

# ESTABLISHMENT AND DISSEMINATION OF PARTICIPATORY WATER MANAGEMENT

## ETABLISSEMENT ET DISSEMINATION DE LA GESTION PARTICIPATOIRE DE L'EAU

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### ABSTRACT

*Currently, JICA and Iran's Golestan Province Jihad-e-Agriculture Organization (JAO) are implementing a project called "Establishment of Participatory Water Management" in Golestan Province. The purpose of this 5-year project (2009 to 2014) is to encourage participatory water management and increase the agricultural productivity in the project area.*

*The capacity building of the JAO staff will be taken up to encourage participatory water management in the whole province of Golestan.*

*Main activities of project : (a) Making project implementation system; (b) Selecting pilot site; (c) Formulation of water management system suitable for pilot site; (d) Planning and implementing of the an action plan ; and Developing a comprehensive plan ((agronomy, irrigation, operation and maintenance of facilities, operation system) for project site.*

*Introduction and dissemination of participatory water management practices will be taken up by farmers if target farmers increase their productivity by efficient utilization of water.*

*Formulating a management system where people themselves participate will be key for implementing effective water management practices. Increase in water productivity based on the participatory water management practices will contribute to sustainable agricultural productivity.*

**Key words:** *Participate, water management, dissemination, capacity building.*

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## RESUME

*A présent, la JICA et l'Organisation Jihad-e-Agriculture de la province du Golestan (JAO) mettent en œuvre un projet intitulé «*

*Etablissement de la gestion participatoire de l'eau » en Iran. Le projet quinquennal (2009 à 2014) vise à encourager la gestion participatoire de l'eau et à augmenter la productivité agricole de la zone du projet.*

*Le renforcement de la capacité du personnel de la JAO sera entrepris pour encourager la gestion participatoire de l'eau dans toute la province du Golestan.*

*Suivent les activités principales du projet: (a) Etablissement du système de mise en œuvre du projet; (b) Sélection du site pilote; (c) Formulation du système de gestion d'eau approprié pour le site pilote; (d) Planification et mise en œuvre du plan d'action, et développement d'un plan global (agronomie, irrigation, exploitation et maintenance d'installations, système d'exploitation de traitement), pour le site du projet.*

*La présentation et la diffusion des pratiques de la gestion participatoire de l'eau sera entreprise par les agriculteurs si les agriculteurs cibles augmenteront leur productivité par l'utilisation efficace de l'eau.*

*Il sera important de formuler un système de gestion où le peuple participe à mettre en œuvre les pratiques efficaces de la gestion d'eau. L'augmentation de la productivité de l'eau sur la base des pratiques de la gestion participatoire de l'eau contribuera à la productivité agricole durable.*

**Mots clés :** *Participation, gestion de l'eau, diffusion, renforcement de la capacité.*

## 1. INTRODUCTION

### Implementation subjective and period of the project

"The Project on Establishment of Participatory Water Management System in Golestan Province" is planned to be implemented for 5 years from January 2009 to January 2014, as an international project between JICA and Golestan Province Jihad-e-Agriculture (JAO), based on the conclusion of Record of Discussion (RD) on August 2008, after a Development Study was performed by Iran and Japan.

The main implementation procedures of the project are as follows:

1. Preparation of appropriate planning and implementing techniques for the area by preparing and implementing agricultural, irrigation and operation & maintenance plans in pilot site which is located in the project area.
2. Strengthening the farmer's organizations and preparation of improvement plan for the entire project site.
3. Planning the dissemination and enlightenment of the entire project site.
4. Preparing for the dissemination and enlightenment of entire Golestan Province.

## Project purpose and outputs

Project purpose is “The participatory water management system is organized within Golestan JAO to extend the model in Tazeh Abad area.”

Outputs are as follows:

1. The water management plan is prepared for all area of Tazeh Abad area and the main irrigation and drainage facilities are operated and maintained by Payvand RPC.
2. The model of participatory water management, which consists of optimized water use and improved farming system is established in the Pilot sites.
3. Capacity of Golestan JAO is developed about participatory water management
4. Preparation for disseminating the participatory water management system in Golestan province is arranged

## Project site

The project site is Tazeh Abad Irrigation Network Area which is located in Gorgan plain, about 45km to the North from Gorgan, the capital of Golestan Province in Northern part of Iran, next to the Turkmenistan's border. This area is a farm Land managed by Payvand Rural Production Cooperative (PRPC) with about 370 members and 3,300 hectare in area. The area depends on Gorganrud River as its water resource and mainly produces barley and wheat. So far, about 75% of irrigation & drainage facilities were developed by Golestan province. The pumped water from Gorganrud River is roughly divided into direct water distribution area (about 2,430 ha) and reservoir area (about 580 ha).

