



PARTICIPATORY MANAGEMENT AND USERS ASSOCIATIONS CASE STUDY: DOOSTI DAM AT THE BORDER OF IRAN-TURKEMINISTAN

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ABSTRACT

Water plans are included among fundamental plans that result in social and economical development. These types of plans make the essential role of the government very crucial in terms of budget supply and the management of such plans. On the other hand, the limitation in governmental budgets and management calls for the participation of people in water plans. Because of the magnitude of these plans, a more supportive force than governmental budgeting and management is required.

Article No. 107 of the fourth development plan law of the Islamic Republic of Iran permits government to involve the non-governmental sector (landlords and water right-possessors) in the water plans and make water and soil utilization organization to implement economizing policies and direct farming water users to improved utilization. In the direction of the fulfillment of this policy, the formation of public organizations at dam drains to deliver water and participate in the construction of irrigation network of agricultural lands at the downstream of the dams is necessary.

From the legal point of view, communal irrigation organization means the organization of farmers that have the water embranchment (subscription) under the same farming water resource. Utilization organizations, also, include utilization companies, communal irrigation organizations or public groups who cooperate in the process of water utilization management.

This condition had to be materialized in the case of the shared dam of Doosti (Friendship) between Iran and Turkmenistan.

The method of the formation of communal organizations has been considered in this study.

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INTRODUCTION

In Islam religion with a particular economic system, the mutual co-operation and participatory system is much emphasized. After the Islamic revolution in Iran people participation in economy and social justice became principle of the country's objectives. Since 1980, all countries of the world including developed industrial countries with capitalism and socialism ideology and also the developing countries in the third world, realized that without people participation and association, development could not be reached. Therefore, the science today has completely accepted the people participation in development.

Understanding the world concept of people participatory principles, I.R. Iran, applied the policy of participation, by reducing the government share in economic and business, assigning the people affairs to people to decrease and solve the existing social and environmental problems. The parliament approved laws followed by the governmental regulations for optimum use of water and fair water distribution, to be enforced by the Ministry of energy (water resource deputy) and the Ministry of Jihad Keshavarzi (Agricultural Ministry) to provide facilities for transferring the water management to associations and also provide facilities for the formation of water users associations. These provisions would facilitate the execution of the participatory objectives of the government. According to our country laws and international experiences, participatory management in historical – traditional level has been a necessity for our country development.

- 1- According to Iran History and tradition references in tens of books and hundreds of specialized articles, there has been no programmed accomplishment completed unless the people participatory management had guaranteed the projects (Popoliyazdi, 1381– Safinejad, 1368 –Farhadi, 1373 and others).
- 2- Formation of NGOs are legally accepted in the world and most of the countries constitution, support the NGOs.
- 3- City and villages councils are supported in chapter 7 of I.R. of Iran constitution, particularly in articles 100 and 104. In the 4th Iran Development Plan the participation of people is recommended in accordance to article 5, 17,10, 50, 52,71, etc.
- 4- The best way to transfer management to people, is to form people associations, That is why in many parts of the world governmental regulations and parliament's laws support the formation of associations and cooperatives.
- 5- In I.R. of Iran constitution, the cooperative is mentioned as the third principle of Iran economy. In article 107 of the third Iran Development Plan, re-approved in article 4 of the 4th development plan, the participatory irrigation management and the formation of Water Users Associations is recommended too.

MAIN QUESTION:**FORMATION OF PEOPLE'S ASSOCIATIONS¹ AT THE DOWNSTREAM OF DOSTI DAM IN SERAKHAS.**

The republic of Turkmenistan and the government of I.R. of Iran signed a contract to construct the Doosti Dam on the Harrirud-Tajan River to provide the drinking water for Mashad and Serakhs as well as agricultural water for irrigation. It is also planned to use The Dam for prevention of floods that may destroy the potential agricultural lands in Serakhs and deconstruct the buildings at the border.

The accumulated water behind the dam are divided for use by Iran and Turkmenistan mutually. The regional water company of Razavi Khorassan has made a contract with a consulting company to form Water Users Associations in the region so that the water management could be transferred to the farmers. The establishment of water users cooperatives (associations) is a proceeding that follows the programme of optimum usage of agricultural water approved by the government and parliament. The consulting company performed a complete study on social and economic situations of water users in the region as well as a complete study of the rural geography and irrigation system of the past and the present. The study was done by the consultant, showed that the form of cooperative systems is preferred by: farmers, experts and authorities of the region as the best form of association.

OBJECTIVES:

The main purpose of this article is a survey on the formation of water users cooperatives in the down stream of Doosti Dam in Serakhs and description of the main problems existed during the procedure of cooperative formation.

