

## ***Module 1 – About ‘ADMI’ Project***

### **Topic**

About West Bengal Accelerated Development of Minor Irrigation (WBADMI) Project

### **Objective**

To make the WUA members aware about the importance of Participatory Management of Minor Irrigation scheme and West Bengal Accelerated Development of Minor Irrigation Project

### **Expected out put**

Optimally utilizing the opportunities provided through ADMI project

### **No of sessions**

- Four

### **Time required**

- 2 days

### **Material required**

- Pictures
- Computer/LCD/
- Drawing sheets
- Sketch pens
- Cello tape

### **Participants**

- Members / Potential Members of WUA

### **Methodologies Used.**

- Lecture
- Power point presentation
- Case illustration
- Information sharing
- Question-Answer session

## **Session wise Plan**

### **Session No.1**

**Topic:** Contribution of MI Scheme in agri-based rural livelihood, importance of irrigation & collective-community managed irrigation for sustainable agri- based livelihood, issue and solution, indicators of a good irrigation scheme

**Method:** Icebreaking exercise, Case Analysis, Brain storming/, Group Discussion

**Time:** 60 minutes

**Resource Person:** SO Community Organiser, Livelihood Expert of SO/DPMU, etc.

**Support Material:** Case study, chart papers, sketch pens, cello tapes, photographs

**Tips for trainer:** Ask the participants to think about the changes happened in the irrigation system for the past 10 years and the reasons for it (What happened? why? How it was rectified? When? With what? Go on asking continuously till to get full information for each question. Note down the information point wise, categorically, consolidate them and add left over. Finally narrate the story mentioned in the manual, draw your conclusions and close the session.

### **Session No.2**

**Topic:** About the WBADMI Project: Objectives, expected outcomes, role of WUAs and project partner agencies

**Method:** Lecture, ppt,

**Time:** 60 minutes

**Resource Person:** . Officer from DPMU, SO

**Support Material:** Handouts of Project brief in Bengali

**Tips for trainer:** Initiate the discussion with the participants on ADMI linking with the story told in the last session, present sources of irrigation, traditional water management practices and explain ADMI project by using ppt.. followed by question-answer session.

### **Session No.3**

**Topic:** Issues and challenges of tribal / women in agriculture, Scope of social inclusion - benefits for economically backward / women / tribal under the scheme

**Method:** Focus group discussion

**Time:** 60 minutes

**Resource Person:** SO & DPMU representative

**Support Material:**

**Tips for trainer:** Initiate a discussion on vulnerability of women, tribal in the society, in terms of economic & social respect. Then divide in to groups for a discussion on finding ways to reduce vulnerability. Groups will share their views after that. Note down the information point wise, categorically, consolidate them, add/ subtract as required, link with the scope given in project and conclude the session.

#### **Session No.4**

**Topic:** Preparation of detail plan of a scheme - information to be collected, steps of collection of information, formats to compile the information

**Method:** Lecture with ppt., group discussion, PRA exercise

**Time:** 90 minutes

**Resource Person:** SO & DPMU representative

**Support Material:** Chart papers, sketch pen,

**Tips for trainer:** Initiate the discussion with the participants on purpose of collecting several type of information for preparing a scheme plan, collect the information by continuously asking them till getting the required information. Can do brief social mapping exercise, wealth ranking etc. Explain the format and conclude the session.

## **Content**

### **Participatory Management of Minor Irrigation scheme**

Irrigation, by its very nature, is a group activity, requiring the cooperation of an entire community of people. Of course, there can be individual irrigation from wells, but even in that case also there is a need for group cooperation in managing the underground aquifer. In some way or other, irrigation brings farmers together through the common challenge of harnessing water for agricultural production.

Days back, irrigation systems were developed by local communities, often without any outside assistance, particularly in remote areas.

Participatory Irrigation Management (PIM) offers an approach to local management of irrigation systems that incorporates the key advantages of traditional farmer-managed governance. It refers to the involvement of irrigation users, the farmers, the primary stakeholders in all aspects of irrigation management, and at all levels.

The water users are being empowered to take part as partner with the government implementing agencies right from the pre planning to implementation of the project, take responsibility of post construction operation, maintenance and management as well as monitoring the performance of the project. Thus they become the key actor not only to manage and regulate the irrigation water distribution but also to ensure efficient use of water, reduce wastages and increase the per unit value of the water discharged.

