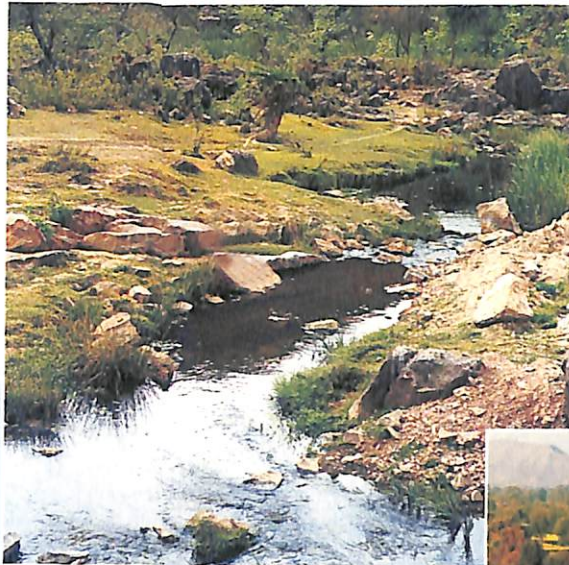


RESTORING
LIFE AND HOPE
TO A BARREN LAND

25 Years of EVOLUTION



25 years of EVOLUTION

Consolidated By
Maulik Sisodia

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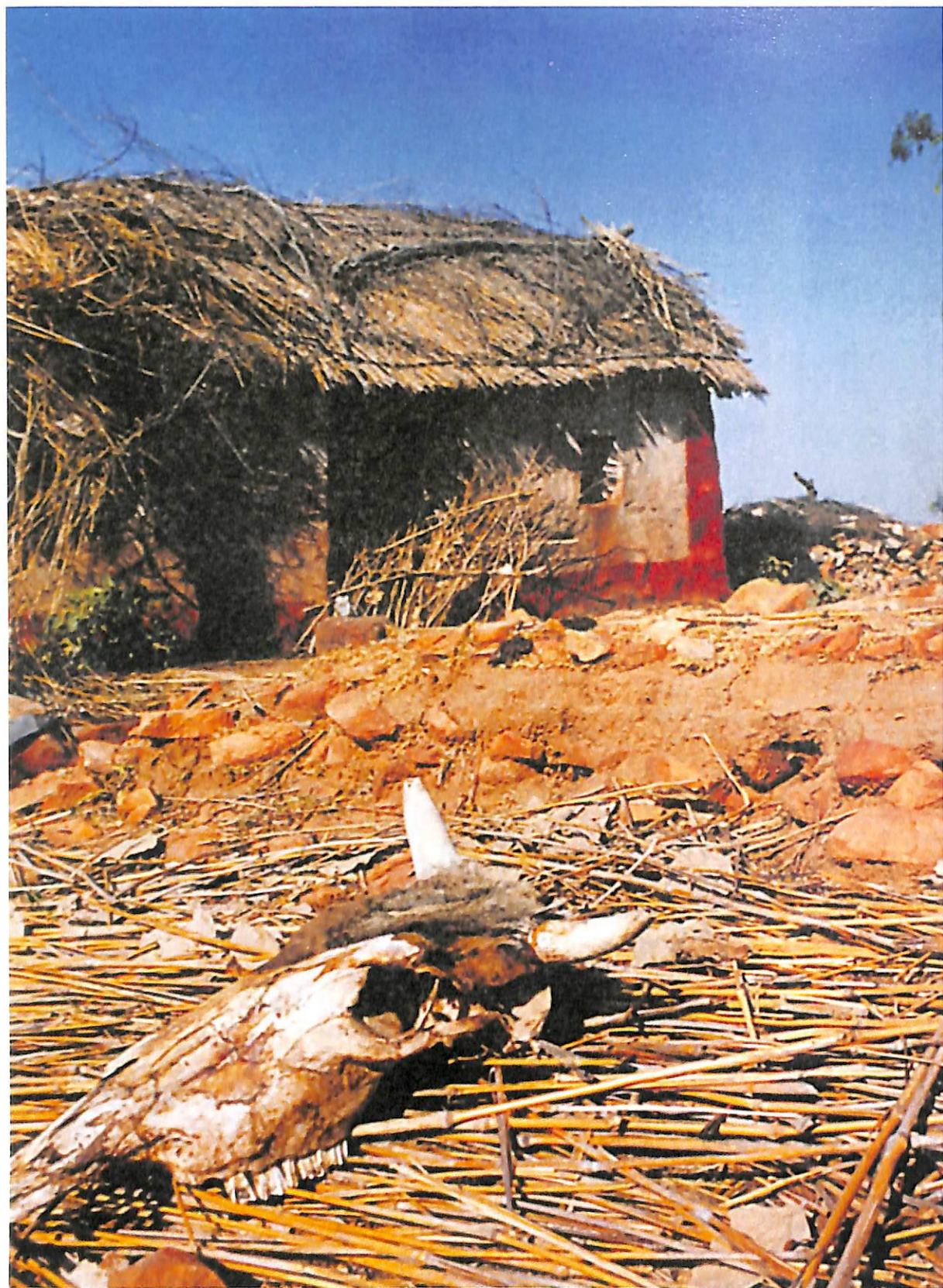


Climate Change &

Natural Resource development

Women & Education

Health



where it all started...

The State of Rajasthan covers more than 10% of area on the map of INDIA. Rajasthan, well known for its recurring droughts, belongs to an arid (60%) and semi-arid (40%) region having only about 1% of the total surface water resources of the country to quench its thirst.

Presently, Tarun Bharat Sangh (TBS) working in the semi-arid region of Rajasthan. The area lies along the foothills and main ranges of the Aravalis, and includes the Sariska National Park. This is a harsh and semi-arid land with temperatures fluctuating from 5 degrees Celsius in winters to 49 degrees Celsius in summers. The average rainfall when the monsoon is kind is around 620 mm. Ninety



Barren Land

percent of the rainfall occurs during the monsoon months (July to September).

Topographically, the tract may be divided into two zones: the hilly area, and the plains. Demographically, the area has two major communities; the Meenas (ST), making 60% of the population and are primarily subsistence farmers in the plains area, and the Gujjars (OBCs) comprising 25% of the population who live in the hill areas and are engaged in animal husbandry.

Forests here are deciduous in nature, typical of desert vegetation. The bio-diversity of this region is one of the most significant in the country and about 12000 wild species of flora and over 5000 wild species are found in this area. Most of the ethnic groups and subgroups of the Indo-gangetic plains are found this district.

A Tale

In thirties of the twentieth century, the district of Alwar in the green valleys of the Aravali hills was a prosperous land. But a prince, with an eye cocked on a free India that would take away his primacy, sold off the rights to the timber on the hills. In ten swift years, contractors laid the land low.

Before 1930s, people of this region had a symbiotic relationship with the existing natural resource base. Besides, subsistence agriculture, the forests, grasslands and animals make up the food security system of the area.

These are considered as common property resources and were traditionally managed by a set of strict rules, which ensured optimum utilisation, preservation of biodiversity and regeneration.

After fifties, government came into picture. Over the years, the remaining sustainable means of livelihood have been systematically destroyed in the various developmental initiatives. Industrial processes initiated by the state and the central government led to



A degraded bawadi

excessive mining and the consequent large-scale deforestation for timber resulting in severe land degradation, which increased the frequency of flash floods and unnatural droughts.

Over a period of time, as control over community water resources passed on to the Government, these community structures were also degraded.

...villagers lost motivation to manage the traditional water system.

