

Water Security: A Non-Tradition Security Concern

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Water is essential for the survival of all living beings. It fulfills fundamental human needs and is used not just for drinking but also for food production, cooking, hygiene, sanitation, individual livelihoods, industry and development. Many poor households use water to earn an income by preparing and cooking food, doing laundry work, cleaning car windows or turning water into ice for sale. In rural areas, water is also used for livestock, for growing vegetables and for making bricks. Besides, water has global spiritual significance and plays an important part in cultural practices. Hence access to sufficient, safe and affordable water is vital for human development and human security. Although water security does not find a direct mention in this list of seven core elements of human security, yet the fact remains that it is inherent in several of the existing elements.

The issue of water security was flagged by the United Nations Development Programme (UNDP) Human Development Report in November 2006 when it presented a dismal state of affairs the world over with regard to access to clean and sufficient water: (Kevin Watkins, 2006:5:15)

- More than 1 billion people lack access to an adequate supply of water;
- 2.6 billion people lack access to adequate sanitation;
- 1.8 million children die every year as a result of diseases caused by unclean water and poor sanitation;
- Close to half of all ill-health suffered by people in developing countries is caused by a lack of access to clean water and sanitation;
- Illness caused by unclean water or poor sanitation causes 443 million school days to be missed each year globally.

Acknowledging the sorry state of affairs pertaining to water, Peter H. Gleick says, “the failure to provide safe drinking water and adequate sanitation services to all people is perhaps the greatest development failure of the twentieth century. The most egregious consequence of this failure is the high rate of

sickness and mortality among young children from preventable water related diseases.” (Gleick Peter H, 2004:1)

The above scenario gives rise to three issues: safety, sufficiency and accessibility to water. All of these can have a bearing on human security. However, it is pertinent to point out that though the three issues are being explained separately here, they are in fact inter-related to each other and should thus be seen as such.

Safety of water

When human beings use unclean and unsafe water for their daily needs, it leads to bad health, sickness and disease. There are four kinds of water-related diseases: waterborne, water-washed, water-based, and water-related insect vectors. (Gleick Peter H, 2004:8) The first three kinds of diseases are a result of inadequate sanitation and the supply of bad quality of domestic water. Waterborne diseases are a consequence of drinking contaminated water. When enough water is not available for washing and personal hygiene, it leads to water-washed diseases. Water-based diseases are caused by hosts that live in water or need water for a part of their life cycle. The fourth kind, water-related insect vectors cause diseases such as malaria and dengue fever. Such insect vectors breed or feed near contaminated water. Human deaths caused by water-related diseases “are inadequately monitored and reported”. No specific figures are available for such deaths but it is estimated that they range between “2 million to 12 million” (Gleick Peter H, 2004:9) annually. Majority of these occur in the developing world for there is a lack of access to clean and safe water in such regions.

Apart from causing water-related diseases, inadequate water services and provisions also lead to “other significant health consequences” which “include morbidity, lost workdays, missed educational opportunities, official and unofficial health care costs, and draining of family resources.” However, there is very little understanding about these health consequences as it is difficult to quantify and measure them.

An effort to quantify the “burden of disease” was made by the Harvard School of Public Health in 1993. It collaborated with the World Health Organization and the World Bank to assess the “global burden of disease” (GBD) which initiated a new indicator—the “disability adjusted life year (DALY)—to quantify and measure the burden of disease. “The DALY is a

measure of population health that combines in a single indicator years of life lost from premature death and years of life lived with disabilities. One DALY can be thought of as one lost year of “healthy” life.” (Gleick Peter H, 2004:1) According to the data published by the World Health Organization in 2001, annually more than 75 million DALY’s are associated with water-related diseases, majority of which are caused by diarrheal diseases.

