The Solution of Climate Change River Revival

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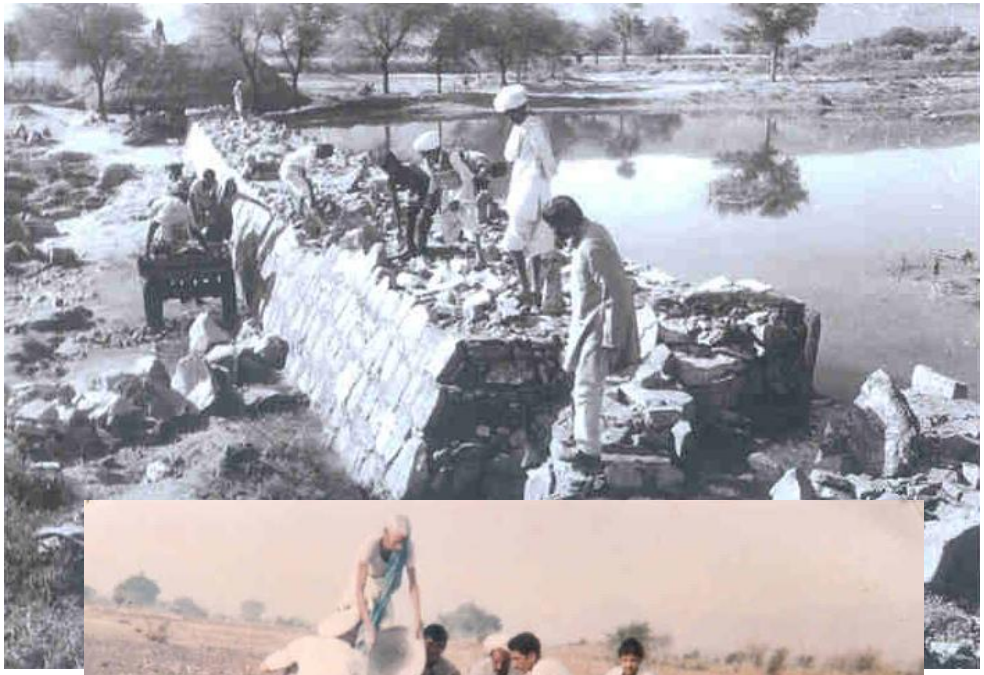
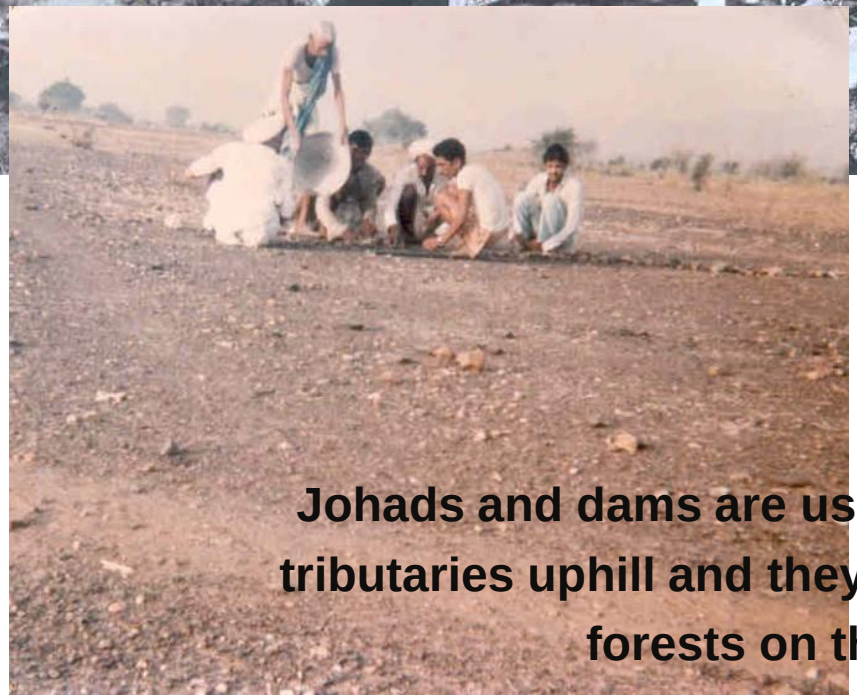
1985

Degraded and barren land
in the catchment areas of Arvari river
& extended drought
had forced people to migrate
out of their villages.

