Marketing Water & Woes

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The energy and water intensive agriculture practices, followed worldwide since 1950s, have already made serious damage to the ecology through indiscriminate use of fossil fuel based chemical fertilizer and underground water. Thus both air and water got contaminated. Eventually these two 'common properties', which were available 'free' from the beginning of the human civilization, have been turned into 'economic goods'.

Water scarcity has emerged as one of the major economic and environmental issues of this century. In 2008 the Stockholm International Water Institute has calculated that 1.4 billion people lived in "closed basins" where existing water could not meet the agricultural, industrial, municipal, and environmental needs of all. The World Bank and the government of China have estimated, for instance, that 54 percent of the water in seven main rivers in China has become unusable because of pollution. Several major rivers, including the Indus, Rio Grande, Colorado, Murray-Darling, and Yellow, no longer reach the sea year-round as a growing share of their waters are claimed for various uses. Water tables are falling as groundwater is over pumped in South Asia, northern China, the Middle East, North Africa, and the southwestern United States, often making food production unsustainably. The World Bank estimates that some 15 percent of India's food, for example, is produced using water from nonrenewable aquifers.

A team of hydrologists of NASA's Goddard Space Flight Centre in Greenbelt, found that Northern India's underground water supply was being pumped and consumed by human activities, such as irrigating cropland, and was draining aquifers faster than natural processes could replenish them. According to them, between 2002 and 2008, more than 108 cubic kms (26 cubic miles) of ground water has disappeared from aquifers in Haryana, Punjab, Rajas-than and Delhi. Rapid urbanization, especially after the 1st green revolution of 1950s, has also increased domestic and industrial demand for water.

It is apprehended that agriculture will be adversely affected in the near future due to rise in global temperature. To address this challenge, an agro-biotechnology based new 'green revolution' has been recommended by the global think tanks and transnational corporations associated with agri-business. It is argued that plants with genes conferring some degree of drought tolerance will be important for developing countries as drought is projected to be the most prevalent constraint to increased crop productivity. Mass applications of biotechnology and bio-informatics have been projected as the appropriate drivers of this 2nd 'green revolution'.

The looming water scarcity, a direct fallout of the 1st green revolution, has not only paved the way for the introduction of genetically modified (GM) seeds and 2nd green revolution, it has also created a vast market of its own. In 2008, the global water market was estimated at $316 billion and transactions in the Asian market, the fastest growing water market of the world, were around $120 billion in a year.

Expecting very high return from this fast growing market huge private investments are being made, by large corporations across the world, in various

water projects. The industry got a real boost after the enactment of the 'General Agreement on Trade in Services' (GATS) in 1995 which seeks to enhance the power of transnational corporations over governments (national, state and local) and to reduce the scope of governments to provide basic human services such as health, education and water. In 1999, the privatization of the municipal water and sanitation company SEMAPA, in Cochabamba, Bolivia's third-largest city, was a glaring example of corporate dominance over the governments on the supply of vital necessitates like water.

Till now, water market, has remained confined to industrial and personal consumption sector only. As in the case of other industries, water industry is also dominated by few transnational corporations mostly from Europe. In 2005, 95% of the world's privately run water utility service was controlled by European companies.

TNCs in Water Business

- Thames-RWE (Germany, in November 2000, Thames Water became a division of RWE);
- Suez Lyonnais (France);
- Veolia Environment (France, world's largest);
- Black and Veatch (USA),
- Siemens Water Technologies (a unit of Siemens AG Germany-the electrical equipment company),
- GE Water & Process Technologies (USA, a unit of General Electric);
- International Water Holdings BV (Netherland, 50:50 joint venture between Bechtel Enterprise Holdings Inc, USA and Edison SpA, an affiliate of group Montedison, Italy's largest private energy services company).
- Pepsi and Coca-Cola have also ventured into bottled water and substantial shares of their revenues are earned from this fast growing segment.

The select list of major TNCs engaged in water utility services, as mentioned above reveals, among others, (a) the strong presence of European firms in the industry; and (b) simultaneous involvement of these firms in energy utility services also. Companies like GE, Siemens, RWE and Bechtel, known worldwide as utilities engaged in energy sector, have successfully diversified into water utility service.