Realizing the relationship between water and human development, one of the Millennium Development Goals (MGDs) announced in 2000, specifically sort to reduce by half the number of people who did not have access to safe drinking water by the year 2015. This target of providing improved sources of drinking water such as piped supplies and protected wells has been reached five years ahead of the deadline. (Ban Ki-Moon, 2012:3), This essentially means that 89 per cent of the world population, viz., 6.1 billion now have access to safe drinking water. (Ford, Liz, 2012) But more work needs to be done in this area for it is projected that in 2015 more than 600 million people would still be using unimproved water sources in the world. (Ban Ki-Moon, 2012:3)

Sufficiency of water

Water is a finite resource. Although two-thirds of the earth’s surface is covered by water, only 2.5 per cent of this is fresh-water, of which the total usable freshwater supply for ecosystems and human beings is less than one per cent. (Global Environment outlook) Thus the popular adage, “Water, water everywhere, not a drop to drink” summarises the situation aptly. On the one hand, fresh-water supply, fit for human usage is already less in quantity and on the other even this is getting scarce by the day, thus magnifying the problem.

In many parts of the world, population growth, migration and the gradual destruction and increased pollution of fresh-water resources create widespread water scarcity and threaten the sustainability of adequate clean water reserves. Water scarcity is exacerbated by inefficient use of water, increasing demand, particularly in the industrial sector and a lack of public awareness and education about the need and the ways in which to safeguard water resources.

Environmentally destructive development models are also depleting domestic water sources, for example, those involving industrial pollution of water, deforestation, the building of dams, diversion of rivers or construction on floodplains. As a result, the competition among the different users of water

is growing more intense. In the developing world, this has resulted in increases both in the number of people without access to water and sanitation, and in the costs of providing and purchasing these basic necessities.

Conflicts over water

The supply of natural resources such as fresh water is finite and the world population has increased tremendously over the last century. As a result there is severe pressure on water bodies which “may lead to conflicts both within countries and between countries: some of these conflicts may be acute and violent.” (Iyer Ramaswamy R, 2003:206), Such conflicts and violence over natural resources further threaten human security.

According to Peter H. Gleick, “Water resources have rarely been the sole source of violent conflict or war” but “there is a long and highly informative history of conflicts and tensions over water resources.” (Gleick Peter H, 2004:234) Gleick gives the following classification (Gleick Peter H, 2004:235) of conflicts over water resources:

- “Control of water resources”, wherein the main cause of tension between or among state and non-state actors is access to water;
- “Military tool”, where water resources/systems are used by states as a “weapon during a military action”;
- “Political tool”, where water resources/systems are used by state or non-state actors for achieving political goals;
- “Terrorism”, where non-state actors use water resources/systems as “tools of violence or coercion” or target them;
- “Military target”, where state actors target water resources/systems during military action;
- “Development disputes”, wherein water resources/systems are sources of “dispute” between or among state and non-state actors in the background of “economic and social development”.

Vandana Shiva says that conflicts (her book is called *Water Wars* but by ‘wars’ she means ‘conflicts’) over water can take place between the rich and poor, between urban and rural areas, between locals and multinational groups, between state and civil society groups, between political units of a country, between countries etc. Her main concern is “corporate ‘wars’ against the people, i.e., the taking away of both individual and community rights to land and water by the state and/or by these domestic corporate private sector, and the

subordination of all these rights, as well as those of the state itself, to those of foreign or multi-national corporations under the regime of the WTO.” (Iyer Ramaswamy R, 2003:207)

Shiva’s concerns about corporates encroaching on individual and community right to land and water are already proving to be real. A case in point is the dispute between Coca-Cola Company in Plachimada and the Perumatty Panchayat, both parts of the state of Kerala, India.

In 2003, the Perumatty Panchayat in its order noted that “excessive exploitation of groundwater by the Coca-Cola Company in Plachimada is causing acute drinking water scarcity in Perumatty Panchayat and nearby places, it is resolved in public interest, not to renew the license of the said Company.” This decision by the Panchayat was challenged by Coca-Cola, and after a series of legal cases, the appellate bench of the Kerala High Court asserted that it did not find a sufficient reason to rule against the multinational’s right to extract water, nor did it find the extraction of excessive natural resources to violate the law. The court further reasoned that Coca-Cola had properly exercised its property rights to extract water from its own property. The case is pending with the Supreme Court of India.