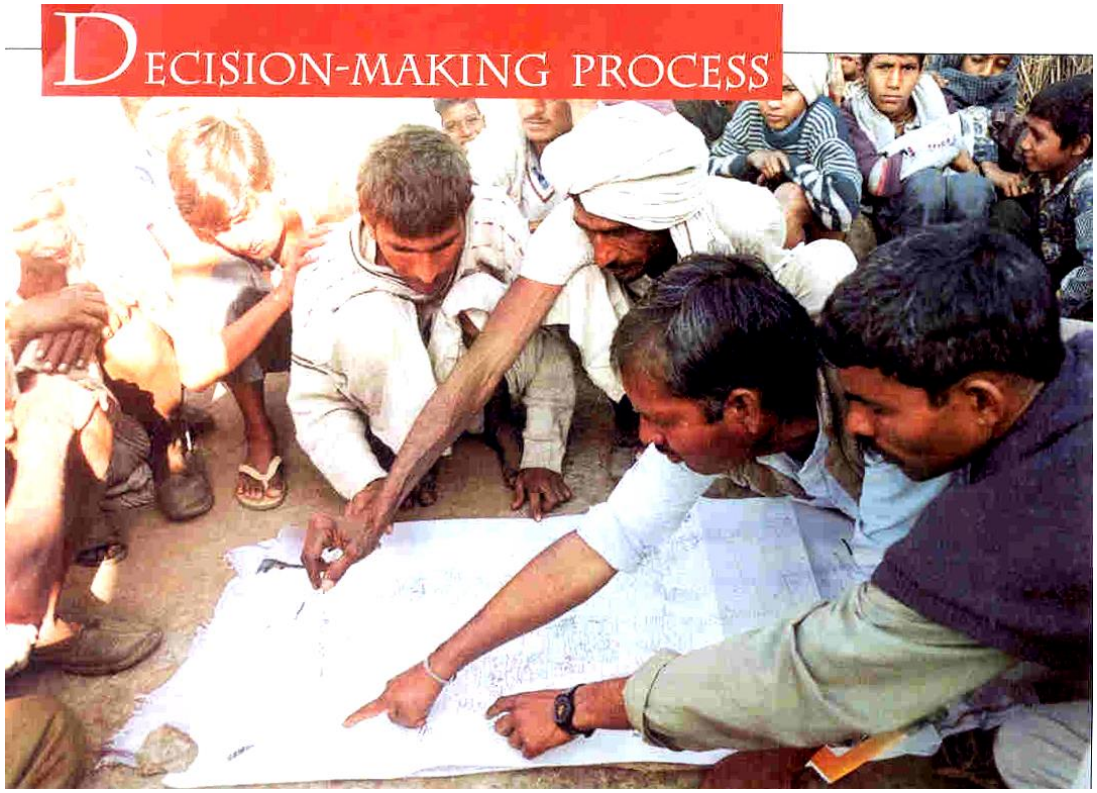

THE SITUATION IN
1985

WATER harvesting structures taking shape





Johads and dams are usually built on small tributaries uphill and they directly benefit the forests on the hill.



Maximum possible use was made of people's traditional technology and wisdom with the help and advice from engineers if needed.

