

EFFORTS OF WALMI AURANGABAD IN TRAINING AND CAPACITY BUILDING: WITH SPECIFIC REFERENCE TO WATER USERS ASSOCIATIONS UNDER MWSIP IN MAHARASHTRA

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ABSTRACT

Ever increasing population is dependent on limited water and land resources. The scenario is deteriorating due to reducing availability of water for irrigation purposes owing to other competing reasons like increase in living standards, industrialization etc. Thus availability of water in right time, right quantities and at right place is essential for sustainable development particularly in agriculture sector. Perhaps the last alternative available for supporting food demands will be to increase the productivity i.e. agricultural production per unit of land. Maharashtra Management of Irrigation System for Farmers (MMISF) Act was enacted in the year 2005 and its Rules in the year 2006 basically for 289 irrigation project selected under Maharashtra Water Sector Improvement Programme. Within the framework of this project responsibility of training and capacity building activities of various stakeholders was assigned to WALMI Aurangabad which includes the Water Users Associations. Training and capacity building is the prime function of WALMI, but apart from this institute has also provided strong technical back up to WRD. Present paper is based on efforts of WALMI Aurangabad in training of Water Users Association under Participatory Irrigation Management in Maharashtra. Under Maharashtra Water Sector Improvement Project strengthening and capacity building of WALMI was taken up as one of the component of the project. WALMI, Aurangabad in association with Water Resources Department has demonstrated a unique and continual effort of delivering the training capacity building programme for Water Users Associations in Maharashtra under MWSIP. Careful delivery of training content selection of WUAs, applying feed back to improve the training, regular inquiry with water users, deliberations of experts, exchange programmes with other sector programmes and interactions with stakeholders in a transparent manner is crucial in translating the learnings in effective manner. At project completion, 23,789 staff and farmers benefitted by participating in a total of 315 training courses conducted by WALMI. In addition to the intended *direct* beneficiaries, because of the strong momentum for public sector reform in Maharashtra, *indirect* project beneficiaries included key decision and policy makers in the public administration, who gained an appreciation of the underlying principles of resource and sector planning, allocative efficiency and cost recovery underscored by the MWSIP. Some of these reform principles in the water sector have been adopted by the Central Government (GoI) which cites Maharashtra as the model to follow. Similarly, in social development tribal communities were trained by WALMI. Moreover, WRD has set up a state level cell under the aegis of WALMI in Pune to assess institutional sustainability of WUAs; develop capacity building strategies for training and monitor performance of WUAs. The efforts of WALMI are step forward in achieving the objective of improving water use efficiency in command area of irrigation project besides providing a functional irrigation system to benefit the rural people.

Introduction:

Ever increasing population is dependent on limited water and land resources. The scenario is deteriorating due to reducing availability of water for irrigation purposes owing to other competing reasons like increase in living standards, industrialization etc. Thus availability of water in right time, right quantities and at right place is essential for sustainable development particularly in agriculture sector. Perhaps the last alternative available for supporting food demands will be to increase the productivity i.e. agricultural production per unit of land.

In National Water policy priority for allocation of water in different sectors has been mentioned clearly in which agriculture is placed on second priority after drinking water. Irrigation is given for protecting the crops from failures. This practice was followed in early seventies and eighties. Later on analysis of water utilization status it was realized to change the policy of water application in command area. The gap between irrigation potential created and its utilization was huge in comparison to the investments made in development of irrigation projects and benefits were not realized by the farmers. In late

eighties policy makers and experts emphasized on irrigation water management in command area and they soon realized that unless farmers are involved in the management and maintenance of irrigation system goals of higher irrigation efficiency could not be achieved. Way back in early independence period surface irrigation was started with concept of fair distribution of water in space and time to protect the crops. It was protective irrigation. Due to advancement of time and technology the meaning of irrigation has changed. Now the irrigation means, "To deliver sufficient quantity of water according to the time schedule that matches the requirement of healthy plant growth and fair distribution among many users for maximization of the yield. Now a day, irrigation is productive irrigation. The irrigation requirement has changed due to the use of high yielding varieties of seeds, fertilizers and pesticide's application in the fields. The purpose of Irrigation Water Management is to optimize the utilization of available water resources in a systematic manner for getting maximum agricultural production. Poor water management affects the success of irrigation project. Hence, the main objective of Irrigation Water Management is "to deliver water in sufficient quantities, according to a time schedule that matches the requirement for healthy plant growth, and with fair distribution among many users".

