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(<http://www.projectwellusa.org/>)

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The declaration at the end of the conference held at the Dhaka Community Hospital on the 4th January 2006 organized by DCH and School of Environmental Studies, SOES emphasized on rainwater harvesting and surface water as sources of arsenic safe drinking water. There are several types of rainwater harvesting. Some of the types practised in India are available at this web link
<http://www.rainwaterharvesting.org/Rural/Contemporary.htm>>

Rainwater harvesting in Argentina is practiced in the rural areas where the rooftops are concrete and flat and water is collected and stored in an underground reservoir big enough to store water for the whole year. As disinfectant Clorox (regular bleaching powder) is applied twice a year and the tank is cleaned once a year (picture1). There are various ways of collecting clean water from the rooftop. Picture 2 shows unclean water goes down the drain where the down pipe is positioned and as the water is observed as clear in a glass tumbler the pipe is positioned to the second drain that is connected to the reservoir.



Picture 1



Picture 2

In Bangladesh how many houses have such concrete roof? What about the poor who live in the houses made of thatched roof?

Large scale rainwater harvesting can be executed by building concrete reservoirs that require a considerable amount of construction cost followed by maintenance expenditure. Its operation would be successful if the government or local NGO regularly maintains it via rural water supply boards. Formation of cooperatives and expecting the local rural people in groups, to maintain each project would NOT be a practical approach unless the groups are fairly small.

Where as the ‘chulli’ system¹, discussed at the conference by Prof. Mohammad Fakhru Islam of Rajshahi University, would be a pragmatic approach because every family, even the poorest of poor, cook at least a pot of rice each day. Hence there is no question of extra expense on monthly basis. If the raw water is CLEAR the villagers would gladly accept the ‘chulli’ system. Hand pumps, drawing water out from dugwell, pond, river or stream would provide clear water because of the filter that is attached to the receiving end of the pipe that delivers water.

It is true that any one option is not suitable throughout the region but one should opt for the cheapest method that require least maintenance to fit into the socio-economic background of the region. Where community dugwells are suitable rainwater harvesting may not be required because properly constructed dugwells maintained by a small number of families is feasible that requires use of chlorine once a month to control the bacterial growth or better still if the dugwell water can be passed through the ‘chulli’ system to avoid use of any disinfectant. However, more observation would be advisable on the efficacy of the chulli system and the growth of bacteria, if any, due to poor sanitation and hygiene practice that is common to all the options. Hence door-to-door public education on arsenic related illnesses and on practice of personal hygiene is essential and demands highest priority.

Lets hope for the best.

Any comments and/or queries may be directed to mmhsmith@berkeley.edu

Thank You.

¹ ‘Chulli’ system is passing raw water through aluminum pipe/coil embedded in the clay ovens, ‘chullis’ designed to kill bacteria by shock treatment with high temperature.