Completion Report for

Activity 1	:	Celebration of World Water Day 2013
Activity 2	:	Assisting about 500 poor and marginalized people to adapt their livelihood to effect the climate change
Activity 3	:	Organizing Stakeholders' dialogue on improved techniques of inland fishery and policy implications.
Activity 4	:	Involving Tank Association/ Water Associations to practice improved technologies

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Final Completion Report

Overview:

DHAN Foundation, a host institution for South Zone Water Partnership entered a MoU to undertake the following on 21st March 2013 for a period from March to November 2013. The work plan included the following:

Activity 1	:	Celebration of World Water Day 2013
Activity 2	:	Assisting about 500 poor and marginalized people to adapt their livelihood to effect the climate change
Activity 3	:	Organizing Stakeholders'dialogue on improved techniques of inland fishery and policy implications.
Activity 4	:	Involving Tank Association/ Water Associations to practice improved technologies

Accordingly the activities have been taken up. Besides the activities, DHAN has undertaken Water Quality Monitoring in Tamil Nadu, Andhra Pradesh and Karnataka in village drinking ponds, open wells, hand pumps, surface water bodies and educated the village community on the quality of water.

Detailed Narrations of activities undertaken under the agreement:

Celebrating Water Cooperation for Conservation and Development of Small Freshwater bodies –Activities undertaken by DHAN Foundation for World Water Day 2013

DHAN Foundation's water thematic collective namely DHAN Vayalagam (Tank) Foundation spearheads the conservation and development of small freshwater resources in six states (Tamil Nadu, Andhra Pradesh, Karnataka, Pudhucherry, Odisha and Bihar) with community ownership and governance through farmers' federations constituted at block, district, sub-basin and basin levels.

On March 7, 2002, DHAN Foundation promoted a people led movement to insist preservation of multipurpose minor irrigation tanks to scale up the programme and address water based livelihoods by strengthening tankfed agriculture in the name of "Vayalagam Mutual Movement"". The launch was done by Shri.Anna Hazare Saheb, Hind Swaraj Trust along with then District Collector of Madurai with 25000 farmer leaders participating from south Indian States. Since then it is a practice for DHAN Foundation to trigger stakeholders involvement from March 7 to March 31 of every year to work for the cause of water resources protection by creating significant awareness drive besides motivating the people to take up voluntary labour in maintaining the traditional tanks, drinking water ponds, soil and water conservation structures in watersheds.

World Water Day 2013 – Celebrating Water Cooperation with India Water Partnership, New Delhi

DHAN Foundation had planned and conducted few campaigns, Voluntary labour (Shramdhan), Sensitizing its own staff across state on the importance of water as a common good and the necessity as well as responsibility of each one of them to protect them from getting extinct and/or deteriorating.

Save Vaigai Campaign:

River Vaigai is one of the important rivers originate from Varusanadu hills of western Ghats in Theni district and flows through Dindigul, Madurai, Sivagangai and Ramanathapurm district about 350 Kilo metre before getting confluence at Gulf of Mannar in the Bay of Bengal. This river is mentioned in the Hindu Mythology on Lord Siva's 64 vital plays. This is again the main source of livelihoods of more than 5 lakh farmers in its delta and also source of drinking water supply to Madurai corporation besides many municipalities and villages. This river in the recent past got into the evils of polluted by untreated industrial wastes, sand mining, extensive growth of water hyacinth, water sharing conflicts and so on.

The villagers living on both sides of the bank across the river vaigai are the worst affected because of such environmental cause. The movement launched by Shri Anna Hazareji about 12 years back took the agenda of stressing a very strong message among the stakeholders an important people led campaign in the river vaigai at 4 places in Head Middle and Tail reaches of the river. The campaign involved a rally by women and farmer leaders, Clean up drive in the river vaigai by free physical labour, an awareness programme on preservation of River Vaigai. The members of government department from Water resources, Revenue, Police, Panchayat raj took part in the campaign and shared their felicitations. The resolutions made by the people were sent to the district administration to inform the state government accordingly. The places where the campaign held were Kadamalaikundu at Theni district, Nilakottai at Dindugal district, Arapalaiyam at Madurai district and Paramakudi at Ramnad district.