Publicly managed irrigation projects are largely under-performing, due to a rigid, top-down, bureaucratic approach, lack of maintenance and upgrading of irrigation schemes, poor water service delivery, and lack of transparency and accountability.

Participatory Irrigation Management has been emerged as important approach. The underlying rationale for participation in irrigation is that water users have a direct interest in the water delivery function because of its influence on the profitability of their agricultural operations. Hence, Water User Associations (WUAs) are the most common mechanism for implementing a participatory management approach.

### **Reasons for adopting PIM**

PIM is expected

- to reduce the burden of costs, staff requirements and technical or management problems faced by governments
- to lead to improvements in the agricultural productivity and economic profitability of irrigation systems
- to motivate farmers to pay more for their irrigation system because they will be empowered to take over the authority to define what their irrigation services will be, who will provide them, how and at what costs these will be provided

- to improve the accountability of irrigation system management to farmers, because of farmer interest this will produce more efficient and equitable water delivery and settlement of disputes.
- to form a strong basis for collective action in adoption of modern agricultural practices and input management
- to build social capital locally, through establishment of WUAs, skills building, leadership and capacity for action.

### **Why Participatory Irrigation Management : Case Analysis**

In the evening people gathered at the *Chala* (village meeting Place) of the village Ranipal. People were delighted with the new experiences gathered in the exposure visit outside the State and were eager to share views with each other.

Ramkaka was very excited and greeted everyone "So! "How was the exposure visit? What about the participatory Irrigation system of Kusumpur & Ratangarh? Now tell me about one thing..."?

"Ramkaka, you are very nice but always in serious mood, like a teacher!" Modhubhai made a joke and started smiling; "never share anything in simple word, all the time raising question like Masterji."

Everybody enjoyed the joke and started smiling, Ramkaka also joined, "although I am a farmer but Participatory irrigation inspired me - and I wish to suggest that to everyone here. Participatory Irrigation is one of the key instruments for livelihood enhancement of small landholders, like ours but whose income depend on agriculture ."

In a prompt voice, he addressed everyone, "Dear all my Farmer Friends, Participatory irrigation is not simply construction of irrigation scheme, but it deals with its ownership as well as unity and prosperity of everyone in the village".

Everyone was listening Ramkaka, "Tell me, have you heard the story of the farmer who was bedridden and in his last days he called all his sons and asked to break the sticks...."?

Balaikaka started in between, "Yes, Yes! At first one of them broke the stick very easily and then the father asked to break a bundle of sticks. No one was able to break that when the sticks were tied together"...

Modhubhai interrupted in between, "This is a story taught in primary school in 2nd standard....."

Ramkaka did not argue, he was smiling but Modhubhai did not understand why Ramkaka became quiet and said, "Kaka, why are you teaching us like children?"

Ramkaka did not answer; suddenly Modhubhai got the message, "My goodness! You want to mean, we need to stay united! Forget that kaka! Everybody of us is thinking about maximum share of water from proposed irrigation system. Some of us also planning to sell the water to outsider and make maximum profit from it immediately. And your fancy idea will not make any difference in the situation."

Ramkaka was silent still, now Balaikaka reacted, "Modhubhai, Ramkaka wants to convey us something but you are disturbing him."

Madhumitadidi also supported Balaikaka, "Please Listen Ramkaka, he is saying something for our benefit."

When majority reacted, then Modhubhai became modest, "O.K., Kaka, please continue."

Now Ramkaka explained, "This is participatory, when I spoke alone you did not want to allow me, but now you are bound to listen to me as majority is telling you".

Modhubhai became conscious about his mistake," Ramkaka, in reality you become our *Mastermoshai* (teacher), everyone is ready to follow you". Everybody enjoyed the lighter part of the discussion.

**"The key of Participatory Irrigation Management is Unity"**, Ramkaka continued, "Our West Bengal Government through department of Water Resources Investigation and Development (WRI&DD) has initiated the Accelerated Development of Minor Irrigation Project (**ADMI**) with financial assistance from the World Bank, the project is expected to bring 138,901 ha. of additional agricultural lands under assured irrigation through developing 4660 Minor Irrigation structures spread over 18 districts".