THE FORMATION OF THE WATER USERS COOPERATIVES (WUCS)

The optimum usage of agricultural water in the 4th Iran Development Plan, The law of fair water distribution and other regulations and manuals on water usage in I.R. Iran, recommends the transfer of water management to farmers. Therefore, the formation of water users associations (cooperatives, associations, etc.) at the down-stream of constructed dams is a policy of Regional Water Companies and agricultural organizations in Iran. Improvement of management structure and decentralization accompanied by increasing the role of people in economic development resulted in developing laws and governmental regulations for the transfer of water management to farmers. According to the third and 4th development plan of Iran, especially in article 107 of the third plan, the regional water company of Razavi has begun the transfer of water management to farmers. The consultant has finished the establishment of 6 water users cooperatives at the down-stream of Doosti Dam in Serakhs. The following is the description of procedures:

1- In any part of this paper the word: ASSOCIATION means any kind of legal group formation such as cooperatives, stock holder Co., trade associations, etc.

THE GEOGRAPHICAL SURROUNDING STUDY:

The city of Serakhs as an important region of the down stream of the dam is located in the northeastern part of Iran. It is located 180 Km from Mashad. Tajan River is the boundary line between Iran, Afghanistan and Turkmenistan. This boundary dam is constructed at 75 Km from the south of Serakhs on the Tajan River.

There are 29 villages on the down stream of the Dam. These villages all are users of the Dam's water and most of them are located at the west side of the Harirud – Tajan river.

The population of the region under study was 65246 persons (in 2006). From this Population 30108 persons are living in the rural area and 35118 persons were the citizens of Serakhs city. 75% of population are shiites and 21% are sunnites. Baluch people are sunnites and Sistanies are shiites.

RECOGNITION OF THE WATER RIGHT USERS AND CALCULATION OF THE WATER RIGHT USE FROM THE DOOSTI DAM FOR EACH WATER USER

Before the formation of the water users cooperatives, the allocation of the Dam water should be calculated. We first calculated the water right use for each water user. Then we calculated the total water right for each cooperative. The cooperatives made a contract with the Regional Water Company to collect the yearly water fee from the members and pay it to the water companies. According to the agreement, 12.5% of collected fees will be returned to the WUCs. The following information shows the specification of the water users cooperatives and their rights of water from the dam:

The land area of water right users from the Dam:	15667 hectare
The total volume of water right per year:	50.7 m Cu.m.
The total number of water users:	3256 persons
The number of established WUCs in 2006:	6 cooperatives
The name of Periodic managing director of all WUCs:	Haj Mohamad Ghasemzadeh
The number of the streams:	4 main streams about 70 Km and 230 Km sub-streams.

THE TRADITIONAL STRUCTURE OF WATER MANAGEMENT IN THE DOWN STREAM OF DOOSTI DAM

The structure of traditional water management depends to the physical layout of the streams and traditional system of cultivation in the region. There was an old system of water management some years ago that distributed water, controlled the water usage, cleared and repaired the streams. Cheif water distributors (SAR-SALAR) used to find the point of stream that needed clearance or reconstruction. Some Mirab (water distributor) was under the control of a SAR-SALAR. Mirab allocated the share of

repairing for any SALAR (chief of some farmers) who was representative of a SAHRA and Sahra was a group of villages. SALAR allocated the share of the work for any Dehghan (farmer) from a village.

The Water distributors called MIRAB, when they ordered the work of clearance or repairing the stream, no one had the right to disobey the order. Farmers were selected from SAHRA for repairing the stream or change the water way, sometimes walked tens of kilometers to reach the point of stream that should be repaired or water way be changed to the other sub-stream.

