

Certificate Course in Participatory Irrigation Management (CCPIM)

Module 9 – Irrigation Recording by WUAs

Topic 9.1: Area based Irrigation Recording

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Area based Irrigation Recording

Topics of Module 9:

- 9.1 Area based Irrigation Recording.
- 9.2 Volume based Irrigation Recording.
- 9.3 Role of WUA and the Department in Irrigation Recording
- 9.4 Process of Collection of Water Fees

Area Based Irrigation Recording

Tradition of recording area-based irrigation is very old in India. Following units and their conversions are used while recording irrigation.

Unit of Area and conversion factors: -

Bigha is a local unit of area, its values vary at places whereas Acre and Hectare are the standard units. So, these are required to be used. For using Bigha unit, its local value should be enquired.

1 Pucca Bigha = 2531.93 square meter (27225 square feet)

1 Acre = 1.6 Bigha = (43560 square feet)

1 square feet = 0.093 square meter

1 Acre = 4047 square meter = 0.4047 Hectare

10 Square chains = 1 Acre (66 feetX66 feet)

1 Hectare = 100-meter X 100 meter = 10,000 square meter

1 square Km = 100 Hectare

1 square mile = 2.59 square km = 259 hectare

Irrigation Recording Process

The WUA requires command farmers' information or farmers' list for recording irrigation. The list is now available online at net in almost all the states as farmer wise Khatauni. The WUA should make use of this facility. This may also be prepared from Tahsil / Taluka records. Generally, It is the responsibility of Water Resource department to provide the farmers' list at the time of handing over systems. The format for farmers' list is as under.

Farmers' list

1. Name of WUA-----

	1.	Sl. No.	
	2.	Farmers Name	
	3.	Father Name	
	4.	Address: village, Tehsil district	
	5	Field No.	
	6	Area of field (ha)	
	7	Flow	Canal Irrigated Area (ha)
	8	Lift	
	9	Irrigated through other sources (ha)	
	10	Unirrigated Area (ha)	
	11	Barren Area (ha)	
	12	Mobile No. (optional)	

- (1) The canal officer shall provide command wise land map called shazra map (topographical map) along with copies of farmers' list.

Figure 1: Field wise Land map (Shazra Map)



- (2) The WUA at minor level can authorize any person for recording outlet wise irrigation. Its information shall be provided to concerned canal officer before or just after appointment.
- (3) Honorarium can be provided as fixed by WUA to the person recording irrigation.
- (4) Irrigation will be recorded as many times as the field is irrigated.
- (5) The format for recording outlet wise irrigation shall be provided by WUA.

**Format for Recording Irrigation
(AREA BASED)**

1. Name of Minor ----- 2. Outlet No. -----
 3. Chainage of Outlet 4. Irrigation year -----
 5. Crop Season (Rabi/Kharif) ----- 6. Irrigation Week -----

Sl. No.	Name of farmer	Farmer Father Name	Address, Village, Tehsil, District	Field No.	Total Area of field (ha)	Measurement of Irrigated Field			Crop	Type of Irrigation	
						Average Length (m)	Average Width (m)	Area (Ha) Col 7X8		Flow	Lift
1	2	3	4	5	6	7	8	9	10	11	12

1. Name of person recording irrigation
 2. Signature -----
 Address -----

Recording Area Based Irrigation: For recording area- based irrigation above format may be used. In above format after recording information in col.1 to 6,

in col 7 & 8 measurement of irrigated field will be recorded. The 7th col. is for recording length of field and if the field is not rectangular the average length & breadth will be recorded by measuring at 3-4 places, average will be taken and recorded and in 8th col average width will be recorded in the same way. This average length & width shall be recorded in meters. Multiplication of col 7 & 8 will be written in col 9th and will be converted in hectare. Crop name will be recorded in 10th col with flow or lift in 11th & 12th col because rates may vary according to crop and according to type of flow

Question: An irrigated field measuring average length 60 meters and average width 45 meters with wheat crop. What will be the irrigation charges if the irrigation rates are Rs 950/- per hectare for wheat & Paddy and charges for sugarcane is Rs 1400/- per ha.

Solution: - Area of field $60\text{m} \times 45\text{m} = 2700$ square meter = 0.27 ha. Rates for wheat are Rs 950/- per ha Charges for 0.27 ha $= 0.27 \times 950 = \text{Rs } 256.50$ and charges for irrigating sugarcane $= 0.27 \times 1400 = 378.00$

Do yourself: -

Exercise: - A farmer irrigated 90mX 30m wheat and 90mX 20m sugarcane. If the rate for irrigating wheat is Rs 950/- and for sugarcane is Rs 1400/- per hectare what will be the charges for irrigating wheat and sugarcane separately? How much has to be paid by the farmer for both.

Example: Irrigation recording process in U P.

In U.P. the W U As are formed at outlet level also and there is a provision of recording irrigation through these WUAs. In addition to it the irrigation official the “Seenchpal” will record irrigation too as irrigation progresses.

Comparing irrigation in case of recording by seenchpal.

Irrigation recorded by outlet WUA and seenchpal will be compared as follows: -

- (1) The seenchpal will compare irrigation recorded by him and outlet WUA in the meeting of management committee of WUA at minor level and prepare a detailed report.
- (2) Any difference if found in recorded irrigations at both level will be referred to management committee at minor level WUA & reconciled by it keeping a record of reconciliation.

(3) The difference of opinion, if any, between seenchpal and minor level management committee shall be settled by canal officer which will be final and shall be recorded.

(4) The minor level WUA will prepare the final irrigation details and made it public through outlet committee.

Inviting objections and finalization of irrigation record: -

The minor level WUA will arrange to intimate the recorded irrigation to individual farmer and invite objection on it. A combined list of farmers showing their recorded irrigation shall be published outlet wise at panchayat bhawan and other public places including its own office. The objections may be raised within 7 days.

The Format for intimating recorded irrigation to farmer

(Area based)

- 1 Name of minor -----
- 2 Outlet No. -----
- 3 Chainage of outlet -----
- 4 Name of village -----
- 5 Tahseel -----
- 6 District -----
- 7 Irrigation year -----
- 8 Rabi /Kharif -----

Sl.No.	Name of farmer	Father's name	Field no.	Total Area of Field (Ha)	Name of Crop	Irrigated Area (ha)	Type of Irrigation	
							Flow	Lift
1	2	3	4	5	6	7	8	9

Seal and Signature of minor level WUA
Chairperson

(1) The minor committee will investigate the objections and take final decision on it. The format will be corrected accordingly, and a separate list shall be prepared.

(2) The chairperson of the WUA and seenchpal shall sign jointly the format and corrected list and forward it to canal officer/ revenue officers . The WUA secretary will also keep a copy of the above record.

(3) The executive engineer / revenue officer shall got prepared the demand list.

(4) The corrected irrigation record format for kharif season shall be submitted to revenue officer / canal officer by 15th November and for rabi by 15th April each year.