

Research Article

Constraints and suggestions perceived by beneficiaries of Participatory Irrigation Management (PIM) programme

■ SURENDRA KUMAR RAI, R.D. PANDYA AND SUMIT R. SALUNKHE

ARTICLE CHRONICLE :

Received :
18.05.2012;

Revised :
18.08.2012;

Accepted :
03.09.2012

SUMMARY : The present study was conducted in Southern region of Gujarat state. 40 villages were identified from two districts (20 from each) on the basis of highest number of water user associations (WUAs) for the present study. Ex-post facto research design was used and 200 sample size was drawn out by using proportionate random sampling method. The data were collected through personal interview method. The result shows that higher irrigation charges recover by the WUAs was reported as major constraint by the beneficiaries and ranked first followed by biasness in distribution of irrigation water by some committee members got second rank and inadequate supply of irrigation water to the tail enders ranked third. Whereas proper management should be done to reduce the irrigation water charges was reported as major suggestion and ranked first followed by supervision should be done to reduce biasness in water distribution got second rank and deprivation of irrigation water should be reduced at tail ends by proper management ranked third.

How to cite this article : Rai, Surendra Kumar, Pandya, R.D. and Salunkhe, Sumit R. (2012). Constraints and suggestions perceived by beneficiaries of Participatory Irrigation Management (PIM) programme. *Agric. Update*, 7(3&4): 222-224.

KEY WORDS:

Participatory irrigation management (PIM), Water user associations (WUAs), Constraints, Suggestion

BACKGROUND AND OBJECTIVES

Irrigation is lifeline of agriculture. It is estimated that 70.00 per cent of world's fresh water used for irrigation. Availability of irrigation water is critical for food security and requires meticulous management. Over the last two decades, various policy reforms were focused on participatory concept. During these reforms it has been realized that without active participation of end users *i.e.* farmers, irrigation systems cannot be managed efficiently. The basic idea behind farmers managed irrigation systems was to improve the overall efficiency of irrigation system and improve the irrigation revenue recovery rate. This laid the seeds for Participatory Irrigation Management (PIM) programme in India. It was accepted as a policy of the Government of India and included in the National Water Policy in 1987. So far 63167 WUAs have been formed in various states covering an area of 14.623 m. ha. under various command areas of PIM programme (Anonymous, 2011). Gujarat has done significant work under this programme

among all the states of India.

Keeping these views in mind, the present study was conducted to know the constraints faced by the beneficiary farmers and provided suggestions to overcome the constraints and enhancing farmers' involvement in PIM programme.

RESOURCES AND METHODS

The present study was carried out at Surat and Navsari districts of South Gujarat. Navsari and Surat districts are situated on the bank of Purna and Tapi rivers, respectively and have well structured canal of Ukai and Kakrapar dams. Hence, both the districts were purposely selected for this study.

Navsari district has five talukas and Surat district has eight talukas. Out of these Navsari and Jalalpore talukas from Navsari district while Kamrej and Olpad talukas from Surat district were selected on the basis of highest number of water user associations' (WUAs) under PIM programme.

Author for correspondence :

SURENDRA KUMAR RAI

Department of
Extension Education,
N.M. College of
Agriculture, Navsari
Agricultural University,
NAVSARI (GUJARAT)
INDIA
Email: surendrarai_86@
yahoo.in

See end of the article for
authors' affiliations

After selecting the talukas, villages were arranged in descending order on the basis of number of beneficiaries of PIM programme to identify the first ten villages from each taluka. In this way 40 villages were identified for the study. A proportionate random sampling method was used for selection of respondents in present study. From each village proportionate random sample was drawn to makeup 50 respondents from each taluka. The proportion sample size was drawn from each village by the following formula:

$$\text{Proportional sample size} = \frac{\text{Total number of beneficiaries of village}}{\text{Total number of beneficiaries of taluka}} \times 50$$

where; 50 is desired sample size from each taluka.

In this way 200 respondents (100 from each district) were selected from 40 villages of four talukas of two districts for the study. The list of beneficiary farmers were obtained from respective WUAs of identified villages.

