

Celebrating 25 years of Vayalagam Programme in Poverty Reduction through Water Resources and Agricultural Development





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25 years of Vayalagam Programme in Poverty Reduction through Water Resources and Agricultural Development

Water is elixir of life. It has economic, social, ecological and spiritual functions. It was on the banks of rivers and water bodies, human civilization flourished. The hydrological characteristics of the Indian monsoon necessitated the creation of storage facilities to hold the rainwater of the monsoon. With extraordinary engineering, managerial and social skills, an extensive system of rainwater harvesting structures like tanks and ponds had been built and maintained by the people for centuries. Behind these existing indigenous systems of irrigation, there are thousands of years of tradition.

DHAN Foundation initiated an action research project in 1992 for regeneration of farmers' management in the tank irrigation system. Later it took a shape of a scalable 'Vayalagam Tank-fed Agriculture Development Program', which has expanded its approach of working on isolated tanks to tank-based watersheds, reviving chains of tanks in minor river basins to multiply the impact of the renovation and restoration works. In the process, DHAN has also evolved scalable models for community-led conservation and development of traditional water resources, inland fisheries development, creation of drinking water ponds, as well as low cost and household level water treatment methods.

Today DHAN Foundation's Vayalagam Tankfed Agriculture Development Programme has reached its 25th year of engagement in promoting community centred conservation and development of small-scale water resources across the country.



Vayalagam Programme

Promoting Community Governance in Water Resources

DHAN lays emphasis in building social capital for reviving the age old practice of community management (kudimaramath). It organises the framers and farm labourers dependent on each tank into Vayalagam Associations, networks them at the cascade level (chain of tanks linked hydrologically) and federates them at the block or district level to take up conservation drive on the large scale, as well as builds alliances with private, public and non-profit organisations working on tank systems.

At each level of the Farmers' Federation, leaders have emerged from among the local communities. They now work tirelessly to further the restoration drive. What DHAN has achieved in the process is to hand over the entitlement for managing and use of water in these tanks to the people at the grass-roots, which was the practice in India for centuries, until the British rule, when all these were taken over by the various levels of governmental agencies, which created apathy in managing their own water resources and consequently helplessness in managing their destinies. Through DHAN's initiative, this has been reversed, with people now taking charge of their water resources and hence their destinies.

So far DHAN has promoted 4443, Vayalagam Farmers' Associations by organising 297182, small and marginal farm-families dependent on tanks seven Indian states, viz., Tamil Nadu, Karnataka, Andhra Pradesh, Telangana Bihar, Odisha and Puducherry.



Augmenting Storage Capacity of the Tanks

Through the Vayalagam Farmers' Organisations, DHAN facilitates rehabilitation of tanks for not only restoring the physical structures to their originally designed standard, but more importantly, facilitating the proper maintenance of the tanks, efficient water management and implementing improved cropping practices in a sustainable manner. Vayalagam institutions have always been insisting on farmers to contribute one fourth of the cost of rehabilitation through monetary or labour contribution. Rehabilitation of irrigation tanks to their original storage capacity increases availability of water for more area for cropping. Earlier all these tanks and the command area were facing the problem of water shortage towards the end of the cropping period as tank water was inadequate to provide adequate water for even a single full crop.

So far, DHAN has facilitated rehabilitation of over 2000 tanks and 104 watersheds by mobilizing Rs. 829 million from government and private organisations, and individual philanthropies, and generating Rs. 207 million as community contribution through cash and labour. Through these renovation drives, DHAN has been able to ensure access to water for 83,500 hectares of command area through the rehabilitated tanks, thereby stabilizing agricultural production and securing livelihoods. As a result of secured water, the farmers can now harvest up to 20 to 25 bags of grain per acre of command area without any losses that are caused by inadequate water.



Enhanced Water Management

Traditionally, most of the tanks in south India had water managers to effectively manage the water distribution. Each tank had one or more Neerkattis. The Neerkattis had several functions to perform ranging from supply of water to every field at the farm level to safeguarding the tank structures from all natural and manmade calamities. He was a mobiliser of village labour, he undertook watch and ward of tank assets, he ensured water management according to the available water and need of the crop, he forecasted the monsoon and water availability, and he managed the water in times of scarcity and/or excess demand. As mentioned, this system collapsed during the British rule of India, when water resource management were taken out of the control of the local community and became the task of the governmental agencies.

