WATER RIGHTS: THE STATE, THE MARKET, THE COMMUNITY

Who does water belong to? Is it private property or a commons? What kind of rights do or should people have? What are the rights of the state? What are the rights of corporations and commercial interests? Throughout history, societies have been plagued with these fundamental questions.

We are currently facing a global water crisis, which promises to get worse over the next few decades. And as the crisis deepens, new efforts to redefine water rights are under way. The globalized economy is shifting the definition of water from common property to private good, to be extracted and traded freely. The global economic order calls for the removal of all limits on and regulation of water use and the establishment of water markets. Proponents of free water trade view private property rights as the only alternative to state ownership and free markets as the only substitute to bureaucratic regulation of water resources.

More than any other resource, water needs to remain a common good and requires community management. In fact, in most societies, private ownership of water has been prohibited. Ancient texts such as the Institute of Justinian show that water and other natural sources are public goods: “By the law of nature
these things are common to mankind—the air, running water, the sea, and consequently the shore of the sea.” In countries like India, space, air, water, and energy have traditionally been viewed as being outside the realm of property relations. In Islamic traditions, the Shari'a, which originally connoted the “path to water,” provides the ultimate basis for the right to water. Even the United States has had many advocates for water as a common good. “Water is a moving, wandering thing, and must of necessity continue to be common by the law of nature,” wrote William Blackstone, “so that I can only have a temporary, transient, usufructuary property therein.”

The emergence of modern water extraction technologies has increased the role of the state in water management. As new technologies displace self-management systems, people’s democratic management structures deteriorate and their role in conservation shrinks. With globalisation and privatization of water resources, new efforts to completely erode people’s rights and replace collective ownership with corporate control are under way. That communities of real people with real needs exist beyond the state and the market is often forgotten in the rush for privatization.

Water Rights as Natural Rights

Throughout history and across the world, water rights have been shaped both by the limits of ecosystems and by the needs of people. In fact, the root of the Urdu word abad, or human settlement, is ab, or water, reflecting the formation of human settlements and civilization along water sources. The doctrine of riparian right—the natural right of dwellers supported by a water system, especially a river system, to use water—also arose from this concept of ab. Water has traditionally been treated as a natural right—a right arising out of human nature, historic conditions, basic needs, or notions of justice. Water rights as natural rights do not originate with the state; they evolve out of a given ecological context of human existence.

As natural rights, water rights are usufructuary rights; water can be used but not owned. People have a right to life and the resources that sustain it, such as water. The necessity of water to life is why, under customary laws, the right to water has been accepted as a natural, social fact:

The fact that right over water has existed in all ancient laws, including our own dharmastras and the Islamic laws, and also the fact that they still continue to exist as customary laws in the modern period, clearly eliminates water rights as being purely legal rights, that is, rights granted by the state or law.

Riparian Rights

Riparian rights, based on concepts of usufructuary rights, common property, and reasonable use, have guided human settlement all over the world. In India, riparian systems have long existed along the Himalaya. The famous grand Anicut (canal) on the Kaveri at the Ullar River dates back a thousand years and is believed to be the oldest hydraulic structure to control the flow of rivers in India. It is still functioning. In the northeast, old riparian systems known as dongri guide the use of water. In Maharashtra, conservation structures were known as bandhans.

The abar and pyne systems of Bihar, where an unlined inundation canal (pyne) transfers water from a stream into a catchment basin (abar), also evolved from a riparian doctrine. Unlike modern Sone canals built by the British, which have failed to meet the needs of the people, the abars and pynes still provide water to peasants. In the United States, riparian systems were introduced by the Spanish, who had brought them from the Iberian Peninsula. These systems were adopted in Colorado, New Mexico, and Arizona, as well as the eastern settlements.

Early riparian principles were based on the notion of sharing and conserving a common water source. They were not attached to property rights. As historian Donald Worster notes:
In ancient times, the riparian doctrine was less a method of ascertaining individual property rights and more the expression of an attitude of non-interference with nature. Under the oldest form of the principle a river was to be regarded as no one’s private property. Those who lived along its banks were granted rights to use the flow for natural purposes like drinking, washing, or watering their stock, but it was a usufructuary right only—a right to consume so long as the river was not diminished.5

Even European colonists who first settled in the eastern United States adhered to these basic tenets. But as the western part of the country began to be inhabited, usufructuary rights were no longer prevalent. The riparian concept was instead believed to have emerged from English common law and consequently centered around individual property ownership. “The men and women who settled the American West did not belong to that older world... [They] rejected the traditional riparianism,” writes Worster. “Instead, they chose to set up over most of the region the doctrine of prior appropriation because it offered them a greater freedom to exploit nature.”6 Universal water rights were thus severely curtailed.

Cowboy Economics: The Doctrine of Prior Appropriation and the Advent of Privatization

It was in the mining camps of the American west that the cowboy notion of private property and the rule of appropriation—Quo prior est in tempore, potior est in jure (He who is first in time is first in right)—first emerged. The doctrine of prior appropriation established absolute rights to property, including the right to sell and trade water. New water markets blossomed and soon replaced natural water rights and the value of water was determined by the monopolistic first settlers. Prior appropriation “gave no preference to riparian landowners, allowing all users an opportunity to compete for water and to develop far from streams.”7

The cowboy sentiment “might is right” meant that the economically powerful could invest in capital-intensive means to appropriate water regardless of the needs of others and the limits of water systems. This frontier logic granted the first appropriator an exclusive right to the water. Latecomers could appropriate water on the condition that prior rights were honored first. Cowboy economics permitted the diversion of water from streams to be used on non-riparian lands. If the appropriator did not use the water, he was forced to forfeit his right.

The cowboy logic allowed the transfer and exchange of water rights among individuals, who often disregarded water’s ecological functions or its functions beyond mining. Although rights were based on first settlement, the true first settlers—Native Americans—were denied water appropriation rights. Miners and colonizers, assumed to be the first inhabitants, were granted all rights to use the water sources.8

Disregard for the limits of nature’s hydrological cycle meant that rivers could be drained and polluted by mining waste. Disregard for the natural rights of others meant that people were denied access to water, and regimes of unequal and unsustainable water use and water-wasteful agriculture began to spread across the American west.