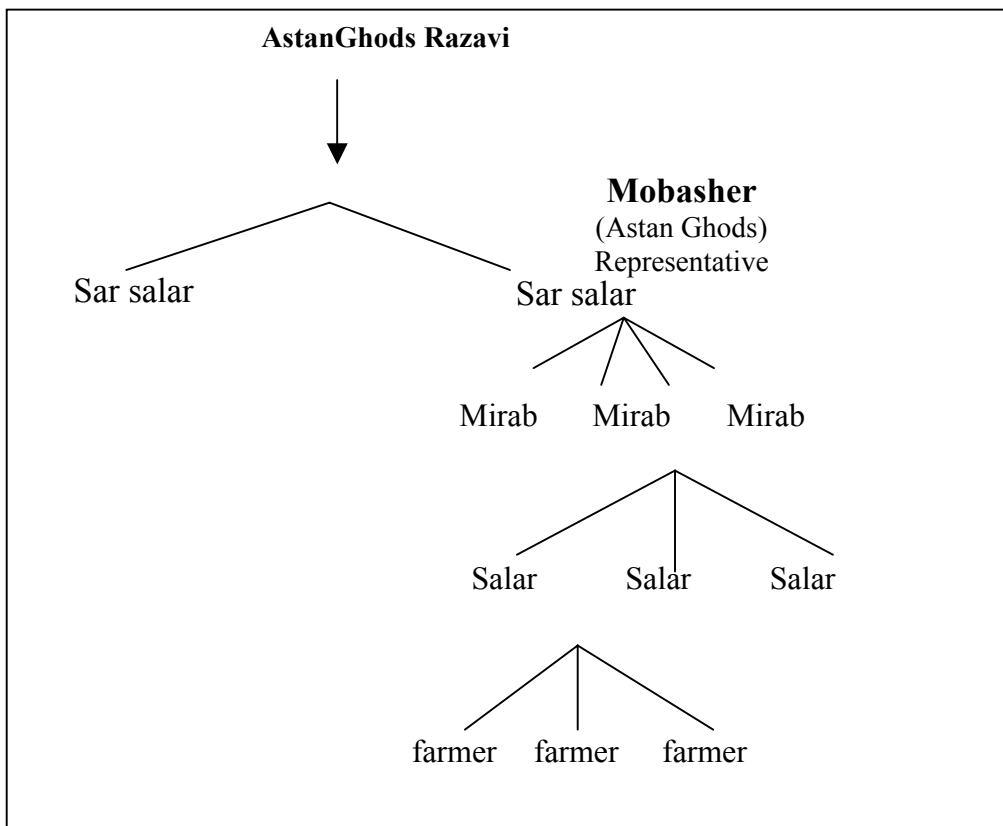
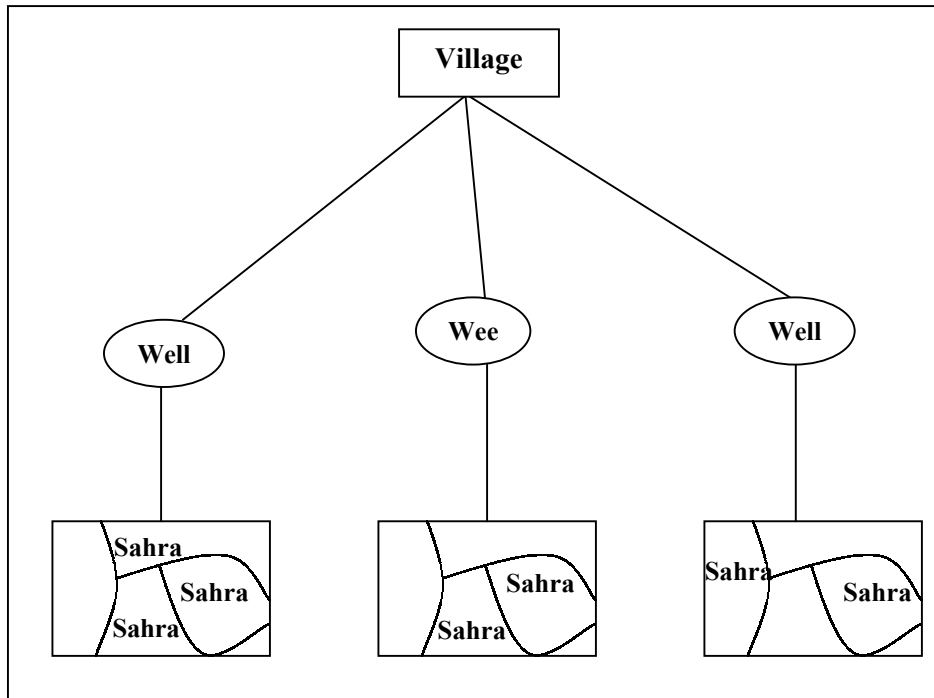
In 1981-1991 decade, Astan Ghods Razavi¹ constructed a long stream to get water from the dam for irrigation of Razavi land and at the same time started digging deep water well in the region. Astan Ghods, then, made contracts with farmers for utilization of agricultural water and land use.

Before the revolution, according to the law of land reformation, some lands of Astan Ghods distributed among 1082 farmers in Serakhs region, each 6 hectare. The traditional management of water distribution deteriorated because of the change in ownership of the lands. Since then no other system has been substituted. Digging deep wells by Astan Ghods provided water to farmers and they did not need to use the stream water. Little by little the old tradition of water distribution was completely deteriorated.

The history of water in Serakhs comes to the point that all streams of water were deteriorated and MIRAB, the traditional water managers, were forgotten for many years. Due to the lack of management system and deterioration of river and stream water usage, and because of digging many deep wells by Astanghods or people, the pressure on the use of underground water exceeded and for the time being (2006), there is the problem of decreasing underground water for irrigation. In draught years there have been many conflicts among farmers for water usage that some-times have resulted in criminals and killing persons.

