

## Our Water Warriors

*"There can be no subject more important for humankind than water. A well managed society is one that knows how to treat its water with care, with prudence and with respect, above all, with a sense of it being a universal asset". – K.R. NARAYANAN, President of India*

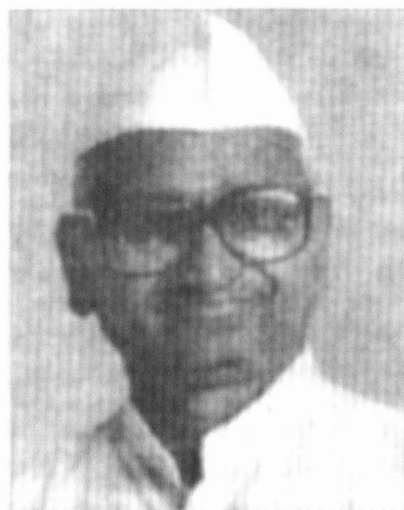
More than ten years ago, making a plea for understanding the wisdom of Nature, I wrote:

'Land, water and forests are our most valuable natural resources. They have to be zealously guarded against misuse. They not only serve our immediate needs but can be handed over to coming generations as important assets....

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..... There is need to understand the wisdom of Nature. Rural people are deserting their farm lands and are running to cities attracted by the pampered gay life of the cities. Farm lands are lying waste. The advantages of biotechnology have not filtered down to the farmer making his occupation pleasant and profitable. The vast human resource is lying idle without motivation to better effort..... Everyone in the countryside should get engaged in one kind of the project or the other – levelling of ground, erection of contour bunds, reforesting bare hill slopes, draining of land, restoring top soil etc. There should be no idle hand anywhere in the countryside.

For maximum food production, the three basic needs are soil, water and sunshine. India has all the three. The only thing wanting is the will to make the best use of the available resources.'

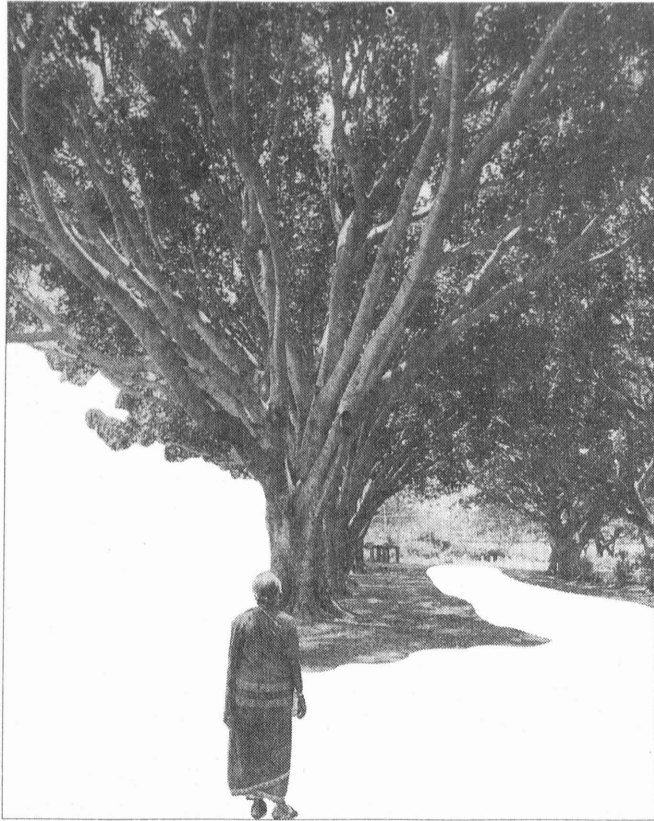
At the time of writing the above note, I was not aware of the existence of non-governmental organizations (NGO) engaged in reviving the traditional practice of harvesting rain water. Sunderlal Bahuguna, in Uttar Pradesh, has been waging a war protesting against the policies of deforestation practiced by government. When forest contractors came to cut the trees, women of the villages hugged the trees marked for destruction and effectively prevented the contractors from coming anywhere near the trees.