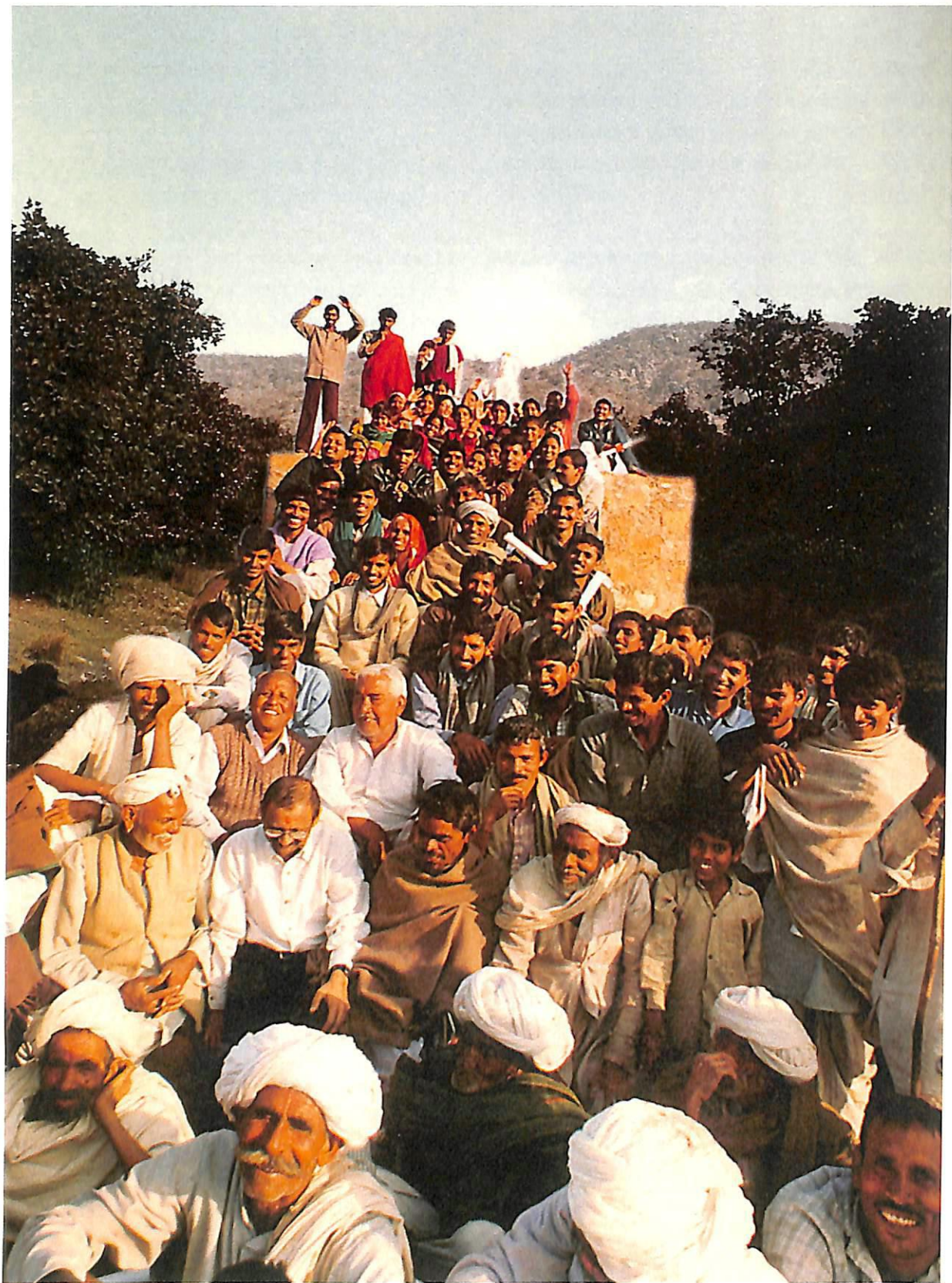
..the helm of eco-degeneration started revolving.

...an enormous hardship for the community, particularly women got amplified.

...land owners joined landless labourers on a trek to Delhi and Agra to toil for small sums to send home. Families broke up.

For fifty years, a whole new generation did not know that there had been hope and fertility once around them.





an organization

WATERSHED

Four youths including Rajendra Singh (chairman of Tarun Bharat Sangh) inspired by Gandhian model of rural-development went to live in the village Gopalpura for rural uplift. They started a school for children but soon got very depressed seeing no response from villagers. Three of them left thinking nothing can be done.

However, even though Rajendra Singh was depressed, but he was not willing to give up. In this mood of desperation, Maangu Meena (a wise old man of the village) consoled him by saying "...you fool you have not understood what is needed here. We do not want literacy, we want WATER first. You need to build Johad so that the water does not run away but is held back to percolate in to the ground." Rest is history now...

Once the first small Johad was ready, the villagers saw water and below it the ecology changed in the very next monsoon. For Tarun Bharat Sangh, it became an approach of rural-development through restoring the ecology for better food production, vegetation rejuvenation and river restoration.

Tarun Bharat Sangh is an NGO registered under Rajasthan Society Act 1958 (sec. 28). TBS is working in Alwar district of Rajasthan, since October, 1985. At present work of the organisation spreads in about 1000 villages of 15 districts of the state.

When TBS first entered the Thanagazi block the land was arid and unproductive. Aforesaid deforestation, large-scale mining operations, lowering of water tables, drying of traditional irrigation sources formed the background. Women had to walk long distances in search of fodder, fuel and water for their families and animals. The migration from the villages peaked to 3-4 persons from each family. The health and literacy profile of the area was also very poor.

Community Self-Reliance through Natural Resource Conservation

TBS started their work with mobilising communities around the issue of water, and supporting them in reviving and revitalising the traditional systems of water management through construction of 'Johads' for rainwater harvesting. The community contributed their labour; TBS arranged some funding and provided support to the villagers in studying the topography and soil type, gauging the water needs of the village, preparing a labour-sharing plan based on the benefits accruing to

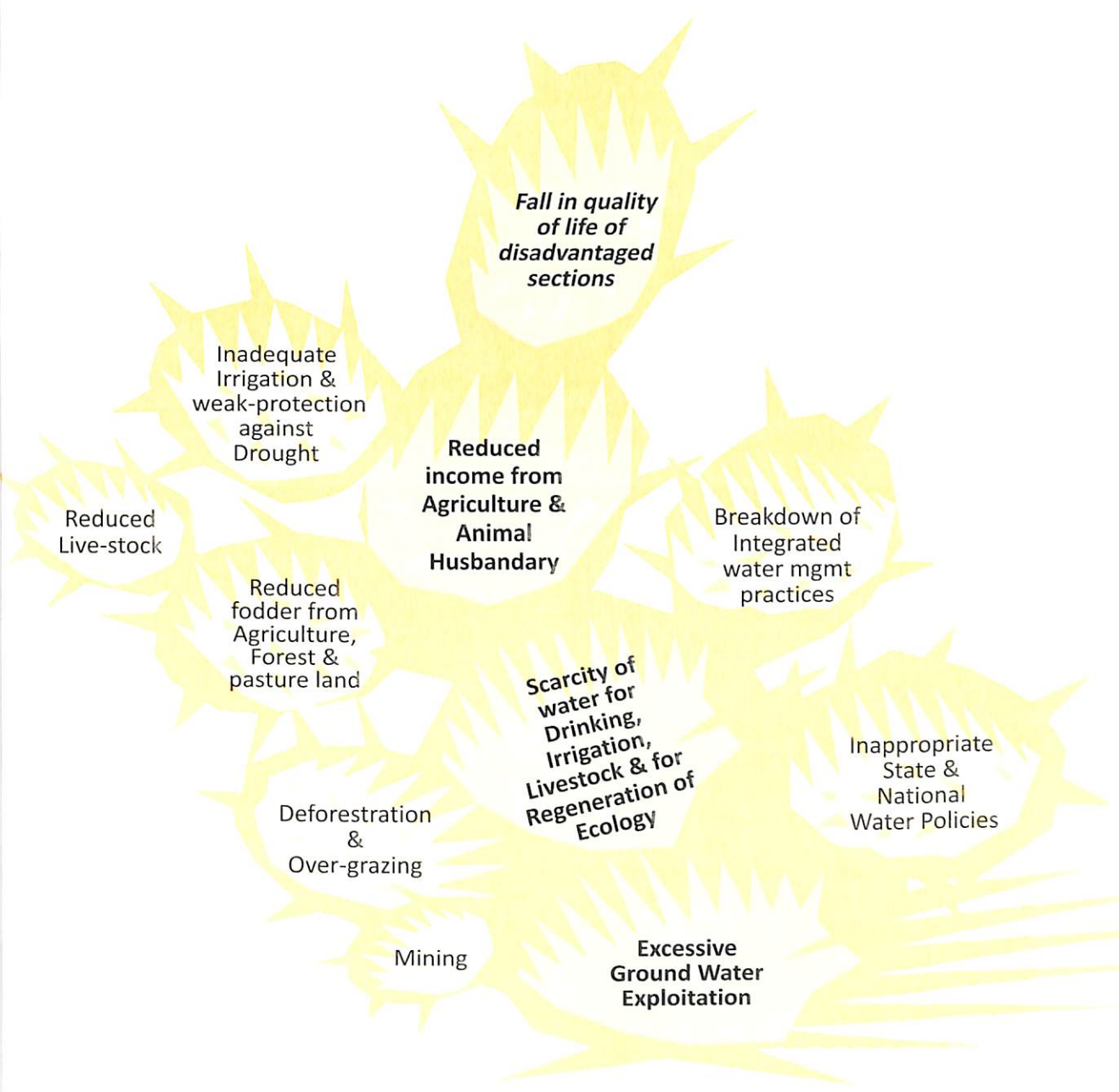
individual households and, finally, construction and management of the johads.

In period of 25 years, over 10,000 Rain-Water Harvesting (RWH) structures have been restored in this way. The effects are visible in terms of recharging of wells and aquifers, renewed flow of rivulets which had been dry for many years, increased bio-mass productivity, significant increase in agriculture production, reversal of out-migration and reduction in women's drudgery. Due to high fodder availability, villagers have also benefited from selling milk products through an informal cooperative arrangement.



Awareness Campaign

Problem Cactus



TBS has built on existing cultural traditions of the area to revive the feeling of oneness with nature which existed in village communities, and to create an understanding and ethos of integrated ecosystem development. The organisation plays a facilitating role in helping communities to articulate their priorities for natural resource development, and to find solutions. The decision-making process is decentralised and most of the TBS workers are themselves members of the communities they are working in.

The work on RWH led, in an organic manner, to communities looking for ways to revive the forests and evolve systems of meeting their fuel and fodder needs through natural

resource conservation and management. Discussions led to community actions like regulating the use of pasture land for fuel and grazing, reserving land for grazing, for protecting certain forests, for building check dams across forest streams and protecting wildlife. The work of TBS also led to a sustained campaign against mining in the Sariska National Park, resulting in a number of mines being closed down.

