INVESTIGATION OF PROBLEMS AND DIFFICULTIES OF OPERATION AND MAINTENANCE MANAGEMENT'S TRANSFER OF QAZVIN IRRIGATION AND DRAINAGE NETWORKS

Amir Moradinejad[1]

ABSTRACT

Iran is located on the dry belt of the world and precipitation rate is low equal to 1/3 of world average. Time and place distribution of precipitation is inappropriate. Hence water shortage is one of the major problems in the arid region of Iran. Since agriculture sector consumes over %90 of harvested water. Unfortunately due to inadequate system for operation and maintenance of water structure, use optimization and lack of water user's participation in operation management of drainage and irrigation large projects, and transferring management of some of irrigation networks to water user's without a studied comprehensive program leads to decrease irrigation efficiency and product, decaying water structures, confusing water user's and consequently high rate of wasting water. In this paper, problems faced in operation management for water and maintenance of water structure in QAZVIN plain having modern irrigation networks have been analyzed. Since operation and maintenance management of hydraulic structures in QAZVIN plain have been governmental and dominant insight on design construction and operation of irrigation networks was initially physical development performance evaluation, users and farmers participation in network management have not been considered. There have been numerous problems for user's and resources. Operation management for water and hydraulic structure has been donated to water user association (W.U.A) under governmental supervision since last year. In this paper we are trying to review and present advantages and disadvantages and also problems and deficiencies in transferring authorities, approaches recommendations through field visit and polling among farmers (W.U.A). by participation irrigation management (P.I.M) for this irrigation network there are some issues such as simplification of administrable affairs reducing governmental involvement time saving, local management decreasing of water loss during transfer and distribution. problems such as, decaying and damaging networks, lack of proper cultivation pattern, inequity in water distribution by water operation in collecting water fee no proper relation among farmers and (W.U.A) among farmers and governmental organization, irrigation efficiency, lack of required motives in order to decrease users expanses, not implementing promotion and training programs which have been studied.

Keyword: W.U.A, QAZVIN irrigation network, irrigation management, operation system.

1- E-mail: jalal_246@yahoo.com TEL: 09188630923

INTRODUCTION

The transference of management in the country has fared based on resolving a temporary problem following foreign patterns and satisfaction of World Bank's facilities condition and is not hosed on precise strategy or program. Hence establishment of operation companies, privatizing activities, legal aspects and readings surveying could not prepare breeding grounds management transference. Also there are limit and temporary success in the above experiences; the aforementioned reasons and lack of suitable approach in programming and mistake in recognition of aspects have fettered the formation of management transference of Qazvin irrigation network.

Government and semi-governmental management in the 30 year-old project (Irrigation and drainage of 60.000 hectares of Qazvin plain) resulted in served problems and poverty in 1200Km constructions such as primary, secondary, tertiary and fourth channels with 94.220.320 and 560 Km respectively and in more than 3000 Hydro mechanical machinery and 30.000 farmers. Traditional and in correct operation and law irrigation efficiency (33%) are the issues of this kind of management for the above mentioned farmers and beneficiaries.

Viewpoints and derivations:

1) The country's long-term development program.
2) The third development program law.
3) Provision two of clause 106, establishment of local water management. Clause 5 of executive bylaw, article (T) of provision (19) of second development program.
4) Action plan for clause 107.
5) Approach of World Bank (1999).

Since 1999 the World Bank began a new approach for poverty eradicate and in per suit of effectiveness improvement, it made balance among macroeconomic, Conditions, construction aspects and human and phenomenal development.

This frame depends in 4 related principles:

1) Existence of comprehend save and long-term development ideal.
2) Complete inclusion of country's development guidelines in participation and comprehensiveness.
3) Increase of participation and coordination among beneficiaries groups.
4) Being account in all stages with control and measurement.

The trend of O&M management irrigation and drainage networks before association's establishment:

Agricultural water operation system and delivery water to the farmers in the modern Qazvin plan irrigation and drainage network is done by determination of each farmer's share according to arable program and required crop water.

Indeed water users, after conclusion, request subtotal or their entire monthly shares individually. This request along with price bank bill is delivered to the sales person then

he or she after required controlling reports the result to the distributor custodian, and this person sort the above mentioned do comments according to the secondary channel and delivers water to the farmers through the gates. Arable program of those farmers who are in the same area is alike and the representative of these farmers is responsible to get their water share form energy ministry's operating companies, which are responsible for network operations, and then distribute water between third and 4th channels.

Water is delivered to the farmer's representative in the third channel gates, and distribution of it in the 4th channel is of representative responsibilities but in the farm by them selves. The farmers don't accept any responsibilities in subsidiary channel's O&M and the government administrations don't move on this matter which is resulted in following problems:

1) Undesirable project O&M and bench premature destruction.
2) The water installations such as checks and outlet works are out of order.
3) Installation of several illegal gates and irregular outlet works in farms.
4) Imperfect artificial recharge of project area through modern Qazvin network.
5) Unexampled spread digging illegal wells and in crease discharge rate of legal wells.
6) Exploitation of water more than aquifer layer capacity and hence drops of water table level.
7) Increase dangerous points due to spread of habitations near network and lack of comprehensive strategy for immunization hence falling of people or cars in to channels.