Contemporary Cowboy Economics

The current push to privatize common water sources had its foundation in cowboy economics. Champions of water privatization, such as Terry Anderson and Pamela Snyder of the conservative Cato Institute, not only acknowledge the link between current privatization efforts and cowboy water laws, but also look at the earlier western appropriation philosophy as a model for the future:

From the western frontier, especially the mining camps, came the doctrine of prior appropriation and the foundation of water marketing. This system provided the essential ingredients
for an efficient market in water wherein property rights were well-defined, enforced and transferable.

The current push to reintroduce and globalize the lawlessness of the frontier is a recipe for destroying our scarce water resources and for excluding the poor from their water share. Parading as the anonymous market, the rich and powerful use the state to appropriate water from nature and people through the prior-appropriation doctrine. Private interest groups systematically ignore the option of community control over water. Because water falls on earth in a dispersed manner, because every living being needs water, decentralized management and democratic ownership are the only efficient, sustainable, and equitable systems for the sustenance of all. Beyond the state and the market lies the power of community participation. Beyond bureaucracies and corporate power lies the promise of water democracy.

Water as a Commons

Water is a commons because it is the ecological basis of all life and because its sustainability and equitable allocation depend on cooperation among community members. Although water has been managed as a commons throughout human history and across diverse cultures, and although most communities manage water resources as common property or have access to water as a commonly shared public good, even today, privatization of water resources is gaining momentum.

Prior to the arrival of the British in south India, communities managed water systems collectively through a system called kudimaramath (self-repair). Before the advent of corporate rule by the East India Company in the 18th century, a peasant paid 300 out of 1,000 units of grain he or she earned to a public fund, and 250 of those units stayed in the village for maintenance of commons and public works. By 1830, peasant payments rose to 650 units, out of which 590 units went straight to the East India Company. As a result of increased payments and lost maintenance revenue, the peasants and commons were destroyed. Some 300,000 water tanks built over centuries in pre-British India were destroyed, affecting agricultural productivity and earnings.

The East India Company was driven out by the first movement for independence in 1857. In 1858, the British passed the Madras Compulsory Labor Act of 1858, popularly known as the Kudimaramath Act, mandating peasants to provide labor for the maintenance of the water and irrigation systems. Because kudimaramath was based on self-management and not coercion, the act failed to mobilize community participation and to rebuild the commons.

Self-managed communities have not just been a historical reality; they are a contemporary fact. State interference and privatization have not wiped them out entirely. In a nationwide survey covering districts in dry tropical regions in seven states, N. S. Jodha finds that the most basic fuel and fodder needs of the poor throughout India continue to be satisfied from common property resources. Jodha’s studies of commons in the fragile Thar desert also reveal that village community councils still adjudicate grazing rights: institutional rules and regulations determine periods of restricted grazing, the rotational patterns for grazing, the numbers and types of animals to be grazed, the rights to dung and fuel wood collection, and the rules for lopping trees for green fodder. Village councils also appoint their own watchmen to ensure that no community member or outsider breaks the rules. Similar rules exist for maintenance of wells and tanks.

Tragedy of the Commons

John Locke’s treatise on property effectively legitimized the theft of the commons in Europe during the enclosure movements of the 17th century. Locke, son of wealthy parents, sought to defend capitalism—and his family’s massive wealth—by arguing that property was created only when idle natural resources were transformed from their spiritual form through the applica-
tion of labor: "Whatsoever, then, he removes out of the state that Nature hath provided and left in it, he hath mixed his labor with it, and joined to it something that is his own, and thereby makes it his property." Individual freedom was dependent upon the freedom to own, through labor, the land, forests, and rivers. Locke's treatises on property continue to inform theories and practices that erode the commons and destroy the earth.

In contemporary times, water privatization is based on Garrett Hardin's *Tragedy of the Commons*, first published in 1968. To explain his theory, Hardin calls on us to imagine a scenario:

Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy. Hardin assumes that commons were socially unmanaged, open-access systems with no ownership. And Hardin sees the absence of private property as a recipe for lawlessness.

Although Hardin's theory about the commons has gained tremendous popularity, it is has several holes. His assumption about commons as unmanaged, open-access systems stems from the belief that management takes effect only in the hands of private individuals. But groups do manage themselves, and commons are regulated rather well by communities. Moreover, commons are not open-access resources as Hardin proposes; they in fact apply the concept of ownership, not on an individual basis, but at the level of the group. And groups do set rules and restrictions regarding use. Regulations of utility are what protect pastures from overgrazing, forests from disappearing, and water resources from vanishing.

Hardin's prediction about the doom of commons has at its center the idea that competition is the driving force in human societies. If individuals do not compete to own property, law and order will be lost. This argument has failed to hold ground when tested in large sections of rural societies in the Third World, where the principle of cooperation, rather than competition, among individuals still dominates. In a social organization based on cooperation among members and need-based production, the logic of gain is entirely different from those in competitive societies. Garrett Hardin's *Tragedy of the Commons* misses the critical point that under circumstances in which common lands cannot even support the basic needs of the population, a tragedy is inevitable—with or without competition.

**Communities and Commons**

In the upper reaches of the Rio Grande Valley in Colorado, water is still managed as a commons. I had the opportunity to visit San Luis, home of traditional *acequia* systems (gravity-driven irrigation ditch) that nurture soils, plants, and animals. I was there to offer solidarity to the local communities engaged in a major struggle to defend the commons and the oldest system of water rights in Colorado. What the irrigation ditches produce is not merely a market commodity but a denseness of life. "The ditches make a lot of plant life possible in what is really a cold, barren desert," says Joseph Gallegos, a fifth-generation farmer working on ancestral lands in San Luis. "More plants means that the wildlife—birds and mammals—have a home. The ecologists call this biodiversity. I call it life, *terra y vida.*"

When the water of the Rio Grande is auctioned to the highest bidder, it is taken away from the agri-pastoral community whose rights to the water are tied to the responsibility of maintaining a "watershed commonwealth." Markets fail to capture diverse values, and they fail to reflect the destruction of ecologi-
ocal value. Water that replenishes ecosystems is considered water wasted. Joseph Gallegos raises an important point when he asks:

Whose point of view is this? The cottonwood trees that line the acequia banks don’t think the leaking water is wasted. Nor do the birds and other animals that live in the trees. The ditches create habitat niches for wildlife, and that is a good thing for the animals and the farmers. It is not wasteful, unless of course you are an urban developer greedily looking for more water for the cities’ insatiable growth needs. The gringo treats water like a commodity. You know the saying, “In Colorado water flows uphill, towards money.”