The two multinationals, Coca-Cola and Pepsi, own 95 bottling plants in India, out of which Coca-Cola owns 57 and Pepsi 38. Each bottling plant extracts up to 1.5 million litres of water a day from the ground. (Shiva, Vandana, 2005), Nine litres of clean water are required to manufacture a litre of Coke. The processes used in manufacturing soft drinks like Coke and Pepsi are therefore inherently dangerous to human security.

Groundwater

Groundwater forms not just the source of drinking water and the source of irrigation for agriculture but also the source of industries in several developing countries of the world. The incessant and mindless extraction of groundwater has depleted water resources and this is no longer sustainable. “Many of the most populous countries of the world—China, India, Pakistan, Mexico, and nearly all of the countries of the Middle East and North Africa—have literally been having a free ride over the past two or three decades by depleting their groundwater resources. The penalty of mismanagement of this valuable resource is now coming due, and it is no exaggeration to say that the results could be catastrophic for these countries, and given their importance, for the world as a whole.” (Moench Marcus, 2004:79), Thus the “availability and

reliability” of groundwater are critical concerns and it is the poor who bear its maximum brunt, for they are deprived of their right of access to clean water.

There is this widely prevalent notion that future wars will be fought over water. Iyer, however, calls the “thesis” of ‘water wars’ “implausible”. He believes that “countries are much more likely to cooperate with one another and enter into agreements or treaties, or embark on joint projects for water resource development and utilization, than go to war.” (Iyer Ramaswamy R, 2003:202) One example of this cooperation can be witnessed in the case of India-Pakistan. Though the two neighbours have been at loggerheads over all sorts of issues but they have largely cooperated with each other on the water front under the framework of the Indus Water Treaty of 1965. So although, we are unlikely to see an all out war over water, the fact that conflicts and disputes are taking place over it cannot be denied either. Such conflicts are likely to continue in the future.

Equal Access to Water

In principle, all human beings should have equal access to clean and safe water. However, in reality, poor households are routinely excluded from receiving adequate water services by inequitable market structures, insensitive institutional rules and poor people’s lack of legal entitlements. During water scarcity, poor communities frequently suffer disproportionately from water supply restrictions. So even when poor households are connected to formal water service networks, poverty and seasonal water scarcity can force them to use unsafe water sources, such as unprotected wells and streams.

Lack of access to water by poor people is being exacerbated by water privatization policies that inadequately protect access by poor individuals and communities. When water is privatized, the poor cannot afford to pay the high prices. If they end up paying the high costs, it impoverishes their family further in a cycle of poverty. Water-selling is a lucrative business, and with increasing installations of private water supply networks, lifeline has been cut off from the poor. Poor people are also particularly affected by policies designed to save public expenditure on public goods such as water, whether arising out of a shift towards privatization or a general cut in social expenditure.

New Delhi, the capital of India, sponges off water from its neighboring states. While the neighboring states reel with water shortages, New Delhi enjoys the highest per capita water consumption in the country. Even within the capital, hotels and posh areas get regular water supply while poor colonies and slum

areas get rationed water. Thirty-five 5-star hotels in Delhi consume 15 million litres of water daily, which is enough to meet the daily requirements of 36,000 households or 1,80,000 people. (Singh, Darpan, 2013: Cover Page)

Water and Women

While lack of water and exposure to water-borne diseases affect men and boys as well as women and girls, the latter's disadvantaged health status and their traditional role in water collection in many societies, leave them particularly vulnerable. In many societies, water and fuel collection is seen to be a role solely for girls and women. The obligation to provide these necessities for domestic use, particularly in conditions of increasing environmental degradation, can place a massive burden on poor urban and rural women and girls.

Where water for domestic use is not available in or near the home, the burden of water collection is compounded by the distance that women may need to walk to reach their source. "A 2002 UNICEF study of rural household conducted in 23 sub-Saharan African countries found that a quarter of them spent 30 minutes to an hour each day collecting and carrying water, and 19% spent an hour or more." (United Nations Department on Economic and Social Affairs, 2004:4) The time taken for water collection impedes women's productive activities and frequently robs children, particularly girls, of an education.