Ex-post facto research design was used for the study. Keeping in view, the objectives of the study, the interview schedule was prepared in local language and data collection was done. The collected data were ranked by using frequency and percentage.

OBSERVATIONS AND ANALYSIS

The observations of the present study as well as relevant analysis have been summarized under the following heads:

Constraints faced by the beneficiaries:

Constraint refers as situation or circumstances which impede restrict or limit the activity or a performance of an individual. In this study it operationalized as the items of difficulties experienced by the beneficiaries of PIM programme. Constraints play a vital role in adoption as well as transfer of technology. To obtain better result of any type of extension services it is very essential to minimize the constraints at level best. As such constraints in flow of services should be studied

carefully and efforts should be made for rapid action. The information regarding constraints faced by the beneficiaries were collected by using open ended questions. Agreements of each respondent against enumerated constraints were sum up separately and converted into percentage and then rank was assigned. The classified data are presented in Table 1.

The data presented in Table 1 indicated that out of all constraints the higher irrigation charges recovered by the WUAs (88.00 %) was reported as major constraint by the beneficiaries and ranked first followed by biasness in distribution of irrigation water by some committee members (81.00 %) got second rank, inadequate supply of irrigation water to the tail enders (79.00 %) ranked third, encroachment in share of water by dominant farmers (71.00 %) ranked fourth, poor maintenance of field channels gave (69.50 %) fifth rank, improper guidance by WUAs for getting maximum benefits from the programme (54.50 %) got sixth rank, time schedule for irrigation was not proper (52.00 %) got seventh rank, lack of finance (47.00 %) ranked eighth, and improper motivation for increasing participation (42.50 %) given ninth rank. However 18.50 per cent of the beneficiaries do not have any constraints. This finding is in conformity with those of Mohite *et al.* (1992), Gumaste *et al.* (1993) and Dabhi *et al.* (2003).

Suggestions to overcome from constraints:

Suggestion refers as opinion about constraints which can be used as solution to overcome or to minimize. In order to develop a foolproof extension strategy, it is essential to seek the opinions of the beneficiaries who were directly involved in the PIM programme. The constraints faced by them may be sometimes imaginary and sometimes due to lack of co-ordination at different levels. Hence, in this study, all the beneficiaries were requested to provide their valued suggestions for eliminating the constraints.

The respondents were requested to express their suggestion to overcome the constraints. The frequency for each suggestion was calculated and converted into percentage. Later on, rank was assigned. The suggestion receiving high percentage was considered as an important suggestion and the suggestion receiving low percentage considered as less

Table 1 : Distribution of beneficiaries according to constraints faced by the beneficiaries of PIM programme (n=200)

Sr. No.	Constraints	Frequency	Percent	Rank
1.	Higher irrigation charges recover by the WUAs	176	88.00	I
2.	Lack of finance	94	47.00	VIII
3.	Time schedule for irrigation was not proper	104	52.00	VII
4.	Improper motivation for increasing participation	85	42.50	IX
5.	Inadequate supply of irrigation water to the tail enders	158	79.00	III
6.	Biasness in distribution of irrigation water by some committee members	162	81.00	II
7.	Encroachment in share of water by dominant farmers	142	71.00	IV
8.	Improper guidance by WUAs for getting maximum benefits from the programme	109	54.50	VI
9.	Poor maintenance of field channels	139	69.50	V
10.	No constraints	37	18.50	

Table 2 : Distribution of beneficiaries according to their suggestions to increase participation in PIM programme (n=200)

Sr. No.	Suggestions	Frequency	Per cent	Rank
1.	Proper management should be done to reduce the irrigation water charges.	172	86.00	I
2.	Government should provide financial support to strengthen the WUAs.	148	74.00	IV
3.	Proper time schedule should be prepared for the irrigation	94	47.00	VIII
4.	Non-members should be convinced to join PIM societies through motivational efforts	64	32.00	X
5.	Deprivation of irrigation water should be reduced at tail ends by proper management.	158	79.00	III
6.	Supervision should be done to reduce biasness in water distribution.	163	81.50	II
7.	Fine should be charged to one who used more water than their share.	140	70.00	V
8.	Proper guidance regarding water management should be provided by the experts	71	35.50	IX
9.	Construction of new field channels for effective distribution of irrigation water should be done	121	60.50	VII
10.	Maintenance and repair work for the field channels should be done.	130	65.00	VI

important suggestion. The data in this regards are presented in Table 2.