When money determines value and courts get involved, common resources are stripped from farmers and lost to private companies. And, as Devon Pena points out,

The attack on common property rights involves the legal codification of production that produces violent but legally sanctioned invasions, enclosures, and expropriations of space. The law itself violates the integrity of places as habitat for mixed communities of humans and non-humans.

This is exactly what transpired in the Rito Seco Watershed in Colorado, when courts allowed the Battle Mountain Gold Mine to transfer water from agriculture to industrial use.

**Community Rights and Water Democracies**

Under conditions of scarcity, sustainable systems of water management evolved from the idea of water as commons passed on from generation to generation. Labor in conservation and community building became the primary investment in water resources. In the absence of capital, people working collectively provided the major input or “investment” in water works. As Anupam Mishra of the Gandhi Peace Foundation observes:

The ways of collecting the drops of **Patar**, i.e., of rainfall, are as unending as the names of clouds and drops. The pot like the ocean is filled up drop by drop. These beautiful lessons are not to be found in any textbook but are actually couched in the memory of our society. It is from this memory that the **shaktis** of our oral traditions have come... The people of Rajasthan did not entrust the organisation of such a boundless work to either the central or federal government, not even to what in modern parlance is termed as the private sphere. It is the people themselves who in each house, in each village, gave fruition to this structure, maintained it, and further developed it.

“**Pindwari**” is to help others through one’s effort, one’s labour, one’s hard work. The drops of sweat streaming down the brow of the people of Rajasthan continue to flow so as to collect the drops of rain.

Traditional water systems based on local management were insurance against water scarcity in drought-prone regions of Gujarat. These systems were managed mainly by village committees. In the event of floods, famines, and other calamities, the king also helped; the role of a central authority was, therefore, primarily in disaster mitigation. Local institutions in water management included farmers’ associations, local irrigation functionaries, local irrigation technicians, the village water associations, and the community labor system, maintained by contributions from each family.

In India, farmers’ associations for the construction and maintenance of water systems were once widespread. In Karnataka and Maharashtra the associations were known as **panchayats**. In Tamil Nadu, they were called **nattamai, kavi maniyam, nir maniyam, oppidi sangam**, or **eri variyam** (tank committee). Tanks and ponds often served more than one village, and in such cases representatives from each village or farmers’ association ensured democratic control. These committees could also collect tank dues and taxes from users. Lands were also donated, especially for financing capital expenditures on waterworks.

Village water systems required irrigation functionaries who looked after the day-to-day operation of irrigation systems. In the
Himalayas, where kulis served community irrigation needs, irrigation-garages were called kulis. In Maharashtra, they were known as patkaris, banvalars, and jogalaya. In Karnataka and Tamil Nadu, they were known as nirkkati, nirganti, nипяыели, nirnikkati, or karu-kakati.

To ensure neutrality, nirkkat was chosen from the landless caste—the Harijans—who were granted autonomy from landowners and caste groups. Only Harijans held the power to close and open the tanks or vents. Once the farmers laid down the rules of distribution, no individual farmer could interfere and those who did could be fined. This protection of the associations from the economically powerful ensured water democracy.

Compensations were based on investments of one’s own labor and could not be substituted by capital or by others’ labor. In south India, collective labor investment was the primary investment in the construction and maintenance of village water systems known as kudimaramath. Each able-bodied person was required to help maintain and clean channels. Nirkkati also summoned farmers to clean the supply and field channels. The ancient economic treatise, Arthasastra, included certain punishments for defectors from any kind of cooperative construction. Violators were expected to send their servants and bullocks to carry on their work and to share the costs, without laying any claim to the return.

The self-management systems suffered when the government took control over water resources during British rule. Community ownership was further eroded with the emergence of bore wells and tube wells, which made individual farmers dependent on capital. Collective water rights were undermined by state intervention, and resource control was transferred to external agencies. Revenues were no longer reinvested in local infrastructure but diverted to government departments.

Community rights are necessary for both ecology and democracy. Bureaucratic control by distant and external agencies and market control by commercial interests and corporations create disincentives for conservation. Local communities do not conserve water or maintain water systems if external agencies—bureaucratic or commercial—are the only beneficiaries of their efforts and resources.

Higher prices under free-market conditions will not lead to conservation. Given the tremendous economic inequalities, there is a great possibility that the economically powerful will waste water while the poor will pay the price. Community rights are a democratic imperative—they hold states and commercial interests accountable and defend people’s water rights in the form of decentralized democracy.

The Right to Clean Water Versus the Right to Pollute

Prior to passage of the Water Act of India in 1974, almost all judicial decisions were in favor of polluters. In addition to being protected by law, polluters also had more economic and political power than ordinary citizens. They were even more successful in using the legal processes in their favor. When the impact of industrial pollution was not severe or when industrialization was seen as a symbol of progress, courts tended to uphold the rights of the industrialists to pollute water as exemplified in a number of cases: Deshi Sugar Mills v. Traps Kahar, Empress v. Holodhan Pooroo; Emperor v. Nana Ram; Imperative v. Neelappa; Darvappa Queen v. Vitthakken; Reg v. Partha; and Imperative v. Hari Bapu. As water pollution intensified with the spread of industrialization, it could be handled only through criminal or penal sanctions. However, the courts alone could not protect people’s right to clean water.

By the 1980s, as the threat from pollution increased, the right to clean water had to be defended as a fundamental right. The Supreme Court of India introduced a new principle of environmental rights in the famous case Ratlam Municipality v. Vardhichand. The municipality had to remove public nuisances, whether it had the financial capability to do so or not. Ratlam established a new type of natural right and recognized customary rights as a consti-
It is not surprising that pollution permits are ecologically blind. They merely consider “incentives for gains from trade.” If pollution control costs are low, an industry will sell discharge rights, and if costs are high, an industry will buy discharge rights. While such cost-benefit analysis might appear to create trade advantages, this market of pollution is ecologically dangerous.

Trade in pollution permits violates ecological democracy and people’s right to clean water on several counts. It changes the role of governments from protector of people’s water rights to advocate of polluters’ rights. Governments assume regulatory roles that are anti-environment, anti-people and pro-polluter industry. TDPs exclude nonpolluters and ordinary citizens from an active democratic role in pollution control, since the trade in pollution is restricted to polluter industries.