1- ASTAN GHODS RAZAVI: The management of lands and investments donated to the Shrine of Imam Reza in Mashad

Traditional management of water usage in down stream of Doosti Dam



The establishment of Water Users Cooperatives in The down stream of Doosi Dam – 2006

Following a survey in the region and listening to farmers, effective members of Islamic councils and the reliable persons in the villages, it is understood that they mostly prefer the cooperative system for the water management. So the consultant decided to establish some cooperative associations for water users in the region.

DETERMINATION FOR THE NUMBER OF WATER USERS COOPERATIVES WUCS.

The study shows that the process of association formation should be started from top a to the bottom. To organize the cooperatives, water should be chosen as a base, not the village. From the point of management the cooperatives should be neither too large nor very small. The physical shape of irrigation network is another factor in determination of cooperation area of a cooperative. Consulting with reliable persons and traditional water distributors, the consultant co., suggested the formation of cooperatives around the main irrigation streams. In the region there are 4 main streams starting from the south to the north or up-stream of Tajan River to down.

1- The Stream of Sangar

This is the first stream which bifurcates from Tajan River. Three villages were irrigated with this river called: Sangar, Kalateh Morehe (Haj Hossein) and Nowruzabad. The land was irrigated by this river was totally 682 Hectares and the Number of water users were 186 persons. A Water user cooperative formed around this stream, called Sangar WUCs.

2- Nowruzabad Stream

The second stream from Tajan River: This stream irrigates villages of Ghasemabad, Dowlatabad, Ghooshsarbozi, Ghaleh Ghassab, and some lands of Kachoolabad. The cooperative formed here is called Nowruz Cooperative.

3- The Revolution (or Dowlatabad) Stream

The third stream from Tajan River: This stream was constructed by Astan Ghods Razavi in 1983. It is suggested that a WUCs be formed around this stream.

Astan Ghods has constructed this stream to irrigate the agricultural land development in the area of Tapeh Sefid, The old airport and the lands under the project of pistachio planting.

4- The Mozafari Stream

This is the fourth and the last stream from the Tajan River. This stream is the oldest bifurcated one. The trunk also irrigates some villages. Water users are divided around the trunk and the two branches. So the consultant suggested 3 WUCs around the trunk and two branches.

4-1- a cooperative formed around the trunk called Etehad.

4-2- a cooperative called Etefeagh formed around the right branch which irrigates the Serakhs city and surrounding villages.

4-3- a cooperative called Yavaran. formed around the left branch. This cooperative includes the water users of seven villages.

Table (1) Villages shared in any WUCs and the name of the related streams

Item	Name of stream	Cooperative name	Villages
1	Mozaffari	Etehad	Asefabad, Ghalehno, Ghoshazim. Ghoshkohneh
2	Mozaffari	Etefagh	Ebrahimabad, Tommokhtar, Tapemirahmad, Serakhs, Abasabad
3	Mozaffari	Yavaran	Tomrasool, Ghoosh Khazae Hasanabad, Ghoshalijan, Ghosh chaker, yaztapeh, kandali
4	Enghelab	Vahdat Tajan	Hasanabad, Dowlatabad, Ghoshkhzaee, Ghosh alijan, Kachooli
5	Nowruzabad	Nowruzabad	Dowlatabad, Ghalehghasab, Ghasemabad, Ghoshsarbozi, Kachooli
6	Sangar	Sangar	Kalatehmerae, Nowruzabad, Sangar

Table (2) Name of Managing director of established WUCs and the registered No.

Stream name	Name of WUCs	Name of Managing Director	Registered No.
Mozafari	Etehad	Haj Shirmohamad Hosseinpoor	342
Mozafari	Etefagh	Haj Bratali Arab Khazae	343
Mozafari	Yavaran	Haj Hosein Mishmast	
Enghelab	Nowruzabad	Hajmohamadali Rahsepar	344
Nowruzabad	Vahdat Tajan	Haj Eidmohamad Ghasemzadeh	348
Sangar	Sangar	Haj Alireza Abaszadeh	341

The limited area for the Water Users Cooperatives at the down stream of Doosti Dam