The data presented in Table 2 indicated that out of all ten suggestions the proper management should be done to reduce the irrigation water charges (86.00 %) ranked first followed by supervision should be done to reduce biasness in water distribution (81.50 %) got second rank, deprivation of irrigation water should be reduced at tail ends by proper management (79.00 %) ranked third, government should provide financial support to strengthen the WUAs (74.00 %) ranked fourth, fine should be charged to one who used more water than their share (70.00 %) given rank fifth, maintenance and repair work for the field channels should be done (65.00 %) got sixth rank, construction of new field channels for effective distribution of irrigation water should be done (60.50 %) ranked seventh, proper time schedule should be prepared for the irrigation (47.00 %) ranked eighth, proper guidance regarding water management should be provided by the experts (35.50 %) got rank ninth and non-members should be convinced to join PIM societies through motivational efforts (32.00 %) ranked tenth. This finding is in conformity with those of Patel *et al.* (1998) and Dabhi (2003)

Conclusion:

On the basis of the result obtained in present study it can be concluded that higher irrigation charges recover by the WUAs was reported as major constraint by the beneficiaries and ranked first followed by biasness in distribution of irrigation water by some committee members, inadequate supply of irrigation water to the tail enders, encroachment in share of water by dominant farmers, poor maintenance of field channels and others accordingly.

When concerned with suggestions proper management to reduce the irrigation water charges should be done was reported as major one and ranked first followed by supervision should be done to reduce biasness in water distribution, deprivation of irrigation water should be reduced at tail ends by proper management, government should provide financial support to strengthen the WUAs, fine should be charged to

one who used more water than their share and so on.

Authors' affiliations :

R.D. PANDYA AND SUMIT R. SALUNKHE, Department of Extension Education, N.M. College of Agriculture, Navsari Agricultural University, NAVSARI (GUJARAT) INDIA

REFERENCES

- Anonymous (2011). Report of the Working Group on Major and Medium Irrigation and Command Area Development for the XII Five Year Plan (2012-2017) New Delhi by GOI, Ministry of Water Resources, November, 2011.
- Dabhi, R.A.** (2003). Impact of participatory irrigation management society on techno-economic change of farmers of Anand district in Gujarat state. Ph.D. Thesis, Gujarat Agricultural University, Anand, GUJARAT (INDIA).
- Dabhi, R. A., Soni, N.V. and Trivedi, J.C.** (2003). Constraints faced by members of participatory irrigation management society in Gujarat. International conference on "Agricultural policies and strategies for profitable farming: field realities, needed reforms and interventions" pp. 135-136.
- Gumaste, A.K., Patil, H.N. and Nirban, A.J.** (1993). Constraints in utilization of water under minor irrigation projects in Konkan. *Maharashtra J. Extn. Edu.*, **12** : 373-374.
- Mohite, S.M., Ankush, G.S. and Nandapurkar, G.G.** (1992). Constraints in the use of canal irrigation water. *Maharashtra J. Extn. Edu.*, **11** : 263-270.
- Patel, J.B., Vekaria, R.S. and Patel, G.M.** (1998). Constraints experienced by the beneficiaries in adoption of watershed management technology. *Gujarat. J. Extn. Edu.*, **9** : 82-85.
- Rudra, B.C. and Mukhopadhyay, P.** (2005). Impact analysis in transfer of technology : a case study in the northern district of West Bengal. *J. Interacademia*, **9**(4) : 623-630.

WEBLIOGRAPHY

http://planningcommission.nic.in/aboutus/committee/wrkgrp12/wr/wg_major.pdf. [May 9, 2012]