Photos:

Commissioner of Police hoist the flag for Inaugurate the proceedings of save vaigai

The procession started at Madurai to save vaigai

Women members participated to save Vaigai

Vayalagam Movement Leader deliberates the historical features of Vaigai

Awareness about save Vaigai given by CEO

Public, Members and local governances leaders were taken a Pledge to save vaigai

Farmers Convention on Agricultural Biodiversity, Food Security and Climate Change:

DHAN Foundation convened a farmers' convention on the said topic at Gandhi Museum premises in Madurai on July 13, 2013. About 300 farmers from Tamil Nadu, Karnataka, Odisha and Maharastra took part. Besides 40 international participants of Agricultural Biodiversity Community from Africa, Holland participated as key observers. A renowned Gandhian Philosopher cum economist chaired the inaugural session and stressed the necessity of protecting the agriculture from perils due to climate change and suggested relevant adaptation measures. Key note paper by an Agriculture Scientist was shared cautioning the threats faced by Indian agriculture and bio diversity in the wake of climate change events. Farmers representatives from each states shared their experiences and problems faced because of climate change. Five sub-groups were made out of participants to discuss about their understanding on Climate Change, their risks and vulnerabilities, deliberate on the coping mechanisms of the community, expectation from mainstream viz. Government, academia and banks.

DHAN foundation also organised a dialogue meeting face to face with the resource personnel involved in new proposal development process to adapt to climate change outcomes. On August 14, 2013, a consultation process was conducted at DHAN Foundation Conference Hall. About members including farmers, Self Help Group

Members, Subject matter Experts on Natural resources management, Disaster and Risk Reduction, Fishery, Coastal Livelihoods, Micro Insurance, Process documentation, development education participated. Mr.Ramasamy Adhinarayanan, Project Investigator of CARIAA from DHAN Foundation facilitated the process by explaining briefly about the Climate change and its impact, briefed overall objectives, necessary to find problem statements to define research questions. The process led to following outcomes:

General Views:

- There is a strong agreement among all stakeholders about CC variability on rainfall, temperature, pest and diseases and livestock population
- Extensive soil degradation, widespread menace of prosopis juliflora
- Vanishing number of native tree species
- Change in crop mix – mixed cropping to pure single crop trend
- Absence of organic amendments
- Season of crop cultivation changed
- Poor access to knowledge and services
- People mindset and cultural barrier

Specific Research Questions/demands:

Related to Agriculture:

- Mapping the vulnerability, risks and indigenous coping practices and its relevance with people perception/ experience and scientific data to be compared for replication and addressing the gap.

- Evolve resilience on farming community and role of agriculture biodiversity conservation in terms of climate change and action needed for increasing resilienceInsurance for small millets and mixed cropping

- Knowledge and practice change – Behavioral Change Communication

- Subsidy for inorganic farming and change of subsidy for organic farming Effect of climate change on soil health and its productivity in the semi-arid regions in different soils

Related to Water:

- Study on surface water bodies storage pattern vs. Climate change and its implications on food security. (number of fillings and number of rainy days)

- Early warning system to reduce the effect/impact of climate change on livelihoods of farming communities and disaster risk reduction

- Drinking water demand and supply - centralised distribution and shortage of drinking water in the villages during summer

World Water Day Celebration at Indian Social Institute, Bangalore

On March 22, 2013, DHAN Foundation's water programme invited 117 DHAN staff working across 15 districts in South India viz. Tamil Nadu, Andhra Pradesh and Karnataka to participate a day long deliberations and made pledge to motivate the poor community to access safe drinking water, hygiene and sanitation. This would be facilitated by providing affordable credit, getting their entitlements through government schemes and/or Corporate Social Responsibility. Mr.A.Gurunathan, Chief Executive of DHAN Vayalagam (Tank) programme shared the role of Global Water Partnership and India Water Partnership on Integrated Water Resources Management. He also highlighted the alignment of activities of DHAN undertakes across its project location mandate the water and food security as well as preserving agricultural bio diversity.

