sujay Mehdudia, "[Sheila Dixit Plays Slander Campaign](#)", The Hindu, Nov 29, 2000
25. Vandana Shiva, "[Water Privatization in India](#)," Article in [Public Citizen](#) website, July 31 2002

26. [“Degremont water plant will leave Tehri farmers high and dry: NGO,”](#) Business Line, July 15 2002
27. [“Water Privatization Fiascos: Broken Promises and Social Turmoil,”](#) Public Citizen Report and references therein.
28. [“Water Privatization in Nicaragua,”](#) Quest For Peace Website
29. [“Ghana: Water Privatization Raises Fears That Profits and Development Cannot Marry,”](#) World Markets Research Centre, Oct 9, 2002
30. [Fiasco Atlanta Georgia Public Citizens Report](#)
31. [“Down The Drain: Privatized UK Water, No Model For Canada,”](#) CUPE website
32. Lobina and Hall “UK Water privatisation – a briefing” (PSIRU, Feb 2001) section 2.2.B. <http://www.psiru.org/reports/2001-02-W-UK-over.doc>
33. Bob Carty, [“Hard Water: The Uphill Campaign to Privatize Canada's Waterworks,”](#) The Center for Public Integrity report, Feb 13 2003
34. [“Top 10 Reasons to Oppose Water Privatization”](#), Public Citizen Website and references there in.
35. [Press Release](#) by The Social Justice Committee, Oct. 9, 2001
36. Nityanand Jayaraman, [“No water? Drink Coke”](#), *CorpWatch India*, May 28, 2002 and references therein.
37. See for instance, [“UN warns of looming water crisis”](#) BBC World News, Mar 22, 2002
38. Srinand Jha, [“India’s Water Wars,”](#) AlterNet, Dec. 5, 2002
39. [CSE India's Report on Analysis of water quality](#)
40. [Water strategy by World bank via Water and Sanitation Program](#)
41. Anjali Kamath, [“Water Profiteers”](#), CorpWatch India, May 28, 2002
42. Abhay Mehta, [“Power Play: A Study of the Enron Project,”](#) Orient Longman Publishers, Jan 2000
43. Sonu Jain, [“A River gone private is drying up”](#) The Sunday (Indian) Express, April 13, 2003
44. David Hall, [“Privatization, Multinationals and Corruption”](#), Public Services International Research Unit, Report No. 9909-U-U-Corrupt.doc, July 1999.
45. [“Corruption, the companion of privatization”](#), Public Services International Briefing – World Water Forum, The Hague, 17-22 March 2000.
46. For more information on rain water harvesting refer to www.rainwaterharvesting.org
47. [“What is Rainwater Harvesting and Why is it Important,”](#) Sustainable Earth Technologies Website
48. Lalitha Sridhar, [“Raining Good Results,”](#) India Together.Org, Feb 2002.
49. [“Rain water harvesting must for new houses, hotels in capital,”](#) The Times of India, May 4 2001.
50. [“Women, Water and Community Ownership,”](#) India Together.org website, Jan 2001
51. [“Integrated Watershed Management: Key to Sustaining SAT Productivity,”](#) Farmers' Training on Integrated Watershed Management, 7 February 2001, ICRISAT, Patancheru, Andhra Pradesh, India.
52. [“Tarun Bharat Sangh: Building oases in deserts,”](#) Tehelka.com June 19 2001.
53. [“A Model Indian Village – Ralegaon Siddhi,”](#) The Energy and Resources Institute’s Edugreen Website@#&
54. Reeta Sharma, [“Anna Hazare: A fearless crusader,”](#) The Tribune, Jan 20, 2001.

55. [“Alternatives to Privatisation: The Power of Participation,”](#) Corporate Europe Observatory Website.
56. [“Private sector participation in Water Supply, Dhaka \(Bangladesh\),”](#) National Institute of Urban Affairs Website

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