Though females are primarily responsible for providing water for domestic usage in most parts of the world, they have "no voice and no choice" with regard to the decisions that are made for providing water facilities and services.

International Efforts for providing water security: The Right to Water Campaign Evolution and Growth of Policy and Political Commitments

Tackling the problems of a lack of access to water by poor people has long been on the development agenda. At the same time, the need for action to reverse the trends of over-consumption, pollution and rising threats from drought and floods have engaged the environmental community. Over the last three decades water has been addressed in a series of international conferences dealing with development and/or the environment. There have also been a number of conferences focusing specifically on water. All these conferences have recognised that water is a basic human need and some have explicitly confirmed the right to water.

The Geneva Conventions of August 1949 and their Additional Protocols of June 8, 1977, not only provide protection to combatants and civilians but also provide for the supply and safety of basic needs such as water. The UN Conference on Human Environment organised by the UN Environmental Programme in Stockholm, Sweden, in 1972 emphasised the mutual relationship between man and the environment, expressing concern about man-made harm to the environment such as dangerous levels of pollution in water and calling for assistance to developing countries in promoting, inter alia, sanitation and water supply. In 1977, the Mar del Plata Action Plan stated that “[a]ll people have a right to have access to drinking water”.

The right to water has been explicitly recognised in two core international human rights treaties – the Convention on the Elimination of All Forms of Discrimination against Women and the Convention on the Rights of the Child. It also forms an implicit part of a number of other rights, most obviously the right to life (protected by the International Covenant on Civil and Political Rights), the right to an adequate standard of living and the right to the highest attainable standard of physical and mental health (both protected by the International Covenant on Economic, Social and Cultural Rights).

The Convention on the Elimination of All Forms of Discrimination against Women, 1979, Article 14 (2), obliges states to eliminate discrimination against women in rural areas and ensure to such women the “right to enjoy adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communication”. Under Article 24 (2) of the Convention on the Rights of the Child, 1989, states are obliged to take steps to ensure the realisation of a child’s right to health and in particular to take appropriate measures: “to combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution”. States Parties to the International Covenant on Economic, Social and Cultural Rights, 1966, recognise by Article 11: “the right of everyone to an adequate standard of living for himself and his family, including adequate food, clothing and housing and to the continuous improvement of living conditions”

Subsequent conferences confirmed the right to water and stressed such human rights principles as universal access, participation and empowerment such as the New Delhi Declaration of 1990 adopted at the Global Consultation

on Safe Water and Sanitation for the 1990s. Recognising the importance of participation and the role of women, the International Conference on Water and the Environment, Dublin, 1992, recognised the importance of participation and the role of women. In 1992, the United Nations Conference on Environment and Development, Rio de Janeiro, dedicated a whole chapter of its concluding document, Agenda 21, to the development, management and use of water resources. It also used rights language, recommending that governments could “promote community ownership and rights to water-supply and sanitation facilities”.

At two UN world conferences, the International Conference on Population and Development, Cairo, 1994 (177 states participated), and the Second United Nations Conference on Human Settlements, Habitat II, Istanbul, 1996 (171 states participated), the community of states unanimously adopted international declarations which stated that the right to an adequate standard of living includes water and sanitation, in addition to food clothing and housing. Target 7(ii) of the Millennium Declaration and Millennium Development Goals (MDG), which was adopted in the year 2000, specifically deals with the provision of making safe drinking water available to the people who still do not have access to the same.

General Comment No. 15 on the right to water was adopted by the UN Committee on Economic, Social and Cultural Rights at its Twenty-ninth session in November 2002. The Comment provides guidelines for states on the interpretation of the right to water under two articles of the International Covenant on Economic, Social and Cultural Rights - Article 11 (the right to an adequate standard of living) and Article 12 (the right to health).

The 43 member Council of Europe recognized the right to water in 2001. The World Summit on Sustainable Development, Johannesburg, 2002 called on states to: “Adopt policies and implement laws that guarantee well-defined and enforceable land and water-use rights and promote legal security of tenure ...” The 118 members of the Non-Aligned Movement recognized the right to water respectively in 2006. The Asia Pacific Water Forum, composed of 37 Asian countries recognized the right to drinking water and sanitation in 2007.