Minimum 30% of total cost was to be contributed by community for each project – the rest was to come from financial support agencies through TBS

.....Ideas into reality

BRINGING PEOPLE TOGETHER

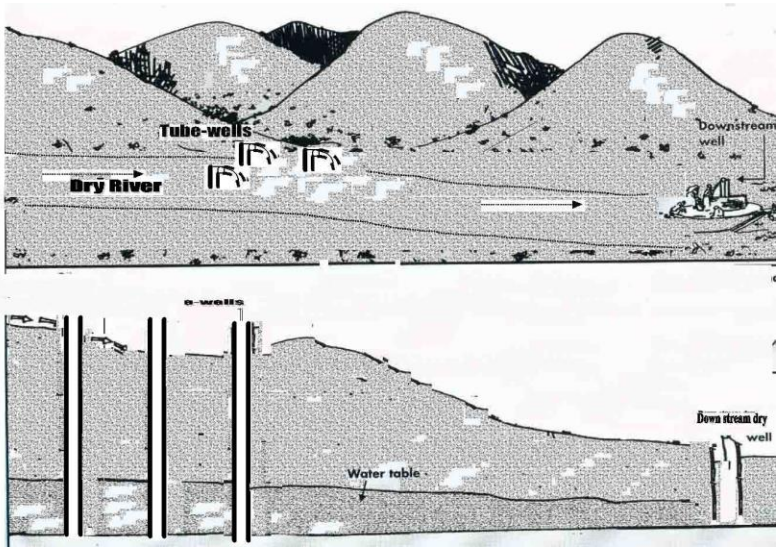
Success of the first Johad inspired people to take up the building of more such structures – the connection between water and forests was made and this also led to the revival of traditional rules.

In the past, forest ownership had been taken over by the Forest Department, leading to alienation of the people and loss of traditions of conservation – making it difficult to bring people together again.

VISIBLE INCREASE IN WATER TABLE

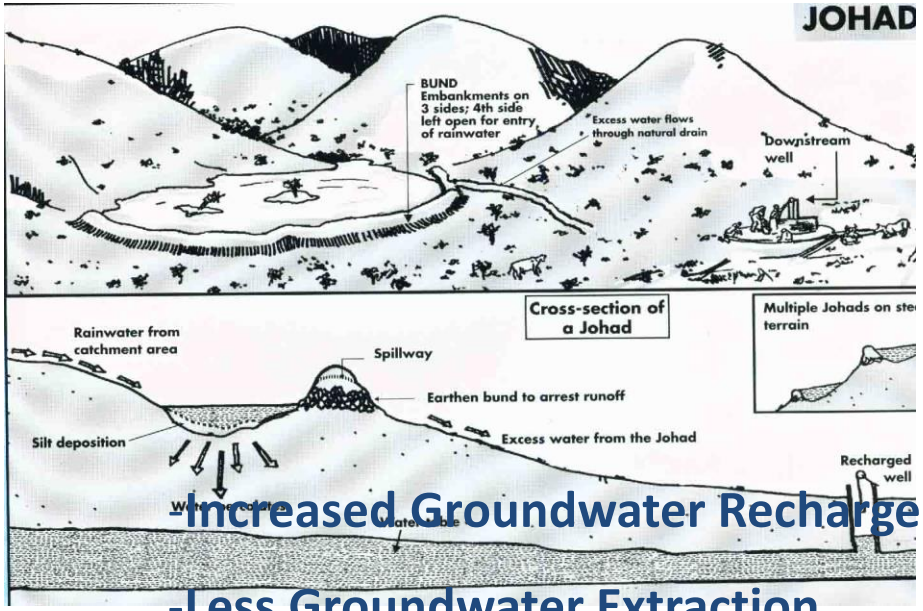
COMPLETED STRUCTURES ON Bhagani BASIN

River Goes Dry:



Excess withdrawal of Groundwater

River is flowing:



-Increased Groundwater Recharge

-Less Groundwater Extraction

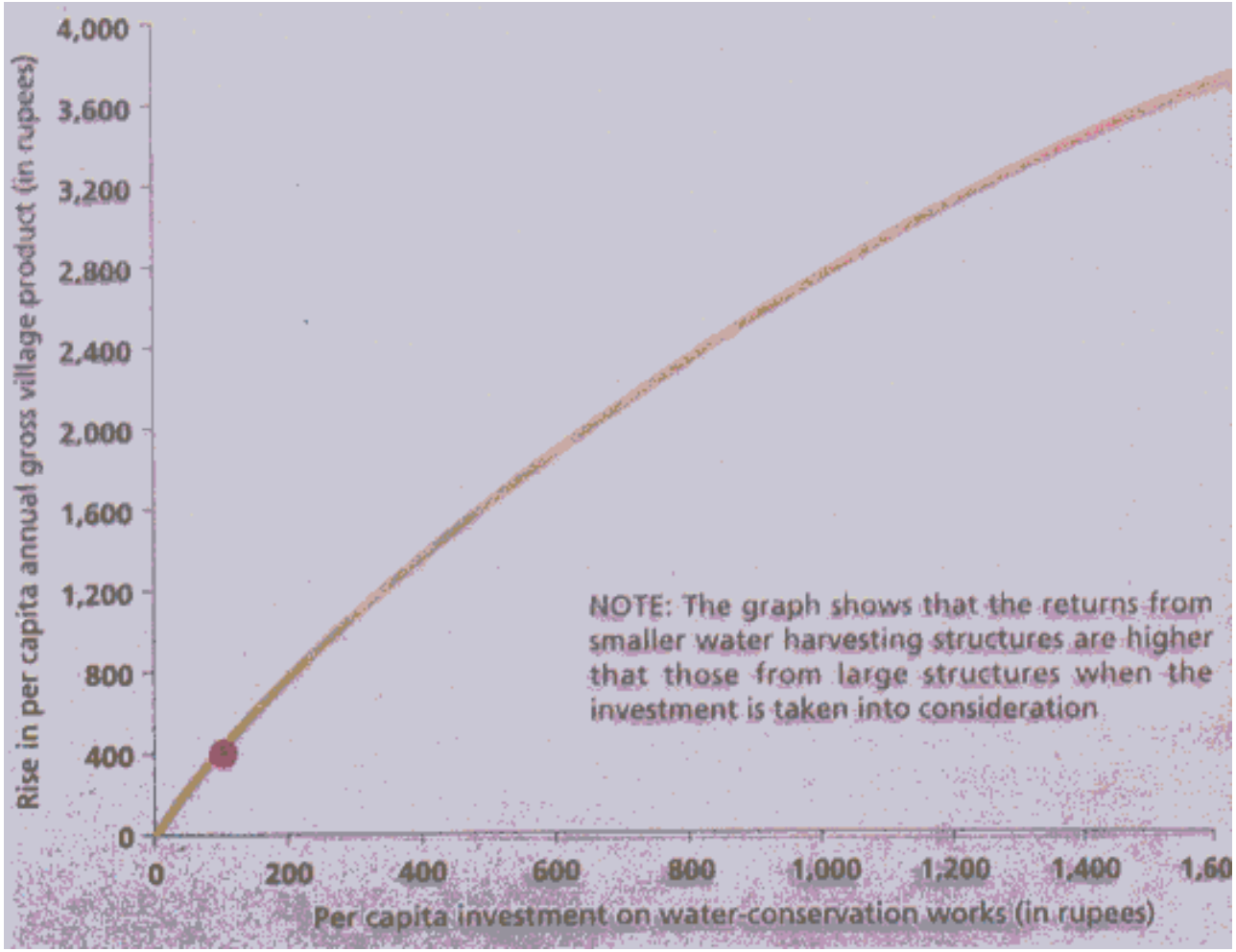
BENEFITS

1. **Sustainable & Reliable water availability for Human beings and livestock**

2. **Increase in agriculture and milk production ensuring food security**

3. **Restoration of ecology and bio-diversity in the area as an adaptation to climate change**

SMALL INPUTS : GREAT RETURNS



Increasing investment on small water conservation works brings increasing economic returns.

An investment of Rs.100 per capita on Johad raises the economic production in the village by as much as Rs.400 per capita per annum.

