### WATER MANAGEMENT AND SUSTAINABLE ECOSYSTEM

# SECURING WATER IN TANK BASED WATERSHED DEVELOPMENT FOR AGRICULTURAL LIVELIHOODS IN GUNDAR BASIN, TAMIL NADU

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Tank system is highly productive wetland eco-systems survived over several centuries; which feeds water 30% of the total irrigated area in South India. Community involved tank based watershed development programmes demonstrated as one of the good model for addressing the development issues and thereby ensuring the food security. Gundar basin is one of the driest river basins in Tamilnadu spread over 3000 hamlets in 5 districts. 5 lakh families most of them marginal, landless and small farming families live here for centuries. The total area of the basin spreads about 5660 Sq.km. The basin receives 550 - 900 mm of rainfall. There are 2276 tanks, 5500 village ponds and 43 diversion weirs are there. 85888 ha of land are irrigated by these tanks, which contribute to meet out the food security needs of the people residing in this basin. Most of the tanks in this basin are hydrologically linked as cascades. Tank cascade /watershed approach is giving good results when compared to an isolated tank development approach. Government departments, agricultural research stations, NGOs, Civic bodies, SHG federations, tank farmers associations and other people institutions are involving in tank conservation, watershed development and other agricultural development activities independently in their own way. There is a lack of shared understanding among different stakeholders. Collective approach of all the stakeholders is the need of the need of hour. Tank based watershed development is one such approach.

"Tank based watershed development programme" is an integrated tank development, which includes the tank catchment area development, tank water spread area development, command area development, creation of new water bodies, reviving other small water bodies and other water conservation works of the particular watershed".

This basin was taken for intervention by DHAN Foundation, by collaborating with various stake holders. Projects are implemented in 20 watersheds with the support of national programmes like NWDPRA, NABARD watershed development fund, schemes of DRDA, interventions under corporates social responsibility, support from philanthropists and other related watershed & tank development programmes.

The component of the programme is as follows

- Sensitizing the development issues through appropriate awareness and capacity development programmes.
- Promotion of tank associations, SHGs, dry land farmers' groups, tank cascade association, block level federations and sub basin associations by organizing both the land holding and landless farmers.
- Micro finance activity to fulfill the investment need of livelihood activities of poor farmers & landless.
- NRM activities like tank catchment area development, tank development and other related soil & water conservation works implementation.
- 10-50% of the costs of the development works were contributed by the community.
- Enhancing the water productivity through suitable agricultural demonstrations.
- Enrolling farmers under suitable social security programmes like life, health, livestock and crop insurances.
- Active participation of the women and minority people.
- Endowment fund/ watershed development fund for the regular self-maintenance of the water resources by the people institutions.

### Impact of the intervention:

4150Ha (40 to60%) of the cultivable waste lands were brought back to the cultivation; Yield loss of 1000-1200Kg per ha (20%) is prevented by providing life saving irrigation through creation of farm ponds and revival of tank system. Significant rising of the ground water level were observed in the wells of project villages. Pond renovation supported the drinking water needs of driest villages, reduces women hardship and livestock development. Social capital mobilization ensures the sustainability. Women encouraged to take up leadership roles; Convergence of programmes of the various stake holders multiplies the impacts.

#### Way forward:

- Shared understanding among the stakeholders will be focused
- Collective forum of stakeholders to steer and monitor the holistic development of Gundar basin.
- Existing traditional tanks/ponds development should be given importance in the ongoing watershed programmes.
- Tank development projects should include the catchment area treatment in addition to the water spread area and command area development.