



Water Sustainability Awards

WATER SUSTAINABILITY AWARDS Key Initiatives

2021-2022



ABOUT THE WATER SUSTAINABILITY AWARDS



Water Sustainability Awards

Water is one of the most vital components of our living environment. It regulates economic growth, social and political change, technical and scientific advances and progress, in partial and/or totality. In India, water acts as a backbone of livelihood to more than 70% of the population engaged in the agriculture sector. Also, approximately 10-15% of the population is engaged in industries directly dependent on water such as textile, leather, food processing, etc. Water, therefore, has a multitude of linkages with the country's economic health. Furthermore, through its role in food security, energy security, and health, water ensures the right to life for all citizens.

United Nations recognizes that national priorities on reliable energy, economic growth, resilient infrastructure, sustainable industrialization, consumption and production, and food security, are all inextricably linked to a sustainable supply

of clean water. Considering this, the United Nation's Sustainable Development Goals recognize water as the key element of sustainable development by setting a dedicated global goal for water. Goal 6 of SDGs, further specifies targets to be achieved by 2030. The significance of these targets is emphasized by the interlinkages among them, and the achievement of every target depends on the achievement of others. Hence, it is necessary that all the stakeholders equally share the responsibility of water management, water use efficiency, and water conservation, to facilitate the achievement of water security for all. Encouragement and recognition would be an effective way to build the culture of water resource protection and conservation. With this perspective, the TERI-IWA-UNDP Water Sustainability Awards will cover the various dimensions related to the achievement of Sustainable Development Goals on water.

WATER CHAMPIONS



SHRI. R.K.SAMA, IFS (RTD.)

Currently engaged with

- (1) Shroff Foundation Trust, Vadodara
- (2) Dhruva (BAIF) and GRISERV (BAIF), Pune
- (3) Rural Development & Management Institute, Ahmedabad.

KEY ASSIGNMENTS

- Helping SFT to formulate, implement livelihood development programs for around fifty thousand families of tribal community in aspirational district of Narmada , Chotaudaipur ,
- Engaged in activities empowering communities to optimally manage and improve the resources: land and water and creating productive assets at household and community level.
- Established a vocational training center at Paldi for SFT, where, more than one thousands tribal girls and boys are trained and gainfully employed every year.
- Engaged as Member of task force constituted by Jal Jeevan Mission GOI for reviewing efficacy of DW programs across country and to suggest the strategy for different regions/ states which submitted its report in September 2020
- Worked as Senior Consultant (Watershed) to Gujarat State Rural Development Corporation Limited and Rural Development Department Gandhinagar (1998-99).
- Conducted a study and process documentation of Joint Forest Management in Gujarat. - awarded by OECF, Japan (1998 - 2002).
- Worked as Adviser to Rural Development Department, Government of Gujarat (1999-2000).
- Conducted Evaluation Studies of Watershed Development Projects in Gujarat.
- Prepared report “To study the possibilities on large scale watershed development.” for national commission for Integrated Water Resource Plan, Government of India. (1999)
- Member of Project Management Committee for “Drought Proofing Project” under Prime Minister Relief Fund in Kutch district.
- Rehabilitated 52 villages in earthquake affected Kutch district- (2001-2003). Constructed around 9000 houses (homes) and other infrastructure in 52 villages
- Successfully coordinated to repair through NGOs, around 100 earthquake induced damaged medium and minor irrigation schemes in Kutch district, in record time of 90

days so as to avoid further damage in rains. The irrigation facilities were restored, which usually would have taken three years at enormous cost.

- As Project Director, Water & Sanitation Management Organisation, Government of Gujarat, promoting community-managed drinking water supply and sanitation

in whole state. One of the founder member and member of its Governing Body & Executive Committee. (January 2003 to 2012.)

- Helped six other states to formulate strategies for community participation in managing rural drinking water supply in their states and to manage change.

KEY ACHIEVEMENTS

- Prepared State memorandum for DAPAP/DDP, submitted to Governments of India's **Dr. Y.K. Alagh Committee (1989) and Hanumant Rao Committee (1993) and helped these committees to prepare strategy and guidelines by GOI.**
- Involvement in **Grounding Watershed Works** as per new guidelines in the state of Gujarat as Deputy Commissioner of Rural Development and evolving training programs and Conducting series of Training, Seminars, Workshops in Watershed Development Programs (1994-2001)
- Member of Pioneering team, worked with Prof Robert chamber of Sussex university to refine and use **Participatory Rural appraisal (PRA)**, as a tool for development activities in whole country.
- Deputy Conservator of Forests, **Rajpipla, East Division (1984-1986)**, pioneered the work of JFM in Division, where the community was organized to protect and nurse the forests falling in there village limits.
- Dy Commissioner, **Rural Development (1982-1984)** - Handled the works of Drought Proofing in the State through DPAD/DDP programmes.
- Deputy Conservator of forests, **Devgadh Baria Division, Panchmahal (1978-1982)** pioneered the scheme of Social Security through Forests Plantation.
- Project Administrator and Project Officer for **Primitive Tribal Groups, Surat(1976-1977)** ,Prepared Monogram and Project for Primitive Group Kotwaliya and executed it
- Deputy Conservator of Forests, Vyara (1975-76)
- One of the First Officer associated with pioneered work in initiating **Social Forestry Pilot Project**, first in the country (1969-1975)