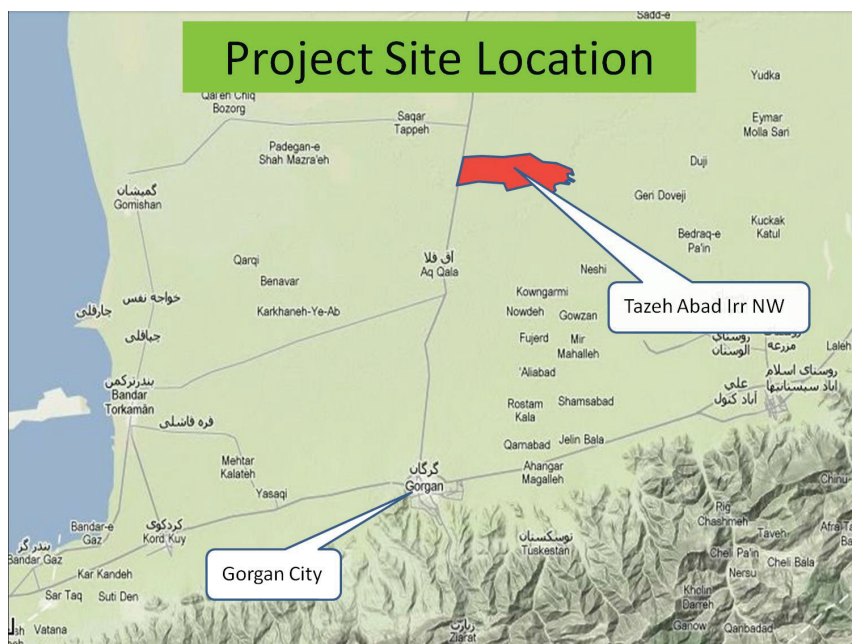


Fig. 1. Project Site Location

## Present conditions and challenges of the project site

### Present conditions of the project site

Tazeh Abad Irrigation Network Area which is the project site, received the permission to construct pump station in 1992 and Golestan JAO mainly constructed the irrigation & drainage facilities and also implemented land readjustment. By 2010, the construction covering for about 2,430 ha of the area has been completed, excluding the reservoir downstream.

In 1997, Peyvand Rural Production Cooperative (PRPC) was established in the Tazeh Abad area, and is providing materials for agricultural productions, implementing irrigation based on farmers' demands, and performing facilities' O&M.

A pump station, 3 main canals (22km), 27 secondary canals (31km), 4 main drainages (21km), 30 secondary drainages (47km), 40 farm roads (99km), one reservoir and one sedimentation pool have been constructed and are being operated and maintained by PRPC.

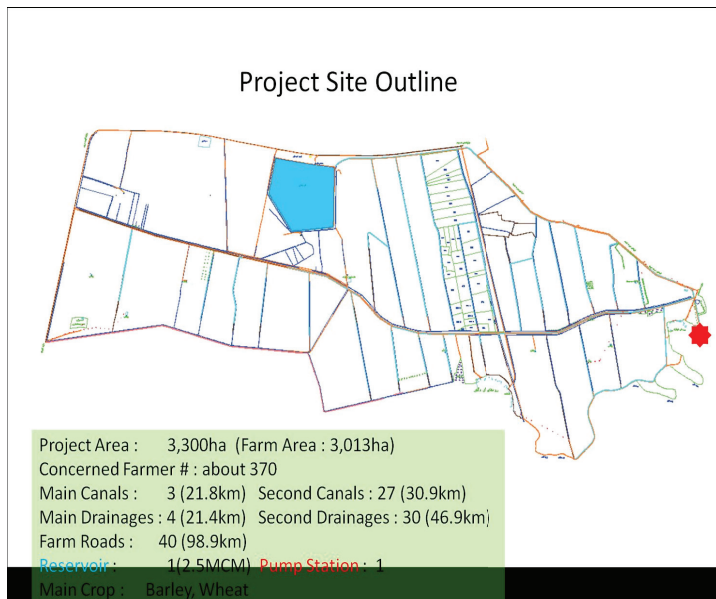


Fig. 2. Project Site Outline

### Challenges

PRPC manages the operation of main facilities to secondary canals, but due to inadequate operation & maintenance of the facilities which has roots in lack of budget and human resources in PRPC, in addition to deterioration of steam regime in Gorganrud River, only about 1/3 of the area is actually irrigated.