Ms.Camillus Juliana, Team Leader who spearheads Health interventions of DHAN Foundation highlighted the connection between health and water in terms of water borne diseases, causes and effects. Mr.K.Vittal Rao, Programme Leader from Adilabad of DHAN Foundation mentioned the plights of tribals in accessing safe drinking water and live in poor sanitation with huge threats to malaria and other epidemics. At the end of the day, each of the members present in the meeting vowed to help the community with whom they work get enough water based livelihoods and entitlements.

Farmers' Stakeholders dialogue on improve techniques of inland fishery and policy implications.

DHAN Foundation (www.dhan.org), coordinator, South zone India water Partnership organised one day Farmers Stake Holders' dialogue on inland fisheries and policy implications on 4th May 2013 at DHAN Foundation, Madurai with the support of India Water Partnership (IWP), a Pan-water network. DHAN foundation is working with more than 2.5 lakhs farmers, who are small and marginal rainfed, tankfed farmers in six states across India. For this event, farmers involved in fish rearing activities in Tanks, Vilage ponds, Farm Ponds were invited from Tamilnadu, Andra Pradesh, Karnataka and Pondicherry. More than 75 farmers were participated and other stake holders, DHAN Vayalagam Tank Foundation, Fisheries Department, Tamilnadu, Fisheries College and Research Institute, KVK Kundrakudi and Private fish farmers were also participated in this dialogue session.Mr.S.P.Madhan Mohan, Fisheries specialist coordinated this event and shared the importance of this event.

Ensured outcomes

- Experience sharing on the impact of inland fisheries development which provides multiple uses
- Experiencing inland fishery as an additional livelihood for small and marginal farmers.

- Sharing on Climate change and its implication, Adaptation by farmers from different contexts
- Discussion on needy policy and practice changes at grassroots level

Th. M.P.Vasimalai, Executive Director of DHAN, emphasised the development of rural aquaculture as an alternative livelihood and added nutrition to rural through fish rearing in commons and other water resources. He requested the farmers to establish their seed rearing units at small scale level to meet out their block level need. He insisted the farmers to look for improved technologies to improve the biomass production from commons and farm ponds and also to share the messages to other farmers in their area doing fish rearing.

A.Gurunathan, Chief Executive, DHAN Vayalagam Tank Foundation (DVTF) shared their experience in renovation of village Tanks and Ponds and fish rearing in commons. More than 2000 water bodies were renovated by DVTF and Dead storage was created in tanks to store more water exclusively for livestock and fisheries in the wake of addressing climate change. He requested the farmers to share their experience, issues and policy implications to the Panels.

S.P.Madhan Mohan, Team Leader. DHAN Foundation shared the experience of DHAN Foundation and DHAN Vayalagam Tank Foundation to the forum. More than 300 village tanks, 250 village ponds and 300 farm ponds are used for fish rearing activity. The success rate of fish rearing in commons lying around 60% and the production was 600 kgs per hectare. Still stocking of seeds and fed with locally available feed ingredients were happened, is the reason for low production and need of improved feeding management and intensifying the phase harvest areneeded to fetch more income. Women and fisheries are given focus and encouraged women SHGs by providing grant support to initiate, more than 50 SHGs are doing in commons. Policy implications and need of new policies are also shared in the forum. As DHAN has implemented more than 150 watershed development programmes, fisheries development in watershed areas given importance and in Chittoor of Andra Pradesh, more than 125 water resources created in watershed areas are used for fish rearing.