STRATEGY ADOPTED:

- Water security is the first and last post for any agriculture development. Historically, the vertical program and the 'supply driven' service model in India, which has viewed "the poor as humble recipients of state-generated largesse" is difficult to reverse. But, one lesson is learnt and very clearly emerged in last two decades, that is- "without real involvement and commitment from the people, especially the women, the users, no water security can be obtained".
- Over exploitation of underground water is damaging the most efficient storage provided by nature. Its availability at every possible place is most cost effective and great advantage. Thus, to recharge the aquifers the most efficient method is "make rain water walk, and on way hold it in appropriate water harvesting structures.". It can also be augmented at appropriate places by artificial recharging or by transferring water in streams and rivers from surplus generated by floods in other places. This needs a paradigm shift in designing the programs for water availability.
- Shift to demand management from present supply management of 'water' is inevitable and that is possible only through communities. Empirical evidences show, that such managed programs (watersheds, landscapes, WHS) on average are capable of increasing soil absorbed moisture retention by 10%. These can enhance aquifer recharging around by another 10-15 % of rainfall and rest runoff can be added to surface storages. This is the only way to water security for agriculture and ecological management and for drinking purposes.
- Overall 700-800 mms of rain is sufficient for all the requirements in a micro watershed for optimal land based production and other requirements, and that's possible by decentralisation of power, authority and supporting community with appropriate technology and building their capacities to manage it. It is also making them responsible. Further, incidentally such approach is capable of "improving and maintaining soil's productivity / fertility" a cornerstone for assured land based production.

PUBLISHED WORKS

- **Authored "Foot Prints of Development" (P.550) 2018**
- Authored two volumes of Study & process documentation of JFM in Gujarat, OECF Project (1999-2003)
- Authored Report on Watersheds for "National Commission on Integrated use of Water", (1999), GOI.
- Series of articles on "Natural Resource Conservation and Watershed" Published in leading papers and presented in national/ international seminars. Member of high level committee to suggest work plan for Artificial recharge of aquifers of North Gujarat (report published in 1995).
- Conducted **Benchmark Survey for Panchmahals District** for UNICEF for launching convergence of Basic Services, (1994)
- Represented India at "International Workshop on Watershed Development in Arid Areas" organized by Afro-Indian Society and Government of India (1989)
- Authored "**Destruction of Forests in Gujarat: a Forester's View**" (1988)
- Authored "**Monogram of Primitive Tribal Group, Kotwalia of South Gujarat**" (1976) for home ministry, GOI, New Delhi.

CASE STUDY SYNOPSIS

Orsang Mini Watershed Planning (Ojas) In Chota Udaipur District

- After Successful implementation of the watershed Development Program in the area, a River Basin Management Program was initiated in 2015.
 - Each micro watershed developed micro plan for watershed development.
 - Micro Plans of 132/144 villages was developed; with help of satellite maps, secondary information, drainage maps, land use and slopes maps integrated with people's wisdom and active participation through PRA.
 - 100% treatment plan with geo tag sites, Survey Nos, Drawings, estimates were prepared and gram panchayats got it included in work plans of MGNREGA.
 - 12 Young boys are trained as bare foot engineers to support the survey exercise and prepare the first level of action plans- 10 boys are now on role of MGNREGA as site supervisor with monthly remuneration of around 10000/-
 - Series of workshops were organized with key people, MGNREGA and other line department to sensitize them to link these works.
 - Building Community awareness & Education / knowledge for generating demands - Institution building for System level improvements in implementation was attempted.
- IMPACT:**
- The gram sabha demanded and covered the works under their MGNREGA planning
 - 60%+ planning for MGNREGA covers Land & Water resource development works
 - Net Plan of Rs. 42Cr and achieved 23Cr – by leveraging MGNREGA & Other projects
- Area available for cropping increased by 12%
 - Ten lift irrigation and adding 350 wells and more water availability in existing wells made possible increasing Irrigation in raising winter crops and summer crops, with supplement in Kharif season.
 - The targeted HH have now Farming and animal husbandry as the major source of income, instead of casual Labor works.
 - The data reveals that the farm based livelihood is enhanced and sustainable, since farming focus has come through Knowledge sharing, linkages and creating supporting institutions.
 - Investment through their own labour in their own farms has increased productivity and animal husbandry has added to their incomes appreciably. Result is visible in migration pattern.
 - Agriculture Crop Diversification ;
 - » The adoption of Tur, Green Gram, Ground Nuts, Gram, Wheat and Vegetable is increased by reducing the traditional crops (Maize- 36%)
 - Rice cropping has increased due to land levelling, contours bunds and adoption of SRI and better seeds along with adding recycled natural inputs like vermi-compost, vermi-wash and brahmastr (pest control) . It's yield has also increased by 40% .
 - » SRI technique (Seed Rate, Spacing, Irrigation & Fertilizer applications) are adopted in all traditional crops; saved input cost up to 25 % with increased yield 25% on average.. 12500 Farmers have adopted new crops , which also helped in adapting to mitigate climate impact and sustain the farming income.



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