Up to the present, fair distribution of water hasn't been implemented and only limited area has been irrigated because the water distribution is implemented based on farmers' individual

demands, which causes that irrigation time, intervals and volume are not proper, and also operation of facilities is not planned

Moreover, because the operation of facilities becomes complicated, PRPC has shortage of staff and adequate O&M is not implemented, constructed facilities don't fully exercise their functions.

The agricultural production is insecure because planned irrigation has not been achieved and crop production is highly swayed due to rainfall conditions.



Fig. 3. Current Situation of the Irrigation Facility

## Participatory water management as the issue resolution

As a result of Detailed Planning Survey conducted by Iran and Japan, introduction of participatory water management was planned as the issue resolution of project site.

Participatory water management is aiming to:

1. Construct a water management system in which farmers themselves are participating
2. Implement proper operation and maintenance of main facilities by dissemination and enlightenment of farmers
3. Increase farmers' income by resolving various agricultural issues along with implementing adequate operation of irrigation facilities.

## 2. MAIN ACTIVITIES UP TO THE PRESENT

### Structure of project's implementation system

In August 2009, "Tazeh Abad Committee (TC)" was established as the project promotion committee which consists of representatives from 7 main concerned villages and personnel

from related organizations in Aq Qalla town and Anbar Olum district. The decision is made in project site; By February 2011, 21 meetings were held and information exchange with farmers, report of project's progress and results of various surveys, and inclusive of listening to farmers' demands, were done.



Fig. 4. Tazeh Abad Committee

## Public relations activities

From April 2009, a newsletter is being published to share information with related farmers. In order to build familiarity among related farmers, the name of newsletter and the color of project was decided by farmers in a public offering. So far, 9 issues have been published and the preparation and editing are done by counterparts from No. 8, aiming at Golestan JAO staff's capacity development.

In May 2009, in order to increase understanding toward the project, briefing sessions were held in the 7 related villages. In briefing sessions, project's goals, contents of planned activities and necessity of farmers' cooperation were explained, also, representatives of villages who are TC members were elected through elections.

In August 2010, as another try in public relations, the project's enlightenment poster was prepared and exhibited in the mosques and shops of related villages.

Besides, the activation of promotion committee is implemented by having TC members distribute the newsletters among related farmers.

## People participation from early stages of planning and implementation

Pilot Site which has a leading role in this project was selected after 3 weeks of TC meetings in which advice from Golestan JAO's staffs as experts were offered. First week meeting held

in a workshop style was to recommend candidate sites by TC members, after sharing desired factors (selection indices) of pilot site. In second week, the candidate site was marked from a general viewpoint after adding specialized evaluations of every selection index by Golestan JAO's staffs for each candidate site. Afterward, TC members screened candidate sites based on the evaluation made by JAO's staffs. Third week, TC members performed a field survey and after confirming the place, they determined the pilot site.

With this mechanism, TC members along with deepening the understanding about the project and function of pilot site, experienced determination by themselves after receiving advice from Golestan JAO's staffs. By collaborative work between farmers and governmental staffs, selection mechanism was clarified and fairer implementation of the project came true.



Fig. 5. Workshop for Pilot Site Selection

## Comprehensive activities

In order to create and fix a proper participatory water management style for the project site, and also comprehensively implement not only irrigation but also agricultural and group activities, pilot site action plan (P-SAP) was formulated based on the TC's consent. In this packaged plan, in order to rationalize water management, improve farming techniques and introduce group activity, the menu was systemized and then was implemented.

In rationalizing water management, beside traditional irrigation method, furrow and other improved irrigation methods were introduced; also, investigations on irrigation efficiency were implemented as well as introductions of canal design in farms and canal excavation.

In improvement of farming techniques, a soil test in the pilot site was performed and prescriptions to improve soil were instructed to the farmers. Soil improvement were also

attempted by selection of proper seeds for project site, introduction of seeding machines which prevent exceed seeding, no tillage method and leguminous (pea family). Also, along the growing stages, training courses were particularly held for farmers, and technical transfer to the farmers was advanced until yield survey throughout the cropping season.