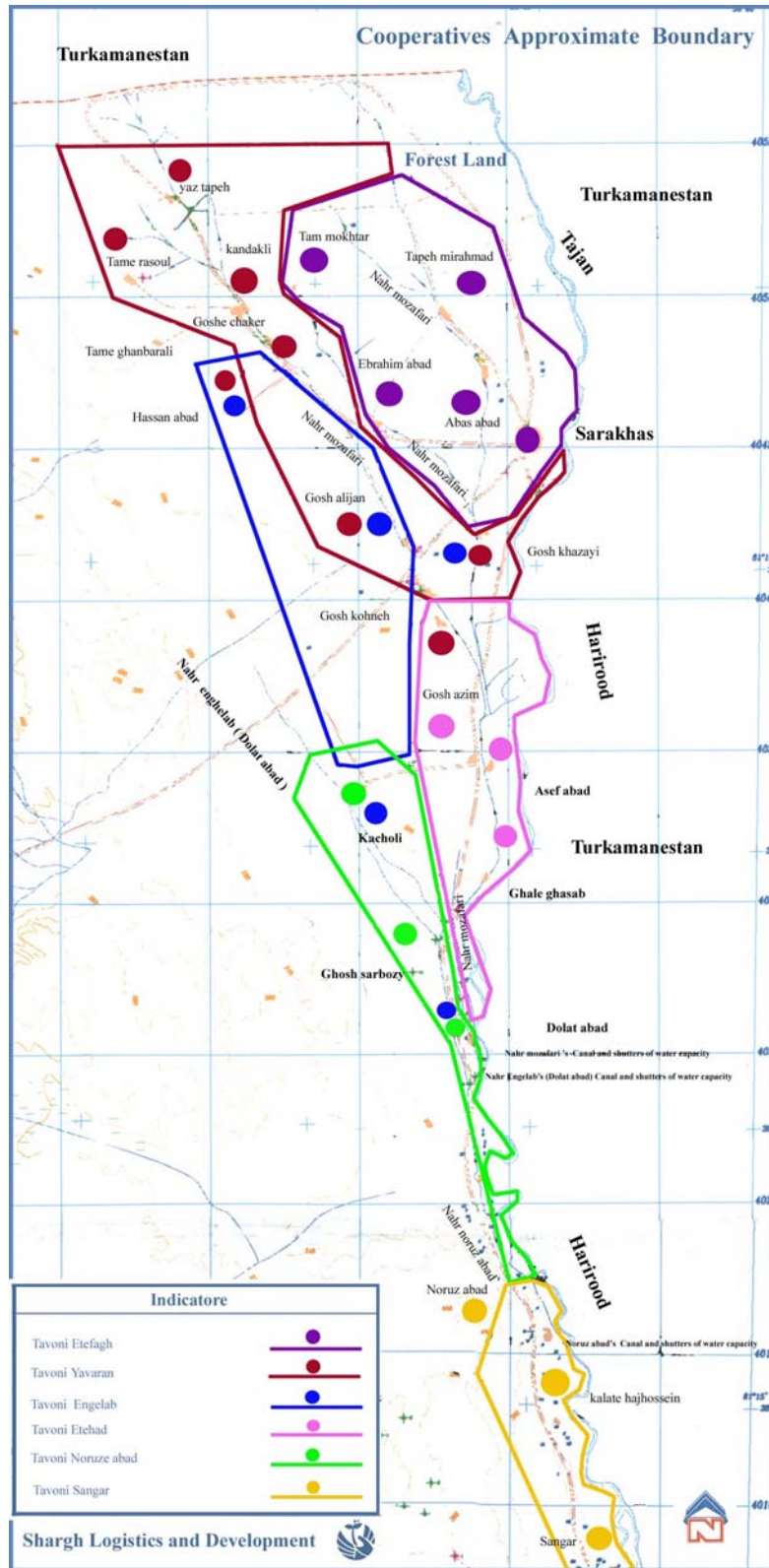


Table (3) Specification of WUCs at down stream of Doosti Dam

Item	Stream Name	WUCs name	Number of villages	Number of water right users	Land with water right (Hectare)	Amount of water allocated (mCu metre)
1	Mozaferi	Etehad	4	309	1440	4.7
2	Mozafari	Etefagh	5	879	4873	15.5
3	Mozafari	yavaran	7	1164	5562	18
4	Enghelab	Vahdat Tajan	5	323	1211	5.4
5	Nowruzabad	Nowruzabad	5	395	1899	4.9
6	Sangar	Sangar	3	186	682	2.2
Total			29	3256	15667	50.7

THE MAIN OBJECTIVES OF THE WATER USERS COOPERATIVES

- 1- Decreasing the government role in water management (in relation to chapter 1, according to the law in the Third Iran Development Plan)
- 2- The complete execution of the law for fair distribution of water, approved in March 2006.
- 3- Executing the objectives of the government manuals on optimum use of the agricultural water
- 4- Executing the objectives of the long guidelines of Iran water resources approved in December 2003 by the government.
- 5- Executing the approved decisions of the High council of Water (HCW).
- 6- Improvement of water usage and distribution of water
- 7- Assigning people affairs to themselves. The people seldom refer to regional water companies.
- 8- Cooperation in the issue of the water documents.
- 9- Facilities made by the manager of WUCs to refer to the banks on behalf of the farmers to receive loan for participatory construction of the networks.