In spite of caste and gender hierarchies, TBS has been able to inculcate a common commitment to the community ecology and economy.

TBS has facilitated the formation of Village-Councils (Gram Sabha) with representatives of



Gram Sabha

Modus Operandi



Awareness Campaigns



Street Plays



Village Meetings



Trainings

Capacity Building



Formation of Gram-Sabha (Village-Council)



Community Participation in Decision Making



Community Contribution in Conservation Works

Community Self-Reliance



Based on the decisions of Gram-Sabha, construction of RWH Structures in the village gets start



According to the rules defined by Gram Sabha, locals conserve the forest in their village

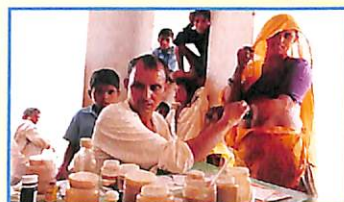
Adaptation to Climate Change



Alternative learning centres for girls and women



Leadership building Camps, Self-Help Groups, Women's Group for NRM



Training of Ayurvedic medicine professionals

Education, Gender Equality & Health

each family, which is the basic decision-making forum. Gram Sabhas are active in taking action on social issues and have become forums for discussion on common issues. TBS is instrumental in initiating discussions with the Government on the watershed programme, leading to direct government funding to Gram Sabhas for watershed development in their own villages. Gram Sabhas have also set up village development funds and grain banks in many villages. The soil and water conservation department is collaborating with the Gram Sabhas established by TBS for effective implementation of their watershed development programme on arable land.

The Gram Sabhas now independently settle forest conservation issues with Forest Department without the intermediation of TBS.

Women

In the course of evolution, it has emerged that women have been the primary beneficiaries of the regeneration of water sources and forests, and there have been improvements in the conditions of their lives.

It is well established that women in this region have suffered a lot on account of fetching water for the family. They, who are responsible for procuring fodder, fuel wood and fetching water, were most affected by these scarcities. All these activities are referred to as women chores, and the average time spent on them was 18 hours a day. Therefore, the creation of RWH structures has benefited women immensely. Liberated from backbreaking work



Women Self-help group

Impacts

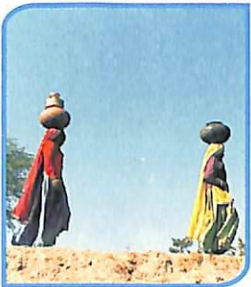
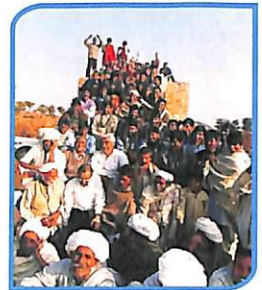


ENVIRONMENT:

- Increase in ground water level.
- Increase in surface water availability- johads, wells etc.
- Increase in common pasture land.
- Increase in area under forest upto 30%.
- Seasonal rivulets are reborn.
- Increase in variety of flora and fauna in the catchment area.

SOCIAL:

- Round-the-year availability of drinking water.
- Ensured food security leading to nutrition security.
- Increased community participation in NRM.
- Increased enrollment of children in schools.
- Reduced stress on cities- decrease in forced migration from villages in search of employment.



GENDER:

- Increased participation of women in decision making process of NRM.
- Liberation from back-breaking chores of fetching water, collecting fuel & fodder.
- Enrollment of girl child in schools has increased upto 70%.

ECONOMIC:

- Increase in agriculture production- land under cultivation increased from 20% to 80% of available land.
- Increase in employment opportunities for land-less population.
- Decrease in cost of irrigation.
- Due to round-the-year availability of water, livestock composition of the area has increased. Income from animal husbandry increased upto three times.
- Standard of living has been raised.



of fetching water they now find time for themselves. The increased availability of water for cooking, washing and bathing has definitely improved the quality of their life. Increasing number of girls are now studying in schools who devotes their big spell in fetching water for family, before the existence of Johads.

The issue of gender equality is critical to the vision of equitable and self-reliant communities living in harmony with nature. The experience of TBS has demonstrated that sustainable resource management demands equity in access and control, with all sections of the community taking informed and responsible decisions. So, in the course of the evolution, women's groups have been set up

who have taken on the responsibility of maintaining the RWH structures.

In order to create an enabling environment for women's empowerment, TBS has organised women's groups around the issue of bio-diversity conservation and health. Women of the region have been supported in building and enhancing their traditional knowledge of herbs and to become health providers for the community. Women's groups are supported to participate in the entire planning and resource management process in the Gram Sabha.

About 300 women's Self-Help Groups (SHG) have been formed which are playing their critical role in planning and management of



Women leadership

community development (education, health, watershed development and bio-diversity conservation).

As far as possible, members of SHG's trained to be teachers at the learning centres. Since the area has poor school facilities, with practically no women who are even functionally literate, the presence of women as teachers is a powerful tool for changing traditional perceptions of women as 'ignorant' and 'incapable'.

More than 300 women para-professionals have been developed as health workers and teachers. Women's control over community resources has been enhanced and now they are taking key decisions for watershed

development and forest conservation. This empowerment process gave rise to many hidden women leaders who are now actively participating in the village level political process.

Education

In the field of education, TBS has struggled for years to assist in opening up government primary schools in remote villages. TBS actively participates in supervision of the community schools and in motivating parents to send their children to schools. TBS encourages literate youths of villages to teach children in other villages lacking formal education facilities. TBS provides extensive training to the community teachers. TBS also helps Gram Sabhas in the



Tarunshala

erection of educational-infrastructure like school building, furniture etc.

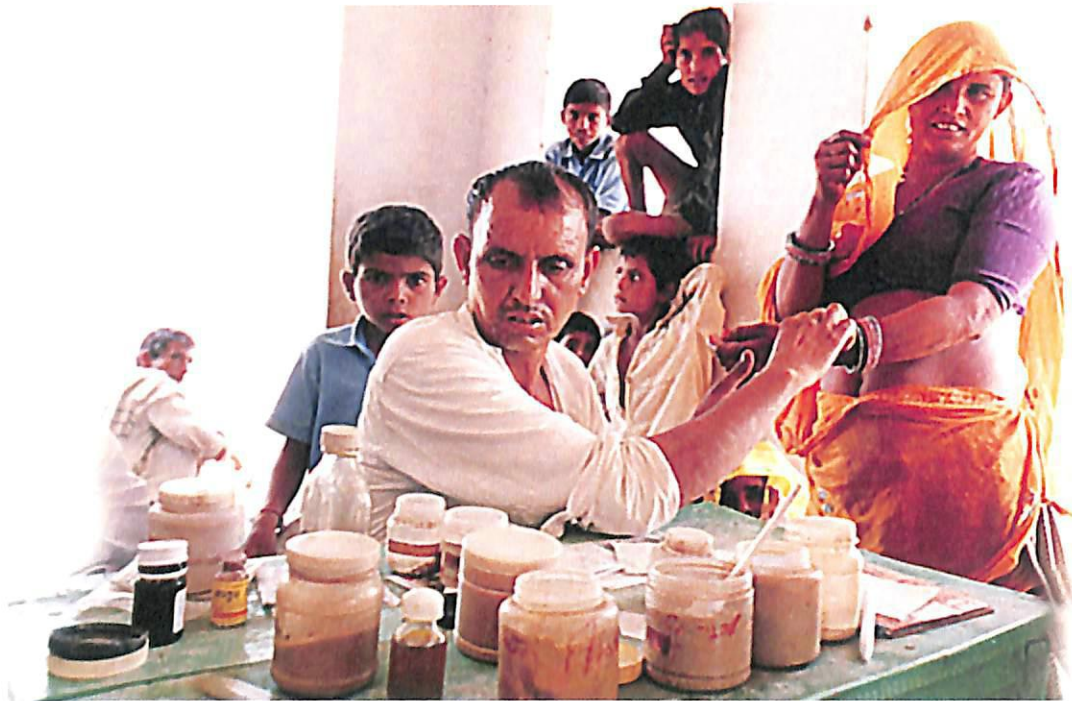
Since the area lacks facilities for education, and since girl's involvement in household work and exclusion from education are major reasons for their continued dis-empowerment as adults, TBS ran alternative learning centres 'Tarun Shalas.' These centres functioned simultaneously as alternative schools for children, as well as learning centres for adult women. These centres provide a platform for women to discuss issues of rights and responsibilities, girl child education, child marriages, etc. Setting up education centres also had the advantage of reducing the incidence of child labour and create a demand for education. The content

and process of education at these centres reflected the values of gender equality and sustainable development.

The TBS is working on environment education for the awareness on issues like climate-change, ecology and natural resource management.

Health

The TBS has also been serving in the field of people's health since its inception. TBS have helped in the revival of traditional system of medicine and the promotion of the Ayurvedic system of medicine. The local traditional healers have been empowered with the latest information on preparation, use and disse-



Health facility

mination of herbal medicine. Now TBS focusing on expanding the range of the activities that are needed for securing health of the region.