Minudi, member of a Self Help Group raised question, "Who will get benefit from the project"?

Ramkaka appreciated the question of Minudi, "Minudi asked one very important Question.... Objective of ADMI project is to enhance Livelihood of marginal and small farmers".

Ramkaka stopped for a while and then continued, "Through different experiences it was observed that government has spent lot of money on irrigation project, but management of Scheme, distribution of water, maintenances of pump, resolutions of conflict, collection of water charge, payment of electricity bills ... government alone cannot manage all these activities. If all the beneficiaries participate and take the responsibility for these, keeping their ears and eyes open, irrigation situation in village can improve".

"Yes, Yes," "this is the crucial point" some villagers supported.

Ramkaka carried on, "Based on the policy of Central Government, experience of Irrigation department and with the handholding support of Support Organization, West Bengal Water Resources Investigation and Development Department (WRI&DD) is asking proposal from marginal and small farmers for 4660 Minor Irrigation structures over 3 years spread over 18 districts". Government has recognized the services of the Support Organization (voluntary Organization) in terms of helping farmers to identify local solution and guide in successful Participatory Irrigation Management".

"Subsequently, Government is seeking farmer's support to manage the Irrigation System", Modhubhai highlighted.

Sadhankaka disagreed with Modhubhai. He interpreted, "Government does not want to execute its duties. It wants to leave everything on our shoulder. We are pre occupied in cultivation work at field, on top of that we have to take up the responsibilities of water distribution?"

Observing that the situation is going against, young Sujit was annoyed and in a firm tone said, "do not talk like a lazy person, Sadhankaka, distribution of water is also a part of agricultural work. Government is seeking our support. It is much encouraging. Till date government was executing everything, but tell me how much we have gained?"

Sadhankaka wanted to react but seeing others reaction he kept himself mum.

Seeing Ramkaka silent, Sujit requested, "Ramkaka, please continue the discussion....."

Ramkaka looked at Sadhankaka straight to his eyes and said, majority of farmers think like you – we have lots of work, in addition to that responsibility of water distribution, collection of water charges, and submission of electricity bills! Just think in cool mind, how these can be possible? At present we are not ready to do this managerial works. That implies we will not be fortunate enough to get irrigated water over the year in our village. Tell me, is it okay or not."

Everyone nodded their heads including Sadhankaka and came into consensus that it is not right.

"Like other villages Kusumpur also adopted Participatory Irrigation, they have encouraged female to participate and result is in front of us. Where farmers become united and adopt participatory method they are able to improve their standard of living by improving production of agriculture, taking up other income generation activities like, small animal rearing, collection of NTFP, fisheries, agro forestry, sericulture, rope making with *Babui* grass etc".

Sudhir could not stop himself, "See, in Kusumpur everyone of my age has one Motorbike".

Everybody started smiling and said, "Keep your dream alive, Ramkaka, tell us how we can start Participatory Irrigation? What we have to do? We, all farmers are ready? Tell us how to start?"

Modhubhai wanted to share something but Ramkaka continued, "The project development objective is to enhance agricultural production of marginal and small farmers. This would be achieved through Accelerated Development of Minor Irrigation schemes, strengthening community-based irrigation management, and developing agricultural productivity, through accessing agricultural services, crop diversification and use of new technologies, facilitating market access, and creating income generating opportunities."

Modhubhai agreed and say "yes, we appreciate and understand now." Everyone joins with him.

Ramkaka also started smiling, "So can you all envisage the system of participatory Irrigation? Well, let me explain once again."



## **'ADMI' Project (West Bengal Accelerated Development Of Minor Irrigation Project)**

### **1. What is 'Accelerated Development Of Minor Irrigation Project'?**

This is a Minor Irrigation project of Govt. of West Bengal. In short it is called 'ADMI'. Apart from Kolkata, the project will be implemented in all the 18 districts of the State. Water Resources Investigation & Development Department of the State Government is the executing agency. Financial assistance has been provided by The World Bank. For each scheme one Support Organisation at the village level is facilitating the members of the related Water User's Association to successfully implement the project through taking care of community mobilization as well as nurturing WUA at scheme and village level. The departments of Agriculture, Horticulture and Fishery of the State Govt. are providing support services in the implementation process to boost up agriculture productivity.