**Big Polluters: Old and New**

The struggle between the right to clean water and the right to pollute is the struggle between the human and environmental rights of ordinary citizens and the financial interests of businesses. Pollution is a by-product of industrial technologies and global trade. Handmade paper and vegetable dyes cause no pollution; indigenous leather treatment is also very prudent and water conserving; fresh vegetables and fruits do not require water, except for cultivation.

By contrast, modern industrial papermaking and leather processing create massive pollution. Pulp uses 60,000 to 190,000 gallons of water per ton of paper or rayon. Bleaching uses 48,000 to 72,000 gallons of water per ton of cotton. Packaging green beans and peaches for long-distance trade can use up to 17,000 and 4,800 gallons per ton, respectively.

The overuse and pollution of scarce water resources is not restricted to old industrial technologies; it is a hidden component of the new computer technologies. A study by South West Network for Environmental and Economic Justice and the Cam-
 campaigned for Responsible Technology reveals that the process of chip manufacturing requires excessive amounts of water. On average, processing a single six-inch silicon wafer uses 2,275 gallons of deionized water, 3,200 cubic feet of bulk gases, 22 cubic feet of hazardous gases, 20 pounds of chemicals, and 285 kilowatts hours of electrical power. In other words, if an average plant processes 2,000 wafers per week (the new state-of-the-art Intel facility in Rio Rancho, New Mexico, for example, can produce 5,000 wafers per week) it would need 4,550,000 gallons of water per week and 236,600,000 gallons per year for wafer production alone.

The study finds that out of the 29 Superfund sites in Santa Clara County, California, 20 were created by the computer industry.

**The Principles of Water Democracy**

At the core of the market solution to pollution is the assumption that water exists in unlimited supply. The idea that markets can mitigate pollution by facilitating increased allocation fails to recognize that water diversion to one area comes at the cost of water scarcity elsewhere.

In contrast to the corporate theorists who promote market solutions to pollution, grassroots organizations call for political and ecological solutions. Communities fighting high-tech industrial pollution have proposed the Community Environmental Bill of Rights, which includes rights to clean industry; to safety from harmful exposure; to prevention; to knowledge; to participation; to protection and enforcement; to compensation; and to cleanup. All of these rights are basic elements of a water democracy in which the right to clean water is protected for all citizens. Markets can guarantee none of these rights.

There are nine principles underpinning water democracy:

1. **Water is nature’s gift**
   
   We receive water freely from nature. We owe it to nature to use this gift in accordance with our sustenance needs, to keep it clean and in adequate quantity. Diversions that create arid or waterlogged regions violate the principles of ecological democracy.

2. **Water is essential to life**
   
   Water is the source of life for all species. All species and ecosystems have a right to their share of water on the planet.

3. **Life is interconnected through water**
   
   Water connects all beings and all parts of the planet through the water cycle. We all have a duty to ensure that our actions do not cause harm to other species and other people.

4. **Water must be free for sustenance needs**
   
   Since nature gives water to us free of cost, buying and selling it for profit violates our inherent right to nature’s gift and denies the poor of their human rights.

5. **Water is limited and can be exhausted**
   
   Water is limited and exhaustible if used nonsustainably. Nonsustainable use includes extracting more water from ecosystems than nature can recharge (ecological nonsustainability) and consuming more than one’s legitimate share, given the rights of others to a fair share (social nonsustainability).

6. **Water must be conserved**
   
   Everyone has a duty to conserve water and use water sustainably, within ecological and just limits.
7. Water is a commons

Water is not a human invention. It cannot be bound and has no boundaries. It is by nature a commons. It cannot be owned as private property and sold as a commodity.

8. No one holds a right to destroy

No one has a right to overuse, abuse, waste, or pollute water systems. Tradable-pollution permits violate the principle of sustainable and just use.

9. Water cannot be substituted

Water is intrinsically different from other resources and products. It cannot be treated as a commodity.

1. *Institutes of Justice* 2.1.1
6. Ibid., p. 89.
7. Ibid., p. 104.
8. Ibid., p. 90.
17. Ibid., p. 149.
23. Ibid.
24. Ibid., pp. 133-134.
Chapter 2

CLIMATE CHANGE AND THE WATER CRISIS

"Jala bhukte sukhina, jala bhunne sukhinaa"
("Too much or too little water destroys creation")
—Oriya expression

In October 1999, a killer cyclone hit the eastern part of the state of Orissa in eastern India. The cyclone, one of the most devastating human disasters ever experienced, damaged 1.83 million houses and 1.8 million acres of paddy crops in 12 coastal districts. Eighty percent of the coconut trees were uprooted or broken in half, and all the banana and papaya plantations were wiped out. More than 300,000 cattle perished, more than 1,500 fishermen and fisherwomen lost their entire source of livelihood, and more than 15,000 ponds were contaminated or salinated. While there is no official number of the human casualties, independent observers and local workers estimate the toll to be about 20,000.

In the summer of 2001, Orissa was hit by one of the worst droughts in history and during the monsoon season it was affected by the worst flood. More than seven million people were affected: 600,000 villages were marooned, 42 people were killed, and 550,000 hectares of standing crops were destroyed. Heavy
THE WORLD BANK, WTO AND CORPORATE CONTROL OVER WATER

Giant water projects, in most cases, benefit the powerful and dispossess the weak. Even when such projects are publicly funded, their beneficiaries are mainly construction companies, industries, and commercial farmers. While privatization is generally couched in rhetoric about the disappearing role of the state, what we actually see is increased state intervention in water policy, subverting community control over water resources. Policies imposed by the World Bank, and trade liberalization rules crafted by the World Trade Organization (WTO), are creating a sweeping culture of corporate-states all over the world.

The World Bank: An Instrument for Corporate Control Over Water

Not only has the World Bank played a major role in the creation of water scarcity and pollution, it is now transforming that scarcity into a market opportunity for water corporations. The World Bank currently has outstanding commitments of about $20 billion in water projects, $4.8 billion of which are for urban water and sanitation, $1.7 billion for rural water schemes, $5.4
billion for irrigation, $1.7 billion for hydropower, and $3 billion for water-related environmental projects. South Asia receives 20 percent of World Bank water loans.