Controlling and monitoring the usage of underground and surface water

Protection of underground and surface water with attention to the allocated investments

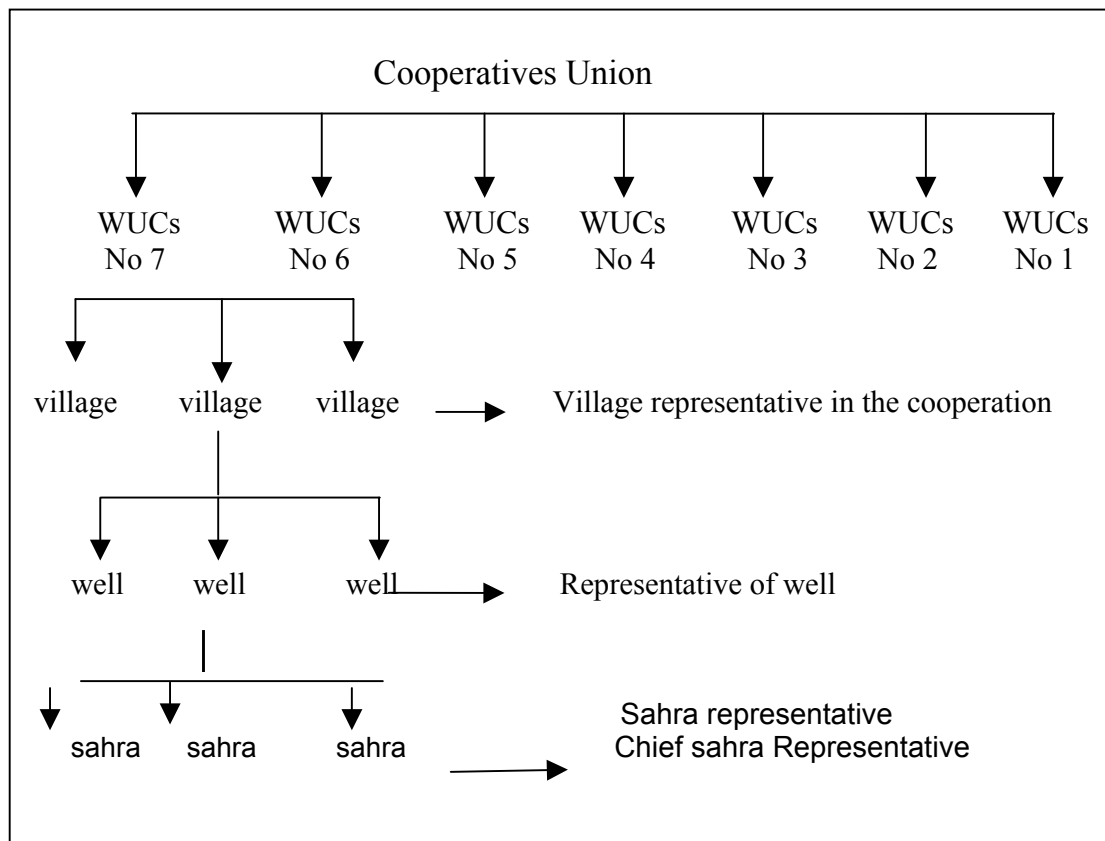
- 10- Assuring assuring the water rights of the farmers and preventing illegal water use.
- 11- Offering the services needed by the land
- 12- Owners, water right users and free water users by the cooperatives.
- 13- Making questionnaires and getting general opinions of the farmers for decision making

- 14- And transferring information to the water users effectively.
- 15- Making contract on behalf of all water users with the regional water companies to collect water fees.
- 16- Cooperation on land purchasing from farmers on the routes of the water canals, lining and the dams construction.

THE NEW STRUCTURE FOR THE MANAGEMENT OF WATER AT THE DOWN STREAM OF THE DOOSTI DAM

After the construction of the Doosti Dam and formation of water users cooperatives, the new structure of water management replaced the traditional system. The new management that is going to be fixed, needs two years time for controlling and training the WUCs managers and monitoring the system so that the new system be fixed as a mixture of new and traditional system. The following model of management has been suggested by the consultant and is being executed in the region.

