A REPORT ON *WATER SCARCITY AND NEED OF RAIN WATER HARVESTING IN HYDERABAD*

BY

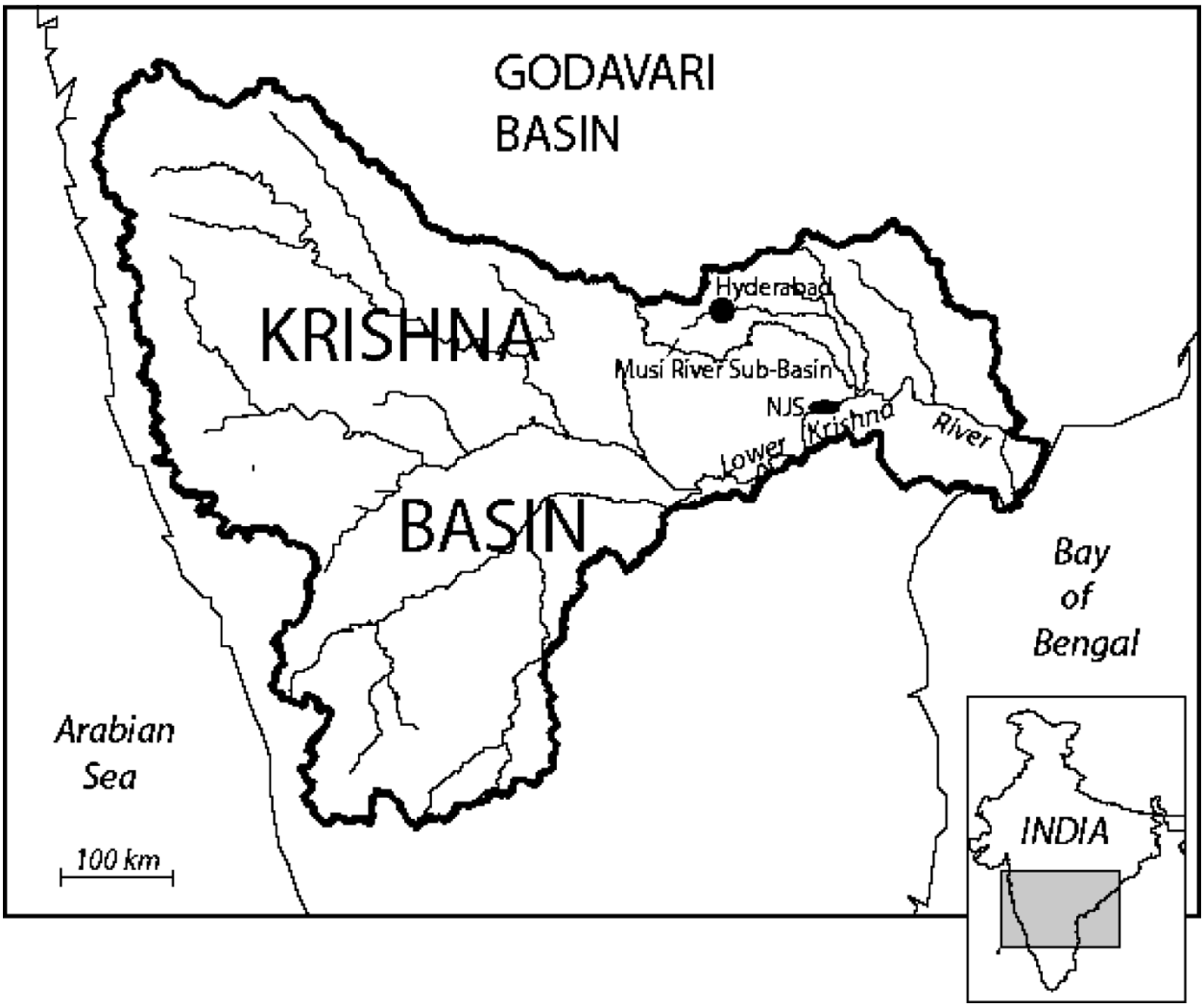
TEAM VRIDHI

Note: This report is purely based on the Research done by

- International Water Management Institute – Hyderabad and Colombo ;
- Draft version of Paper presented in International Water Conference, Berlin;
- And other authentic online resources.

