

Research Paper

Pathology of Water- user Cooperatives (Case study: Mian-Darband Plain, Kermanshah Township)

*Amir Hossein Alibaygi¹, Somayeh Dashtestan², Mahboobeh Kheirollahi³

1. Associate Professor, Department of Agriculture Extension and Education, College of Agriculture, Razi university of Kermanshah, Iran.
2. Graduate Master of Agricultural Extension and Education, Department of Agriculture Extension and Education, College of Agriculture, Razi university of Kermanshah, Iran.
3. PhD Student in Agricultural Development, Department of Agriculture Extension and Education, College of Agriculture, Razi university of Kermanshah, Iran.



Citation: Alibaygi, A.H., Dashtestan, S., & Kheirollahi, M. (2020). [Pathology of Water- user Cooperatives (Case study: Mian-Darband Plain, Kermanshah Township) (Persian)]. *Journal of Rural Research*, 10(4), 650-665, <http://dx.doi.org/10.22059/jrur.2018.209486.920>

doi: <http://dx.doi.org/10.22059/jrur.2018.209486.920>

Received: 11 June 2016
Accepted: 06 April 2018

ABSTRACT

The main purpose of this mixed research was to identify and prioritize the damage of participatory irrigation management among water users' cooperatives in *Mian-Darband* Plain of Kermanshah Township. The population for qualitative phase consisted of experts and Informant at Kermanshah Regional Water Organization (N=15). Sampling method for this phase was purposeful. Population of quantitative part was members in water users' cooperatives of *Mian Darband* (N=688) that a sample of 245 was selected by stratified random sampling method. The data collection tool was semi-structured interview and a researcher-made questionnaire Based on the findings from the qualitative part, the damage expressed by the members of water cooperatives was divided into two categories, including the damage related to cooperatives and members (internal damage) and damage related to organization and related organs to the management of irrigation and drainage networks (external damage). According to the results of the quantitative part, the most important damages which threaten the cooperatives were: not holding of management board meetings and general assembly, dissatisfaction with policy of management networks, distrust among members of cooperation, lack of timely delivery of water during the growing season, lack of uniformity in water distribution, high water pricing, not delivering long-time credits by government for recovering water resources. Water- user Cooperatives Cluster analysis was used in five clusters to determine the extent of identified impacts.

Key words:

Water, Pathology, Water users' cooperative, *Mian-Darband* Plain, Cluster analysis

Copyright © 2020, Journal of Rural Research. This is an open-access article distributed under the terms of the Creative Commons Attribution-noncommercial 4.0 International License which permits copy and redistribute the material just in noncommercial usages, provided the original work is properly cited.

Extended Abstract

1. Introduction

A

griculture as an important and reliable source of food supply in the world, a high proportion of water consumption is

accounted for. Iran is one of the most water-consuming countries in agriculture. According to studies, one way to optimize the use of water resources is farmers' participation in the operation and maintenance of irrigation and drainage network. The term Participatory Irrigation Management is referred to irrigation systems to water user par-

* Corresponding Author:

Amir Hossein Alibaygi, PhD

Address: Department of Agriculture Extension and Education, College of Agriculture, Razi university of Kermanshah, Iran

Tel: +98 (918) 8565101

E-mail: baygi1@gmail.com

ticipation in all levels of management. No study on Participatory Irrigation Management in *Mian darband* damage has been done. In this regard, the survey attempts to study the area of cooperative water users in the city of Kermanshah *Mian darband*. The damage Participatory Irrigation Management in various fields have been identified and practical solutions to provide treatment for this damage. This realization requires achieving specific objectives are:

- 1) Identifying the weaknesses of cooperative water users *Mian darband* area in the city of Kermanshah,
- 2) Prioritizing damage identified cooperatives, water users and
- 3) Grouping water users' associations based on the impact on each identified damage.

2. Methodology

The main purpose of this mixed research was to identify and prioritize the damage of participatory irrigation management among water users' cooperatives in *Mian-Darband* Plain of Kermanshah Township. The population for qualitative phase consisted of experts and informant in Kermanshah Regional Water Organization. Sampling method for this phase was purposeful. Population of quantitative part was members in water users' cooperatives of *Mian Darband* that a sample of 245 was selected by stratified random sampling method. The tool used in qualitative research, in-depth semistructured interviews and a questionnaire which designed for the opinions of panel of experts which revised after a few steps. Cronbach's alpha was used to estimate the reliability of the resulting amount (0/76) is indicative of the tool of study. The analysis of interviews in qualitative research was used to analyze the content of perceptual analysis. In the quantitative section, after completing the questionnaires in sample collection, coding and data transfer operations in SPSS software, data processing and statistical analysis (descriptive and inferential) was performed.

3. Results

Based on the findings from the qualitative part, the damage expressed by the members of water cooperatives was divided into two categories, including the damage related to cooperatives and members (internal damage) and damage related to organization and related organs to the management of irrigation and drainage networks (external damage). According to the results, the most important damage which threatens the cooperatives were: not holding of the management board meetings and general assembly, dissatisfaction with policy of management networks, distrust among members of cooperation, lack of timely delivery of water during the growing season, lack

of uniformity in water distribution, high water pricing, not delivering long-time credits by government for recovering water resources.

4. Discussion

In many developing countries, irrigation systems have been designed without the participation of users. This kind of one-dimensional development in the long-term exploitation of water resources has made water organizations face a heavy burden of running and maintaining the costs of cooperative irrigation management as a management concept. Participatory irrigation management improves water delivery services, system maintenance, irrigation development of the area, reducing environmental impacts, increasing agricultural productivity and the income of the farmers. Generally, the management of participatory irrigation through water management associations in the knowledge, attitude and skills of farmers in the field of crop water management can be very effective in adopting new irrigation methods. In total Participatory Irrigation Management by Water User Associations in knowledge, attitudes and skills of farmers in agricultural water management can be very influential in the adoption of modern irrigation methods.

Since the most significant internal damage to the water-cooperatives under study was the failure to hold the meetings of the Board of Directors and the General Assembly, it is recommended to hold monthly and regular meetings in order to discuss and decide on cooperative matters between the cooperative company (member farmers or board of directors) and the stakeholders of the Water and Jihad Organization. Also, the managing cooperatives rights and privileges be considered to have a greater incentive to hold these meetings. So since the results of further damage due to loss of Participatory Irrigation Management internal culture of participation among rural communities. Therefore, the formulation and implementation of public awareness programs to promote culture-oriented management is recommended.

5. Conclusions

The findings revealed that the involvement of farmers has been in the center of organization attention in the process of transferring irrigation management to Water-user Cooperatives. So that after managing the networks, required protections either have not been made or have been stopped. As if the sole purpose was to attract farmers. However, before transferring water management in successful countries, they create an appropriate place for transfer, like redefining organizational principles and

norms, make an appropriate legal framework for transfer, explain the steps and prioritize the implementation.

Acknowledgments

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The article was extracted from a M.S.C thesis in Agriculture Extension and Education at Razi university of Kermanshah, Iran.

Conflict of Interest

The authors declared no conflicts of interest