Policy Level Protagonism

The TBS's achievements in building up appropriate institutional mechanisms for integrated water resource management based on traditional and indigenous skills, knowledge, cultural values were recognized and appreciated by cross-section of the society. This recognition propelled TBS to pursue advocacy route to transform the people-exclusionary policies into inclusive one on issues of rights, conservation, management, pollution, over-exploitation and encroachment of water resources.

In parallel of being a grassroots implementing agency now TBS also is playing a role of an intermediary support level agency. It is now delivering the following functions:

- Training staff of NGOs in water harvesting in arid/semi-arid regions of various states.
- Establish the credibility of traditional water harvesting structures.
- Help various organisations in activities related to public advocacy and for fighting against repressive Acts of the Government (such as privatisation of water rights).
- Act as mediators between Government interests and civil society, due to the

credibility TBS now enjoys nationally and internationally.

- Plays an active role at a global, national and state level for influencing policies related to water harvesting and distribution.

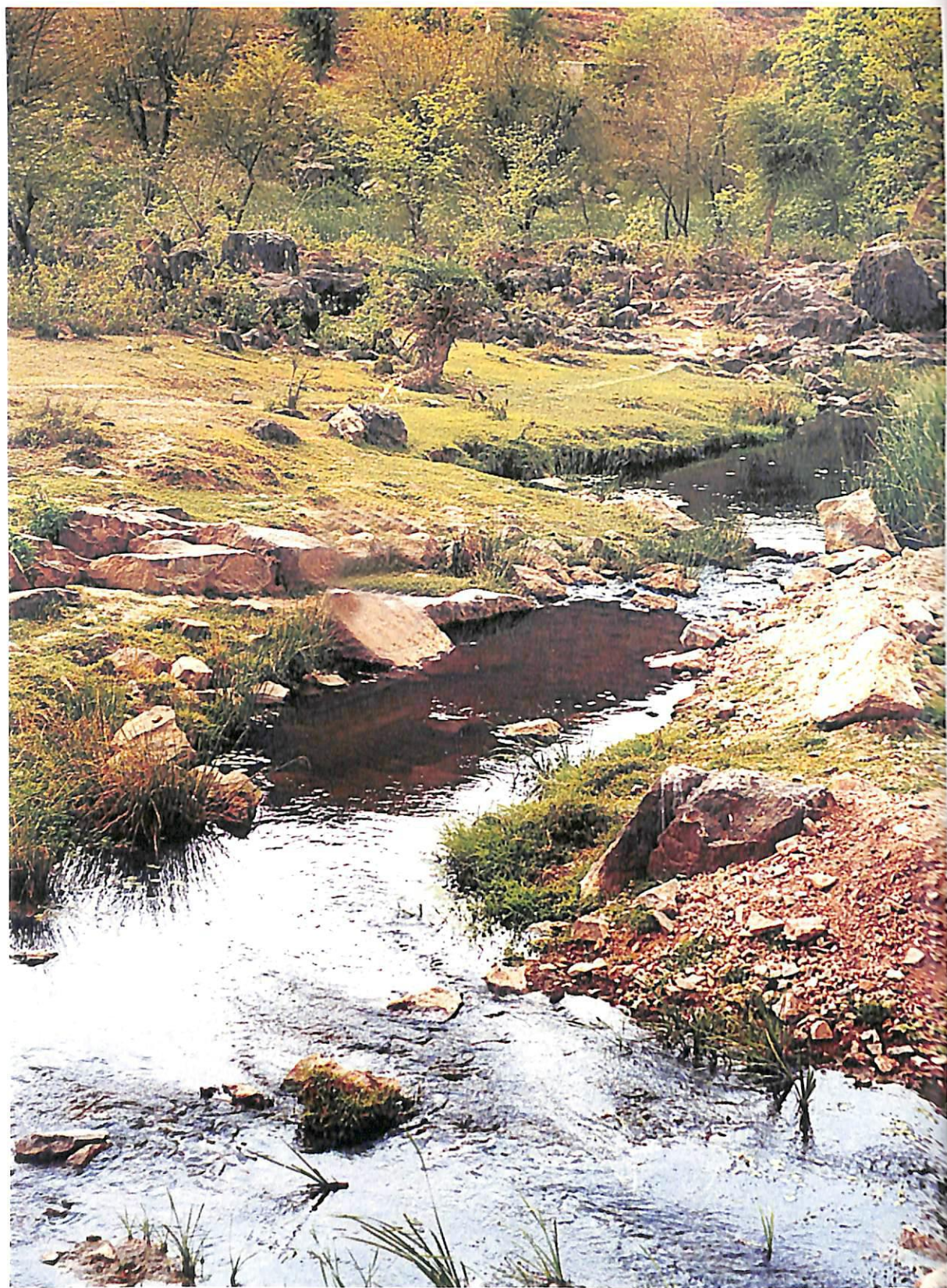
TBS's efforts of organizing the villages and local communities across the country have resulted in the formulation of the Rashtriya Jal Biradari (National Water Community).

From 2001 onwards Rashtriya Jal Biradari is engaged in colossal nation-wide struggle on issues of rights, conservation, management, pollution, over-exploitation and encroachment of water resources so as to make people oriented National and State Water Policies, Acts, Authorities etc.

TBS has launched a nationwide campaign popularly called as Nadi Bacaho Abhiyan (Save the River Campaign). The nationwide campaign along 17 river of the country was taken up in 2007. The prominent campaigns are as follows:

- Bhagirathi-Ganga Satyagraha
- Yamuna Satyagraha
- Rejuvenate Mithi river campaign
- Save Arkavathi
- Hindon Nadi Bachao Abhiyan
- Save River Luni





milestones

Dark Zone to Flow

Few words of a wise old-man spoken to Rajendra Singh changed the path of Tarun Bharat Sangh's approach towards development. After that TBS never look back.

It is 'Johad' which made TBS a champion in the sphere of Rain-Water Harvesting. Till today, TBS constructed around 10,000 of johads with the contribution of villagers.

The impact of 25 years of tireless effort has brought about a significant increased from an officially marked "dark zone" to "a water surplus" zone.



A Johad

"Water is the basis of life. It is increasingly being realised by rich and industrialised countries as well as by poor and developing countries that non-availability of water

is becoming a very grave problem. Some time ago, the Arvari, which flows through Bhaota-Kolyala, was absolutely dry. Lack of water had destroyed agriculture. The people here were forced to migrate to cities to earn a livelihood. While it is the responsibility of the government to create a situation where people can develop, it is up to the people themselves to work for achievement of true Gram Swaraj. Tarun Bharat Sangh have shown how people can do this on their own," said the then Hon'ble President of India, Shri K. R. Narayanan on 28th March 2000, after presenting the "DOWN TO EARTH-JOSEPH C JOHN AWARD" for India's most outstanding environmental community to Bhaota-Kolyala village & Tarun Bharat Sangh. In a ceremony which was perhaps the first of its kind, the Hon'ble President flew down to Tarun Bharat Sangh to felicitate the village community.

On 2nd November 2003, HH Prince Charles of Wales also visited Tarun Bharat Sangh. The Prince conducted an aerial survey of the River Arvari.

Now we begin with the story of the rivulet Arvari. The first step to make this stream alive was taken in 1987 by constructing a small Johad in a village Bhaota. Later seeing the advantage of johad, many villagers came forward to build such structures in their own areas.

Now there was simply a craze for johads. And to this date, there are 375 RWH structures in the catchment area of the river Arvari.

Water in RWH structures raised the water table in the entire catchment area of the river. This in turn, enriched the forest in the same area. Forests and scrubs helped to retard the run-offs of monsoon waters. This way, in a decade, the river Arvari came to life from a dried up dead water-course. Today, the river-flow continues the year round.

Expert opinion R.N.Athavale, emeritus scientist at the National Geophysical Research Institute in Hyderabad, assessed the work done by TBS. His aim was to gauge the changes brought about by the RWH structures through certain estimates of the water balance of a typical river in the area. Here are some of his findings:

- ◆ The annual average rainfall in the region is about 600 mm. Most of this rain (about 80 per cent) falls during the monsoon. Before TBS's intervention in encouraging RWH, 35 per cent of the rainwater was lost immediately as seasonal run-off. Another 50 per cent

was lost due to evaporation or transpiration. Only 15 per cent of the rainfall naturally recharged the groundwater. Of this, 5 per cent became soil moisture, as the soil was too dry. Another 5 per cent constituted the base flow, implying the amount of groundwater returned to the surface stream or river. Of the remaining 5 per cent, some parts were tapped by wells and used, but the rest percolated to depths below the wells and stream beds.

- After RWH structures were built, there was an additional recharge of groundwater to the tune of 20 per cent.
- Though the base flow to the stream or river remained the same, there was an additional seepage (effluent seepage) of 17 per cent of rainfall to the river in non-monsoon months. This phenomenon contributed to the revival of the River Aravari and made it perennial.
- Seasonal run-off has come down from 35 per cent of the rainwater to only 10 per cent.
- There has been an increase in soil moisture: an additional 5 per cent of the rainwater is retained in the soil. Groundwater table has risen. In all 5 per cent of the total rainwater is being used for irrigation, one-third of which is returned to the ground. It should be noted that the villagers have not been unscrupulous in drawing out groundwater.
- About 22 per cent of the run-off (excluding the 10 per cent seasonal run-off during the monsoon) is better regulated and spread out over the year.

