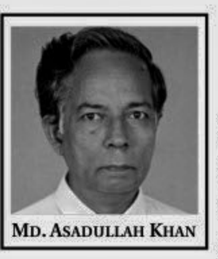
BITTER TRUTH

Conserving surface water for food security


MD. ASADULLAH KHAN

SHORTAGE of water is the biggest crisis facing Bangladesh today in terms of severity and spread.

Waterwhich scientists tell us always finds its own levelalso happens to be the great leveler. It is fundamental to our very survival. Availability of surface water is the most important means to attain food security. Even if we provide improved variety of seeds to the farmers, if there is no easy accessibility to surface water we will achieve little success in attaining food security.

But the stark fact is: every summer Bangladesh discovers that life with water shortages is increasingly becoming constrained. From being a necessity, water has now become a luxury. With pipes running dry, residents, especially in Dhaka and Chittagong are using alternative sources like tankers serviced by WASA.

The situation there is worse in the villages. With drying up of ponds and with no new ponds dug during the last several decades, either by the government or through private initiative, farmers year after year remain mired in their old practice of digging tube wells deeper and deeper to reach the decreasing ground water level.

The greater tragedy is that the country has enough water for its 160 million citizens. But appalling mismanagement and lack of forward planning has led to a situation where the capital city situated on the banks of the Buriganga has to go for piping in water from the Jamuna.

The water crisis has been exacerbated by the construction of the Farakka Barrage over the Ganges in Indian territory, which obstructs the usual flow of water in the rivers inside Bangladesh, especially in the lean season. But no visible effort was taken to control the damage by constructing water reservoirs inside the country.

How did the situation come to such a sorry pass? The reason for the country's growing thirst, says conventional wisdom, is the rate at which its population is increasing. While it may be one of the reasons, Bangladesh's water crisis is also the culmination of myopic

planning, muddled policies and misguided perceptions. As cities grew and towns sprouted and flow of water in the rivers continued to decrease, no thought was given to the emerging mismatch between demand and supply.

In the quest for food security, ground water was pushed as a solution because it was cheaper and quicker, while storage and distribution projects were neglected. With no checks on wasteful technology and pollution of water resources, industry continues to be the biggest polluter along with pesticides/fertilizer-ridden discharge from the fields. The rapid pace of urbanisation has led to the drying up of traditional water sources like tanks and lakes.

The government should consider raising external and internal funds from World Bank aided programmes for integrated countrywide tank development for irrigation. Such development work can fruitfully be done when government effort is combined with individual civic initiatives.

The first signs of population boom and water stress were visible in the 1980s, but most municipalities and city corporations at that time focused on the immediate, tapping ground water resources in and around the cities, town and villages. Expectedly, the pressure on ground water has shown up. Tubewells are now routinely dug to a depth of about 100m and above. In a word water is being mined and pumps are being sunk 3 to 6 metres deeper every year.

The immediate task of the authority would be to raise the water table in Dhaka and adjoining areas. Dhaka Wasa has to link sewage pipes to treatment plants that it must construct to save the city dwellers from the pollution that will increase at least five times by 2020.


FAZLEY ELAHI SHWOPON/ DRIK NEWS

Desperate people, not only in urban areas but also in villages, are forced to buy water from vans ferrying it in water-starved areas. Worse, conservation has not figured in our scheme of thingsneither directly through steps like water harvesting nor indirectly through restoration of lakes and water sheds that have been encroached upon by land grabbers.

Big cities are a veritable jungle of concrete blocks. There were once lakes and canals within and running through Dhaka. About 250 sq km of watersheds around the city have been encroached upon or have dried up due to inadequate flow from the main water bodies. The result has been a drastic depletion in the water table, evidenced by the fact that bore wells in the city have to go deeper and deeper these days.

The dismal statistics are only a part of the story. To prevent waterlogging, it has become imperative to constitute an independent Lake/ Watershed Development Authority. It should work for the protection, conservation, restoration, regeneration and integrated development of the lakes, watersheds, lost canals and rivers.

The immediate task of the authority, if constituted, would be to raise the water table in Dhaka and adjoining areas. Dhaka Wasa has to link sewage pipes to treatment plants that it must construct to save the city dwellers from the pollution that will increase at least five times by 2020, when the population could reach 350 million. And that's the reason that experts have warned time and again that unless corrective measures are taken well ahead, Dhaka will turn into a dead city by 2020.

