



Panchayati Raj: A Way Out of Drinking Water Crisis in Rural India

KEYWORDS

Freshwater, crisis, water harvesting, Panchyat.

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ABSTRACT Freshwater water resources all over India are becoming scarce. Safe and clean drinking water is a fundamental right yet in many parts of rural India, water has become scanty resource. People often pay for clean unpolluted water. The situation is more aggravated by a new found field of activity of tapping groundwater by means of bore wells that has been allowed to grow unchecked, receding the ground water level. At many parts of the country, the lowest depth for water is 175 feet and highest is 750 feet, which is an alarming phenomenon. Realizing the gravity of drinking water scarcity and pollution, several steps are being tried out but the most powerful of all is probably working at grass roots by ensuring peoples participation by local Panchayat. Through Panchayat, farmers should be encouraged to adopt drip and sprinkler irrigation practice, prohibit use of groundwater for agriculture and use traditional water storage systems like rain-water harvesting. With common people's involvement, man-made drought and the looming water crisis can be overcome.

Introduction

Water is a precious and scarce resource, with only 3% of total water is fresh and suitable for human utilization. Over the year, water crisis has become grave and the situation in rural areas are graver as even after six decades of independence, pure and safe drinking water is not available to 20 % of rural Indians (<http://www.humanium.org/en/ngo-blog/2010/09/right-to-water-recognized-as-a-fundamental-right/>)

The water crisis in general and in rural areas in particular, is aggravated by another problem of overexploitation of ground water and receding water tables in many parts, resulting in dry wells, ponds etc. With this backdrop, a more proactive role of local panchayats and people's participation is sought after to overcome this looming water crisis.

Concept

Water crisis has taken devastating form in rural areas where pure and safe drinking water awaits many of its citizens. There have been reports of deaths due to several water borne diseases like dysentery and diarrhoea in Kundanala area of Hailakandi Districts in Barak Valley which is a part of Dhalcherra Bilaipur Gram Panchayat. The region occasionally becomes death zone as no pure drinking water is available and only sources of water are some natural springs and water pits kilometres away from their homes. These water sources are unfit for consumption due to the presence of coliforms and other impurities. Such sad story is not an isolated incidence but a regular feature of most rural India, especially North East India. Rural water is not safe due to the presence of pathogens (coliforms), toxicants such as Arsenic, Iron Fluorides, Nitrites, other trace metals and organic matters.

Yet another dimension in water crisis is the depleting ground water levels. Ground water is normally pure and safe for consumption but because of overexploitation, water table is gradually getting down. As past few years have seen tremendous boost in use of ground water as alternative source of water, in many parts of the country, the lowest depth for water is 175 feet and highest is 750 feet as compared to 10 feet in Tunisia! In rural areas this precious resource (ground water) is regularly misused especially for irrigation purposes. Besides, due to high usage, the groundwater quality is being degraded gradually with pollutants such as heavy metals, pesticides, coliform, BOD, COD etc.

In such situation, Panchayati Raj can come as respite. It is a system of governance in which gram panchayats are the

basic units of administration. It has 3 levels: village, block and district. Mahatma Gandhi advocated Panchayati Raj, a decentralized form of Government where each village is responsible for its own affairs, as the foundation of India's political system. His term for such a vision was "Gram Swaraj" (Village Self-governance). Panchayats are thus meant for preparation of plans for economic development and social justice. Managing this looming water crisis through peoples' participation and under the guidance of local Panchayats can probably ensure a sustainable solution to this imminent problem.

Objectives

1. Exploring role of Panchayats in managing water crisis
2. Exploring alternative sources of water in rural areas
3. Conserving and managing water

Result and Discussion

Local panchayats play an important role in ensuring safe drinking water to rural people. A gram panchayat member from Anekal was so moved by rain water harvesting that he took a decision to build a 10,000 litre Rainwater Storage tank in his village. Similar steps were also made in Paani Panchayat, Ralegaon Siddhi, Bundi and Alwar, Sukho Majari, Anandvan and Somnath by local panchayats. Local panchayats can popularize rain as alternate source of water. Rain water is naturally pure and perfect for consumption and therefore should be harvested (Ghosh, 2004; Vishwanath, 2001). Rain Water Harvesting (RWH) refers to the process of capturing the rainwater as it falls on roof-tops, sides of buildings and even concrete pavements, filtering it and storing it in large containers either above ground or underground for immediate consumption or future use. RWH is also used to recharge the underground water sources using percolation pits for use during dry months. In rural backdrop, for a family of 5, 135 litres of water is required per person per day, or 246,375 litres of water is required per family in a year. If avg. rainfall is 1m, then Roof Catchment Area required is 307.5 m². [The capacity of the tank is calculated as: Capacity (Q) = (n x q x t) + c where, n = number of persons; q = consumption level per capita per day, l pcd; t = number of days or dry period for which water is needed; e = evaporation losses from storage, litres. The required roof catchment area, A = Q / (f x p) where, p is rainfall, m; f is runoff coefficient (0.8 to 0.9)] (Obuliswamy, 2004).

Local panchyat can follow these recommendations:

- i. Funds may be mobilized from PMGY, Rajiv Gandhi Drink-

- ing Mission, Department of science and Technology, apart from UNICEF, DANIDA and World Bank.
- ii. Panchayat can ask Banks to adopt villages for providing Rain Water harvesting structures to below poverty line houses.
 - iii. RWH can be included in group houses and Indira Awas Yojana.
 - iv. RWH can be tagged to rural water supply schemes.
 - v. Proper legislation should be implemented to control the over exploitation of water.
 - vi. The unused bore wells and shallow open wells may be recharged by rain water.

- vii. Community participation is more essential for making the Rain Water Harvesting successful.
- viii. Minimise use of borewells especially for irrigation purposes.
- ix. Use of separate water for drinking and other usages like sanitations.

Conclusion

Realizing the gravity of rural drinking water scarcity, several steps are being tried out but the most powerful of all is probably working at grass roots by ensuring peoples participation via local *Panchayat*. With common people's involvement looming water crisis can be overcome.

REFERENCE

<http://www.humanium.org/en/ngo-blog/2010/09/right-to-water-recognized-as-a-fundamental-right/>. (The right to water recognized as a fundamental right.) | Ghosh, P.K. Rain water harvesting- a ray of hope, Orissa review, August, 2004. | Obuliswamy, V.K. Sustainability of the systems and sources-rainwater Harvesting - strategies for execution - funding options, TWAD Technical Newsletter, January, 2004, 103p. | Vishwanath, S. Domestic Rainwater Harvesting Some applications in Bangalore, India, RWH Conference, IITD, New Delhi, April 2001. |