

# Suggestions expressed by the officials of project and non-project areas in tank management

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**ABSTRACT :** The paper reveals that earlier various tank management policies are never implemented, but integrated through the negotiation with other diverse policies and socio-economical, technological settings in (re) shaping tank management. The analysis demonstrates that water is managed by multifaceted governance arrangements *i.e.* WUAs, government, participatory groundwater users, officials, commodity interest groups, gender groups and tribal groups. Ex-post facto research design was adopted for this study. The state of Telangana and Andhra Pradesh, three districts (Mahaboobnagar from Telangana; Vizianagaram from Coastal Andhra, Chittoor from Rayalaseema) were selected purposively. For these study, officials were selected both from project and non-project tank areas in each district. From the tanks operated under project area in each selected district 10 members of officials were selected randomly who are discharging the mandate of APCBTMP. Whereas, from the tanks operated under non-project area in each selected district 10 members of officials are selected randomly representing department of agriculture and I and CAD department. Thus, comprising a total of 60 officials were selected for the study. Suggestions expressed by the officials of project and non-project area in tank management were grouped into four categories namely job related, organization related, technical related and finance related categories. The suggestions under each category were ranked based on frequency and percentage.

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Community-based approaches, which involve farmer groups, have gained increasing importance for agricultural development in recent years. In extension too, this is considered important as it promised to overcome both the state failures and the market failures inherent in extension (World Bank, 2005).

Farmer associations can play an important role in aggregating farmers' demands for extension and in representing farmers in participatory models of extension

management so as to make extension more demand driven (Feder *et al.*, 2010). Tank irrigation management is at crossroads. Tank irrigation system collectively operated and managed by informal local bodies have been a dominant source of irrigation in India since time immemorial. However, the agricultural area under tank irrigation has been in retreat, especially since the 1990s due to decline in collective management. One of the alleged causes of this is the rapid adoption of by farmers. According to the Planning

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Commission (2008), Government of India, 5.56 lakh tanks are present in India. Out of these tanks, 4.71 lakh tanks are in use. In Andhra Pradesh (Anonymous, GoAP, 2012, I and CAD) the total number of tanks as on 2012 are 77,472. Out of these tanks, 10,677 (>40 ha each) are managed by irrigation and command area developemnt (I and CAD) department and remaining 66,503 tanks (<40 ha) are managed by panchayat raj department. Telangana region there was a loss in tank irrigation from 1956-57 to 2005-09 of 58 per cent of 3,12,441 hectares (ha). Over this same period, Rayalaseema lost 1,29,503 ha which is about 70 per cent of its acreage in 1956-57. Similarly, the loss in the Coastal Andhra was 1,16,295 ha but its relative decline over this period is only 25 per cent and is substantially lower compared to the other regions. So while there has been a general decline of tank irrigation in Andhra Pradesh generally, the declines are not uniform across the regions.

## EXPERIMENTAL METHODOLOGY

Ex-post facto research design was adopted in the present investigation. Telangana, Coastal Andhra and Rayalaseema regions were selected purposively and from each region one district was selected purposively. Accordingly, Mahaboobnagar from Telangana, Vizianagaram from Coastal Andhra and Chittoor from Rayalaseema were selected. For these study, officials were selected both from project and non-project tank areas in each district. From the tanks operated under project area in each selected district 10 members of officials were selected randomly who are discharging the mandate of APCBTMP. Whereas, from the tanks

operated under non-project area in each selected district 10 members of officials are selected randomly representing department of agriculture and I and CAD. Thus, comprising a total of 60 officials were selected for the study. Suggestions expressed by the officials of project and non-project area in tank management were grouped into four categories namely job related, organization related, technical related and finance related categories. The suggestions under each category were ranked based on frequency and percentage.

## EXPERIMENTAL FINDINGS AND DISCUSSION

Suggestions expressed by the officials of project and non-project area in tank management were grouped into four categories namely job related, organization related, technical related and finance related categories. The suggestions under each category were ranked based on frequency and percentage.

The major job related suggestions expressed by the officials of project area under each category are strengthening information sharing among the officials (72.50%) and more infrastructure facilities for effective delivery of information (67.50%); technical related category – training to officials on advanced irrigation management (75.00%), conducting action research to find out workable solutions (68.33%); finance related category – allotted budget is insufficient to carryout Operation and Maintenance (O and M) costs (60.00%) and regular collection of water cess from tank users (40.00%) (Table 1).