Water bodies are the barometer of the ecological health of a city, and also determine its climate. They could be formed into a hydrological chain, and during monsoon surplus water from an upstream lake could be drained into the next lake.

The biggest problem is encroachment of rivers and lakes and disposal of untreated sewage into the lakes and water bodies. They have become sinks for domestic sewage, construction debris, effluent from industries and agricultural run off of silt and pesticides that are wreaking havoc on the ecosystem.

Cleaning and recharging may take a long time. The sources and entry points of sewage discharge into the lakes have to be diverted to some suitable place for safe disposal. Catch-water drains will have to be built to collect water runoff. That done, the water has to be purified, using hydrophyllic plants that absorb dissolved pollutants and toxins. De-silting and removing accumulated organic sludge and sediments from the lake bed are just as important.

Restoration of water bodies, other than being an aesthetic and ecological utility, could have been a source of poor man's protein. It must be mentioned here that without ever looking into the quality of the water, that is now full of bacteria and toxins, the lake was leased out to a fish trader.

People see with horror the dead fish floating on the blackish water that is now only knee-deep even at the midstream. No indigenous variety can bear this toxic load. Live and dead fish lifted from the lake are being marketed without anyone caring to protest or stop this vile trade. The resultgullible consumers, without ever knowing the source, could fall victim to deadly diseases.

Recalling the fact that water, not oil, is the precious fluid in our lives, we must make

All-out efforts to conserve surface water, which will help recharge the aquifers. Moreover, if we run short of oil and other fossil fuels, we can use alternative energy sources. But if we have no clean potable water, we are doomed.

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Boundaries of development

HANNAH MARSDEN

EXTREMELY poor women and girls throughout Bangladesh are surviving on the absolute minimum, facing multiple constraints to making their lives better in a way that might be meaningful and lasting. What to eat, where to work, how and where to travel, how to stay healthy, who to ask for help, are all experiences shaped specifically by being extremely poor and female. To meet their diverse needs, the boundaries within which we are working for them need to be pushed.

Progresshow far?

There's no doubt that Bangladesh has made significant progress in improving the position and raising the voice of women and girls.

The micro-finance movement, for example, and various activities of NGOs focusing on women have highlighted that when women are given opportunities for economic empowerment, significant benefits to other household members can also accrue. Positive trends towards female (secondary) education and maternal health goals on an international level have also been made.

Further, women's large contribution to paid (in both agriculture and other sectors) and unpaid work (through household domestic tasks and childcare) has been more widely recognised. The prime minister recently committed to creating an environment conducive to empowerment by increasing education opportunities and access to knowledge.

But where is there room for improvement? Who is left behind? We must ask, what is the position of the poorest women in the country? The extreme poor are those at "the bottom of the ladder" (25% of the population live below the lower poverty line as of 2005). Given that many extremely poor women remain outside the reach of micro-finance and government and NGO programmes, how can the country's overall move towards progress in this area both continue and be extended to reach the poorest members of society?

Extremely poor women: A picture

Extremely poor women are disadvantaged across the board: they fare worse in terms of a variety of indicators (such as health, education and empowerment). Findings from the Economic Empowerment of the Poorest (EEP)/shiree baseline survey (in March 2010) show that women are coming into projects from an extremely low starting point and require a different and holistic approach. What's the overall picture?

The employment opportunities open to the extreme poor are limited and often rely on seasonal labour and local (often unequal) relationships. Within this, women are more likely to be in jobs which are more open to exploitation and abuse, for example mainly as domestic maids (31.8%), day labourers (24.2%) and beggars (14.6%).

Also, more children and adolescents were found to be working in female-headed households. This is limiting children's schooling and holds damaging consequences for the next generation.

Female-headed households are distinctly vulnerable from being widowed, divorced or abandoned. They are less likely to own a house, more likely to live alone, and have fewer people to rely on. Further, 1 in 3 male heads had attended school compared with only 1 in 9 female heads. Female-headed households were also significantly more likely to eat smaller portions of food, fewer times a day, and suffer from chronic energy deficiency or anaemia than male-headed households.

Extremely poor women and girls face diverse experiences of extreme poverty in terms of health, mobility, decision making, and income, land and asset ownership. These multiple factors are interrelated.

The situation is further compounded when looking at land ownership. Land ownership among the extreme poor is low anyway, limiting the income-generating possibilities, making households more reliant on others for work, and shaping food availability. Of the entire March sample, just 1 in 6 households owned some homestead land compared with the national figure of over 50%. But women's position is made more challenging by the patchy access to inheritance, worsened by abandonment by husbands or sons. Within this, more male-headed households owned land (20.7%) than female-headed households (9.9%).