### **2. What is the aim of the project?**

The project aims to enhance agriculture-based income of small & marginal farmers through sustainable use of irrigation resources.

### **3. Who are the target beneficiaries for the project?**

Economically poor, small & marginal farmers are the direct beneficiary for the project.

### **4. What are the objectives of the project?**

- Accelerate the development of minor irrigation infrastructure by using surface water and ground water sources
- Enhance agricultural production and income of small and marginal farmers sustainably
- Strengthen community based irrigation management, operation and maintenance

### **5. Where the scheme can be taken up?**

Priority will be given to those areas where no permanent irrigation facility exists promoted by Government or individual and the farmers depend only on monsoon.

### **6. What are the scopes of work under this project?**

Scopes under the project are:

- to organize and strengthen community based institutions to assume responsibility for operation, maintenance and management of minor irrigation scheme
- to empower economically backward, SC & ST and women population

- to provide agriculture services, such as, organizing demonstration and training for encouraging diversification of crops, use of new technologies for higher productivity
- to facilitate for better market integration and marketing opportunities
- to create income generation opportunities and form village resources
- to build up any of the 8 minor irrigation structures given below. Based on the available water resources the type of structure can be chosen for that area

### **Type of Irrigation structure along with Culturable Command Area**

<b>Sl. No.</b>	<b>Irrigation structure</b>	<b>Culturable Command Area</b>
<b>Surface Water Minor Irrigation Schemes</b>		
1.	MINI River Lift Irrigation	50 acre
2.	Surface Flow Minor Irrigation Scheme	75 to 125 acre
3.		
<b>Ground Water Minor Irrigation Schemes</b>		
1.	Light Duty Tube well (Cluster of 5 to 6)	90 acre
2.	Shallow Tube well	15 acre per tube well/ cluster wise 90 acre
3.	Pump Dug well	75 acre
4.	Water Detention Structure	12.5 acre
5.		

Since it would be easier to handle, manage small schemes by the WUA and cost of installation and maintenance is less, this project discourages MDTW and Midi River Lift schemes unless there is strong reason for taking up them. More importantly with submersible pumps, chances of theft of Pump would be less.

<b>Sl. No.</b>	<b>Irrigation structure</b>	<b>Culturable Command Area</b>
6.	MIDI River Lift Irrigation	100 acre
7.	Medium Duty Tube well	50 acre

Apart from these new innovative scheme can be taken up, if it meets the necessary criteria and suitable for that area.

### **7. What are the benefits that can be obtained from the project?**

- The CCA of a minor irrigation scheme can be up to 2000 ha.
- Building of minor irrigation structure does not take much time
- Effect on environment due to implementation of ADMI is insignificant

- Operation and maintenance of the irrigation structure is simple
- Irrigation facility can be accessed by the small and marginal farmers and irrigation coverage will be increased.
- With the increase of agriculture production, fishery production , income will be enhanced
- Small and marginal farmers will be better off. Landless farmers will get more work

#### **8. What are the roles and responsibilities of each stakeholder of 'ADMI' project?**

- Under the custodian of State Water Resource Investigation & Development Department the project will be implemented. Department of Agriculture, Horticulture and Fisheries will provide technical support through demonstration, training and establishing convergence with the other programmes of the respective departments.
- State Project Management Unit (SPMU) and District Project Management Unit (DPMU), are responsible to implement the project keeping coordination with all the stakeholders of the project at the State level and district level respectively.
- Project Director, WRIDD, with a rank of Chief Engineer, WRDD, Government of West Bengal is heading SPMU.
- At the district level, under the custodian of District Level Implementation Committee (DLIC), headed by District Magistrate the project is implemented. DLIC is responsible to give final approval to any scheme on the basis of different technical, environmental and social criterion and also coordinate, review regularly.
- Alike SPMU, the project at the district level is being reviewed by District Project Management Unit (DPMU). DPMU will be led by District Project Director (DPD)- Technical and DPD- Administration who are of the rank of Superintending Engineer, WRIDD. DPMU is responsible for the implementation of district programmes, working closely with communities and for all communication with SPMU on day to day matters and reporting.
- Support organization (SO), i.e. NGOs mainly provide services of community mobilization and institutional strengthening of the Water User Associations.
- Initially, representatives of SO along with DPMU tries to understand the social, economic, natural and physical situation of the village through discussion with the farmers of the area and based on that propose a scheme area to DLIC. DLIC technically assesses the proposed scheme and gives approval.
- After that SOs facilitate the potential water users to form Water User Association and apply for registration under the West Bengal Society Registration Act, 1961. Simultaneously SOs with the technical support from line department and DPMU staff work with the WUAs to prepare Scheme Development and Management plans which

