

According to a fact sheet from the U.S. Agency for International Development, if the world's water supply is a gallon (3.8 liters), then freshwater would make up 4 ounces (118 ml.) or 3 percent, and readily accessible freshwater would make up 2 drops. If we were to then follow the distribution of that small amount of freshwater across the world, then Asia, with 60 percent of the world's population, receives only 36 percent of the global freshwater runoff, with 80 percent of that occurring in floods from May to October, making the water exceedingly difficult to capture.

By 2050, 4,000 million people in the world are expected to live in regions with severe water shortages. Today, in 2008, more than 1 billion lack access to potable water, and many of these are in India, with the entire country now divided into critical water blocks. Water, rather the scarcity and mismanagement of it, today threatens to silence the roar of the emerging tiger.

India's rapidly growing economy along with its billion-plus population has put so much stress on its ill-functioning water supply infrastructure, that many states across the length and breadth of the country now have critically depleted levels of surface as well as ground water. In the rural village of Abhaypur, a few miles outside of the National Capital Territory of Delhi, water levels have fallen about 60 meters in some areas in less than five years. Roja, a cattle herder from the village, goes to a rich neighbor's pump to draw water for her domestic needs, including for her cattle. When asked if she has to pay, she states with a worried smile that "they don't charge me, yet."

The government has shot darts at a few random targets to address the water supply problem, including attempts to dam the far-off Ganges and import its waters to Delhi, (the capital city through which the Yamuna river, polluted and drain-like, already flows,) but with citizen initiatives, NGO's and environmental watch dog groups blowing heavy steam on its neck, the government is now also seeking to revive an ancient science that has become, all at once cutting edge and possibly critical.

Rainwater Harvesting is today the latest hardware in the outsourcing Mecca of the world that might be needed to keep India's software industry booming. In fact, the building bye-laws for the city of Bangalore now make rainwater harvesting mandatory for new buildings. More importantly, this technology can be used to recharge the ground water, even in heavily constructed urban areas.

A common Rainwater System consists of three main components: a catchment area, a collection basin, and a conveyance system. Whereas rooftop systems coupled with a rain-barrel or a shallow mud-walled surface tank at ground level are good for domestic use, larger surface or underground catchments can be used to retain excess runoff from small creeks and streams, which can then help meet water demand during dry periods.

Additionally, these catchments can be used to re-direct water back into the ground using recharge wells or infiltration beds. A typical domestic well used to re-inject the captured precipitation from a rooftop rainwater harvester could allow for as much as 2,600 gallons (10,000 liters) of water to be recharged per day during the rainy season. If a third of the approximately twenty million wells used for extracting ground water in India are used for recharge purposes during the monsoons, a significant quantity of water would be replenished to the aquifers and be available for later use.

Mr. Dadoo, Secretary, Department of Environment, Govt. of Delhi, insists that, "In a very big way, we would like to do rainwater harvesting, because if fifty percent of the forty hours of rainfall in a year is tapped and the groundwater recharged, then a large part of the problem in Delhi will be resolved." In fact, his government is subsidizing these structures and has instituted an award of almost \$10,000 for the best rainwater system in a year. May there be many winners.