



ROYAL IRRIGATION DEPARTMENT

Participatory Irrigation Management

By

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and
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The Kra Seaw Operation and Maintenance Office Background

The Krasiew Reservoir is located at Dan Chang District, Suphanburi Province. The Reservoir is a large-scale storage dam in the central region of Thailand with an average storage capacity of 240 million m^3 . Gravity flow is used to supply water for irrigation of a 177 km^2 area covering three districts, 11 sub-districts, and 50 villages. The location of the case study site is depicted in Figure 1. The main crops in the irrigation areas are rice, sugar cane, and orchard, which account for 60%, 39%, and 1%, respectively. The average annual water demand for different sectors of the Krasiew Reservoir is as follows: agriculture is 160 million m^3 or 80% of usage water in the second crop season; industry is 3 million m^3 or 1.5%; and domestic use is 1 million m^3 or 0.5%

The Krasiew Reservoir encompasses one JMC, nine IWUGs, and 278 WUGs, totaling 6,740 members.

Figure 1. Location of The Kra Seaw Operation and Maintenance Office (Suphanburi Province)

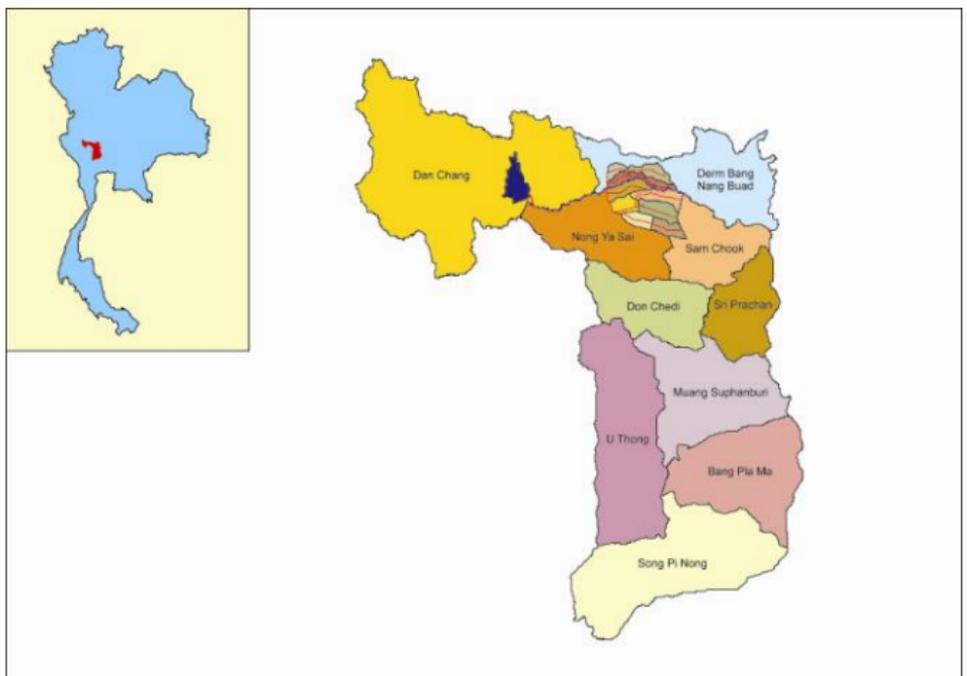
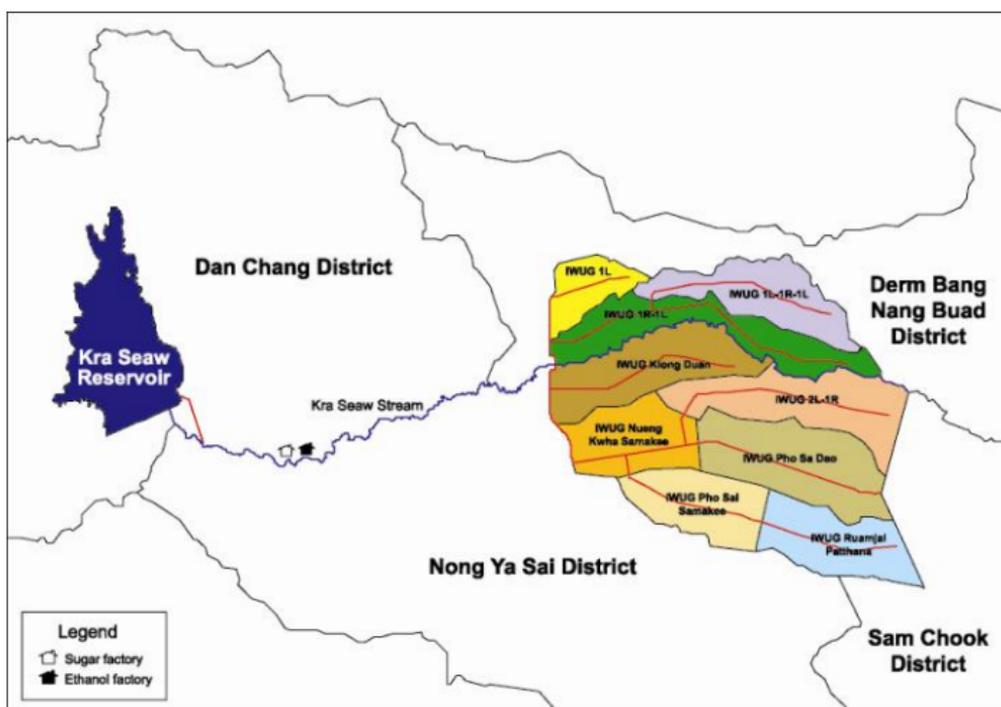