After this, Farmers from different states shared their experience: the success, failure, issues, their needs in quality seeds, feeds, policy changes in this dialogue. They also shared their experience of fish rearing in different water bodies such as Village Tanks, Village Ponds, Farm Ponds, Check dams etc...Late onset and earlier with drawl of monsoon's effect on agriculture and fisheries shared by famers. Apart from these, varied intensity of rainfall and reduced number of rainy days are also shared by the farmers caused the duration of water availability and lesser growth of fishes.

Dr. P.Jawahar, Associate Professor, Fisheries College and Research Institute, Th. Sekar, Assistant Director, Tamilnadu Fisheries Department, Th.Ganesh, Assistant

Professor, KVK, Kundrakudi are the Panels for the dialogue forum. After the sharing of farmers, AD fisheries shared the schemes and also possible areas in developing fisheries in rural areas. P.Jawahar explained the need of dead storage and conservation of water resources for developing fish rearing. Mono sex tilapia is highly suits for rainfed water resources can hold water for less duration. Pangasius is also another suitable species for rainfed tanks and ponds. Th.Ganesh shared his experience in developing fish rearing in farm ponds, fresh water prawns, Pangasius can also be reared along with carps provided more income. Integrated fish farming with bund cultivation, duck rearing, coat rearing is highly suitable for rainfed farmers in their farm ponds.

After lunch, four sub groups were formed to discuss on four topics

1. Selection of suitable techniques for different water resources
2. Inland fisheries- needed policy changes
3. Role of different stake holders – scope for enhancement
4. Youth and inland fisheries

Following declarations were made after deliberations of four sub groups

1. Exclusive Ministry for fisheries at national level and develop national inland fishery policy for resource sustenance and promotion of fishery based livelihood through rural aquaculture.
2. Emphasis should be given to tank ecosystem protection, biodiversity and above all socio economic benefit. Equal importance to be given to rainfed fisheries development as food and nutritional support to rural.
3. Integrating inland fishery with watershed development as large number of water resources were created under different watershed schemes and still creation is going on. A policy on using the water resources for inland fishery development to be integrated in Watershed development policy itself.
4. Convergence with MGNREG- project for fisheries focused on village tanks and Ponds development**, creating dead storage**, desliting, bund strengthening, repairs in effective way
5. Research to look into promoting more multi species composite culture especially for rainfed water resources system, expecting moderate growth in lesser period and also in water depth.
6. Ensuring availability of advanced fingerlings in all districts in right time, at present even the state fisheries department depend on private farmers
7. National Fisheries Development Board (NFDB) to work with NGOs and other civil society organizations with grant fund or seed money to promote and strengthen Inland fisheries through rural youths and women in rainfed tanks and ponds in food and nutritional perspective rather than commercial fisheries

8. Leasing period of water bodies to be increased from three years to ten years with preference to water users association and Panchayat agreement with WUAs, will encourage the farmers to take up maintance of traditional water resources by themselves. Bring back traditional system of water user rights can be achieved.

Welcome address by S.P.Madhan Mohan, Fishery Specialist, DHAN Foundation

Lighting Lamp by M.P.Vasimalai, Executive Director , DHAN Foundation and Vasavalingam, Vayalagam Movement leader

M.P.Vasimalai delivering Chief Guest address

A.Gurunathan, CEO, DHAN Vayalagam Tank Foundation sharing the purpose and expected outcome of the event

S.P.Madhan MohanSharing experience of DHAN, fisheries development in rainfed tanks, ponds and farm ponds

Sekar, AD Fisheries sharing the schemes of Fisheries Department

P.Jawahar, Associate Professor, addressing farmers on improved techniques in fis rearing

Ganesh, Assistant Professor, KVK, Kundrakudi, sharing experience and advantages of integrated fish rearing in farm ponds

Farmers sharing their experience, limitations in developing inland fisheries in commons

Sub Group discussion on Policy implications and need of changes and new policies

Annual General Body Meeting of SZIWP on May 4th 2013.