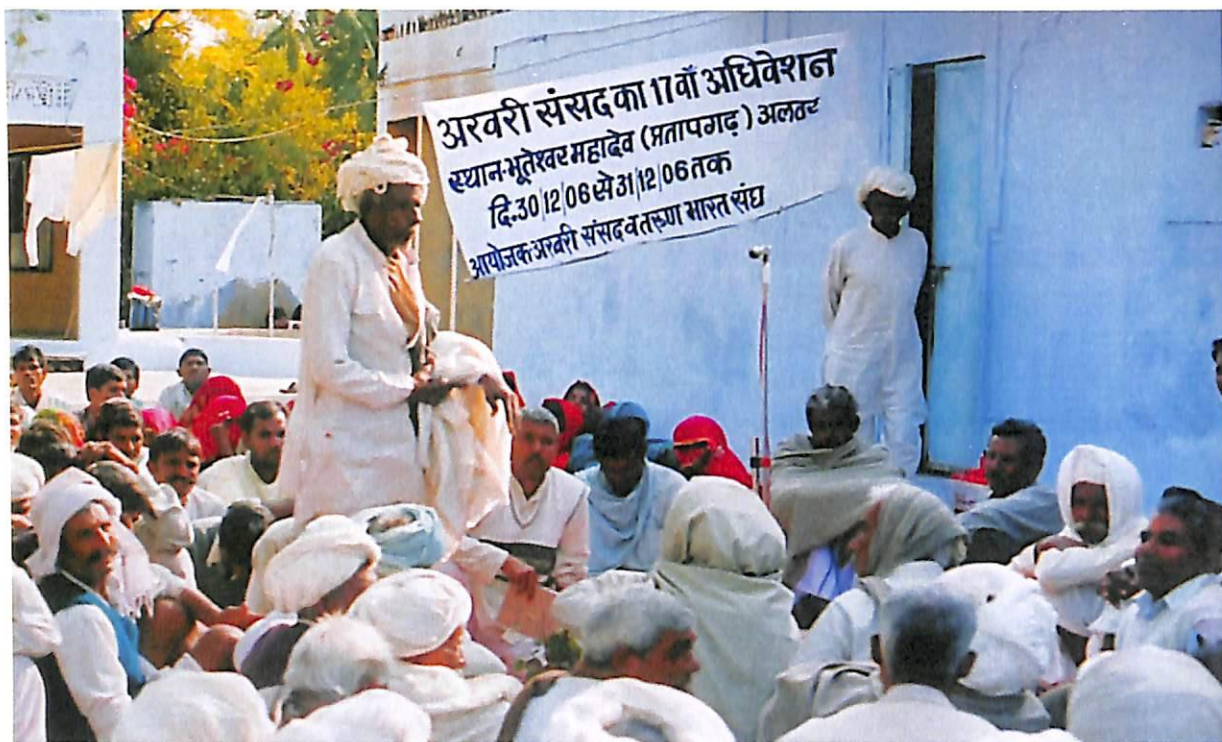
This has been crucial in reviving the Arvari. If this run-off had not been regulated, the river would not flow throughout the year. This shows how fragile the ecosystem is...

Arvari Sansad (River Arvari Parliament)

The River-Basin focused approach of TBS has led to the rejuvenation of seasonal rivulets as perennial rivers. When there was plenty of water in River Arvari, there was natural growth of fish, which continued to multiply. The government wanted to get hold of fish and brought in a contractor.

The people resisted and the Government had to cancel the contract. It is not that the local people wanted control over the fish. Far from it! They are all vegetarians and do not eat fish, but they realized that today it was fish tomorrow it would be water.

This incident led to the formation of Arvari Sansad (River Arvari Parliament) representing 72 villages at its bank. This Parliament meets two times a year. The primary objective of the Sansad is to safeguard Integrated Water Management efforts of the community in river catchment. It follows Gandhian ethos of participatory, equitable and decentralised paradigm for water management (Jal Swaraj), where decisions are made at the grassroots not by centralised institutions. The Sansad has framed a set of rules for the river basin conservation and its management issues.



River Arvari Parliament

This example demonstrates community leadership in action in protecting a resource. This is the only region in INDIA where the people themselves have set up a unique river basin organization for Demand-side Water Management.

Struggle Against Mining in Sariska National Park

A protected forest with unclear boundaries, a tiger reserve chalked out in a limestone-rich area, mining leases whose legality is questionable – all these have created a mess in the Sariska National Park in Rajasthan. The TBS found that even after constructing johads, the water level did not go up in the wells and lakes

around Sariska. But soon found what was wrong. Tarun Bharat Sangh traced the missing water to the pits left unfilled by the miners after their operations. Water collected in them, depriving the wells and lakes of water.

The TBS took up the issue and a public interest petition was filed in the Supreme Court. In 1991, the apex court issued an order against continuing mining in the ecologically fragile Aravalis. This was followed up by a notification by the Ministry of Environment and Forests in May 1992 banning mining in the Aravali hill system. It eventually led to the closure of 470 mines operating within the buffer area and periphery of the Sariska National Park.



A Closed Mine

During this struggle, TBS activists had to face the wrath of the mine owners. They were threatened and attacked. The miners carried on a vilification campaign against them. But it was the noble cause of the struggle which led to victory.

Rashtriya Jal Biradari

TBS's efforts of organizing the villages and local communities across the country have resulted in the formulation of the Rashtriya Jal Biradari (National Water Community).

Rashtriya Jal Biradari (RJB) is a network of various like-minded individuals, farmers groups, social groups, Voluntary Organisations,

Non Government Organizations, Research Institutions, social scientists, water experts basically all those who are concerned and have deep interest in the issue related to water.

The Rashtriya Jal Biradari was formally incepted in the National Water Convention held in April 2001 in Tarun Bharat Sangh at Nimi village (near Jaipur). More than 7,000 water warriors from all over the country participated in the convention. Then started the water movement regarding water rights and to establish communities right over water. The responsibility of leading the movement was given to Rajendra Singh (Ramon Magsaysay Laureate, 2001).



Grassroot brainstorming for pro-people national water policy

The Rashtriya Jal Biradari has its units in each state of the country. It is working on national level issues like pressurizing Central and State governments for making pro-people water policies, decentralized community driven water management, advocacy against privatization of natural resources and gigantic project of Interlinking of rivers, creating awareness among general mass for water conservation.

The Tarun Bharat Sangh have ensured positive impact to create a nationwide awareness on issues related to management and conservation of water resources for well-being of the society. The details are as follows:

- ◆ Rashtriya Jal Biradari has provided an indisputable and prestigious platform to all stake-holders to join hand at various levels to exchange experiences, ideas, learn and take appropriate measures to address issues related to water. This is perhaps the first and foremost conglomeration of cross-section of society fighting for common cause in the country.
- ◆ Judiciary has become more environment especially river-sensitive, as evident in verdict of rejuvenation of Mithi river in Mumbai, forcing U.P. government to obtain environment clearance for highly controversial Ganga expressway project and pollution of Ganga-Yamuna basin.

- ◆ Rainwater harvesting has now become a crucial obsession and buzzword in societal discussion at all level. Many of the large number of visitors from other states have been inspired by Tarun Bharat Sangh's work to take up such works in their areas.
- ◆ Tarun Bharat Sangh has influenced state drought relief works to ensure that more part of the budget is spent on water harvesting structures rather than works not directly relevant to drought proofing.
- ◆ Perception of National and State Governments towards protected areas has significantly changed after the formation of "People's Sanctuaries" in villages in Tarun Bharat Sangh's project area.
- ◆ In Sariska National Park, Tarun Bharat Sangh has moved from a position of conflict with the state to one of collaboration. Due to TBS's work, water-harvesting structures are now part of the Park's program.
- ◆ A long struggle of Rajasthan Jal Biradari has successfully being culminated into people oriented Rajasthan water policy-2008.

At present RJB focusing on 'Save the Rivers Campaign' *Recently, due to persistent efforts of RJB, River Ganga has been recognized as 'National River' by the Government of India.* Moving ahead, RJB is trying to bring stakeholder of polity and community on common platform for dialogue to save rivers from pollution, excess exploitation and encroachment.

Rashtriya Jal Chetna Yatra (National Water Awareness Campaign)

The National Water Policy was declared on April 1st, 2002. It was widely felt all over the country that the provisions of the Policy would drive India towards a centralised control of water and an atmosphere in which the private sector would have more say in planning and managing water resources in the country. The colossal scheme for linking 37 rivers all over India to enable inter-basin transfers has also been proposed by the Government as a panacea for tackling problems of drought, flood and agricultural and industrial development in the country.

In the above environment, TBS feared that in the long run, resources developed by the efforts of countless communities in various parts of the country could come under the ambit of privatisation. It is also widely recognised that lack of right to develop, manage and control their own water resources is the major reason for alienation of local communities from their water (and hence land and forest) resources. The current policy developments would further alienate communities and result in pushing the country into an ecologically and economically disastrous downward spiral, afflicting most the poorest sections of Indian society.