Figure 2. Location of the Kra Seaw Reservoir and nine IWUGs in the irrigation areas



Participatory Irrigation Management by Civil Society Committee and Water User Organizations

1. Irrigation Management before Establishing the Civil Society Committee and Water User Organizations

- 1) No public relations to farmers regarding water situation.
- 2) Sole irrigation management by public irrigation staff.
- 3) Water fight among farmers.
- 4) Water conflicts between farmers and public irrigation staff.
- 5) Many water complaints from farmers.

2. Irrigation Management Approach

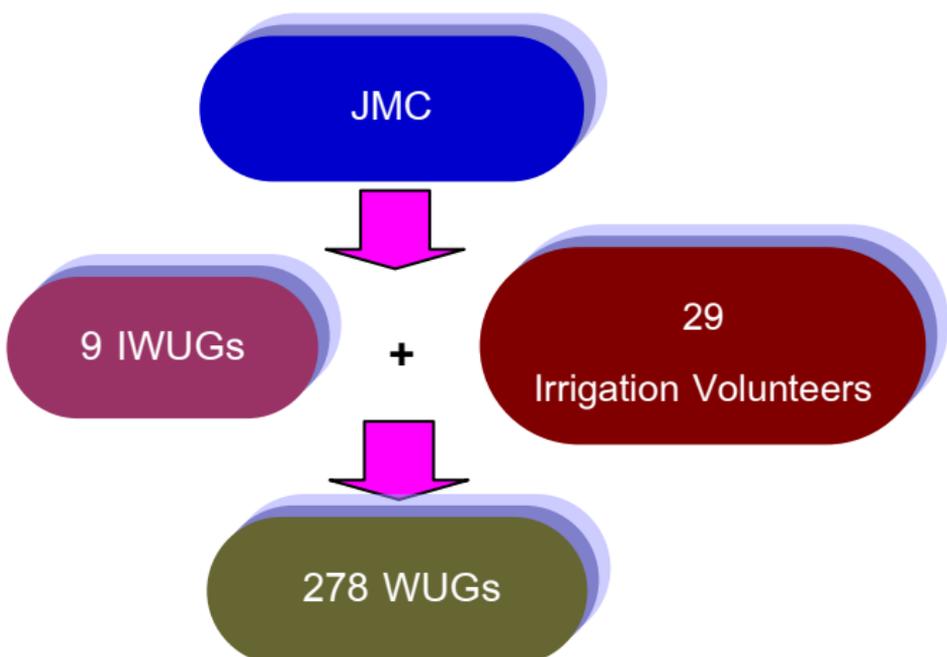
The Kra Seaw Operation and Maintenance (O&M) Office classifies irrigation management into 3 levels:

Level 1: Irrigation management at a reservoir level is cooperatively done by the civil society committee, so called Joint Management Committee for Irrigation (JMC).