Virtual Water Trade

In addition to the 'real' water market there exists, though somewhat dormant at present, another large market of 'virtual water'. Virtual/embedded water is the amount of water used in the production of food, energy and other products. It is the embedded water content of a product. If a country decides to rely more on imported food, it can save enormous amount of its own water which otherwise would have been used for cultivation. For example, to produce one ton of wheat, say, 1160 cubic metres of water is required. That means, 1160 cubic metres of water got embedded in one ton of wheat. Thus if India exports one ton of wheat to Japan then there is a virtual flow of 1160 cubic metres of water from India to Japan. Large parts of North and South America, Australia, Asia, and Central Africa are net exporters of virtual water. Most of Europe, Japan, North and South Africa, the Middle East, Mexico, and Indonesia, in contrast, are net importers of

virtual water. It has been claimed that one solution to water scarcity involves accounting for the 'virtual water' when designing trade policy.

The concept of 'virtual water trade' is gaining importance. Suggestions have been made to set up a 'virtual water-trading council', under the World Trade Organization (WTO), to help 'manage both real and virtual water resources for the world's booming population'.

As early as 2002, the European Union had first opened the discussion on foreign participation in water distribution in developing countries. Then in 2005, during negotiations on GATS under the WTO Doha Development Round, they proposed that in exchange for access to the water markets, developing and least developed countries (LDCs) would receive long sought-after access to the western markets. In plain term it means, developing countries would get market access of their agricultural products in the EU on the condition that they (developing countries) open their water sector to the water TNCs.

Being a sparsely populated region with moderately low demand for food grains EU has put more importance in promoting market for quality food products grown mostly through organic farming. European Union will emerge as one of the largest importers of food grain as EU has offered to eliminate export subsidies altogether by 2013. The EU is already the biggest market for Third World foodstuffs.

European Union has taken a conscious decision to save their scarce water resources by shifting the burden of cultivation to developing countries. The 'water import dependence' (WID) data of a few major economies of Europe will corroborate this observation. WID (expressed in %), is the ratio between 'water footprint' of a country's import and its total water foot prints. The higher the ratio, the more a country depends on outside water sources. During 1997-2001, the 'water import dependence' of the Netherlands, UK, Germany, Italy France and Spain were 82%, 70%, 53%, 51%, 37% and 36% respectively. The corresponding figures for India, Bangladesh, China, and Brazil are 2%, 3%, 7% and 8%. And the WID of Japan and USA, during that period, were 64% and 19%. Thus during 1997-2001 the Netherlands could reduce, through imports, the country's 'total water foot prints' by 82%!

Concerns

The requirement of water to produce few selected food items like beef, pork, poultry, eggs, rice and wheat are very high. To produce one ton of each of these items, it requires 13,500; 4,600; 4,100; 2,700; 1,400; and 1,160 cubic metres of water, respectively. If India exports any of these water intensive items, then, by default, huge quantities of scarce water would be transferred to those importing countries.

In future, in the name of protecting water resources, importing nations might ask for 'water labels' to guarantee that only pure (and preferably from renewable sources) water be used in the production of exported food items. By discouraging/prohibiting the use of arsenic and lead contaminated underground water in cultivation and animal husbandry, 'water labels' will ensure the safety of their imported food. In such a scenario, which is very likely, the organic farmers, targeting the developed country markets, will increasingly rely on renewable natural water sources for cultivation. Funds will be diverted to develop water

bodies to serve that purpose. And the food processing plants will collaborate with the major water utilities of those importing developed countries to guarantee that water purification level, as specified in the water standard, is maintained.

While the citizens of the importing countries of the North, would consume ‘green products’, large number of Indians would lose their basic rights on water. Conditions of the already polluted water sources, which would cater to the needs of the unprivileged sections of the local population, will get further deteriorated. The transnational water utilities will take charge of the municipal water distribution services and the soft drink giants will reach every corner of the country with their brands of bottled water—a litre of which might cost more than a litre of milk!