BLUE *brought* GREEN

BLUE *brought* PROSPERITY

The magic of Bhagani river over 12 years

The river had disappeared in 1940s, and was revived in 1997 through the efforts of Tarun Bharat Sangh

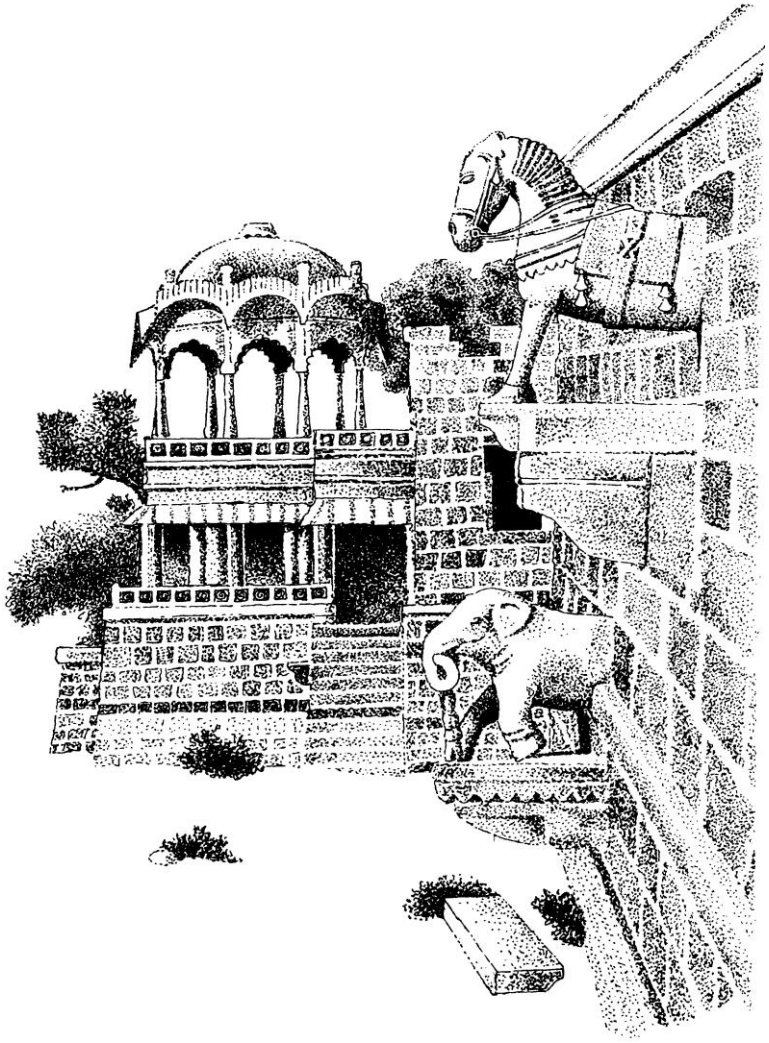
Traditional

WATER HARVESTING SYSTEMS IN INDIA

THERE ARE VARIOUS METHODS OF WATER HARVESTING EXISTING IN INDIA.

THE MAIN COMMON PECULARITIES OF ALL SYSTEM ARE :