On February 28, 2008, the UN Human Rights Council, the primary UN body for human rights adopted by consensus a resolution on ‘Human Rights and access to safe drinking water and sanitation’. Through this resolution, the

Council established on March 28, 2008 a new 'Independent Expert on the issue of human rights obligations related to access to safe drinking water and sanitation'. This means that the UN human rights system now has a separate mechanism exclusively dedicated to issues related to the right to water and sanitation. The resolution also confirms that governments have obligations to ensure access to safe drinking water and sanitation under international human rights law. In its February 2008 resolution, the Human Rights Council, did not proceed as far as explicitly referring to the 'right to water and sanitation' as a right contained within the International Covenant on Economic, Social, and Cultural Rights but the creation of an Independent Expert mechanism and clear recognition of human rights obligation relating to the right to water and sanitation are important breakthroughs. The resolution firmly placed the right to water and sanitation on the Council agenda.

Implementation and Impact

Over the last few decades, the preparation of global conferences has prompted unprecedented co-operation between inter-governmental, governmental and non-governmental organisations worldwide. Additional activities around the conferences have provided an important platform for the concerns of deprived communities to be voiced. This has had a considerable influence on changing perceptions and shaping the analysis of issues from a people-centred, human rights-based perspective.

The adoption of a number of international policy commitments and declarations on water issues represents global consensus on agreed priorities. These policy commitments provide a basis for holding governments politically accountable for their action and inaction, even though the commitments have not yet been turned into legal commitments enforceable in a court of law. At the same time, the right to water is being increasingly relied upon as a policy imperative by water development organisations and Non-Governmental Organizations (NGOs) throughout the world.

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) have established a Joint Monitoring Programme (JMP) to keep track of progress in meeting the MDG goal on water and the Johannesburg Target on sanitation. On the 21st November 2006, the Office of the United Nations High Commissioner for Human Rights (OHCHR) was requested by the Human Rights Council (HRC) to conduct a detailed study on the scope and content of the human rights obligations related to the equitable access to safe drinking water and sanitation under human rights instruments taking into

account the views of States and stakeholders to be submitted prior to its sixth session.

The World Water Council was established in 1996 by renowned water specialists and international organisations, in response to an increasing concern about world water issues from the global community. It has nearly 300 member organisations representing more than 50 countries. The World Water Council aims to reach a common strategic vision on water resources and water services management amongst all stakeholders in the water community.

The Alternative Water Forum was established in March 2003, to present an alternative strategy to challenge the privatisation of water and promote people-centred policies. The Forum is open to local representatives and people responsible for local communities, to people and institutions from the world of education, communication, and cultural creation, government ministers and of representatives of the private sector, as well as to the general public. The Alternative Water Forum aims to “develop and promote institutions and public policy that will provide access to potable water for all human beings, in a manner which is democratic and sustainable”.

The first Alternative Water Forum took place in Florence in 2003, and the second, in Geneva in 2005. The 4th World Water Forum held in Mexico City in 2006, provided a critical forum for advocating water as a human right. The Sixth World Water Forum concluded in Marseille, France in March 2012 and the Seventh Forum is going to be held in May 2013 in the Republic of Korea.

The year 2013 has been declared by the United Nations General Assembly as the International Year of Water Cooperation. This cooperation is meant to view all aspects of water holistically so as to make water resources “truly sustainable”. It aims to raise awareness about the need for “increased cooperation” and the need to face the challenges of water management jointly.

In conclusion

The relationship between water and security is complex and multi-dimensional as it is not just a basic human need but also has socio-cultural significance. Besides, providing clean water and sanitation creates a virtuous circle of better health and rising wealth. According to WHO, each \$1 invested in water and sanitation would bring an economic return of between \$3 and \$34. On the contrary, if the current crisis in water and sanitation is allowed to continue it would cost many times more to resolve the situation. Cooperative

and coordinated efforts thus need to be made to invest in water, so as to make humans secure.

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