Level 2: Irrigation management at a canal level is under the responsibility of an integrated water user group (IWUG). An IWUG is administered by an elected committee of a four-year term.

Level 3: Irrigation management at a ditch level is undertaken by a water user group (WUG). Every member of a WUG jointly manages water in a ditch under the supervision of an elected chief.

3. Participatory Approach



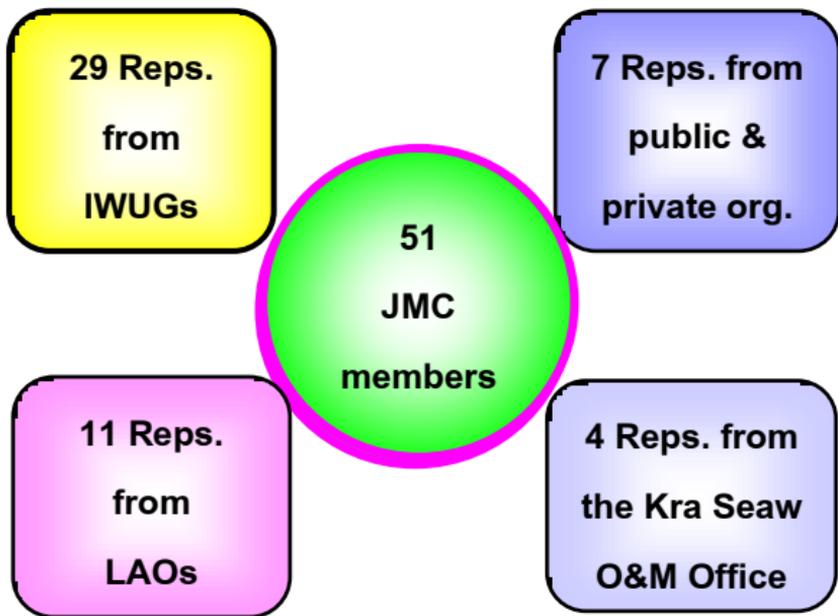
4. Activities of Water User Organizations

- 4.1 After a JMC meeting, an IWUG will arrange a general meeting to inform the results from the JMC meeting and to update water situation from the Kra Seaw O&M Office. A ditch maintenance plan is specified before water delivery.
- 4.2 Every member of a WUG helps maintain a ditch and irrigation structures in a ditch.
- 4.3 IWUG committee members, which consist of WUG chiefs from every ditch under the same canal, mutually manage water in each canal. The public irrigation staff provide water accordingly.
- 4.4 IWUG committee members and WUG members have an opportunity to join seminars and training sessions in order to enhance capacity development.

5. The JMC Establishment at the Kra Seaw O&M Office

The JMC at the Kra Seaw O&M Office was organized in 2006. The JMC, totaling 51 members, is made up of representatives from four sectors including IWUGs, local administrative organizations (LAOs), the Kra Seaw O&M Office, and relevant public and private agencies. A representative from an IWUG serves as the JMC president while the director of the Kra Seaw O&M Office acts as the JMC secretary.

5.1 The JMC Structure



5.2 The JMC Responsibilities

- 1) Reach a mutual agreement on water allocation and delivery plan.
- 2) Specify a maintenance plan of an irrigation system.
- 3) Disseminate the related plans and conduct other activities to assist in using water effectively.

5.3 O&M Activities

1. The JMC meetings are scheduled twice a year before the major and second crop seasons. The meetings are held in June and November for the major and second crop seasons, respectively. A special meeting can be arranged in case of an urgent issue.
2. The IWUG general meetings are held two times per year before water delivery in each crop season. The

general meetings are usually arranged after the JMC meetings.

3. Each IWUG cooperatively designates a water use plan in a canal according to the water allocation and delivery plans from the JMC meetings. Each IWUG, moreover, needs to plan the ditch maintenance before start delivering water. An irrigation volunteer helps distribute the plans to their fellow farmers.

4. Every member of a WUG jointly maintains a ditch and irrigation structures in a ditch.

5. The results of previous water delivery are discussed in the next JMC meeting.



5.4 Procedures of a JMC Meeting

1) The JMC secretary coordinates with the JMC president to schedule a JMC meeting.