Hyderabad urban agglomeration (HUA), the capital city of Andhra Pradesh State in India, has a population of about 6 million. With an area of about 778 square kilometers, the HUA consists of the Municipal Corporation of Hyderabad (MCH), Secunderabad Cantonment and the ten surrounding municipal towns as important components. Being located in an undulating topography of the Deccan Plateau of the Indian subcontinent, Hyderabad city and its environs were blessed with a number of natural and man-made water bodies locally known as *Cheruvus, Kuntas* etc. These water bodies acted as water storage reservoirs for irrigation, drinking and groundwater recharge, and have been an inalienable part of the urban ecology of the city. Gradually, while some lakes were encroached and replaced by concrete buildings, several others got severely polluted with the domestic and industrial effluents. With the loss of water bodies and the consequent decline in groundwater table, long-distance and expensive water projects are being undertaken to provide water to the city.

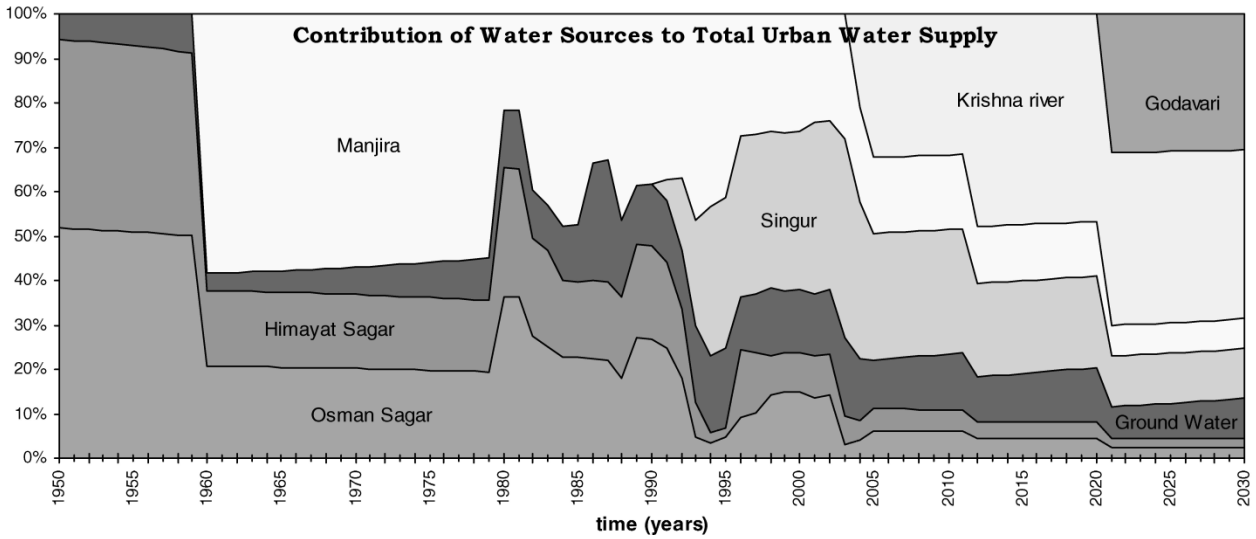
The crisis of water shortage in the city has been more evident since mid-1980s with the citizens getting municipal water supply on alternate days. Increasing number of bore wells and the decline of groundwater table has resulted in the bore wells now being dug up to over 800-1000 feet in several areas as many old bore wells are drying up. Due to increasing population in HUA and the slow expansion of water board coverage area the people are increasingly resorting to groundwater usage. The recently approved Water, Land and Trees Act (WALTA) has not made any impact in urban areas. Under the Act, it is compulsory to seek and get permission from MRO (Mandal Revenue Officer) before digging any bore well. It is also prohibited to draw water from below 500 feet of ground. To meet the growing demand, people of all sections of the society frequently flout both these requirements.