Chart No.2 New structure of WUCs management on the down stream of Doosti Dam



THE ACTIVITIES DONE BY THE WUCS SINCE THE ESTABLISHMENT:

- Distribution of 60 million cubic meters of agricultural water.
- Decreasing the complaints of the framers on water distribution
- Clearing the old and unused canals by the WUCs: because of this activity and clearance of irrigation canals by WUCs, Iran could use her own relative share of water from the Doosti Dam
- WUCs have a central office in the city of Serakhs
- Lining the surface of the streams bottoms to prevent the linkage of water from some part of streams.

THE FINAL RESULT:

The formation of six WUCs in Serakhs, despite the existing particular problems as described below, was successfully finished in one year. The cooperation of consultant, governmental authorities and the local managers of the regional water company of Razavi Khorassan was the reason for expedition in following the legal steps and prompt formation of cooperatives.

The problems existed were as the following:

- 1- The sensitiveness of the region because of its location at the border.
- 2- Existing particular problems between the farmers and Astan Ghods Razavi on the matter of land ownership.
- 3- Existing some social conflicts among the farmers for water.

During the following procedure of cooperatives formation, many consultative, technical and scientific meetings were organized with the participation of managing directors of the new established WUCs, to consult the technical procedures for distributing the water from the Dam to the end of streams.

Many streams that distributed water to the down stream in the past had been filled and were out of use .the first activity of the cooperative was to repair the streams for distributing the Dam's water. It was the most important participatory action. With cooperation of the dam manager and the water company authorities and particularly the cooperation of WUCs, the farmers could use the mechanical machines for clearance of the streams at the end of the year 2006. The formation of WUCs was the main reason for reducing the conflict on water and other social matters. Although the social conflicts have not been finished in Sarakhs, it will be eotdr during the draught years because of the shortage of water. One of the other important activity of WUCs was to prevent the water linkage from the some part of sandy streams by lining the bottom of the streams. The other important activity by WUCs was piping and making the opening leads at the beginning of each stream that was done by the cooperation of WUCs and the Regional water company of Razavi Khorasan. Many social and political factors such as the boundary location, different local originations, different traditions, the difference of local income and poverty the region, independency of 100% of families to cultivation and agricultural activity, and the other similar problems, could prevent the formation of

cooperatives, but a good collaboration and cooperation among people, governmental authorities and Astan Ghods Razavi proved this fact that collaboration and cooperation and participatory action can solve all the problems and can result a good benefit to the all.

Participatory work of the farmers in this project showed that they would be able to manage water use and water distribution and network construction or repairing by their own, if they had some governmental adviser with enough expertise and patient to advise and help them.

Of course it is obvious that WUCs would have many problems at the beginning because of the lack of experience or some miscollaboration but with more assistance and support to these cooperatives we are sure that they could do their job at the highest expected functions, and late or soon, these WUCs would be the sample of the successful water users association in whole the country of I.R. of Iran. As a consultant to regional water companies and the adviser in social and economic matters, I should recommend all water authorities of the country to extend their support and cooperation to the new established co-operatives for a few years. Be sure these people associations will be a good hand of executing projects to the government and by strengthening these cooperatives the country will simply reach her approved objectives in transferring water management, fair water distribution and optimum use of agricultural water.

ADDITIONAL PROBLEMS:

The legal relation between WUCs, the Ministry of Energy and the Regional Water Companies is not clear.

- At the present time the formation of cooperatives is financially supported by the regional water companies, but WUCs or any association are under the rule of the Cooperative Ministry or Labour Ministry and there is no legal relation between associations and the Regional Water Companies.
- IRAN Documents and Estates Registration Administration in her officially notice of recognition sends copies to 11 unit and organizations but no copy is sent to regional water companies that have most of cooperation before and after the cooperative establishment. Because there is no legal place of recognition for water companies.

SHORT-TERM SOLUTION:

The formation of cooperatives should be based on the permission of The Ministry of Energy (through the regional water companies) that means, if water companies of the region cancel their permission of cooperative formation, the cooperative practically is dissolved.

LONG-TERM SOLUTION:

Integrated views on the WUAs:

For increasing the ability of cooperatives so that WUAs be changed into an effective organization in water management, a multipurpose bill for WUAs should be proposed to parliament or at least, to the government. The approved proposal should be sent to governmental organizations and WUAs for execution.

TO MAKE THE ASSOCIATIONS MORE EFFECTIVE, AN OFFICIAL AND LEGAL RELATION SHOULD BE ORGANIZED BETWEEN DIFFERENT GOVERNMENTAL SECTORS AND THE WUAS

One of the negative view on the formation of the cooperatives is that their function is limited to collect the water fees and pay it to the regional water companies. This view should be improved among water users by strengthening and supporting them in such a way that they could be independent from the government while they are supported. The WUAs should be able to obtain income and become active in agricultural business. The collection of water fees should be their second or third function after being strengthened.