The urgency of the campaign was further accentuated by cases in Chhatisgarh, Orissa, Kerala and other states where water resources had been (or were proposed to be) put under



Jal yatra in the state of Orissa

BOOT schemes. The private sector has been given unfettered priority rights by these States over water resources completely ignoring the rights of local populations.

In order to sensitise people at large about the major issues involved and to seek a diversity of opinions from various parts of the country on the same, the National Water Awareness Campaign was planned with the following objectives:

- To increase awareness about the need for judicious use and regeneration of water resources for enhancing water quality and quantity in all parts of India.
- To increase awareness about water as a basic right of each citizen of India and the

consequences of Government policies regarding privatization of water and interlinking of rivers of India.

- To meet and bring together activists who are working on water issues in isolated pockets of India.
- To form a pressure group for making state and national water policies more people-oriented and responsive.

In 14 months, the campaign touched 320 districts in 30 states of India (of which 17 states are severely drought affected) and met concerned persons in 90 cities and 4 metropolises.



Water Warriors at TJV

Tarun Jal Vidyapeeth (Tarun Water School)



Tarun Jal Vidyapeeth (TJV) is an initiative of Tarun Bharat Sangh. The idea of the TJV sprouted during the National Water Literacy Campaign. During this campaign, a need was felt to build the capacities of organisations and individuals working in the field of water conservation in India.

TJV caters to the requirements of an illiterate farmer and a highly educated person alike; the training provided in TJV enhancing the understanding and skills of those working or interested in working on issues of water management.

The objective of setting up TJV is not to construct a set of buildings but to raise a group of pupils who have a deep concern for water conservation and want to develop a better understanding. These pupils will serve as the pillars of the school.

The mode of imparting knowledge in TJV does not rely primarily on lectures and experiments of science in classrooms. But the entire country where efforts of water conservation are on serves as classrooms for the students.




TJV has till now facilitated following activities:

-  Two-year course for “Water Warriors”.
-  Short term capacity building course for all



Yamuna Satyagrah

stakeholders in water management such as village institutions, NGOs, VO's, CBO's, GOs, Academicians, Scientists, bureaucrats, social activists etc.

-  Organising State & National level workshops on vital issues related to water management and for working towards a more equitable and sustainable State Water Policy.
-  Maintain and upgrade national mailing list and resource library on water.
-  Publications of exemplary work and issues on water management.

Now, TJV is on the way of collaboration with many well known varsities of the country. TJV

will help them in syllabus formulation & execution of natural resource management courses.

Save the Rivers Campaign

IPCC reports a considerable shortage of water in all river basins of India by the year 2025. World Watch Institute predicts that the Ganges and other rivers in heavily populated India will run dry for a part or all of the dry season by the year 2025.

Tarun Bharat Sangh under the leadership of Dr G.D.Agarwal (Vice Chairman of TBS) launched a nation-wide campaign to maintain an

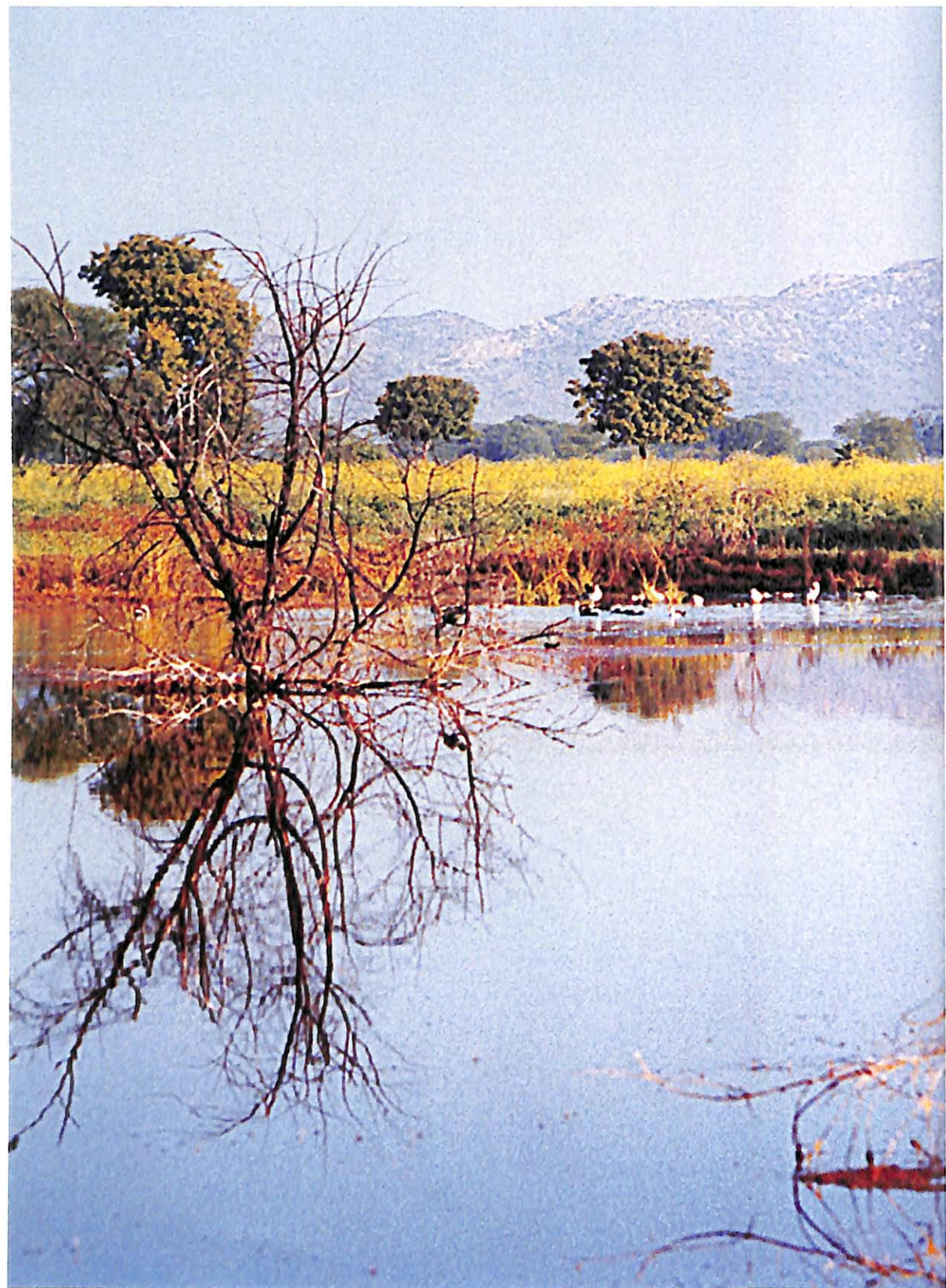
unaffected flow of the river Bhagirathi in Uttarakhand. Dr G.D. Agarwal twice went on “fast-onto-death” to oppose the government policies to dam the river for power projects. To support the “fast-onto-death” RJB mobilized religious leaders, environmentalists, media persons, political parties, engineers, NGOs, social activists etc to highlight the importance of pollution and encroachment free flow of River Ganga.

The campaign compelled the Government of India (on February, 2009) to designate River Ganga as National river and notify the National Ganga River Basin Authority (NGBRA) as an

empowered planning, financing monitoring and co-coordinating authority for the Ganga under the Environment (Protection) Act, 1986. It will, thus ensure, that the development requirements (such as construction of hydropower projects) are met in a sustainable manner while ensuring ecological flows.

The NGBRA would be responsible for addressing the problem of pollution in the Ganga in a holistic and comprehensive manner. This will include water quality, minimum ecological flows, sustainable access and other issues relevant to river ecology and management. Under the new approach, the river basin will be the unit of planning.





modern problems & traditional solutions

an experience of tbs

Climate Change – Adaptation & Mitigation

a. Rain Water Harvesting







The climate change is affecting various aspects of the human lives and ecology. Water resources is among the most vulnerable sectors to be affected by the climate change. Warming trend over India, reported to be 0.57°C per 100 years, is likely to affect the hydrological cycle. Annual rainfall



RWH Structure

variability from one state to another stretches from 10% - 60% or even more, characterized by heavy to low rainfall crucially affects crop production.

The changes in water cycle would result in:

-  Reduction in frequency of rains but increase in intensity;
-  More rainfall in lesser time;
-  Increased glacial melt-runoff initially and then afterwards decrease;
-  Increase in runoff but less ground water recharge;
-  Increase in flood events particularly of flash floods;
-  Increase in drought like situations; cyclones etc.

India's average annual rainfall is 1170 mm. It varies from 100 mm in the deserts of Western India to 15,000 mm in the high rainfall hills of the Northeast. Nearly 12 per cent of the country receives an average rainfall of less than 610 mm per annum while 8 per cent receives more than 2500 mm. But more than 50 per cent of this rain falls in less than 100 hours out of a total of 8760 hours in a year. The climate change is believed to exacerbate this scenario. Therefore, it is very important to capture this rainwater, which just comes and goes in a few hours.

An Experience of TBS

The TBS experiences reveal that promotion of traditional water harvesting structures through appropriate institutional mecha-

nisms and financial arrangements would be the best intervention or adaptive mechanism to reduce the adverse impact of climate change on groundwater resources as well as farm economy based livelihood.