Besides, extension workers, Anbar Olum Service Center, Aq Qalla Office and Golestan JAO's staffs were arranged for farming techniques dissemination.

In group activities, implementation of irrigation facilities' O&M by Water User Groups (WUG) and gathering of irrigation requests mainly by leaders were WUG activities. Besides, farmer training courses are being held such as visit to neighboring water associations.

These pilot site activity circumstances are properly reported to TC and we are trying to share information with the whole area.

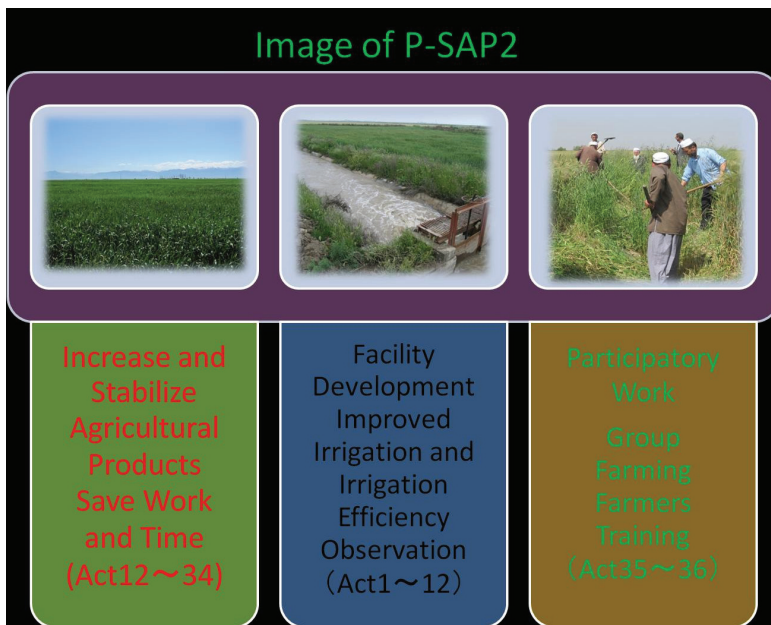


Fig. 6. Image of Pilot Site Action Plan 2

### Establishment of water management association

First, water user groups (WUG) in pilot site were established. Also on this occasion, opinion exchange with farmers was valued, and it was determined to divide pilot site into 3 WUGs. Afterward, water user groups were established sequentially in Tazeh Abad area based on secondary canals. As the establishment began, briefing sessions were held for related farmers during 2 weeks. First week was to update the list of related farmers for the facilities that are dealt with, check the cadastral maps, clarify facilities to be managed, explain the objective of establishing water user groups, activity contents and outlines of regulation. In second week, group leaders were elected and the regulation was signed after detailed explanation of the regulation, and also the minutes of meeting and member list were prepared.



In addition, a unit being in charge of the whole project site's water management which consists of WUG leaders will be established in PRPC.

### **3. IMPLEMENTED ARTIFICES TO ENSURE SUCCESS OF PARTICIPATORY PROJECT**

#### **Training of promotion committee and leaders, continuous and diversified approach**

1. Selection of farmers' representatives by farmers themselves, Issuing of assignment certification.
2. Implementation of detailed regular and irregular meetings with leaders and members.
3. Intellectual stimulation is offered by trainings and workshops.
4. Privileges such as ID card and distribution of files to save meetings documentations were offered.
5. Photo and members' introductions were printed in newsletter.

#### **Interactive information exchange**

Diligent information exchange was done with farmers and their representatives. Regular TC meetings were held and farmers participated in some procedure managements. Preparing and distributing minutes of meetings, and information sharing was implemented among concerned parties such as project experts, Golestan JAO's staffs, extension workers/farm advisers, etc.

#### **Participation in decision making process**

Opinion exchange and selection mechanism were shared and also farmers' representative were participated in various decision making process of the project such as establishment of water management unit, replacement of TC members, selection of pilot site, etc.

### **4. CONCLUSIONS**

While accumulating artifices to disseminate participatory water management, we have made "let's manage water, let's live in prosperity" as our project theme and implemented activities. Everyone gathers, everyone thinks, everyone decides and everyone acts. Every day we are working on artifices in order to advance such activities smoothly, together with Golestan JAO's staffs.

### **REFERENCE**

JICA 2003 The Study on Improvement of Irrigation, Drainage and Agricultural Development for Golgan Plain, Golestan Province in The Islamic Prpubric of Iran.