identifies and prioritize desirable intervention as well as describe cost estimates and implementation plans. The complete SDMP has to be approved by the General Body of the WUA and submitted to DLIC for technical scrutiny and ultimately for getting formal ratification.

- DPMU then send the SDMP to SPMU for approval. The bidding process takes place after formal approval to select the contractor for civil/mechanical works. The successful bidding leads award of the work/construction to selected contractor.
- After the construction and installation of a minor irrigation scheme gets completed, each scheme is being handed over to the respective WUA. Then on WUA remains responsible to operate and manage the scheme.

## **9. What are the steps to prepare SDMP?**

### **Step 1**

Community Worker, specialist of SO and staff of DPMU visits a village, tell the purpose of the visit and build up rapport with the villagers. Then all of them together carry out Participatory Assessment of resources and opportunities.

- Through Transact Walk they identify
  - location of the village (name of panchayat, block and district)
  - state of infrastructure (distance of concrete road, post office, other communication, market, cooperative, bank, community hall, ICDS, schools from the village, no. of SHG, youth club, cultural troupe in the village, availability of electricity)
  - existing land use pattern and ownership (availability of cultivable land & period of cultivation, availability of forest land and type of forest, availability of pasture, orchard, fallow land, period of no cultivation)
  - topographic condition, gradient
  - soil condition (type of soil)
  - Location of water sources
  - existing irrigation sources (location & capacity)
  - existing and probable problems, risk (if flood, soil erosion, draught prone area)

- After the Transact walk, the representatives of SO, DPMU staff and villagers will once again sit for identifying poorest households, potential configuration of the command area and households in the command area through spatial mapping, social mapping and wealth ranking.

All the information collected will help in identifying the installation points and designing the layout of pipeline, spout locations.

- Executive Engineer from DPMU will visit the sub project site to assess the technical feasibility of any sub project.
- SO & DPMU will place all these information to DLIC for helping them understand the feasibility of any scheme.
- Based on the information DLIC will give approval to the scheme and delineate the command area as well as decide the category of the scheme.

## **Step 2**

- Receiving the approval from DLIC, SO will facilitate potential water users to form and register Water User Association (WUA) under WB Society Registration act, 1961.
- At the same time SO, with the assistance of DPMU staff and line departments will facilitate WUA to draft Scheme Development and Management Plan (SDMP).