Between 1984 to 2008, some 10,000 RWH structures are constructed with support of national and international donors. The rainwater harvesting through small structures consequently revived five rivers, Bhagani-Teldehe, Arvari, Jahajwali, Sarsa and Ruparel, which had been reduced to seasonal rivers, benefiting some 250 villages. The area was subsequently declared a "white zone" by the state government. The impounding of just three per cent of the rainfall is bringing about the economic and ecological miracle of regeneration in the region.

This turnaround in the region was due to revival of traditional water harvesting structures backed up by region specific institutional mechanisms.

Thus the issue of water is not about scarcity but about its careful use and about its equitable and distributed access. This will require reworking the paradigm of water management, so that it is designed to harvest, augment and use local water resources so that it leads to inclusive growth at all levels.

It is evident that freshwater resources and ecosystems are under great threat from non-



Bhairon Dev Public Sanctuary

climate related demands and problems, and water managers are focused on finding sustainable solutions to these pressing challenges.

In the above context, traditional community based water management systems, pave the way for identification of appropriate adaptation and mitigation strategies to address the implication of climate change on economy and ecology. *The Integrated Water Resource Management (IWRM) interventions of TBS shows the potential adaptation and mitigation measures at local/regional level that address the global challenges of climate change impact on water resources.*

b. Forest Conservation

Conservation of biodiversity (both flora and fauna) along with its sustainable use and equitable benefit sharing is one of the major global concerns today. *Protected Areas (PA), accounting for 11% of world geographical, are the core foundations of biodiversity conservation strategies and now even recognized as last bastion of carbon sink on planet earth or a vital mode of sequestering carbon.*

An Experience of TBS

In this scenario TBS has continued to play a vital role in conservation of forest, wildlife and has spent its energy to promote community based biodiversity model. TBS maintains and

encourage traditional methods of living and strengthen means by which local people could take ownership in conservation.

After successful community-based initiative of TBS in the village of Bhaota-Kolyala, a dense forest got conserved. In October 1998, villagers declared it as “Bhairon Dev Public Sanctuary” presenting an alternative to the non-participatory approach to conservation followed till recently by the Forest Department in near by Sariska National Park.

Villagers has defined their own set of rules to control deforestation and grazing. This is the first public sanctuary of its kind.

Also, TBS motivated village level intuitions to undertake afforestation work, protection of forest and construction of RWH Structures in both core and buffer zone of Sariska National Park. TBS has constructed 115 earthen and concrete structures in core zone and 600 RWH Structures in the buffer zones of Sariska National Park. On one hand, these efforts facilitated a rise in the groundwater levels and provided drinking water to wildlife during droughts. Moreover, the increase in soil moisture in downstream of RWH Structures provided excellent conditions for vegetative growth and thus helped in rejuvenation of degraded grazing land into productive one. The grazing land thus developed in vicinity of RWH structures and in their catchment provided immense relief in terms of fodder/forage availability to wildlife during mild to severe drought conditions. Thus the grazing land

developed in buffer zone significantly reduced the pressure on core zone of Sariska National Park.

Food Security

a. Agriculture Production

The anticipated population growth may be 15000 million by 2020. The food production has to be stepped up from 184 million metric tones during the year 1994-95 to 225 million metric tones by 2020. Large-scale losses in agricultural productivity may in turn give rise to malnutrition and micro nutrient deficiencies.

It is important to realize that India's future food security even from its so-called Green Revolution areas will depend heavily on a nationwide groundwater recharge programme, which can only be taken by individual communities through rainwater harvesting. If this is not done, agriculture will suffer even in current irrigated areas because of the increasing overexploitation of groundwater and lowering of groundwater tables across the country.

And as areas irrigated by groundwater show higher productivity than those irrigated by canals, the contribution of groundwater to India's total agricultural output from irrigated areas is much more than that of canals.

Further lowering of groundwater tables can seriously threaten India's hard-earned food security at a time when India will need to produce more food to feed its growing population.



Fertile land

To address the above scenario, global and national discourses unanimously conclude that, among others, two crucial adaptation strategies should be adopted to enhance the contribution of rain-fed agriculture.

First, use strategies for efficient conservation of water through - soil and water conservation, better runoff management, improved rainwater harvesting, improved management of irrigation systems and recycling wastewater. Second, seek active participation of local communities in promotion of innovative and productive technologies, in strengthening of soil and water management and revival of traditional resource management practices.

An Experience of TBS

The most important input in increasing agriculture productivity is availability of secure water for irrigation. TBS in course of its evolution found that, agriculture productivity has reportedly increased substantially in the following cases:

Prevention of erosion: In cases where the primary objective of the RWH was soil conservation, a significant impact in crop productivity and a reduction in expenses in maintaining and leveling fields affected by gully formation has been observed.

Increase in water for irrigation: Where RWH has increased Groundwater and previously

un-irrigated or inadequately irrigated fields have been put under irrigation, the impact has been the most dramatic in hundreds of villages.

Increase in productivity and income: A study conducted in 2000-01 by an eminent economist; Bharat Jhunjun-wala. He observed that in the project villages of TBS, the area irrigated by a well increased by 7.4 bigha in project villages in comparison to 0.3 bigha in control villages and therefore, the impact of RWH was dramatic as the average increase in irrigated area in a project village was 426 bigha against mere 2 bigha in the control villages. In the case of wheat, the average productivity has increased from 720kg per acre to 1,500 kg per acre. The same study also revealed high benefit-cost ratio of TBS interventions.

One major benefit of the RWH has been that cultivation has shifted from one Kharif crop of bajra or maize to second Rabi crop of wheat or mustard. Since the Rabi crop is the main cash crop in this region, this has translated into significant economic gains.

In many villages, farmers have diversified into crops such as onion, vegetables and flowers due to assured water availability. This has led to an increase in agricultural income. Also, reports of wastelands being converted into agriculture lands are also reported.

b. Livestock

Livestock play role in all three aspects of food security viz. food production, stability of supply and access to food because livestock make a significant contribution in terms of;

- 🐄 Food production through the provision of high value protein-rich animal products. It can measurably enhance nutritional quality in diets, especially vulnerable groups such as young children and pregnant and lactating women.
- 🐄 Indirect support to crop production through draught power and manure.
- 🐄 Significant source of income and store of wealth for smallholders, thereby providing access to food.

An Experience of TBS

Impact of forest protection: In villages where protection of Common Property Resources (CPR) and catchment has been done in addition to RWH structures, the improvement in quantity and quality of fodder has changed livestock composition.

Increasing drinking water availability for animals: The greatest impact of TBS' work has been on animal husbandry. The increased availability of drinking water for animals (both in grazing lands and in villages) in peak summers could be rated as star achievement. Drinking water security has resulted in significant changes in cattle population and composition.

Increase in fodder through strengthening of agriculture yields: In villages where a significant recharge in wells has taken place leading to better irrigation, a positive impact has been observed on fodder availability from agriculture lands in the form of agriculture residue from Bajra, maize and wheat as well as green fodder.



Water and live-stock

Increase in milk yields of cattle: Due to increase in Drinking water availability from RWH and increase in fodder availability by protection of Common property resources and catchment, it is reported to be a marked improvement in cattle health. This improvement is reflected in increased milk yields of cow and buffaloes.

Incomes from animal husbandry: With increased water and fodder availability, there has been a consequent increase in incomes from the animal husbandry sector. In many villages, the real annual income from animal husbandry per family rose by an impressive three times.





miles to go...

Climate Change & Natural Resource Development

Major issues that face our country in addressing the challenge of balancing increasing human requirements for adequate water supplies for overall development are as follows:

Governance: India faces a governance crisis, rather than a water crisis. Good water governance requires effective and accountable socio-political and administrative systems adopting an integrated water resources management (IWRM) approach with transparent and participatory processes that address ecological and human needs.



Way ahead

Capacity Building: The need for capacity building, education and access to information for enhanced effectiveness in water management is unquestioned. These critical elements of the water development process are often treated as an add-on to programmes, with scant regard to local capacity-building institutions, gender mainstreaming, cultural diversity and traditional knowledge or to long-term commitment.

Financing: Financing infrastructure for the water sector comes mainly from the public sector of developing countries and is “topped-up” with contributions from foreign aid, international financial institutions, commercial loans and private equity. Despite the link between water security, development and poverty alleviation, overall investment in water resources management has been seriously neglected. Several models for combining public, donor and/or private funding have been attempted, and the results have been mixed. The debate concerning public-private partnerships has not been resolved.

Participation: In many regions, states and local communities have come to realise that water is a multi-stakeholder issue, and that partnerships of all interested and affected parties are a viable mechanism to translate IWRM into practice. Yet large segments of society, especially women and the poor, are not given a voice.

Actions committed for future

Keeping in view the above issues, TBS has committed to support, strengthen and implement the following actions;

Promote IWRM approach to address adaptation to climate change: TBS would communicate the impact of climate change on the water cycle and facilitate capacity development to support better management of water resources at all levels, national, regional and local, including river basin organizations to build resilience to climate change. Application of the IWRM approach will balance social and economic impacts, minimize environmental impacts and preserve ecosystems.