Through the Vayalagam program, DHAN has strengthened the traditional systems by encouraging the Vayalagams to appoint Neerkattis and provide them social and financial safety-nets, so that they continue to contribute in water management, which is very critical in maintaining equitable distribution of water and avoidance of conflicts related to water sharing by the local communities.



Tank-based Watershed Development

An individual tank with its own catchment, water spread and command area is an integral part of a watershed within which it is situated. A cascade of tanks forms a micro-watershed by itself as the tanks are interlinked, often by a common stream or by the surplus water of an upper tank feeding a lower one. An existing tank or cascade of tanks within a watershed captures the rain water runoff and conserves it for later use, which would otherwise flow down the gullies and streams and mostly get evaporated or otherwise dissipated. Over the last two decades DHAN has been constantly advocating inclusion of tanks in the conventional watershed treatment plan. Started on a pilot basis in Chittoor district of Andhra Pradesh in 1997, the tank-based watershed model demonstrated its impact, which has made the Government to include it in the revised guidelines for watershed.

DHAN has taken up Watershed Development works in 104 Watersheds under various Central and State Government Schemes benefitting another 75,900 hectares of land through soil and moisture conservation practices.



Farm ponds for life-saving-irrigation

Hheavy downpour during a few rainy days is a phenomenon caused by climate change. It necessitates more water harvesting structures to augment the storage. While the tanks serve irrigation water needs of the farmers in the entire command area, creation of farm ponds would supplement the irrigation needs of each farm, creating space for the farmers to go in for diversified cropping. A well-sited and properly integrated pond can be the most crucial 'shock absorber' to the farmers. Farm ponds can be built to store water ranging from 500 to 5000 cubic meters depending on the farm size. Besides irrigation, the farm ponds can be used in multiple ways such as fodder production for livestock, raise vegetable crop on its bunds and for fish rearing.

DHAN has supported over 5000 farm families to construct farm ponds in their fields to provide life-saving irrigation to crops during critical phases of water need, thereby securing their livelihoods.



Creating access to drinking water

In the water-starved regions of southern peninsular India, acute shortage of drinking water is a common phenomenon every year. The ground water is saline and unfit for drinking and irrigation. Traditionally, surface drinking water ponds (Ooranis) maintained and nurtured over generations by the local communities have been the source of water needs for the millions of people in this region. Each village has two or three ponds, one for drinking, and another for domestic purposes and for animals. Breakdown of community management and poor maintenance have made these water bodies lose their efficacy. Typically, people have to walk 3-5 kilometres to fetch water, and the burden falls mostly on women. Harvesting and storing the rain water is the only way out of this otherwise intractable situation.

Through Vayalagam Associations have constructed drinking water ponds in 300 villages in the drought-prone districts of Tamil Nadu, and over 120,000 people now have access to drinking water.



Safe Drinking Water through Household Water Treatment

Next to ensuring access to drinking water, DHAN addresses the issues of quality of drinking water, as more than 80 per cent of the diseases among the poor communities are attributed directly or indirectly to unsafe water, for which at least 25-30 percent of family's income is drained towards healthcare expenses. DHAN promotes low-cost household water treatment technology that has proven its efficacy through a significant improvement in the microbial quality of water and reduction in the episodes of diarrheal diseases.

Bio-sand filters, adapted from the traditional slow sand filters have been provided to over 2500 households. Another 10,000 families have been given ceramic candle filters coated with silver, a bacterial-static agent. These houses have also been provided with education on the need for safe drinking water, various ways to purify water at the household level, as well as lessons on the functioning of filters and their maintenance. Over 50,000 people have got benefitted from these filters.



Endowments for Sustainable Management of Water Resources

DHAN has made an institutional arrangement in the form of endowment funds at each Tank Farmers' Association for the sustainability of the association and for future maintenance of tanks. It could mobilise support from the traditional philanthropies like Sir Ratan Tata Trust (SRTT), Mumbai.

DHAN has mobilised Rs 10 Million as Endowment grant to 500 Tank Farmers Associations, which was matched by the community with their contribution of another Rs. 10 million. The income from the secured investments of Rs. 20 million is used by for maintenance of tank structures after their rehabilitation by the local-level Associations.