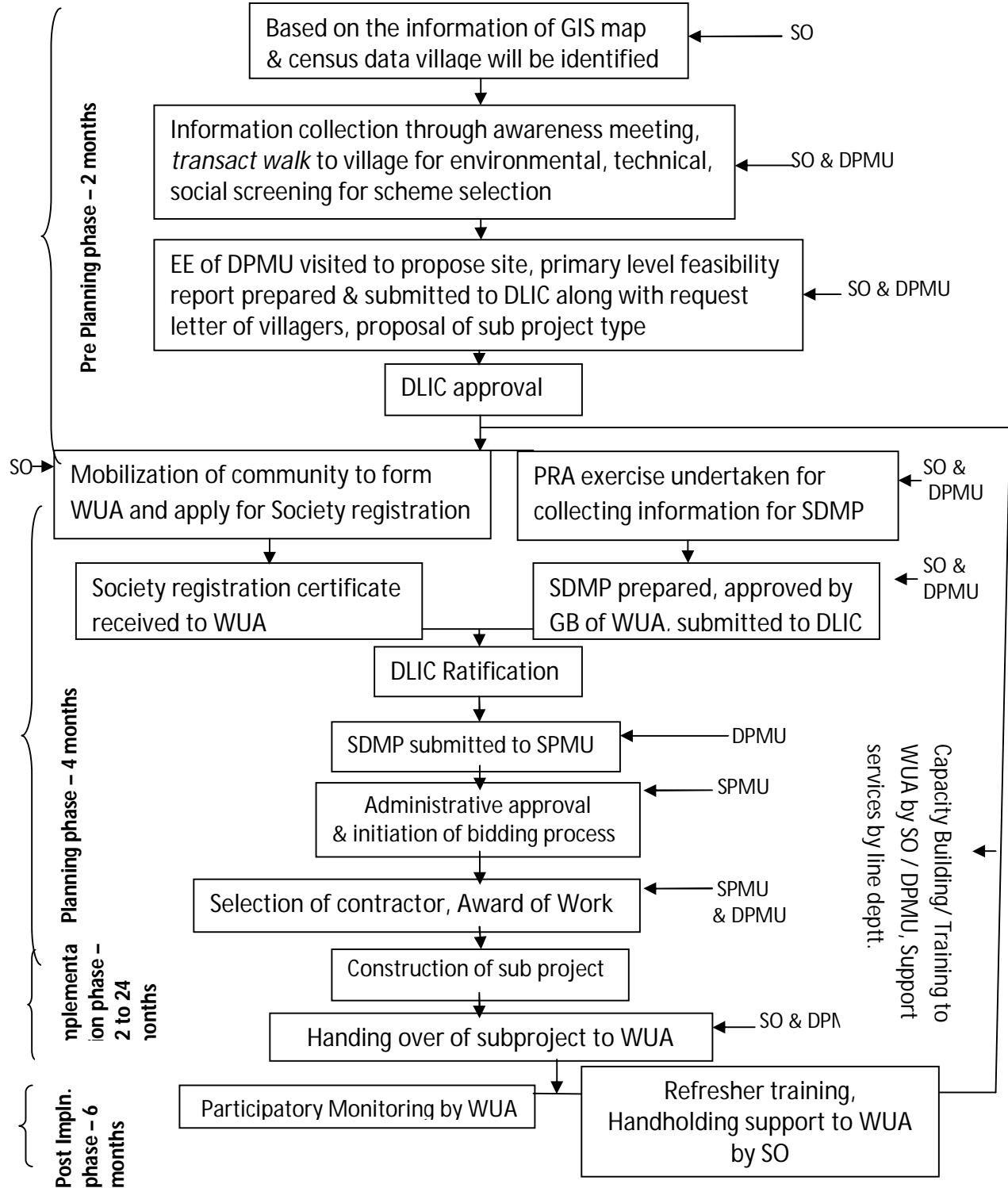
## **While preparing SDMP distinctive conception on four issues is essential**

- Identification and analysis of resources of the village
- Identification of problems and the cause
- Planning to deal with the problems by utilising the resources
- Preparation of implementation plan

## **Format of SDMP: (Will be included after finalization)**

## Annexure 1

### Activity Sequence in Sub project



### **Primary level Scheme Selection Criteria**

For primary level selection of irrigation site state of following factors need to be considered.

**Agro climate:** Raid fed area

**Farmers:** Predominance of marginal & small farmers

- Small and Marginal farmers should be minimum 60% of total water users
- Farmers should be ready to form WUA and agreeable for the Operation and Maintenance (OMM)

**Land:** Available area of cultivable land, land use pattern and ownership, availability of forest land and type of forest, availability of pasture, orchard, fallow land, period of no cultivation, topography & gradient, existing cropping pattern

- Sufficient catchment area should be there
- Cultivable area should not fall within the command area of any other irrigation project
- Free land should be available for constructing of pump house

**Water Source:** Status of surface water and its use, aquifer condition- water table depth of ground and surface water, state of drainage system, system of water reservation, annual run off of catchment area (in case of SFMIS), water quality, existing irrigation system & status (location & capacity), location of water source

- Priority is to surface water
- In absence or lack of supply of surface water, ground water source will be used

**Soil:** soil condition - type and quality of soil

**Infrastructure:** Not far from concrete road, post office, other communication, market, cooperative, bank, community hall, ICDS, schools from the village, existence of SHG/ youth club/ cultural troupe in the village (preferably), availability of electricity