The major job related suggestions expressed by the officials of project area are strengthening information

**Table 1 : Job related suggestions expressed by the officials of project and non-project areas in tank management**

Sr. No.	Suggestions	Officials under project area (n=30)		Officials under non-project area (n=30)	
		Frequency and percentage	Rank	Frequency and percentage	Rank
1.	The work pressure of officials should be reduced to focus extensively and intensively more on tank management	71 (59.16%)	III	40 (33.33%)	V
2.	More infrastructure facilities should be created for effective delivery of available information to tank user groups	81(67.50%)	II	51 (42.50%)	IV
3.	The information sharing among the officials should be strengthened to take valid, reliable and timely decisions to solve the problems arose in tank management	87 (72.50%)	I	61 (50.83%)	III
4.	The officials should be trained on tools and techniques to motivate the farmers to form into groups and participate collectively in tank management	61 (50.83%)	IV	74 (61.66%)	II
5.	Teams may be formed with the officials and tank user groups to bestow more accountability in attending various operations under the tank	51 (42.50%)	V	78 (65.00%)	I
6.	There should be leverage in unity of command to be more focussed in attending tank management activities	38 (31.66%)	VI	27 (22.50%)	VI

sharing among the officials (72.50%) and more infrastructure facilities for effective delivery of information (67.50%), the work pressure of officials should be reduced to focus extensively and intensively more on tank management (59.16%); whereas non project tank officials felt that teams may be formed with the officials to bestow more accountability (65.00%) and training the officials on tools and techniques to motivate the farmers to form into groups and participate collectively in tank management (61.66%) are the major constraints.

Without a well-defined programme to ensure this, the huge amount spent on physical rehabilitation will become fruitless after some years. An evaluation of the outcome of tank rehabilitation projects indicates that the importance given to structural improvements overshadows the institutional development. Very little has been spent on institutional development. Tank performance cannot be improved by mere physical rehabilitation alone (Sakthivadivel, 2004).

CADA or agricultural department was not effective enough impart knowledge to farmers about better tank management practices. CADA has not been successful in preventing unauthorised cultivation or violation of cropping pattern. Inter departmental group maybe formed

to strengthen tank management (Mini, 2006).

The results furnished in Table 2 indicate that, the major organisation related suggestions expressed by the project tank users is that more conveyance facilities need to be arranged for officials to have close supervision in implementation of tank management activities (75.00%), nexus between the contractors and politicians should be reduced to have more transparency in attending tank management activities (69.16%), filling of man power to attend and guide farmers on tank management (63.33%). Incase of non-project officials more filling of man power to attend and guide farmers on tank management (68.33%), conveyance facility for officials for close supervision (65.83%) and the nexus between the contractors and politicians should be reduced (60.83%).

The results furnished in Table 3 indicate that, the major technical related suggestions expressed by the project tank users is that the officials need to be trained on advanced irrigation water management activities to increase water use efficiency at field level (75.00%), need to conduct action research to find out workable solutions to various tank management activities (68.33%). Incase of non-project officials more exposure visits for the officials to other well maintained tanks to enhance the technical competency (60.00%) and the

**Table 2 : Organisation related suggestions expressed by the officials of project and non-project areas in tank management**

Sr.No.	Suggestions	Officials under project area (n=30)		Officials under non-project area (n=30)	
		Frequency and percentage	Rank	Frequency and percentage	Rank
1.	More conveyance facilities need to be arranged for officials to have close supervision in implementation of tank management activities	90 (75.00%)	I	79 (65.83%)	II
2.	The vacant positions should be filled up immediately to have sufficient man power to attend and guide the farmers on tank management activities	76 (63.33%)	III	82 (68.33%)	I
3.	The nexus between the contractors and politicians should be reduced to have more transparency in attending tank management activities	83 (69.16%)	II	73 (60.83%)	III
4.	The intensity of redtapism and cumbersome etiquette need to be relaxed to narrow down the gap between policy makers and farmers	71 (59.16%)	IV	69 (57.50%)	IV
5.	The mechanism of co-ordination and co-operation need to be maintained among various concerned departments in attending the tank management activities	61 (50.83%)	IV	50 (41.66%)	VII
6.	The encroachment of tank canbe minimised only with the support of politicians and tank user groups	34 (28.33%)	IX	63 (52.50%)	V
7.	The desilting of tank should be takenup on priority basis under the programme MNREGA	42 (35.00%)	VII	42 (35.00%)	VIII
8.	There is every need to link the tanks like a chain to facilitate the passage of water from one tank to another tank to avoid flooding and breaching of bunds	50 (41.66%)	VI	32 (26.66%)	IX
9.	The repair of sluice gates, crush gates, main and tributary canals should be attended frequently	39 (32.50%)	VIII	58 (48.33%)	VI

officials should be deputed frequently for the trainings to refresh and finetune the knowledge and skills pertaining to tank management activities (51.66%).