DHAN Foundation organised the annual general body meeting of south zone India water partnership on May 4th 2013 in Madurai. The members of India water partnership in south zone , people federations working on water theme and other NGOs were invited for the AGBM.

Fifteen federations from Tamilnadu, Andra Pradesh, and Karnataka were participated in this AGBM and they have become members of SZIWP. Mr.A.Gurunathan, Programme Leader, coordinator of SZIWP welcomed all the members and shared the backround, focus, purpose and need of South Zone India water partnership. M.P.Vasimalai, Executiive Director, DHAN Foundation delivered chief guest address; in his address he emphasised to bring more NGOs, Academic institutions, COs, Federations as members to strengthen the network. He

facilitated the brainstorming on focus areas of SZIWP. All members participated actively and the following focus areas were decided to take it forward.

1. New technology transfer for improved irrigation, agriculture, fisheries etc...
2. Linking rivers interstate and intrastate
3. Awareness on rain water harvesting
4. Encroachment eviction in non system tanks
5. Safe drinking water

All members shared that they will go back to their working areas and share the proceedings to other members and suggested to organise same kind of dialogue session at people level.

With that decision, the discussion on selection of board members, period of meetings was discussed. During next meeting, board members will be finalised and the network work more intensively on the above said areas. Mr.A.Gurunathan delivered vote of thanks and with national anthem the programme ends.

Shared Brief Note for National Consultation on Climate Change Adapatation in South India to IWP, New Delhi

<u>Climate Change : Priority areas for Coping and Adaptation</u>

Augmenting Freshwater bodies

In Tamil Nadu state, there are 39000 minor irrigation tanks, innumerable local ponds drinking water Oorani and percolation tanks. The climate adaptation action plan therefore should focus in Tamil Nadu on augmenting storage capacities and strengthening hydrologic linkages between fresh water bodies at all 17 river basins. Priority must be given to tank intensive districts and coastal districts which bear the brunt of water scarcity and salinization in view of sea water intrusion. As suggested by International Water Management Institute, Colombo in their water policy brief , following are the options for adaptation and water storage options.

Fig 1: Options for Adaptation

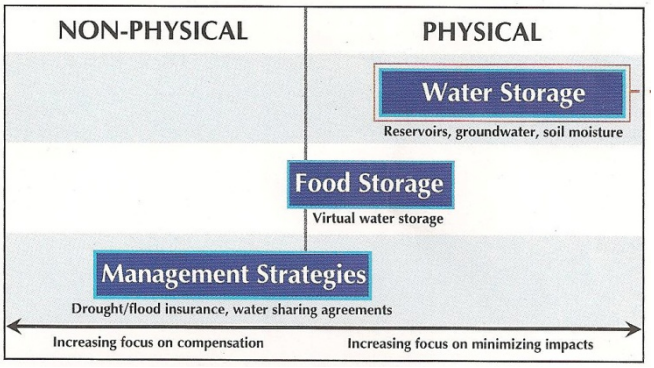
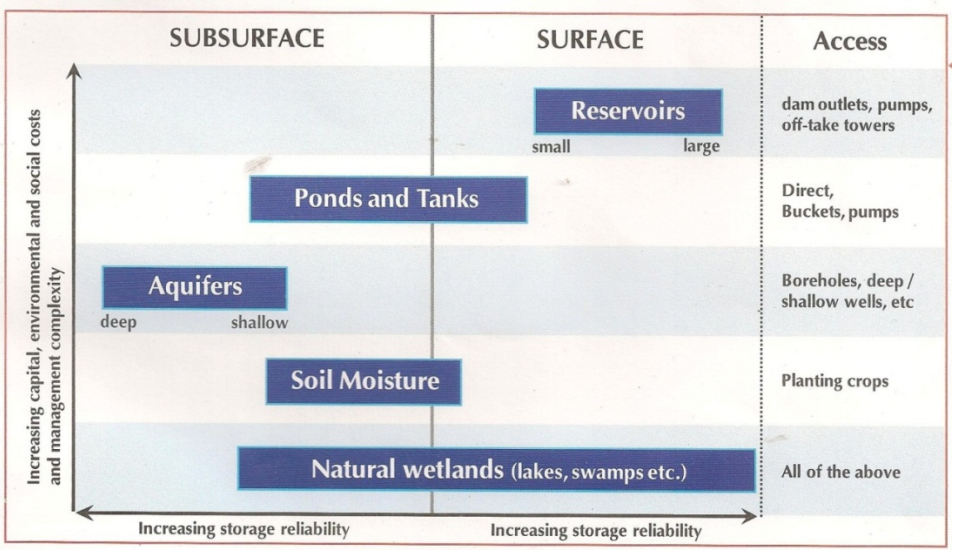