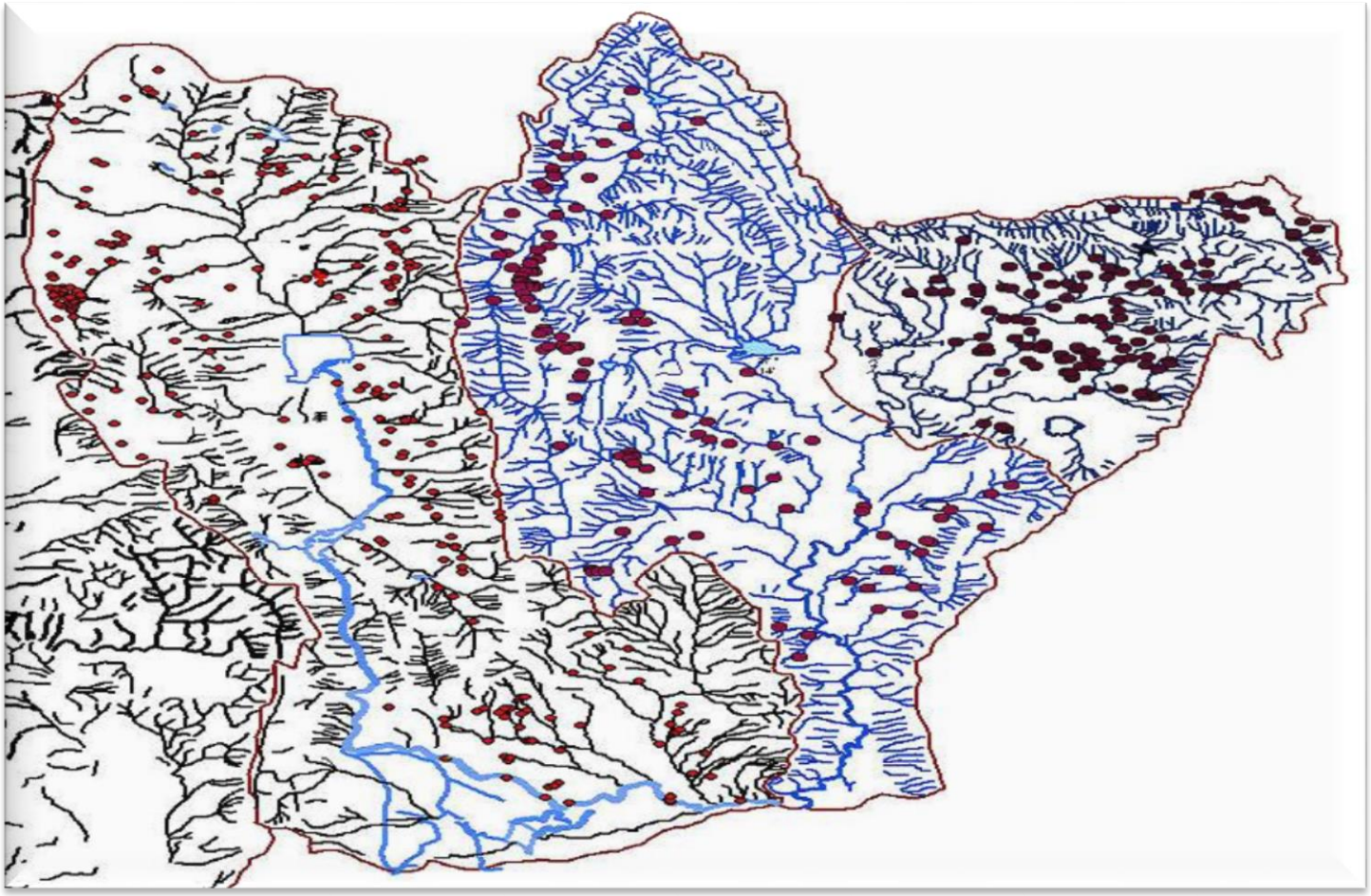
- USE OF LOCAL RESOURCES AND TECHNOLOGY
- COMMUNITY BASED OPERATION
- COMMUNITY DRIVEN DE-CENTRALISED WATER MANAGEMENT
- CONSERVATION AND DISCIPLINED USE OF NATURAL RESOURCES



The River Basin Organization
Water Demand side management

Rules are framed about issues of water conservation and utilization, and forest conservation.

CATCHMENT AREA OF RIVER JAHAJWALI



11 ASPECTS OF The River Basin Org.

1. Framing of rules regarding direct irrigation from the Bhagani river and the wells.
2. Framing of rules regarding crops and cattle feed.
3. Rules to first fulfill local needs with crop production.
4. No sale of water and conservation of fishes in the river.
5. Restriction on the sale of land and the efforts to reduce the need to sell land.
6. Making the whole river area green, ban mining and restrict extended grazing by nomadic grazers.
7. Restrictions on hunting of animals and illegal cutting of trees.
8. Revive traditional methods of water and forest conservation.
9. Prevent over exploitation of water and promote water conservation work.
10. Establish an active system of the management of the river.
11. Define and redefine the role of the village communities.