- The tube well installation site should have *pucca* roads for entering the trucks to bring drilling equipments

**Environment:** identification of potential sensitive receptor, such as natural habitats, sacred groves, culturally important water bodies

- Pump sets should be electricity driven. In case, electricity has not reached to the village or nearby, then only diesel pump set will be used. But diesel pump set should be installed 250m away from any habitation
- Felling of trees should be avoided. In case, it is required, prior permission from Forest department is necessary
- Environmentally sensitive areas, such as national parks, natural habitats, reserved forests, wetlands of National or International importance, wild elephant corridors, sacred groves of significant bio-diversity should be avoided
- Areas where ground water extraction is already critical or semi-critical should be avoided
- Areas where Arsenic, Fluoride contamination exist, salinity level is high should be avoided
- Specific distance of proposed ground water structure from nearest existing ground water structure has to be maintained, namely, for  
LDTW, PDW, STW – 200 m  
MDTW – 600 m
- No scheme of shallow and medium-duty type should be installed within 600m and 800m respectively of any International border
- Areas where Historical and Archeological remains preserved under the provisions of the Ancient Monuments and Archeological Sites and Remains(Act), 1958 should be avoided

**Key problems of the area:** Degree of occurrence of Flood, soil erosion, draught

### **Scheme type specific selection criteria**

#### **1. Selection Criteria for LDTW cluster sites**

- The scheme is to be selected in the safe blocks in terms of ground water condition as per SWID recommendation
- Minimum distance of any existing tube well must be greater than 200m
- The HT line should be within 1.5 to 2 km from the pin pointed installation site
- Free land should be available for constructing pump house (10 sqm approx per point)

#### **2. Selection criteria for MDTW scheme site**

- The scheme to be selected in the safe block in terms of ground water condition as per SWID recommendation



- Minimum distance of any existing tube well must be greater than 600m
- Minimum 20 ha cultivable command area should be available for irrigation
- The HT line should be within 1.5 to 2 km from the pin pointed installation site
- Free land should be available for constructing pump house (30 sqm approx)
- The tube well installation site should be accessible for truck mounted with drilling equipments

### **3. Selection Criteria for PDW cluster sites**

- It is suitable where water table is found in shallow depth and within suction limit
- The scheme to be selected in the safe blocks in terms of ground water condition as per SWID recommendation
- Minimum distance of any existing well must be greater than 200m
- Free land should be available for constructing the well(5 sqm approx per point)

### **4. Selection Criteria for STW cluster sites**

- The scheme to be selected in the safe blocks in terms of ground water condition as per SWID recommendation
- Minimum distance of any existing tube well must be greater than 200m
- The HT line should be within 1.5 to 2 km from the pin pointed installation site
- Free land should be available for constructing pump house (10 sqm approx per point)

### **5. Selection criteria for MIDI or Mini RLI**

- There should have a perennial surface water sources like perennial river, canal etc.
- Minimum 40 ha and 20 ha cultivable command area should be available for Midi and Mini RLI schemes respectively
- For electrified RLI scheme the HT line should be within 1.5 to 2 km from the pin pointed installation site
- Free land should be available for constructing pump house (30 sqm approx)

### **6. Selection Criteria for Choosing Surface flow or storage site**

- Free Land for pond is available near the site
- Sufficient catchment area should be there
- Water distribution preferably by gravitational flow
- Minimum 30 ha Culturable command area should be available for the scheme
- The foundation soil should have good strength like rocky or sandy soil

**Factors to be considered to determine Water charge**

- Fees to operator
- Monthly Electricity expenses
- Cost of spare parts/ Depreciation charge of machineries
- Expenditure for communication & conveyance for WUA activities
- Expenditure for Refreshment at meetings
- Expenditure for stationeries
- Audit charge

## **Involvement of Women in ADMI project**

### **Women's position in the society**

In many families the role of women is to do the household work and look after her family members. She is discouraged to work to earn money. If she does so, her job is considered less important than household work. The work that a woman does free of cost for her family is very important for the family's well-being and it needs as much labour as the work men do. But the household works are often not recognised because it does not bring money for the family.