Demonstration of Different Partnership Models

Vayalagam institutions have demonstrated different models of partnerships for developing tank systems. In addition to state-sponsored programmes with the water resource departments, they have promoted individual philanthropy for water conservation and mobilised support under Corporate Social Responsibility. Reviving the age-old practice of creating endowments for village organisations for regular upkeep of the tanks, DHAN has evolved a concept of endowment from philanthropies with the matching contribution from farmers. DHAN's experience also shows that significant collaboration with mainstream agencies is possible with proper efforts.

Vayalagam Institutions could mobilise support from several mainstream agencies for water conservation and development works. To take up these works, they have mobilised Rs. 829 million from government, private organisations and individual philanthropies. This was matched with contribution of Rs. 207 million from farmers as cash and labour. These efforts have resulted in securing water and improvements in soil moisture regimes of 159400 hectares of lands.



Facilitating farm finance

Agricultural Finance Groups (AFGs) are part of Vayalagams, promoted by organising 15 to 20 members from Vayalagams. They provide continuity to the conservation and development works and facilitate continuous access to credit facility for tankfed farming. The AFGs facilitate cross-learning among the farmers and help them to work collectively. Many banks have come forward to provide financial services to the AFGs. Farmers and farm labourers save in these groups and avail loans for various cultivation and marketing needs, initiating allied activities in the farm such as dairy, goat rearing, either to buy lands or to enhance productivity of lands with soil and moisture improvement measures, construction of farm ponds and so on.

There are 6491 AFGs functioning in the Vayalagams effectively facilitating savings to the tune of Rs. 265 million, facilitated credit to members to the tune of Rs. 756 million and so far these AFGs have mobilised Rs.600 million from commercial banks for issuing credit to their members.



Farmers Producer Organisations

Small and marginal landholders are mostly unorganized, characterised by lack of access to capital, technology and market information. They are often subjected to exploitation by the middlemen with deceptive weights and measures, and unfair prices for their produces. Livelihoods of these smallholder farm families could be made sustainable only when their capacity is enhanced to influence the value chain, in which they enjoy little control. The producer institutions promoted by DHAN work for livelihood improvement of its members in a phased manner and follow graduation approach, starting from enhancing production and productivity through thematic interventions, aggregating the produces and facilitating market linkages, and value addition by way of branding and reaching the consumers directly through retail outlets created by producer companies.

Producers, organised into Primary Producer Groups and further networked into Producer Companies (PC), have started governing a major part of the value chain of their produces. Currently there are 19 Producer Organisations covering 10000 farmers involved in cultivation of crops such as small millets, paddy, groundnut, tapioca, pulses, cotton, jasmine, chillies, coconut, maize, sorghum, chillies and coconut.

TAMIL NADU WATER WEEK 2014

Valedictory Ceremony

Date: 12.12.2014

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விருந்தினர்



Contributions to the Water Sector

DHAN Foundation has set up a Resource Support Organisation for popularising community tank management and tank-based watershed models in Andhra Pradesh and Karnataka. DHAN has prepared a strategy for Water Security through Integrated watershed development for the State Planning commission during 2004. It has been involved in the working committees of the apex planning body of the country, the Planning Commission of India, during 10th Five Year Plan on Minor Irrigation, 11th Five Year Plan on Agriculture and Rural Development, as well as the 12th Five year plan Working Group on Minor and Medium Irrigation and Water Governance. DHAN's hydrologic-based community Institution model is adopted in the Repair, Renovation and Rehabilitation Guidelines of Ministry of Water Resources. Besides, DHAN is one of the institutional members of World Water Council, Global Water Partnership. It has been inducted in the advisory group for National Water Academy, Pune and National Institute of Hydrology for Hard Rock Areas, Belgaum. DHAN has promoted a Council for Conservation of Small-Scale Water Resources. It comprises of eminent thinkers and practitioners, who propagate and promote the conservation and development of small scale irrigation systems in South India. This council engages in periodic interactions with policy makers, planners, administrators and bureaucrats. It also reflects the opinion of the people at the grass-roots on matters relating to small scale irrigation systems through media. Through various tools that it deploys, it helps to shape the government policies related to this sector.