Water Sources and Water Supply:

The main sources of surface water are Osmansagar, Himayatsagar, Manjira Barrage, Singur Dam and Krishna Water. The second phase of Krishna project, when completed, is estimated to bring 90 mgd more into the city and total quantity may reach 320 mgd (million gallons a day), making daily water supply a distinct possibility.As of now there seems to be no infrastructure to store the water brought from the Krishna water scheme. There are plans to construct 12 new reservoirs of 100 mld (million litres per day), including eight in the old city, and lay pipelines to take Krishna water to all areas. The new reservoirs will enable the Hyderabad Metropolitan Water Supply and Sewerage Board (HMWSSB) store the huge volume of water. The board currently has 80 reservoirs with storage capacity of 200 mld.3 The government of Andhra Pradesh has plans to supply water round the clock to the entire city in the six months or so.

The Census data for 2001 reveals that while tap is the principal source of water supply for 93 percent of households in MCH area, the corresponding figure is only about 60 percent and below in the several surrounding municipalities. The location of the tap is outside the premises for a substantial proportion of households in several municipalities. For many families that depend on hand pump, the source is located outside the premises. The municipalities in the HUA are among those facing several acute water shortage in Andhra Pradesh.



"From Osmansagar and Himayatsagar there has been a decline in water supply over the years due to reduced inflows and, for the first time in about 80 years, Osmansagar and Himayatsagar dried up in 2003. When full, these two sources were supplying 45 Mgd to the city. Himayatsagar has dried up again in November 2004 while the Osmansagar became dry in April 2005. A study found that there has been a progressive decline in the percent of rainfall converted into inflows into these two reservoirs during 1961-1996 even though the rainfall pattern has not changed much. These two water bodies reached their full reservoir levels more times (10 times by Osmansagar and 11 times by Himayatsagar) in the first 18 years of 1961-96 compared to the second half of the period (only 5 times by Osmansagar and 6 times by Himayatsagar)". Based on this trend, it was concluded that these two reservoirs may dry up completely in future: Himayatsagar in 2036 and Osmansagar in 2040. Even if they do not dry up, they will receive mostly polluted water resulting from the increasing urbanization of the catchment area and would cease to be the sources of drinking water, unless proper remedial measures are taken. Despite copious rains in Hyderabad and its surroundings during July-September 2005 and 2006, the inflows have been very less into these reservoirs. This is due to construction of check dams and other encroachments in their catchment areas. The total water in these two reservoirs thus accounts for only 1Tmcft (Thousand million cubic feet) as against their storage capacity of 7 tmcft.5

There has been an in improvement in the water supply position in the city in general with more water being brought into the city with the Krishna water project. This improvement has happened in those areas which already have piped connections and sufficient water storage facilities. The low-income and slum areas, which do not have such facilities, have not witnessed any significant improvement. Irregular supply of water in terms of duration (once in three or four days instead of alternate days), low pressure, inadequacy and poor quality are some of the problems regularly faced by such areas. Intra-city inequity in water supply as an issue has not been addressed by the policy makers. As a result, people in such areas fall victim to water-borne diseases. Analysis of data for 34 diseases in the Ronald Ross Institute of Tropical Diseases, popularly known as Fever Hospital, in the city reveals that a large number of visits/admissions of patients is caused by

water-borne diseases. This is a major referral hospital for infectious diseases for the poor and low income people.

CONCLUSION:

Since early 2000 the concept of rainwater harvesting has failed to catch on among house owners. Initially, several interested residents submitted applications to the Municipal Corporation of Hyderabad (MCH), Hyderabad Metropolitan Water Supply and Sewerage Board (HMWS & SB) and Hyderabad Urban Development Authority (HUDA) but with no action forthcoming, they have dropped the idea.

Collector in 2001 publicized list of contractors trained in taking up work of Rain Water Harvesting in all the houses of twin cities but this was contradicted by HMWS has they opened a special cell on Rain Water Harvesting where people could directly approach and get the information needed. According to HMWS, 50 percent subsidy on the structures announced in early 2000's has been lifted as the response was poor. Of the, 5000 applicants received ,more than 3,000 were processed and only 500 people actually completed the works. Keeping this in view , the broad has decided to lift the subsidy .

Since then, the concept of having compulsory Rain Water Harvesting Tank or Pit in every home has been stagnate despite Government passing orders on Conservation and Harvesting of Rain Water Structures in construction of buildings in all Municipal Corporations/Urban Development Authorities on 9th June 2000.