Anna Saheb Hazare

In a remote village of Maharashtra, Anna Saheb Hazare, a truck driver in the service of the Indian Army, returning to his village Ralegan Siddhi saw it in ruins and resolved to see the village return to its old glory. He provided the badly needed leadership, mobilized the villagers and made them construct numerous check dams for collecting rainwater where it fell. Ralegan Siddhi as a result has become a prosperous village.

In Karnataka an ordinary woman, Thimmakka by name, a widow, belonging to backward caste, had on her own initiative planted a number of saplings, took care of them for 40 years and created a magnificent avenue of most noble trees adorning the village landscape.



Thimmakka and her avenue of trees.

A new tribe of 'water warriors' has thus risen in different parts of the country, showing exceptional leadership by enlisting the cooperation of a large number of dispirited villagers by giving a big boost to community based water harvesting.

The work of water warriors like Sri Anna Hazare in Maharashtra and Sri Rajendra Singh in Rajasthan has demonstrated that by adopting simple water harvesting methods, economic conditions of rural India can be greatly improved. If this spirit spreads and water harvesting really becomes a mass movement, generating employment on a large scale by way of desilting tanks, excavation of contour trenches and erection of bunds, amelioration of life in rural India cannot lag far behind.



Rajendra Singh

Migration of rural poor to cities in search of work can be prevented. The need of the hour, therefore, is identification of community leaders and giving them every assistance aimed at effective implementation of water harvesting programmes.

Work of Rajendra Singh, one such leader from Rajasthan has attracted international attention, culminating in his receiving the Magsaysay award for the year 2001 in recognition of the economic miracle he has been able to achieve in the water starved Alwar district of Rajasthan. He is the founder secretary of *Tarun Bharat Sangh*, an Alwar based non-governmental organization founded for the amelioration of the conditions of rural folk.

*Tarun Bharat Sangh*, started in 1984, has constructed till now over 4500 structures or *johads* in 850 villages spread

These acts of selfless service were highlighted in the pages of the JGSI and it is gratifying to note that these persons have received National Awards in recognition of their selfless service. Canara Bank has since announced that it would give Rs. 100,000 for the project of Thimmakka to construct a hospital in her village. It has also come forward to adopt the village and ensure its all round development.

Anil Agarwal of the Centre of Earth Science and Environment, a well known environmentalist, is rendering great service by highlighting the problems of the rural poor, holding conferences and *Pani yatras* and making a powerful plea for undertaking rainwater harvesting on a grand scale and making it a mass movement.

over 11 districts of Rajasthan, regenerating a vast extent of farm land. He has revived many traditional water harvesting structures which had become useless through neglect and brought back to life many dormant rivers.

### *Motivating 'Workless' Class of People in Villages*

Central and State Governments are no doubt keen on rural development and substantial amounts are being granted for the purpose but the bureaucratic setup is such that the only way it can function is by creating a multitude of new departments manned by an army of officials. The bulk of the amounts allotted is frittered away in maintaining this army and hardly any amount filters down for the actual implementation of work. Our hope lies in non-official organizations like the *Tarun Bharat Sangh* and village leaders like Rajendra Singh who involve the village community at every stage. Maintenance of the structures is the responsibility of the local community. An attitude of self-reliance and local management has been encouraged which brings hope for the future.

Far too much dependence on government has created a 'workless class' of people in most villages. There is no motivation and no enthusiasm. This scenario has to be changed by a radical shift in our values and attitudes.

### *Village as a Unit of Development*

Village should be the focus for development. A prerequisite for such development are maps on a cadastral scale of 1:8000, showing vital information about the shape of the land, soil characteristics, geology, landuse practices, groundwater structures, depth to water table and all such essential details required for planning. Information technology has made it possible to store a very large amount of data and recall it whenever wanted under GIS-format. Such maps are essential to plan development and a blueprint for action should be prepared for each village.

Rainwater harvesting as a programme involving construction of a large number of small dams can be taken up only with the willing cooperation of villagers. Their cooperation is essential for the success of the many poverty alleviation programmes of the government.