Scale-up the rainwater harvesting systems: Development of irrigation systems would be required at a large-scale to achieve the required increase in food production, eradication of poverty and hunger and protection of the environment. Therefore, TBS would support and facilitate rainwater harvesting in semi-arid and arid regions of the country so as to improve rainfed or dryland agriculture.

Creating National Awareness and political support: TBS will continue to conduct numerous campaigns, satyagrahas, workshops, meetings, seminars to underscore the importance of water for development and therefore have set goals and targets for priority action. TBS will continue to be engaged in dialogue with state governments to develop people inclusive water policies, strategies and laws for water resources development and management, most often following the principles of IWRM.

Building Bridges between stakeholders: Efforts shall be made to bridge the gap between the food and environment sectors

and to develop mechanisms to increase the productivity of water for food and livelihoods in a manner that is environmentally sustainable and socially acceptable.

TBS would facilitate dialogue and interventions to build bridges between water managers, climatologists, hydro-logist and disaster management organisations, as well as raising awareness amongst water policy makers, water managers and society about the need for better adaptation to climate change and increasing meteorological hazards. The sustainability of groundwater represents one of the major water challenges. Programs that provide technical and financial support to local initiatives are required to better understand and manage these resources.

Strengthen Local Action to Improve Water Governance: Several local and regional scale initiatives on disaster preparedness and adaptation to climate variability (and change) need to be launched, but funding for such activities has been very limited and most have yet to mainstream their recommendations into national policy.

Gender-sensitive participatory processes at the community level have proved effective but there is a need to devise and implement gender inclusive policies. In this perspective, TBS would give attention to water education in primary and secondary school, and higher-level water-sector education and training needs to be re-oriented towards IWRM.

Increase the number of river and lake basin and groundwater organizations, their strength and capacity: TBS would encourage

establishment of river and lake basin, coastal, marine and groundwater institutions or organizations where they do not exist. As these river basin organizations would promote cooperation, mutual understanding and confidence building. Where river basin organizations do exist, TBS would strive to strengthen their capacity to confront the complexities of changing circumstances, including global changes.

Institutionalize pollution prevention: TBS would continue to struggle for enforcing clear and enforceable regulations at the government level to prevent pollution of water resources by agricultural, industrial or domestic waste.

Build on existing local knowledge: Local community are at the front line as they are the first in addressing local problems. They hold valuable knowledge and experience and this still too often goes unrecognized. TBS would document, disperse and build knowledge and experience, as well as technology, so as to sensitize the decision makers to realize the need to learn from these stakeholders and apply the lessons learned, such that they use local capacity and knowledge, work with local reformers, build capacity of local institutions and civil society, and apply the subsidiary principle to empower the local actors.

TBS would strive at both national and local governments to create an enabling environment so that the customary law, informal water use practices and cultural diversity are formally recognized and accommodated in appropriate reforms of water policy and legislation.

Women & Education

It has been recognized that woman is the main donee of the water & forest conservation. However, her position and social status continues to be defined by traditional norms, as is evidenced by their lack of access to education, poor health and exclusion from decision-making on 'public' issues. In spite of the fact that women are the primary managers of natural resources, particularly water and forests, they are still seen as consumers and users of natural resources, rather than as planners and managers.

Even though improvements in the local economy have taken place due to interventions by TBS, children continue to work in these sectors. This is exacerbated by the lack of basic school infrastructure and facilities which forces a large number of children to be out of school and at work. Several socio-cultural, economic, infrastructural and other institutional problems which have acted as barriers for universal access to schooling need to be addressed.

TBS has started some preliminary work in taking up issues of education and health with women's SHG. The need is now to build on the gains of the earlier work in order to ensure that women become active participants in the entire resource management process. Their traditional knowledge of biodiversity and herbal lore can become a valuable resource for the community, and a good starting point for women's empowerment.

Another problem has been that the existing SHG do not have strong linkages with the panchayats. It is critical that these groups formed in the area with TBS support be linked more closely to the local panchayats, which would be to the advantage of both. Panchayats would become more accountable to the local community and through panchayats, the community could access more resources from other departments and institutions. This would also serve as a platform for the emerging women leaders.

TBS addresses issues of sustainable human development in a direct manner, through attempting to build the values and competence necessary for evolving and managing a process of development which is pro-poor, pro-women, pro-nature and pro-children. The area where it will be implemented is one with a rich tradition of conservation of bio-diversity and common property resources, and the sub-strategies will build on these to re-establish a holistic and ecologically sustainable livelihood system. The focus of the TBS is to develop the capacity of the economically and socially disadvantaged groups, particularly women's groups to deal with community resource management with a focus on natural resources and environmental issues. In addition, capacity will also be developed in areas such as health and education.

Also as part of the strategy, the links between child labour, poverty and development would be strengthened. The process would include building an enabling environment of education for children employed in industries from the area. A multi-dimensional approach has to be

followed to address the problem. This would include building the local economy through strengthening natural resource management on one hand, and mobilizing the community and the employers of child labourers, on the other hand, towards education. More educational centres will be set primarily in areas where there are no government-run schools and will have all the working children going to these schools.

A major component of the strategy will be the selection and training of animators and village level workers, who will facilitate the learning process of women's groups. TBS already has expertise in facilitating processes of planning and implementation of resource management programmes. The experiences and expertise of other organisations working to organise women and on issues such as women's health and education will be accessed. Exposure visits and study tours for TBS workers and community representatives will be organised to ensure cross-fertilisation of ideas on women's empowerment. Trainers and resource persons from other organisations will be contacted to provide hands-on support to women's groups in implementing their ideas. The focus in all cases will be on ensuring women's equal participation in all activities, as well as on building their capacities in a focused way on issues related to education and health. In the process of capacity building, the panchayat members, government functionaries, other NGO workers will also be oriented to the people-centred concept of development through exposure and exchange visits.

In order to ensure financial independence of the women's group in the long run, the village fund (gram kosh) initiative would be linked with larger development funds such as lead banks, government schemes and other financial institutions. The village fund will be used for capital generation for any future natural resource development and other community development activities and thereby, achieving a greater financial autonomy.

Marginalised groups particularly women and other village level workers of TBS's work area are the main target group. In addition, poor families and other community members in these villages would benefit from the assistance provided on water resource management, bio-diversity conservation, community health, education, etc.

Health

During the present phase, the health programme of TBS has reviewed many of its existing activities in an effort to understand exactly where and how it making a contribution. In the coming year the focus of TBS will be on expanding the range of activities that are being carried out to secure health. In addition to this, efforts will be made to strengthen and further systemise the work to explore new ways of engaging with the bigger health system. Although this will undoubtedly present many challenges, TBS feels that without intervention on this front it will not be possible to ensure a good health status for the people in its work area.





The then Hon'ble President of Republic of India, Mr. K.R. Narayanan, felicitating the village community

glossary

BOOT	Build Own Operate Transfer
IPCC	Inter-governmental Panel on Climate Change
IWRM	Integrated Water Resources Management
NRM	Natural Resource Management
OBC	Other Backward Class
RJB	Rashtriya Jal Biradari
RWH	Rainwater Harvesting
SHG	Self Help Group
ST	Scheduled Tribe
TBS	Tarun Bharat Sangh
TJV	Tarun Jal Vidyapeeth

support & recognition

In its purposeful journey of two and half decades, Tarun Bharat Sangh partnered with many esteemed national and international organizations for support. To name few of them are CAPART, CASA, Embassy of Japan, Embassy of Ireland, GTZ, IC, NORAD, OXFAM, SDC, The Ford Foundation and UNDP. TBS enjoyed a long and meaningful relationship with ICCO and SIDA.

The work done by Tarun Bharat Sangh and local community has been recognized by various governments, institutes, organizations, communities and individuals around the world. TBS has received numerous awards for its exemplary work.

Rajendra Singh (Chairman, TBS) honoured by Asia's most prestigious *Ramon Magsaysay Award 2001*, for Community Leadership.

An endeavour of riparian community of River Arvari in collaboration with TBS received Special Commendation from *International Thies Riverprize 2004*, for river restoration model. In a ceremony which was perhaps the first of its kind, the then Hon'ble President of Republic of India, Mr. K. R. Narayanan, flew down to Tarun Bharat Sangh to felicitate the village community by *Down to Earth – Joseph C Johan Award 2000*, for being India's most outstanding environmental community.



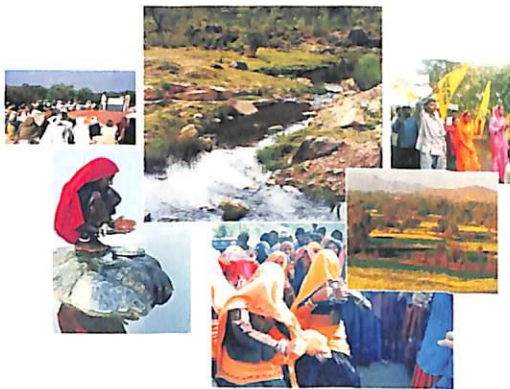
The Prince Charles of Wales with Rajendra Singh during his visit to TBS's work



International Thies Riverprize in the hands of a member of Arvari Parliament

RESTORING
LIFE AND HOPE
TO A BARREN LAND

25 Years of EVOLUTION



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