plant. The high concentration of ammonia in the supplied water as well as excessive use of chlorine to treat the polluted river water in the plant creates a bad smell in the supply line. Which is why the consumers who get water from the Saidabad Water treatment plant get sticky straw coloured water in the supply line.

There is every possibility of toxic heavy metals in supplied water, despite claims by Wasa that they test the water before supplying it.

Through 514 deep-water pumps, Wasa 'abstracts' (pumps out water from the river and other sources) more than 160 crore litres of water from underground. The figure is about 88 per cent of the total water supply by Dhaka Wasa. Apart from the Wasa pumps, the private sector abstracts an estimated 20 crore litres of underground water through 1200 legal and an estimated 1000 illegal pumps, according to the Chief Engineer of Dhaka Wasa Mohammad Nurul Haque.

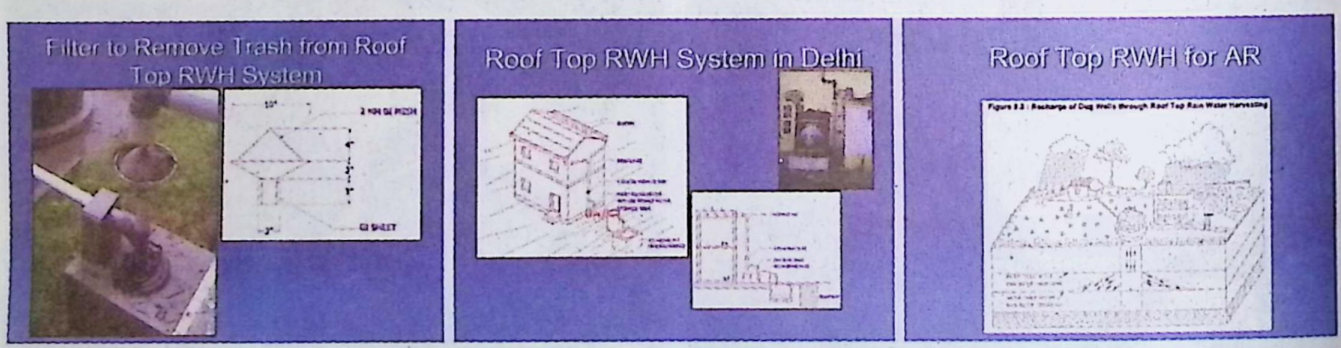
Excessive use of underground water (180 crore litres a day) through deep tube wells without any adequate replenishing mechanism has lead to an alarming drop in the underground water level. People living in the areas such as Mirpur, Shyamoli, Gulshan and Dhanmodi are going through the same water crisis as most of the existing pumps in these areas cannot abstract water properly from the ever-decreasing underground water layer, especially in the dry season when the water level naturally decreases further.

The ground water layer in the city, in fact, is dropping by around three metres a year on an average. But without considering this, Wasa has been abstracting water from the underground, which is causing the water in the aquifer layer to disappear altogether. Each year, the rate of pumping water from underground through deep-water pumps is increasing at a frightening rate of 15 per cent.

According to hydrogeologists, this not only exacerbates the already sever water crisis but will in the future, cause land to subside. Already most of the available water of the upper aquifer layer has been used up. Now Wasa is installing deep aquifer pumps to abstract water from the second layer. But even this is becoming difficult in many areas of Dhanmondi, Mirpur, Niketan, Nakhalpara, Ibrahimpur and Manipur.

"Drilling to a deeper aquifer layer is not a solution," continues hydrogeologist Kazi Matin U Ahmed, a professor of Department of Geology of University of Dhaka, "Rather it will trigger disasters like subsiding of land. Already we have identified Motijheel, Dhanmondi and Mirpur as areas of the city that might face serious land subsiding, since there is a huge depression in the underground layers of these areas because of excessive use of underground water. Production costs, moreover increases, since Wasa is pumping from deeper layers. Ten years ago water could be abstracted from 140 metres deep, now you need to dig 300 deep for abstraction."

According to Professor Matin, Dhaka is perhaps the only mega city in the world, which is totally dependent on underground sources for supplying water to the city dwellers. "With the existing system, the natural recharge is not sufficient to meet the demand of excessive rate of abstraction. The rate of natural recharge through rain-



These images indicate how rain is harvested in individual houses in Delhi to recharge the underground water. COURTESY PROFESSOR KAZI MATIN U AHMED.

water has decreased since the concrete structures are replacing the water bodies. Moreover, the unplanned urbanisation is facing a huge environmental threat. Because of inappropriate disposal of domestic and industrial wastes, there is every possibility of filling up the underground vacuums with hazardous effluents. This might cause a serious health crisis in the city. Geologists have addressed these issues to the government, however, nothing has been considered", says Professor Matin.

Wasa officials also blame the ongoing power cuts as one of the major causes for the decrease in the production of Wasa. The Chief Engineer of Dhaka Wasa claims, "Because of load shedding we cannot operate 540 deep pumps for an average of three hours a day. As a result, most of the time we supply 20 crore litres less than our capacity."

Only 274 pumps of Dhaka Wasa are equipped with generators and it does not have enough funds to buy fuel to run all these generators whenever needed. Dhaka Wasa also blames the public for creating the shortage and decreasing the quality of the water.

A high official of the agency says, "Huge volume of the supplied water in the city is being misused simply because of lack of awareness of the users. The city dwellers consciously or unconsciously misuse the supply