### *Recharging Groundwater Reservoir*

Nature has provided a vast inter-connected reservoir of water below ground. Ways of replenishing this reservoir should be our main concern. Terracing, contour bunding, creation of farm ponds and afforestation of catchment areas – these can provide plenty of work to rural folk. Scientific knowledge has to be put into practice in demonstration plots and the message of water conservation conveyed to the public. Scope for service in this field is unlimited. It is the field where geologists can come in close contact with the people and in which they can, by their application of scientific knowledge contribute greatly to public welfare.

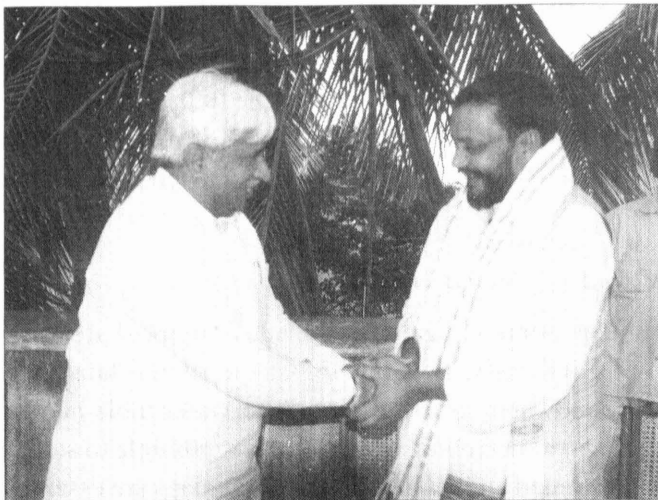
### *Making the Best Use of Rainwater where it Falls*

'By combining technology with social action rainwater can be made to provide maximum benefit to dry land farmers both through surface water storage and through aquifer recharge. The message of scientific harvesting and recycling must be spread among rural community' (JGSI, v.51, 1998, p.428).

Greater emphasis has to be laid on voluntary work, less dependence on the machinery of the State, and more on cooperative effort generated by the people themselves. A reorientation of higher education and research supporting the needs of the rural folk at village level is called for.

Print and electronic media in our country are too preoccupied with the problems of city dwellers and give scant attention to the problems of the countryside. The work of 'water warriors' like Anna Hazare and Rajendra Singh should receive wide publicity. Training centres should be established and groundwater sanctuaries created where different methods which could be adopted for rainwater harvesting and recharging groundwater reservoirs can be demonstrated.

In the newly dawned 21st century a serious attempt has to be made to take our science to middle and high schools and also involve leaders of the rural community in our meetings. The Society had arranged a small function to felicitate Sri Rajendra Singh when he visited Bangalore recently. Sri H.K. Patil, Minister for Water Resources in Karnataka, graced the occasion and



Sri H.K. Patil felicitating Sri Singh.

felicitated Rajendra Singh on the noble work he is doing in Rajasthan. This is the first time that the Society is felicitating a person not for his knowledge of geology but as a leader of village communities who has achieved spectacular results. The need for such leaders is great as they are going to be the builders of new India. Geological Society of India will consider it a privilege to extend its technical help in the work of regeneration of rural India by motivating villagers who are dispirited and leaderless.

#### *Legal Hurdles to be Overcome*

State Irrigation Department in Rajasthan has taken exception to the voluntary construction of check dams and structures. A notice to Rajendra Singh on May 22, 2001 said: "The unauthorized dam construction at Lava ka baas by you with the help of villagers is unsafe as it has not been made according to the technical standards. You are directed to drain the water in that dam within 15 days and in future no water should be stored in that dam".

This is a foretaste of the impediments which voluntary agencies have to face in pursuing rainwater harvesting programmes. Laws in force relate mainly to the construction of major structures. Check dams, on the other hand, are comparatively small structures for holding water for local use and their construction should not be construed as disobeying the law.

The time is now opportune to form a regiment of water warriors whose sole task will be to revive water conservation system with the aid of modern technology and the ushering in of a new blue revolution, matching in scope the green revolution which changed the face of India a few decades ago.