The Bank estimates the potential water market at $1 trillion. After the collapse of the technology stocks, Fortune magazine identified the water business as the most profitable industry for investors. Large corporations, such as the biotech giant Monsanto, covet this lucrative market. Monsanto is currently plotting its entry into the water business and is anxiously eyeing the funding available from development agencies:

First we believe that discontinuities (either major policy changes or major trendline breaks in resource quality or quantity) are likely, particularly in the area of water, and we will be well positioned via these businesses to profit even more significantly when these discontinuities occur. Secondly, we are exploring the potential of non-conventional financing (non-governmental organisations, World Bank, USAID, etc.) that may lower our investment or provide local country business-building resources.

The World Bank’s use of loan conditions to privatize and trade water suits Monsanto well, and the two have already begun to talk of collaboration. Monsanto is “particularly enthusiastic about the potential of partnering with the International Finance Corporation (IFC) of the World Bank” and expects the IFC to “bring both investment capital and on-the-ground capabilities to our efforts.” For the company, sustainable development is the conversion of an ecological crisis into a market of scarce resources.

Monsanto estimates that the safe water market is worth billions of dollars. In 2000, the business of safe water provision was estimated to reach $300 million in India and Mexico. This is the amount currently spent by nongovernmental organizations (NGOs) for water development projects and local-government water-supply schemes; Monsanto hopes to tap these public finances for providing water to rural communities. Where the poor cannot pay, the company plans to create “non-traditional mechanisms,” targeted at building relationship[s] with local government and NGOs as well as through innovative financing mechanisms, such as microcredit.”

Monsanto also plans to penetrate the Indian market for safe water by establishing a joint venture with Eureka Forbes/TATA, a firm involved in water purification. The venture will help Monsanto control water delivery and distribution systems. The joint venture is ideal because it will allow Monsanto to “achieve management control over local operation[s] but not have legal consequences due to local issues.” Additionally, Monsanto is to purchase a Japanese company which has developed electrolysis technology for water treatment.

In 1999, Monsanto ventured into aquaculture in Asia to augment its agricultural biotechnology and expand its fish feeding and breeding capabilities. By 2008, the company expects to earn revenues of $1 billion and a net income of $266 million from its aquaculture business. While Monsanto’s entry into aquaculture was justified under the auspices of sustainable development, industrial aquaculture is highly nonsustainable. The Supreme Court of India banned industrial shrimp farming because of its catastrophic consequences. Unfortunately, the government is trying to reverse the ban due to pressure from the aquaculture lobby. An Aquaculture Authority Bill has been presented to Parliament to undo the environmental laws that protect the coast.

Public-Private Partnerships: International Aid for Water Privatization

Privatization projects funded by the World Bank and other aid agencies are usually labeled “public-private partnerships.” The label is powerful, both because of what it suggests and what it hides. It implies public participation, democracy, and accountability. But it disguises the fact that public-private partnership arrangements usually entail public funds being available for the privatization of public goods.
Public-private partnerships can occur in the area of capacity building or management (operations and delivery of services). Management contracts can be short-term service contracts lasting six months to three years, longer contracts of three to five years with the public agency holding investment responsibility, or 25- to 30-year contracts with the private agency holding full operation, maintenance, delivery, and investment responsibility. Longer contracts usually involve bulk water-purchase agreements to be paid by the public agency, much like the power purchase agreements in energy privatization.

Public-private partnerships have mushroomed under the guise of attracting private capital and curbing public-sector employment. The World Bank, working on the assumption that the Third World will urbanize by 2025, estimates that $600 billion of investment in infrastructure projects will be required. However, urbanization, like water privatization, is a possible result of World Bank policies, not an inevitable outcome.

Currently, public-private collaborations in water services receive millions of aid dollars. This money is a subsidy for private firms, who bid ferociously for the contracts. In India alone, there are 30 such collaborations in water services. Public-private partnerships in the water business are meant to replace water services as a public service:

First is the focus on commercial orientation through institutional reforms and restructuring. For example, a first step may be restructuring the water and sewage department on a profit center basis. Over time, corporatisation of the utility or separate joint venture companies to manage the water and sewage system will help to bring the necessary commercial orientation.

The second aspect relates to the need for an appropriate regulatory framework. The basic objective of such institutional reform is to move towards a commercial and consumer orientation in service provision. The entire outlook changes from publicly provided free services as a right, to a consumer orientation with access to services.

The erosion of water rights is now a global phenomenon. Since the early 1990s, ambitious World Bank-driven privatization programs have emerged in Argentina, Chile, Mexico, Malaysia, and Nigeria. The Bank has also introduced privatization of water systems in India. In Chile, it has imposed a loan condition to guarantee a 33 percent profit margin to the French company Suez Lyonnaise des Eaux.

Not only does privatization affect people's democratic right to water, it also affects the livelihoods and employment rights of those who work in municipalities and local water and sanitation systems. Public systems worldwide employ five to ten employees per 1,000 water connections, while private companies employ two to three employees per 1,000 water connections. In most Indian cities, municipal employees have resisted privatization of water and sanitation services.

Privatization arguments have been based largely on the poor performance of public-sector utilities. Government employees are seen as excess staff, responsible for the low productivity of public water agencies. The fact that poor public-sector performance is most often due to the utilities' lack of accountability is hardly taken into account. As it turns out, there is no indication that private companies are any more accountable. In fact, the opposite tends to be the case. While privatization does not have a track record of success, it does have a track record of risks and failures. Private companies most often violate operation standards and engage in price gouging without much consequence. In Argentina, two of the largest private French firms, Lyonnaise des Eaux and Compagnie Generale des Eaux, two of the largest private British firms, Thames Water and Northwest Water, and the largest public Spanish firm, Canal Isabel II, formed a consortium to bid for a World Bank-financed water privatization project. Employees at the public-sector utility provider Obras Sanitarias
de la Nación (OSN) in Buenos Aires were reduced from 7,600 to 4,000 in 1993. The unemployment of 3,600 workers has been touted as the most important achievement and indicator of success. While employment in water services went down, the price of water went up. Within the first year, water rates increased by 13.5 percent.16