Fig 2: Water Storage Options



Source: Water figures Issue 2 – 2009, IWMI

Water storage focus and contextualisation

Sl. No.	Eco-systems / Context	Adaptation Focus	Rehabilitation/Renovation/Conservation of Water bodies such as...
1.	Rural	Water Security Food security	• Minor irrigation tanks in cascades • Percolation/Cattle Ponds • Roof Water Harvesting • Recycling Waste Water at Panchayat Level • Farm Ponds in catchment /rainfed lands • Artificial Recharge of potential aquifers through Check dams/anicuts
2.	Coastal	Preventing Desertification & Sea water intursion Clean Drinking Water Access Safe drinking water & Househould level	• Enhancing storage capacity of irrigation tanks in coastal belt and diverting water going waste in to sea after giving care to biological needs • Constructing Farm Ponds/ Kondams • Drinking Water Oorani to be deepened in all costal villages • Bio-sand filters at Household • Roof Water harvesting • Sanitation improvement

Sl. No.	Eco-systems / Context	Adaptation Focus	Rehabilitation/Renovation/Conservation of Water bodies such as...
3.	Hilly terrains	Afforestation Preventing Erosion & Sedimentation Preventing Wild fires	• Checkdam/Gabions/ terraces and staggered trenches • Tree Plantation
4.	Urban/Town Area	Preventing Floods Improving Drainage Protecting Waterbodies Penalising Water Pollution	• Deepening Waterbodies after eviction of encroachment • Clearing Water Ways • Diverting Drainage with proper filteration into waterbodies • Roof Water Harvesting • Decentralized/ centralized Waste Water Treatment Plants

Preparing Village/Panchayat wise Disaster management Plans: In all hamlets in all blocks should participate in developing a disaster assessment, disaster preparedness, disaster mitigation plans in both situation before occurrence of Climatic disaster such as Drought, Flood and cyclone (more relevant to coastal villages) and immediately after the occurrence of calamities. Early Warning Systems, Vulnerability Maps, Capacity Development of locals to cope and creating Calamity Fund at Village level with proper accountability should be thought of.

Key Focus area in Climate Adaptation:

1) **Adaptation to hydrological impacts of climate change**: Water_being a cross cutting issue, hydrological impacts of climate change are increasingly being addressed in projects in related sectors, e.g. in agriculture and resource management. However they are dis- jointed and not coordinated. They need to be coordinated. Climate change impacts must be integrated with climate variability while planning and implementing sectoral development projects.

2) **Changes in management and governance**: In the recent past, due to climate change, changes in hydrological and extreme weather events are becoming more frequent and more intense.

Most of the effort invested so far in India has been at improving the knowledge base as a prelude to action such as modeling, building data bases and documenting baseline conditions. Other efforts have been aimed at reducing demand for water and water consumption and reallocation of scarce water supplies during droughts. Key lessons learnt during this process include the importance of integrating

adaptation to climate change into routine government planning and management practices and of starting early to develop the capacity and knowledge base needed to support subsequent actions.