Milestones of 25 Years of Vayalagam Programme

1992	Initiation of Tank Rehabilitation Project in Madurai District, Tamil Nadu (by PRADAN)
1992 - 1994	Implementation of tank rehabilitation works at system tanks with 75% of contribution from District Rural Development Agency and farmers contributed 25% of the project cost.
1993 - 1994	Submission of proposal for Regeneration of Farmers Management in Tankfed Agriculture to Ford Foundation
1994 - 1995	Initiation of programme in Ramnad district at Kamudhi and Mudukulathur blocks.
1994 - 1995	Completion of 1st phase pilot project at Madurai district.
1994 - 1996	The Ramnad District Rural Development Agency's support for pilot tank project at Kamudhi & Mudukulathur blocks with 75% & 25% contribution model.
1995	District level Tank Farmer's Federation concept was evolved and promoted the First Federation at Ramnad district.
1996	Vayalagam Programme was expanded to Theni, Villupuram, Thiruvallur districts with the invitation from the district administrations.
1996	Madurai District Tank Farmer's Federation was promoted.
1996 - 1997	Consolidation of tank rehabilitation project, initiation of programme expansion and deepening at South Indian level.
1997 - 1999	Expansion to Kanchipuram, Chittoor districts of Andhra Pradesh. New components such as microfinance, endowment to tank institutions, intensive focus on tankfed farming initiated. Tank based watershed development was evolved.
2000 - 2003	Support from multiple agencies such as Oxfam Novib, Sir Ratan Tata Trust, UNDP (GEF). Took up IWS supported action research on Co-management of tanks for renovation and maintenance of tanks at Gundar basin and shaping farmer's perspective on tank irrigation system management. Tank Cascade atlas was prepared for Adilabad district. Initiation of locations at Northern Andhra Pradesh and Karnataka
2002, March 7	Vayalagam Movement was launched in the presence of Anna Hazare to further the community-led water resources development nationwide
2003	More than 1000 Neerkattis gathered at Madurai Symposium 2003 for sharing their experiences and resolved to revive and stabilize effective water management.

- 2004 – 2006 Oxfam NOVIB continued its support. Tank-based watersheds were done for Tamil Nadu Agriculture Department under NWDPR. Projects for Oorani renovation was initiated in Tuticorin, Kanchipuram and Ramnad district and started collaboration with Centre for Affordable Water and Sanitation Technology (CAWST), Canada for promoting Bio-Sand Filter.
- October 2, 2006 An exclusive institution 'DHAN Vayalagam Tank Foundation' was launched to focus on scaling-up.
- 2007-2008 Madurai Marathon (Run for Water) was organised to sensitise the public and raise funds. ITC-Rural Development Trust sponsored CSR projects to revive tanks in Sivagangai district in Tamil Nadu was launched.
- 2008 Centre for Urban Water Resources (CURE) was launched
- 2009 DEWATS community-government joint initiative in Panaiyur was launched. Launched CSR Project with BPCL and HPCL in Tamil Nadu and Andhra Pradesh. Gundar River Basin level Federation Collective was launched to take up long-term restoration drive.
- 2010 Launched Conservation and Development of Tank Cascades in Gundar Basin in partnership with Hindustan Unilever Foundation and NABARD to rehabilitate 250 tanks.
- 2011 Launched DHANA Project with the support from AXIS Bank Foundation to renovate 750 water bodies in Pambar-Kottakaraiyar Basin covering 4 districts
- 2012 Prepared manual for Ahar-pyne renovation at National Policy seminar as part of India Water Week with the Union Minister Shri Jayaram Ramesh.
- 2013 Launched Annual Tamil Nadu Water Week in partnership with consortium of TNAU, Anna University and MIDS.
- 2014 Initiated collaboration with NABARD as a Resource Support Organisation for Andhra Pradesh to guide watershed development programme.
- 2015 Launched a programme for promoting Farmers Producer Organisations with NABARD Support for 19 crops all over India. Vaigai River Pageant was organised as a start for Vaigai River Restoration drive. Water Knowledge Centre was launched in Tata-Dhan Academy
- 2016 Phase II of Hindustan Unilever Foundation sponsored project in Gundar Basin to renovate 450 water bodies was launched. Expanded Ahar-pyne renovation programme in Munger district, Bihar and Tank-based watershed programme in Khammam district, Telangana with ITC Support.



DHAN Foundation



DHAN Vayalagam (Tank) Foundation

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