Further, they have fewer productive assets (again low among the extreme poor anyway) and fewer household belongings. They were also more likely to report having no cash income.

In comparison to women, men are more confident in deciding how incomes and loans would be spent in households, and in general about their abilities to plan for the future.

Research also confirms that dowry and pressure to marry early push more families into extreme poverty (e.g. see a previous article by Christopher Tomlinson: 'Dowry and Extreme Poverty' on 19.10.10 -- DS).

Extremely poor women and girls face diverse experiences of extreme poverty in terms of health, mobility, decision making, and income, land and asset ownership. These multiple factors are interrelated and suggest that despite Bangladesh's progress in gender equality, the situation of those who are extremely poor still demands attention and increased action.

Where now?

In the context of movements around mainstreaming gender and empowerment, how can we actively push the boundaries to ensure a meaningful and holistic change to women and girls lives? There is talk of equality, discrimination and changing relationships, whether at the government or the household level. How far can talk of equality go? Doesn't everybody "do gender" these days? Can we avoid getting "gender fatigue?" Rather than simply "adding gender and stirring," can the boundaries at which we are comfortable at working with the extreme poor, and women and girls, be pushed further? This might involve not only increased funds but also creatively integrating gender sensitive and transformational programming.

Actions need to be more then piecemeal or implicit. For example, some poverty reduction approaches may rest on gender assumptions, or work in isolation from other key areas. How can projects improve the lives of women and girls without adding to the already heavy productive and domestic burdens they face? Can more work with men and boys be done to try to change attitudes and reduce discrimination? How can we actively tackle the issues which keep women poor (e.g. initiating collectives around local wage rates or advocating on inheritance rights)? Can we encourage a questioning of the patterns of behaviour which are accepted but which worsen the poverty situation of women and girls (e.g. eating last)?

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Huge dessert threatens city

DANGER! Children and a male were cooking.

Mom fled, having premonitions of disaster. I couldn't blame her. Having used every container in the kitchen, I left the room to scour the apartment for vases and toothbrush mugs to press into service.

Big mistake! When I returned, the children were cooking an astonishingly large amount of macaroni.

"We're hungry," they said. I told them that macaroni expanded. A lot! Five minutes later, we transferred the overflowing pasta into a larger pot, and then into several huge pots. Half an hour later, we had enough pasta to feed Italy for a year.

My wife returned, surveyed the damage, and expressed bafflement as to why anyone would want to cook several cubic meters of macaroni. I suggested we let it harden and then sell it as building material to property developers making stadiums.

The scene reminded her of a book in the kids' room, The Magic Cooking Pot, a fairytale about an overflowing porridge pot which floods a village. But it reminded me of a true story: the Great Pudding Bomb of Wales. It's a tale worth repeating.

Your humble narrator spent a year as a student reporter in a harbour city called Cardiff in the UK. On arrival, locals told me in hushed terms about the day the city was almost engulfed by a giant pudding.

A huge cargo ship from Thailand, carrying timber and 1,500 tons of raw tapioca, arrived at the dockside one day. Sailors told dockworkers the timber had caught fire and been burning for several days. The fire service arrived and started spraying it with water to put the flames out. But after hours of soaking, the only development was a series of strange creaking noises from the ship.

Onlookers suddenly realised what was happening. The flames and water had turned the ship into a giant steam oven and were cooking the tapioca, which was expanding into a massive dessert. "It's like a huge tapioca time-bomb," gasped the fire chief.

It became clear that the cargo would turn into the biggest pudding the world had ever seen and either sink the ship or explode out of it, possibly engulfing the city dockyards. City officials calculated that the dessert would fill more than a million plates.

Police wracked their brains about what warnings should be issued. "Evacuate the district. This is a giant killer dessert warning. Move to higher ground. A very large pudding may be approaching at high speed."

(I know this sounds like an urban legend, but I swear it's true.)

In the end, fire-fighters managed to soak the timber and remove it from the ship, halting the cooking of the explosive pudding.

But back to the present day. Another food miracle happened: In just five days, my children and their friends managed to consume that mountain of pasta. "How can children eat something bigger than they are?" my wife asked. "Quantum physics," I replied.

But if there's ever another giant pudding disaster at sea, I know how to solve the problem.

Make a million plates of dessert vanish? Kids, we have a job for you.

To know more, visit our columnist at http://mrjam.typepad.com