The process of adaptation will involve a mix of private and public sectors. Ultimately adaptive actions will be the result of a multitude of individual decisions made by farmers, business people and consumers. It is the task of government to supply the collective goods (such as knowledge and infrastructure) needed for effective adaptation. Responsibility for coordinating adaptation action should generally rest with the ministry or department with a broad mandate such as planning or finance ministries.

Key indicative priorities for initial action include addressing current and expected water scarcity problems, expanding the knowledge base on water resources and climate change exposure and impacts and strengthening the local capacity for integrated water resource planning.

Suggested areas for early adaptive action in the water sector include:

- Integrating climate change into planning.
- Expanding the water resource knowledge base.
- Promoting use of water-saving technology and efficient water usage.
- Reforming management practices and governance policies.
- Augmenting water supplies.
- Investing in multiple use water systems.
- Intensifying adaptive agricultural research.
- Developing insurance schemes for agriculturalists.
- Raising awareness among policy makers, opinion leaders and the general public.

Efficient water use can be supported through water saving technologies like drip irrigation, reducing water losses in water networks , agricultural lands and canals, reducing evaporation and runoff on agricultural land through crop cover (mulching) and cropland management, optimized water allocation, multiple use systems and methods of rain water harvesting. Protecting existing water resources through wastewater treatment and controlled land fills are other available technologies.

Physical infrastructure will be most relevant to augment storage capacity and to flood protection. Storage Capacity can be increased through dams and reservoirs, constructing earthen enhancements along contour lines, protection of wet-lands and flood plains, artificial groundwater recharge and reforestation. Infrastructure and technologies may also support disaster prevention through construction of dams, dykes, improved regulation of reservoirs, flood plain management and flood protection facilities. Finally, information and monitoring systems including data collection, modeling and analysis are prerequisites for proper preparation of action plans.

Role of NGO/ Civil society's in Supporting Adaptive Action

The NGO's can support governments in formulating adaptation strategies and setting priorities. In setting priorities, it will be important for the NGO's to target the most vulnerable regions, vulnerable groups and sectors most affected by climate change. Often, the marginalised society (e.g. subsistence farmers, herders, fisher folks and landless laborers) are the most strongly affected by climate change due to strong exposure, and low adaptive capacity. The NGO's can help the government in identifying such cases and create awareness to carry out necessary adaptive responsive actions.

While the role of NGO's is very much helpful and needed in developing a sound strategy for adaptive action by the government departments, they can also play a vital role in assisting implementing adaptive actions through pilot projects.

The Ministry of Water Resources, Government of India has set up a large number of task forces at the State and Central levels to tackle climate change through adaptation and mitigation. It would be advisable for the NGO's to get involved with these task forces for effective strategizing and integrating adaptive measures in the on-going development projects.

Lastly, the NGO's can play a vital role in creating awareness among the public at the local level through village knowledge centers and participatory action studies.

Involving Tank Associations/ Water user Associations to practice improved technologies:

In Chittoor district of Andhra Pradesh, tank associations have given Rs.5000 per acre as a short term loan to 125 farmers to apply tank silt to conserve subsoil moisture in the catchment area of tank foreshore and drylands. This technology indeed help the farmers to enhance soil health and moisture retention capacities of small and marginal farmers. Besides, DHAN foundation has facilitated philanthropic support to more than 10 farmers in Ramanathapuram district to construct farm ponds in their farm land to provide live saving irrigations to Chilli and Cotton crop during the incidence of dry spell. Farmers and villagers of Ramasamudhram Mandal chosen few ponds and deepened them using voluntary labour and also taken MGNREGA funding to get paid for labour. The cattle population in this Mandal provide subsistence livelihood during drought years.

In a nutshell, the host of South Zone water partnership DHAN Foundation could indeed complete all activities which have created a lasting awareness and impact among the primary stakeholders, farmers, women and landless about the necessity to protect the natural resources, village commons, involve productive activities such as inland fishery in South India. All our compliments and gratitude in this collaboration is due to India Water Partnership for its funding support and constant encouragement.