In Chile, Suez Lyonnaise des Eaux insisted on a 35 percent profit.17 In Casablanca, consumers saw the price of water increase threefold. In Britain, water and sewage bills increased 67 percent between 1989–90 and 1994–95. The rate at which people’s services were disconnected rose by 177 percent. In New Zealand, citizens took to the streets to protest the commercialization of water. In South Africa, Johannesburg’s water supply was overtaken by Suez Lyonnaise des Eaux. Water soon became unsafe, inaccessible, and unaffordable. Thousands of people were disconnected and cholera infections became rampant.18

Despite its unpopularity among local residents worldwide, the rush to privatize water continues unabated. Encumbered by exorbitant debts, countries around the world are forced to privatize water. It is common for the World Bank and IMF to demand water deregulation as part of their lending conditions. Out of the 40 IMF loans disbursed through the International Finance Corporation in 2000, 12 had requirements for partial or full privatization of water supply and insisted on policy creation to stimulate “full cost recovery” and eliminate subsidies. In order to qualify for loans, African governments increasingly succumb to water privatization pressures. In Ghana, for instance, World Bank and IMF policies forcing the sale of water at market rate required the poor to spend up to 50 percent of their earnings on water purchases.19

The WTO and GATS: Trading Away Our Water

The General Agreement on Trade and Tariffs (GATT) was created along with the World Bank and IMF to manage the global economy in the postwar era. The 1944 Bretton Woods Confer-

cence gave shape to these institutions and instruments. GATT was intended to become the International Trade Organization in 1948; but the United States blocked the move since the rules of trade favored the South.20 GATT therefore continued as an agreement until 1995, when the WTO was established on the basis of the agreements made at the Uruguay Round.

Before 1993, GATT dealt only with trade in goods beyond national borders. The Uruguay Round, negotiated between 1986 and 1993, expanded the scope of trade and the power of GATT by adding rules beyond goods and international trade. New rules were introduced on intellectual property, agriculture, and investment. Services were subjected to trade via the General Agreement on Trade in Services (GATS). By the time the WTO formed in 1995, the stage had been set for its unregulated power to override domestic policies and hijack common resources.

While the World Bank is promulgating privatization of water through structural adjustment programs and conditions, the WTO is instituting water privatization via free-trade rules embodied in GATS. GATS promotes free-trade in services, including water, food, environment, health, education, research, communication, and transport. The WTO markets GATS as a “bottom up” treaty, citing the freedom of countries to liberalize trade progressively and to deregulate different sectors incrementally. In reality, GATS is a treaty with no reverence for or accountability to national democratic processes. In many cases, governments do not have the liberty to use cultural issues and resources in their WTO negotiations.

GATS not only bypasses government restrictions but also permits companies to sue countries whose domestic policy prevents free-market entry. For instance, in 1996 India passed the Provision of the Panchayats Act, recognizing the local community in tribal areas as the highest forms of authority in matters of culture, resources, and conflict resolution.21 For the first time since India’s independence, village communities (gram sabhas)
were granted legal acknowledgment as community entities. Village communities retained a number of powers, including the power to approve or reject development plans and programs. Gram sabhas were also bestowed with the authority to grant land.

The act accepted the traditions of the people and their cultural identity by honoring their traditional relationship with the natural resources in their homeland. As the law stated, “a state-legislation on the panchayats that may be made, shall be in consonance with the customary law, social and religious practices and traditional management practices of community resources.” The importance of having control over community resources was recognized not only as an economic necessity but as a touchstone of cultural identity: “Every gram sabha shall be competent to safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolution.”

The WTO disregards and even subverts hard-won victories such as the Indian Constitution. GATS is a tool to reverse the democratic decentralization to which diverse societies have been aspiring. GATS can challenge measures taken by central, regional, or local governments as well as nongovernmental bodies. Its rules are shaped entirely by corporations without any input from NGOs, local governments, or national governments.

The WTO and GATS: Facts and Fiction

On March 16, 2001, the WTO presented a defense of GATS in a press conference it called “GATS: Fact and Fiction.” It argued that GATS does not violate rights to water, health, or education because it excludes “services supplied in the exercise of governmental authority.” The WTO further maintained that GATS does not oblige countries to deregulate services or to open up their markets and that countries are free to tighten regulations on foreign investors.

A close examination of the WTO claims reveals a different and contrary reality. While GATS appears to exempt “services supplied in the exercise of government authority,” it also mandates that such services be “supplied neither on a commercial basis, nor in competition with one or more service suppliers.” Since “commercial basis” is not clearly defined, governments charging any tax or fees could be interpreted as engaging in commercial activity, and essential services could be dragged into a free trade ambit. Further, since most societies have pluralistic service providers, governments can be accused of being in competition with one or more service suppliers.

The “National Treatment” rule of GATS prohibits governments from discriminating between foreign and local service suppliers, even if the local provider is a community nonprofit and the foreign supplier is a giant water corporation. This rule also proscribes governments from requiring foreign corporations to hire or train citizens or to involve local people in management and ownership. Neither can these corporations be forced to transfer technology to local industries. The “Market Access” rule forbids governments to set limits on, among other things, the number of service suppliers, the value of service transactions or assets, the number of service operations, and the quantity of service output.

Water services have always been on the GATS agenda. For instance, “environmental services” currently include sewage, refuse disposal, sanitation, gas exhaust cleanup, and nature protection. At the heart of the environmental industry and of these services is of course water. The centrality of water to this field has been of interest not only to the WTO but also to the European Community—the government of the European Union. In 2000, the European Community reported that environmental services amount to $280 billion and are expected reach $640 billion by 2010, placing this sector in roughly the same category as the pharmaceutical and information technology industries.
The European Community has expanded the coverage of “water services” to include “water collection, purification and distribution.” And of course, as Ruth Caplan of the Alliance for Democracy points out, “collection could include the withdrawal of water from bodies of water and the extraction from groundwater and aquifers.” The proposals by the European Community could, therefore, have a major impact on community rights to water resources. At the Doha meeting of the WTO in November 2001, the United States sneaked water trade into the Ministerial Declaration. The section on Trade and Environment refers to “the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services.”

In other words, free trade in water.