To face and unravel the above mentioned problems, the government on behalf of (clause (T) of provision (19) and it's executive bylaw, clause 106 and 107 of third program, clause (A) & (8) and clause (17) of 4th program) charge the energy and jihad-e-agriculture ministries to improve and optimize agriculture water consumption and gravitate beneficiaries to volumetric delivery of water (based on the exist document), to equip suitable measuring instruments and transferring of (water installations) o & m responsibilities to the water user associations.

Transference of management to the associations:

Qazvin plain irrigation management transfer (IMT) formulated in 2002 with the aim of substantial conservation and maintenance and operation optimization.

The design of local water management system was fared according to arable blocks and assortment of neighboring farmers till to third channels sluice points.

Water user associations syndicates was established according to integration of irrigation associations bounds to secondary channels this design implemented by using of local and regional capacities since 2002 in form of three year schedule.

With three stays as follows:

1) Internal stage: system design, planning, data base collection and processing, cooling of cultivate and irrigation information and preparing a schedule for design and time of implementation.
2) Regional stage: determination of farmer group's represents datives, water supply conclusions, operation of arable blocks and assortment of participant's information and concerned priorities.
3) National and headquarters stage: Initiation of syndicates and regulation of agreement for taking main and distribution channels and also provision transfer of operating company's share to the water users.

During (2004-2005) arable year, the third and final stage of the Qazvin plan (IMT) design implemented with administration, financial and operational delegation and the following activates are fared by syndicates chairman without government interference.

a) Register of order, sale, distribute and agriculture water delivery.
b) Dredging of channels, reconstruction of network installations.
c) Volumetric delivery of water to the syndicate's chair man in man channel outlet points.
d) Continuous overhaul of installations and report of water user's offends.
e) Accountability and resolve of water user's request and problems in the syndicate office.

At the moment by implementing step by of PIM and provision of water user's short term benefits, their gratifications have increased. This kind of influence on behalf of arresting farmer's attention and cooperation for transfer of the government's rest duty to them is very important.

Also with complete and systematic coordination with to syndicates representative that have been selected among 3000 person and applying supplementary plans, land consolidations it is expected that gradually raising effectiveness, real and justly distribution of water and irrigation efficiency will materialized.

Duties and entrust of charges to the water users:

1) Acceptance and register of water demands or water trade requests form network participators.
2) Accord of demands with water supply conclusions and ration according to cultivate and irrigation plan.
3) Planning and accordance for selling water and getting water rate and taking turn for water delivery.
4) Operating and administration of water distribution affairs (about 1100 km) and the network's channels (2,3,4)

5) Volumetric delivery of water to water users association's representatives due to arable units.
6) To lead the administrative affairs and supervision to associations and group's operation (3, 4 channels).
7) Continuous visit and inspection of installations and prepare and sending of farmer's offends.
8) Accountability and resolving of farmer's problem in the water user syndicate's office.

At the moment there are 158 associations, 10 syndicates and am active central focal and O&M management with 30.000 farmers. The syndicate has started its activities since 2003 and each office is responsible for comprehensive water management of an area and every association is like representative of a gate only the farmer's representative refer to the association's office to deliver water and proceed by it's identity card.

"Impacts of irrigation management transference to water users:

Placement of 3000 farmers terms and clientele with to syndicate's chair man is it's most important effect.

Cumulative effects	Reducer effects
People supervision	Official bureaucracy
Gustily water distribution	Terms and clientele
Substantial maintenance	Government tenure
Irrigation efficiency	Production costs
Increase of productivity	Reduce of costs

Pursuant to the accomplished activities on behalf of beneficiaries, operation company Jihad-e-agriculture organization and Qazvin water affairs aren’t successful of irrigation management transference and there are some dysfunctions and if we unravel the following problems, of course by applying some adaptabilities, we cam develop it to whole country as a pattern project.

Existing problems:

1) There is not confident water source.
2) Nonintervention of beneficiaries' ideas or opinion or polls both at study and implementation stages.
3) Nonexistence of initial social studies in order to determine suitable o&m management capacity building with farmer's participation.
4) Absence or lock of suitable laws.

5) Destruction of network and hydro mechanical equipments and poverty of water transition, distribution and farmer's water share division.
6) Neglect of comprehend save and continuous tramping program for agriculture water users.
7) Nonexistence of annual supervision for implementation of cultivate plan.
8) There aren't suitable equipments for volumetric delivery of water in third and 4th channels.
9) Tamper of some beneficiaries on behalf of persons who are responsible for water division in the network area and in water division and distribution.
10) The government doesn't support the existing associations.
11) Uncertain in comes and costs.
12) Uncertain administrative terms among associations and governmental sections.

REFERENCE:

1) Hydarian, A (1383) an analytical review on native experiences about irrigation management transfer. First session for evolution of drainage and irrigation network problems.
2) Ghacemi, A. (1383) plan for irrigation ferries monument Transfer a report by regional water organization of Tehran.
3) Guide book on participatory irrigation management www.worldbank.org Worldbank. (1998)
4) Meinen- Dick, r 1997. Farmer participation in irrigation: 20 years of experience.