**Hence, her position refers in society in relation to men ...**

- Low socio – economic status and material deprivation
- Secondary status in participation & decision making/dependency on men to take decision
- Preference of male child than female child
- Presence of widow being considered inauspicious at social and religious gatherings

Further, there is increasing evidence that women and girls in the poor households bear a disproportionately higher share of burden of poverty. Gender discrimination and differential impact of poverty among the poor households is reflected in lower nutritional status, higher mortality and lower levels of education of women and girls. Their deprivation is mainly due to their lower endowment of land and other productive assets, limited access to social services and discrimination in the labor market. More importantly, female-headed households belonging to backward class, clans, tribes and ethnic minorities are often further at disadvantage.

Participation of women and backward class households in irrigation management institutions and decision-making processes thereof is very low. Lack of their involvement means not only continuing of inequities in participation and decision making processes but also missing out on opportunities for enhancing local benefits of irrigation investments through participation of these important households.

**Condition refers to everyday situations in which women faces difficulties**

- Lower endowment of land and other productive assets
- Discrimination in labour market
- Every day long walk for fetching drinking water, fuel and fodder, more difficulty in summer

- Common property resources are degrading i.e. water bodies, pasture land, social forestry and their struggle increased in search of fodder and fire wood
- Girl Child are looking after kids and doing house hold work when mothers go for fetching water
- Lack of sanitation facilities at home as well as in public place

### **Relationship of women with irrigated water**

Women use irrigation water for domestic as well as for productive and livelihood purposes deriving a range of benefits from irrigation water. Domestic uses of water include water use for washing, bathing, cleaning etc. Production uses include water for crop production where women contribute to various production activities along with men, and for small-scale activities that enable women to grow agricultural produce (such as vegetables, fruits), rear livestock and run micro-enterprises. These activities help households to increase their incomes, improve housing condition including better sanitation for women, and enhance food security and nutrition and overall family health. Access to good quality irrigation water from nearby irrigation systems in the local setting also help save time and labor for women who no longer need to travel long distances to fetch water for washing, bathing and for livestock raising. Thus Women make large contributions to irrigated agriculture.

Generally, uses of irrigation water for crop production are largely the task of male while domestic and other small-scale uses of water are female's affair. With increased out-migration of males and resulting feminization of agriculture, women's roles in agriculture including irrigation is further increasing. In general, since women play larger role in multiple uses of water (other than crop production) they can be expected to have greater understanding and knowledge about the potential local level issues related to irrigation water use and management and their solutions.

There are two main areas of women's involvement in participatory irrigation activities:

1. **For irrigating their farm lands:** Irrespective of area/region, women are rarely land owners and by and large the ownership of land is with men. Few of those women with landholding continue with traditional farm practices and get low yields. Therefore, the need is to increase their participation in the operation and management of scheme, so that they benefit from the irrigation scheme.
2. **Easing familial and domestic duties:** Including the collection of water, cooking and preservation of food, child care and care of aged and of livestock are traditionally the roles performed by women. The accessibility to irrigated water to women would ease/reduce women's domestic burdens.

Women could be benefited most when women and poverty issues are explicitly incorporated in policy and project level interventions in irrigation and are implemented through establishing effective mechanisms.

WBADMI project recognizes the stakes of women and to make them have a place in rural economy through the project, it puts priority to increase women's participation in the programme.

### **Opportunities provided to women in ADMI project**

Priority is given to Women through

- Making inclusion of 1/3 women in the WUA management committee/governing body.
- Including them in sub committees of WUA
- Arranging separate discussion with women to address their issues
- Providing training / exposure and handholding support for gaining decision making power
- Encouraging involvement of women SHG in livelihood activities under the scheme through convergence

Following are the activities where women can participate directly and derive the benefits from ADMI implementation:

- Agriculture/Horticulture related Activities
- Fishery related activity
- Income Generation Activities through convergence

In **Agriculture/Horticulture/Fishery related Activities** equal importance will be given to women from vulnerable sections and women who have land, to increase their productivity through **Farmers Field School (FFS), On Farm Demonstration and Exposure visit**.

The project envisages equal and active participation of women in all **Training and Capacity Building activities** in order to improve meaningful women participation in the project. But to give emphasize on equal participation of women gender sensitization and leadership training will be provided to all the members of WUA as well as SO, DMPU staff.