**New Agreements, Old Agenda**

The WTO refers to GATS as the “first multilateral agreement on investment.” Although a global resistance defeated the Multilateral Agreement on Investment (MAI), the agenda has been resurrected by GATS. A similar free trade treaty is the North American Free Trade Agreement (NAFTA). Under NAFTA, Metalclad, an American waste management company, was able to extort $17 million from the Mexican government in a lawsuit. Metalclad’s hazardous waste treatment and disposal site in the central Mexican state of San Luis Potosi was shut down by local officials on the grounds that it was not environmentally sound. Unfortunately, NAFTA allows companies to sue governments for cash compensation if a country implements legislation that “expropriates” the company’s future profits. Metalclad invoked this rule in its suit against the Mexican government and eventually won. The intense community opposition to Metalclad’s facility was irrelevant.

Corporate trade rights granted by trade agreements such as NAFTA and GATS apply to cases of corporate water ownership and control. NAFTA explicitly lists “waters, including natural or artificial waters and aerated waters,” as tradable goods. And of course, as US trade representative Mickey Kantor pointed out in 1993, “when water is traded as a good, all provisions of the agreement governing trade in goods apply.”

In 1998, the American company Sun Belt Water sued the Canadian government for $10 billion because the company lost a contract to export water from Canada to California due to a 1991 ban on bulk water export imposed by the government of British Columbia. The company claimed that British Columbia’s ban on exports violated the protection of investor rights under NAFTA. The case is still under deliberation. Every level of government—including regional and local—is now forced to adhere to rules that it did not negotiate or agree to. Policy-making is no longer in the hands of local or national governments but in the grip of large multinational corporations. As Jack Lindsay, CEO of Sun Belt, puts it: “Because of NAFTA, we are now stakeholders in the national water policy in Canada.”

**The Water Giants**

Water has become big business for global corporations, which see limitless markets in growing water scarcity and demand. The two major players in the water industry are the French companies Vivendi Environment and Suez Lyonnaise des Eaux, whose empires extend to 120 countries. Vivendi is the water giant, with a turnover of $17.1 billion. Suez had a turnover of $5.1 billion in 1996. Vivendi Environment is the “environmental services” arm of Vivendi Universal, a global media and communications conglomerate involved in television, film, publishing, music, the Internet, and telecommunications.

Vivendi Environment is engaged in water, waste management, energy, and transportation. In 2000, Vivendi Environment was awarded a 43-million-euro contract for a wastewater treatment plan in Berne, Switzerland. Vivendi also has a 50-50 joint venture company called CTSE in the Czech Republic.
sales are expected to be 200 million euros. Vivendi’s subsidiary, Onyx, owns Waste Management Inc. Vivendi operates waste services in several countries, including Hong Kong and Brazil.

Other water giants include the Spanish company, Aguas de Barcelona, which dominates in Latin America, and the British companies Thames Water, Biwater, and United Utilities. Biwater was established in 1968 and given its name to reflect the company’s involvement in both the dirty- and clean-water businesses. Thames is owned by RWE, an electric company whose ventures include water.

Biwater and Thames have operations in Asia, South Africa, and the Americas. In the 1940s, Biwater entered Mexico and the Philippines. By the 1970s, it had contracts in Indonesia, Hong Kong, Iraq, Kenya, and Malawi. By 1992, the Biwater empire had expanded to Malaysia, Germany, and Poland. In 2000, the company, along with a Dutch firm, launched its joint venture company, Cascal. Cascal has contracts in the United Kingdom, Chile, the Philippines, Kazakhstan, Mexico, and South Africa. Another addition to the global water takeover is General Electric, which is working with the World Bank to create an investment fund to privatize power and water worldwide.

The privatization of water services is the first step toward the privatization of all aspects of water. The American water market for water supply and treatment, estimated at $90 billion, is the largest in the world, and Vivendi is investing heavily in order to dominate it. In March 1999, the company purchased US Filter Corporation for more than $6 billion and formed the largest water corporation in North America. Vivendi’s projected revenue is $12 billion.

Once the water giants enter the picture, water prices go up. In Sicily, the Philippines, Biwater increased water rates by 400 percent. In France, customer fees increased 150 percent but water quality deteriorated; a French government report revealed that more than 5.2 million people received “bacterially unacceptable water.” In England, water rates increased by 450 percent and company profits soared by 692 percent—CEO salaries increased by an astonishing 708 percent. Service disconnection increased by 50 percent. Meanwhile, dysentery increased sixfold and the British Medical Association condemned water privatization for its health effects.

In 1998, shortly after Sydney’s water was overtaken by Suez Lyonnaise des Eaux, it was contaminated with high levels of *Giardia* and *Cryptosporidium*. After water testing had been privatized by A&L Labs, in Walkerton, Ontario, seven people, including a baby, died as a result of *E. coli*. The company treated the test results as “confidential intellectual property” and did not make them public, just as Union Carbide withheld information about the leaked chemicals in its Bhopal, India, plant while thousands were dying. In Argentina, when a Suez Lyonnaise des Eaux subsidiary purchased the state-run water company Obras Sanitarias de la Nación, water rates doubled but water quality degenerated. The company was forced to leave the country when residents refused to pay their bills.

**The Great Thirst**

In the aqueducts of Mexico, drinking water is so scarce that babies and children drink Coca-Cola and Pepsi. Coca-Cola’s products sell in 195 countries, generating a revenue of $16 billion. Water scarcity is clearly a source of corporate profits. In an annual report, Coca-Cola proclaims:

All of us in the Coca-Cola family wake up each morning knowing that every single one of the world’s 5.6 billion people will get thirsty that day. If we make it impossible for these 5.6 billion people to escape Coca-Cola, then we assure our future success for many years to come. Doing anything else is not an option.

Companies like Coca-Cola are fully aware that water is the real thirst quencher and are jumping into the bottled water business. Coca-Cola has launched its international label Bon Aqua
Dasani is the American version), and Pepsi has introduced Aquafina. In India, Coca-Cola's water line is called Kinley. In addition to Coca-Cola and Pepsi, there are several other well-known brands such as Perrier, Evian, Naya, Poland Spring, Clearly Canadian, and Purely Alaskan.

In March 1999, in a study of 103 brands of bottled water, the Natural Resources Defense Council found that bottled water was no more safe than tap water. A third of the brands contained arsenic and E. coli and a fourth merely bottled tap water. In India, a study conducted by the Ahmedabad-based Consumer Education and Research Center discovered that only three out of the 13 known brands conformed to all bottling specifications. None of the brands was free of bacteria, even though some claimed to be germ-free and 100 percent bacteria-free. Such false and misleading advertising has forced the Indian government to amend its Prevention of Food Adulteration rules to include bottled water. It now differentiates between mineral water obtained from and packaged close to a natural source and treated drinking water.

