RAINWATER HARVESTING

Rainwater harvesting is the process of collecting, filtering, storing and using rainwater. This has gained increasing importance in the current situation of exploding demand for water. Rainwater harvesting is relevant for both urban and rural areas. Examples are the implementation of projects in Bangalore by Rainwater Club in urban setting and by Tarun Bharat Sangh in E Rajasthan in rural setting.

Bangalore gets its water from the Cauvery river at about 95 km away and from 500 m depth. Groundwater in the city is either polluted or getting depleted in many areas. Surface water bodies are on the decline. Since demand for water is picking up the sole service provider viz. BWSSB, is faced with the Herculean task of providing water for the city. Rainwater harvesting can be an important supplement given the fact that on the average Bangalore gets 970 mm of rain (based on data for the last 10 years). A 100 sq. m roof area gets 97,000 litres of water and with a little change of design at least 60,000 to 70,000 litres can be harvested either through storage in sumps/tanks or through recharge of open wells and borewells or a combination of both storage and recharge. Given the current building practices and sensitivity to design, house-owners, architects and engineers are now seriously considering rain harvesting. Institutions and industries faced with high tariff for water can also harvest rain since they would generally have large site and roof areas.

Rainwater Club seeks to arm people with information by working on the requirement of quality and quantity as well as design, to enable them to make informed choices of managing water. A small booklet and a website *www.rainwaterclub.org* has been created and further work with students is on to work out a research agenda. Bangalore gets the equivalent of 3000 million litres of rainwater per day on its 1279 sq. km CDP area, which is nearly double the ultimate water supply of 1500 million litres per day planned by the BWSSB. It is therefore every citizen's responsibility to ensure full utilisation of the rainfall through rainwater harvesting.

Rainwater Club, Bangalore S. VISHWANATH,

DISCUSSION

HYDROGEOLOGICAL INVESTIGATIONS OF THE EASTERN PART OF DHAKA CITY USING GEOPHYSICAL WELL LOGGING by D. Hossain and R.K. Majumder. Jour. Geol. Soc. India, v.56, 2000, pp.161-168.

N. Lakshmi Narayana, Geohouse, Plot No.32/B, Road no.2, Adarsh Nagar, Nagole, Hyderabad - 500 068 comments:

1. The technical aspects of logging system are missing, which would have helped to understand or have the perspective view of logs for better interpretation and correlation. Some aspects include the electrode configuration in Resistivity Sonde, Time Constant (T.C.) in Natural Gamma Log recording system etc.
2. The statement reads: "R_w was not determined from SP logs since all the parameters required for its evaluation were not available". Then how R_w was determined? In the beginning R_w has to be estimated either through SP logs [Todd, 1980, p.446 (12.4)] or by Archie's formula (Lazrez, 1972). The parameters of porosity, cementation factor and water saturation of the water sample collected from the aquifer zone are to be used for calculating the formulation factor (F) with the known R_0 from the resistivity log. The calculated F for any geo-electric unit is expected to be the same for the area under study.
3. To evaluate the anisotropy (λ), the parameters required are transverse resistivity (ρ_n) and longitudinal resistivity (ρ_l), which are in turn calculated based on the resistivity (R_0) derived from the resistivity log. How two unknowns (ρ_n and ρ_l) were derived from one (R_0) known factor?
4. The statement reads as "clays and shales usually exhibit higher level of radioactivity than sand units", but in Fig.2, particularly the gamma log in BH.No. DW5/20 and DW6/10, significantly shows contradicting responses to the statement like "gamma ray response for the sand unit is higher than that of the upper clay unit". The high gamma response in sand unit (GEU-2) is explained as due to the presence of heavy