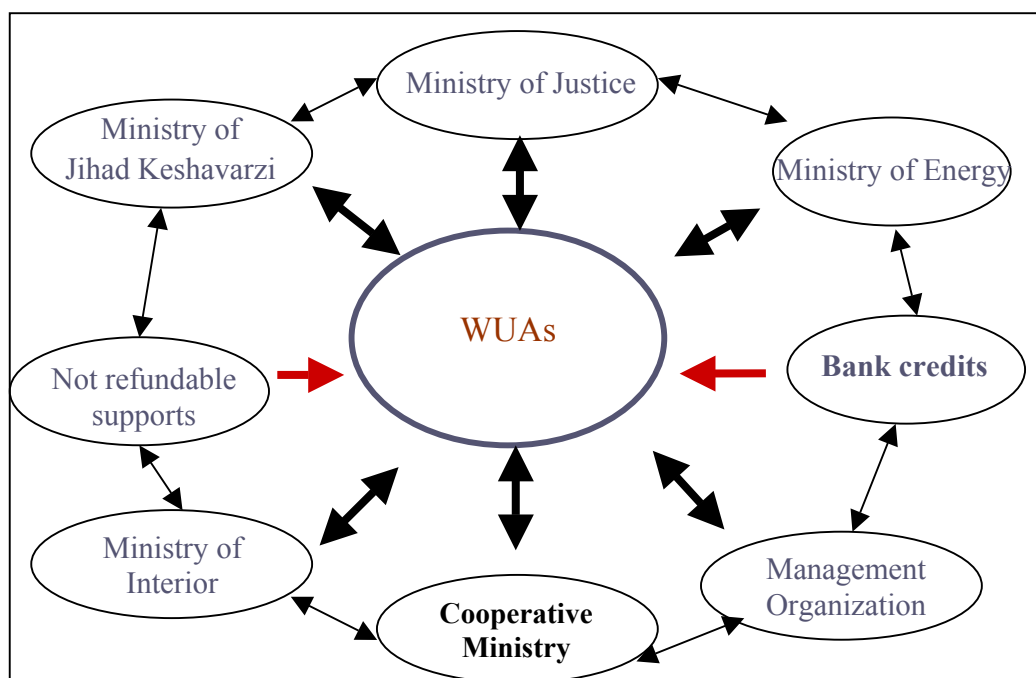


Chart 3: Capacity building of WUAs performance of article 107 of the third Iran development plan and article 17 of 4th Iran development plan

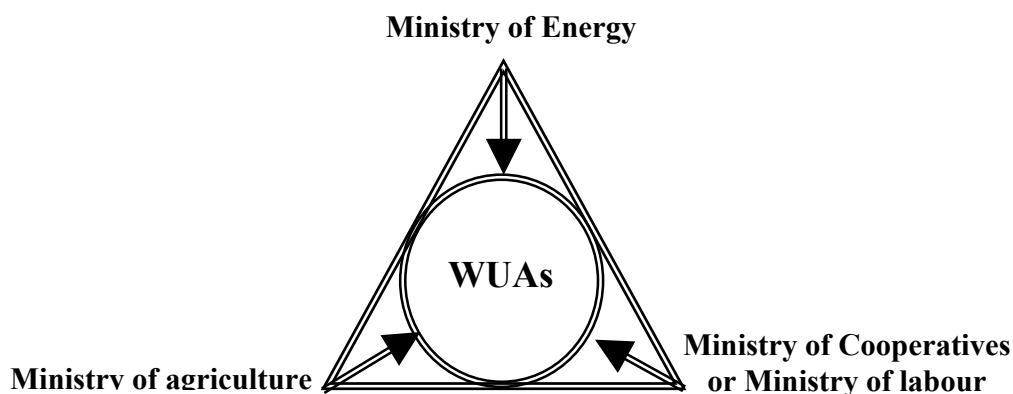


Chart 4: The main interrelation of WUAs with government ministries.

Notes:

1- This paper is derived from two projects at the down stream of Doosti Dam that was ordered by regional water company of the Razavi Khorassan. This is to thank the regional water company of Razavi Khorassan and all the researchers and persons who cooperated.

2- Article 107 of third Iran Development Plan:

“Government is allowed, in favor of execution the policy on economic use of water and the guidance of agricultural water users on optimum use of water, to provide water in streams or irrigation networks or pumping plants and deep and semi –deep wells on the basis of agricultural optimum water use to users and rating the price of water on the basis of the law for fixation of water fees .In this regard government will proceed on the written regulations and executive system for usage of water and participation of non governmental (right water users and owners) and formation of associations of water and soil users.

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