Action research should be conducted on base line survey, water balance, water use efficiency, pricing of water, effect of tube wells on tank recharge, seepage losses may be conducted with research institutions and Agricultural Universities. The results were inconformity with Goutham (2008).

The results furnished in Table 4 indicate that, the major finance related suggestions expressed by the project tank users is that allotted budget is rarely meeting all the operation and maintenance costs of the tanks throughout the year (60.00%) and the water cess needs to be collected regularly from the tank users (40.00%). Incase of non-project officials The water cess needs to be collected regularly from the tank users (58.33%) and the allotted budget is rarely meeting all the operation and maintenance costs of the tanks throughout the year (48.33%).

Transferring rights to the revenue from all uses of the tanks to such a local management body is important for enabling them to do the necessary work. Mobilising financial resources is an important activity in sustaining the working of any institution. All the institutions we

studied collect subscriptions through the sale of fishing rights, sale of usufructs, and fines and fees from members. When these funds are inadequate to meet the operating cost, successful tank institutions manage additional funds through innovative methods (Vermillion 2001).

Levy/ tax on area command is based on landholding and depending upon the extent of repair and maintenance work and the deficit in the fund, the tax rate per acre is decided. A tax was collected not only from the owners of wells in the ayacut area but also from those in the non-ayacut area *i.e.* multiple users of tanks. The well owners in this village had the conviction that unless the tank got water their wells will go dry and, therefore, they were willing to pay the tax.

The officials of project area suggested to strengthen the skills of information sharing among the officials more conveyance facility for officials, training on advanced irrigation management and allocation of sufficient budget to meet the operation and maintenance costs. Definitely sharing of information among officials improve their capacities and confidence in executing the work. Regular and comfortable conveyance facility make them to ease in attending the assigned work, and the budget in sufficient proportions acts as a fuel in accomplishing

**Table 3 : Technical related suggestions expressed by the officials of project and non-project areas in tank management**

Sr.No.	Suggestions	Officials under project area (n=30)		Officials under non-project area (n=30)	
		Frequency and percentage	Rank	Frequency and percentage	Rank
1.	The officials need to be trained on advanced irrigation water management activities to increase water use efficiency at field level	90 (75.00%)	I	59 (49.16%)	III
2.	The officials should be deputed frequently for the trainings to refresh and finetune the knowledge and skills pertaining to tank management activities	61 (50.83%)	IV	62 (51.66%)	II
3.	There is a need to conduct action research to find out workable solutions to various tank management activities	82 (68.33%)	II	46 (38.33%)	IV
4.	More exposure visits for the officials to other well maintained tanks to enhance the technical competency	72 (60.00%)	III	72 (60.00%)	I

**Table 4 : Finance related suggestions expressed by the officials of project and non-project areas in tank management**

Sr. No.	Suggestions	Officials under project area (n=30)		Officials under non-project area (n=30)	
		Frequency and percentage	Rank	Frequency and percentage	Rank
1.	The allotted budget is rarely meeting all the operation and maintenance costs of the tanks throughout the year	72 (60.00%)	I	58 (48.33%)	II
2.	Some of the financial powers to attend the tank management activities may be devolved to local bodies	63 (52.50%)	III	39 (32.50%)	III
3.	The water cess needs to be collected regularly from the tank users	48 (40.00%)	II	70 (58.33%)	I

more number of delegated works in tank management.

The suggestions expressed by the officials of non-project area are forming teams to bestow more accountability in attending various operations under the tank, filling vacant positions, conducting exposure visits for the officials to the well maintained tanks, regularly collecting the water cess from the tank users. Team approach definitely facilitates better understanding the situation for a suitable remedy, sufficient man power is maintained by filling up the vacant positions there by fair distribution of work load among the officials to attend the given duties deligently, regular collection of water cess will enrich the financial status of the tank which facilitates to attend various works in the tank.

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