The consequences of bottled water extend beyond price hikes and unsafe water. Environmental waste is a major cost incurred by the bottling industry. In the 1970s, 300 million gallons of bottled water were sold in non-renewable plastic water containers. By 1998 this number had exceeded 6 billion. In India, the leading bottled water producer Parle Bisleri accounts for 60 percent of the market share. It is expanding its $835 thousand business and hopes to earn $208.8 million by 2002.

The head of Parle Bisleri, Ramesh Chauhan (also known as the “Water Baron”), has big plans: “Bisleri has to be made a megabrand. It’s still baba [a baby]. In the next two or three years, Bisleri must oust all the cola companies together.” Chauhan forecasts that “the bottled water market will outstrip the carbonated drinks market in three years.” Currently, bottled water accounts for 14 percent of the soft drink industry. Bisleri’s one liter bottle sells for 20 cents, and the five liter bottle sells for 52 cents. Chauhan hopes to outsell Coke and Pepsi by keeping his prices lower.

Bisleri, Pepsi, and Coke are not the only players in the Indian bottled water market. Britannia Industries and Nestle are also pushing their products, Perrier, San Pellegrino, and Price Life. Britannia markets Evian, which sells at $2 per liter, nearly double the hourly minimum wage. Evian is promoted as “an alternative beverage for lifestyle and fitness needs.” More than 500 rich families in India spend approximately $20 to $209 a month on Evian water. The Australian company Auswater Purification Ltd. is promoting its brand, Auswater. Smaller Indian companies like Trupthi, Ganga, Oasis, Dewdrops, Minscot, Florida, Aqua Cool, and Himalayan have also entered the market. These small firms account for 17 percent of the market share.

Global corporations are taking full advantage of the demand for clean water, a demand which has resulted from environmental pollution. Even though the corporations tap clean water resources in nonindustrialized, unpolluted regions, they refer to their bottling practice as “manufacture” of water. Nestle has a plant in Samalka in Haryana. In 1999, Pepsi started its Aquafina bottling plant in Roa, Maharashtra, and is setting up new plants in Kosi, Bazpur, Kolkata, and Bangalore. Coca-Cola bottles Kinley at its plants in Delhi, Mumbai, and Bangalore. The Indian packaged-water market is estimated at $104.4 million, with a growth of 50 to 70 percent per year. In other words, bottled water production is expected to double every two years. Between 1992 and 2000, sales had increased from 95 million liters to 932 million liters.

As quickly as the water market is expanding in India, so is the traditional practice of giving water to the thirsty disappearing. For thousands of years, water was offered as a gift at pujas, road sides, temples, and marketplaces. Earthen pots known as ghadas and surais cooled the water during the summer for the thirsty, who would drink from their cupped hands. These pots have been replaced by plastic bottles, and the gift economy has
been supplanted by the water market. No longer do all people have a right to quench their thirst; this is a right held exclusively by the rich. Even the president of India laments this misfortune: “The elite guzzle bottles of aerated drinks while the poor have to make do with a handful of muddied water.”

In Kerala, the restriction of water to the rich led local organizations to launch a campaign to boycott Coca-Cola. Partly as a protest and partly to develop alternative markets, residents of the coconut-rich state Kerala (Kera means coconut in Malayalam) adopted the slogan “Goodbye Cola, Welcome Tender Coconut.” Coconut prices had dropped considerably when WTO rules flooded the region with soya and palm oil. Their low cost and their abundance made coconuts ideal for resisting another global conquest.

Corporations Versus Citizens: Water Wars In Bolivia

Perhaps the most famous tale of corporate greed over water is the story of Cochabamba, Bolivia. In this semidesert region, water is scarce and precious. In 1999, the World Bank recommended privatization of Cochabamba’s municipal water supply company, Servicio Municipal del Agua Potable y Alcantarillado (SEMAPA), through a concession to International Water, a subsidiary of Bechtel. On October 1999, the Drinking Water and Sanitation Law was passed, ending government subsidies and allowing privatization.

In a city where the minimum wage is less than $100 a month, water bills reached $20 a month, nearly the cost of feeding a family of five for two weeks. In January 2000, a citizens’ alliance called La Coordinadora de Defensa del Agua y de la Vida (The Coalition in Defense of Water and Life) was formed. The alliance shut down the city for four days through mass mobilization. Within a month, millions of Bolivians marched to Cochabamba, held a general strike, and stopped all transportation. At the gathering, the protesters issued the Cochabamba Declaration, calling for the protection of universal water rights.

The government promised to reverse the price hike but never did. In February 2000, La Coordinadora organized a peaceful march demanding the repeal of the Drinking Water and Sanitation Law, the annulment of ordinances allowing privatization, the termination of the water contract, and the participation of citizens in drafting a water resource law. The citizens’ demands, which drove a stake through the heart of corporate interests, were violently rejected. La Coordinadora’s fundamental critique was directed at the negation of water as a community property. Protesters used slogans like “Water Is God’s Gift and Not A Merchandise” and “Water Is Life.”

In April 2000, the government tried to silence the water protests through martial law. Activists were arrested, protesters killed, and the media censored. Finally on April 10, 2000, the people won. Aguas del Tunari and Bechtel left Bolivia and the government was forced to revoke its hated water privatization legislation. The water company SEMAPA (along with its debts) was handed over to the workers and the people. In the summer of 2000, La Coordinadora organized public hearings to establish democratic planning and management. The people have taken on the challenge to establish a water democracy, but the water dictators are trying their best to subvert the process. Bechtel is suing Bolivia, and the Bolivian government is harassing and threatening activists of La Coordinadora.

By reclaiming water from corporations and the market, the citizens of Bolivia have illustrated that privatization is not inevitable and that corporate takeover of vital resources can be prevented by people’s democratic will.
1. www.worldbank.org
7. Ibid.
8. Ibid.
15. Ibid.
16. Ibid., pp. 27-50.
18. Ibid.
20. Ibid.
22. Ibid., Sec. 4(a).
23. Ibid., Sec. 4(d).
24. GATS submission by European Union.
26. WTO Doha Declaration (Ministerial Meeting, November 2000).
28. Ibid.
29. Ibid.