- Specify date, time, and place of the meeting.
- An invitation letter and a meeting agenda are prepared by the JMC secretary and then signed by the JMC president.

- The invitation letters are sent to every JMC member about one week before the meeting.

2) The JMC meeting

- Meeting attendances are JMC members and zonemans. However, the meeting is always opened to the public.
- A signature is needed for every meeting attendance.
- Either the JMC president or vice president acts as a chairman of the meeting.
- The meeting will follow a meeting agenda.
- A meeting resolution is agreed to be final and acted accordingly.
- The results of the meeting are recorded and disseminated to relevant parties.
- The JMC secretary distributes the results of the JMC meeting to individual farmers by posting the meeting resolutions on a community board and announcing via a village loudspeaker. Irrigation volunteers also help to deliver the meeting results to individual farmers.

5.5 The Benefits of Participatory Irrigation Management

1. Water conflicts and complaints are minimal.
2. Farmers embrace the senses of ownership from joint-water management, thus help saving water.
3. Farmers and public irrigation staff understand their roles in participatory irrigation management.

4. An irrigation system is well-maintained by farmers. The LAOs help allocate budgets for maintenance.
5. The unity is created among farmers and between farmers and related public and private agencies.
6. The government can save budgets to hire new public officers to replace the retired staff.
7. Water management is much more effective. Even though the public irrigation staff are getting decreased continuously.
8. The water allocation is fast and fair.
9. Water security is enhanced for every sector.
10. Water security helps farmers to get water in a sufficient and timely manner. The products then have higher yield and make more income to farmers.

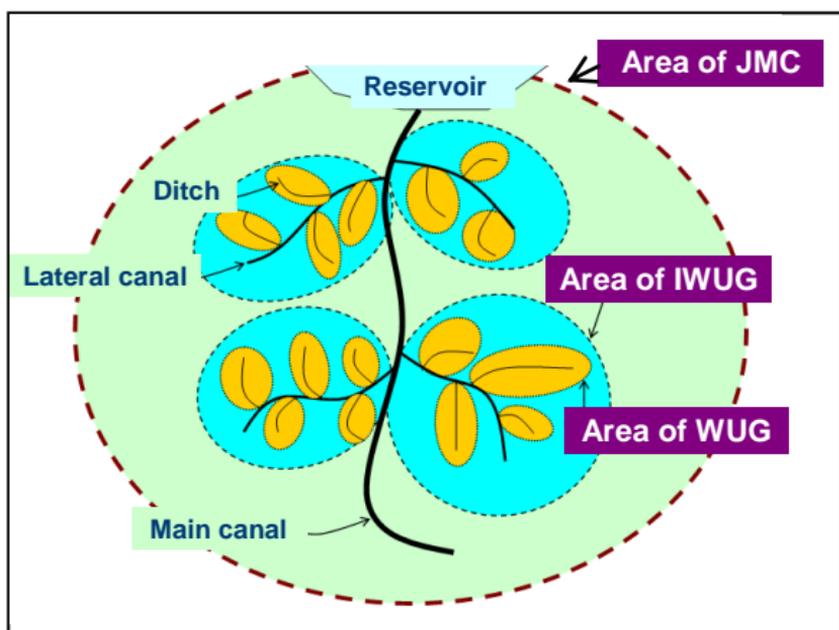


Table 1: Production yield before and after the JMC establishment

Year	Crop type					
	Rice				Sugar cane	
	wet season rice		dry season rice			
	Area	Yield	Area	Yield	Area	Yield
Before the JMC establishment						
2000	7,553	5,295	7,584	5,218	9,731	50
2001	7,301	5,243	7,303	5,503	9,848	58
2002	7,376	5,965	7,363	5,780	9,878	60
Total	22,230	16,503	22,251	16,500	29,458	168
Average	7,410	5,501	7,417	5,500	9,819	56
After the JMC establishment						
2006	10,178	6,800	10,034	5,673	7,028	70
2007	10,229	6,610	10,230	6,090	7,055	83
2008	10,438	6,400	10,384	6,668	7,004	93
Total	30,846	19,810	30,648	18,430	21,086	245
Average	10,282	6,603	10,216	6,143	7,029	82
Difference	2,872	1,103	2,799	643	-2,791	26