USE OF INDIGENEOUS KNOWLEDGE IN TBS WORK

AWARENESS IN THE COMMUNITY

- Awareness of various aspects of water management
- Respect for culture, traditions and historical practices
- Will to work together for community's common interest

WORKING STRATEGY

- Constitution of Village Councils – Monthly meetings of all grown ups
- Maximum possible use of traditional technology with advice from engineers if needed
- All decisions including technical (siting, materials, design etc.) by Gram Sabha
- All decisions by consensus, and not majority
- Role of women in helping reach consensus
- Min. 30% of total cost contribution by community – rest from support agencies thru TBS

OPERATION AND MAINTENANCE

- Total responsibility assumed by the community

WATER – ABSTRACTION AND USE MANAGEMENT

- River Based Organzation
- Responsible for planning & enforcing sustainable use of water, particularly in agriculture

BLUE *brought* HAPPINESS

Need of the hour…

The River Policy

Thank you…

GOAL

To enable rivers to be rejuvenated and to be able to sustain its existence and provide eco system services for generations to come.

PRINCIPLES

Integrated Water Resource Management (IWRM) principles are to be adopted in the management of all water resources in the country through people's participation. People should be the owner and manager of water resources. It will require mass water awareness campaigns in the country followed by capacity building programs at all levels.

Cont…

- Governance of rivers should be completely transparent and participatory and managed by people by constituting an organization called River Parliament. The logistics for formulation of this River Parliament can be organized for every 10 km distance of a river, and these Parliaments should have power of a local governance committee. There should be at least 50% members' representation from the local communities. The committee should have legal powers to monitor the river and take corrective measures/orders as per the requirement to maintain the quality and flow in the river.

Cont…

- At River Basin level there will be a apex body namely river basin governance committee comprising of members nominated from local governance committees to form a River parliament. State should consult the local committee and the River Parliament in planning any development or intervention in the river.

Cont…

Environmental flows should be ensured in all the rivers in the country. Balance has to be maintained between surface and groundwater, use in all the river basins to check the alarming status of groundwater across the country.

Cont.

River flood plain demarcation needs to be taken up on a high priority basis, based on 100 years flood data, and these should be protected by legal and regulatory provisions.

Cont…

Usability profile of river and cyclone areas should not be modified or changed. Clear demarcation of source of origin to ocean river flow, and these areas to be defined as reserved areas. Community participation in identification of these areas should be ensured.

Cont…

To avoid release/mixing of contaminated and sewer water into rivers there should be different policies for sewer and river.

Cont…

Surface and ground water pollution by individual, group, community, industry or any other should be treated as criminal act and must have legal provisions for severe punishment and not penalties. Continuous and planned efforts by all be made to maintain the natural characteristics of rivers.

Prioritization of River Water Use

- Release of water as Natural/environmental Flow (environmental and ecological)
- Drinking Water (both for humans and livestock/animals)
- Water for agricultural livelihood
- Non-consumptive uses, such as, cultural, religious, and tourist uses, etc.
- Hydro Power
- Industries
- Others

River Rejuvenation and Natural Flow

- Natural flow of the rivers should be given the above priority. The river and groundwater should be treated as common property resource (CPR). The management of rivers and groundwater should be with peoples' participation as there are strong traditions of community management of water and other natural resources in India.

River Rejuvenation

Adoption of Integrated Water resource Management (IWRM) approach in all river basins, sub-basins and watersheds. It should be participatory and based on use of traditional and modern knowledge of water resource management.

Cont…

Initiate water auditing and budgeting at all levels staring from village to river basin and plan for surface and ground water augmentation and usage with one of the objective as drinking water security to all.

Cont…

Popularize water conservation and use of water saving technologies. As agriculture is the most water demanding activity promotion of sprinkle and drip irrigation techniques to reduce the demand significantly.