Participatory Irrigation Management:

Most of the irrigation projects were constructed, operated and maintained by the Government. The gap in irrigation potential created and its utilization was due to infrastructural, social and organizational constraint. In Government managed irrigation system, the desired benefit of water management of reliable, equitable and timely supply of irrigation water from tail to head in a canal system could not be achieved. Participatory Irrigation Management (PIM) deals with farmers' participation in irrigation works for economically optimum utilization of available water. This also provides maximum benefit in production of agriculture produce at farmer's field. This management economizes the cost of maintenance of irrigation system and use of water and promotes the feeling of ownership among farmers in irrigation project. Realizing the fact that participation of water users can be achieved through their function organization, various states have enacted farmer's participation in irrigation water management acts under different nomenclature. Water User Associations (WUAs) models adopted by different states has been viewed as social solution to manage the scarce water resource in efficient manner and also balance the community grievances in situ by creating social checks and balances. Gradually Government managed irrigation system is transferred to farmers managed irrigation system. In most of the states irrigation management transfer is still in joint management status where government agency is responsible to carry water in desired quantity at certain level of canal and thereafter WUAs has to manage the water distribution among users. Water management by communities is based on their experiences and expertise. In present context WUAs do not have adequate knowledge and skills of canal water management. Hence it is imperative to develop their capabilities by conducting training and capacity building activities. Water and Land Management Institute, WALMI Aurangabad is a state level institute in Maharashtra where training and capacity building of all stakeholders of irrigation system are conducted in systematic manner. Refer Annexure 1 about WALMI.

Efforts of WALMI in training and capacity building of WUAs:

Development water user's societies was promoted in the state since eighties. Various models of WUAs were tested and implemented in the state to gain experience of water management by communities and establish their rights over quantity of water. However it was in the year 2005 when Maharashtra Management of Irrigation System for Farmers (MMISF) Act was enacted and its Rules were issued in the year 2006. This act was developed basically for 289 irrigation project selected under Maharashtra Water Sector Improvement Programme. Within the framework of this project responsibility of training and capacity building activities of various stakeholders was assigned to WALMI Aurangabad which includes the Water Users Associations. Training and capacity building is the prime function of WALMI, but apart from this institute has also provided strong technical back up to WRD.

Present paper is based on efforts of WALMI Aurangabad in training of Water Users Association under Participatory Irrigation Management in Maharashtra. WALMI, Aurangabad in association with Water Resources Department has demonstrated a unique and continual effort delivering the training capacity building programme for Water Users Associations in Maharashtra. Careful delivery of training content selection of WUAs, applying feed back to improve the training, regular inquiry with water users, deliberations of experts, exchange programmes with other sector programmes and interactions with stakeholders in a transparent manner is crucial in translating the learnings in effective manner. The efforts of WALMI are step forward in achieving the the objective of improving water use efficiency in

command area of irrigation project besides providing a functional irrigation system to benefit the rural people.

Maharashtra Water Sector Improvement Project (MWSIP):

MWSIP became effective in 2005 (Refer Map at Annexure I), when state was facing significant developmental and natural resource management (NRM) challenges, particularly in the water sector. Prior to MWSIP, the water sector was facing the following challenges:

- a. Rapid increase in demand and competition for water use;
- b. Low level of service delivery in irrigation and low productivity of water use in irrigation,
- c. Low cost recovery in irrigation; and
- d. Poor, uneven and un-coordinated planning, allocation and management of water resources.

As a first step various reforms were undertaken to build a solid foundation for establishing the water user's association network. These reforms include policy and legislative initiatives and adoption of:

- a. The Maharashtra State Water Policy (2003);
- b. The Maharashtra Water Resources Regulatory Act (MWRRA) (2005); and
- c. The Maharashtra Management of Irrigation Systems by Farmers Act (MMISF) (2005).

As part of these reforms numbers of other initiatives to improve water use efficiency were also taken up as under:

- a. strengthening institutional capacity for integrated multi-sectorial water resources planning, allocation and management;
- b. restructuring irrigation institutions especially, the Water Resources Department and the Irrigation Development Corporations (IDCs);
- c. formation and empowerment of farmer water user associations(WUAs);
- d. Increasing budgetary provision for irrigation management, operation and maintenance (MOM).

MWSIP was having following components for development of water sector in Maharashtra:

Component A: Water Sector Institutional Restructuring and Capacity Building: As a part of this component strengthening and capacity building of the Water and Land Management Institute (WALMI) was taken up.

Component B: Improving Irrigation Service Delivery and Management

Component C: Innovative Pilots

Component D: Project Management

Strengthening and capacity building of WALMI:

Water and Land Management Institute (WALMI) is the nodal training institute under WRD. The stated objective of MWSIP component was to strengthen WALMI as the implementing agency for training and capacity building of the WUAs and field level staff of the WRD and the Agriculture Department (AD), which in turn would improve the capability and capacity of the restructured WRD. MWSIP funding was provided for for this purpose to WALMI to support establishment and operational support to dedicated cell for the training of WUAs and staff of the WRD. The main activities supported were:

- a. Strengthening and capacity building of WALMI, including multidisciplinary

experts/manpower; and

b. Training of WUAs and WRD field staff.

The training curriculum for farmers and WRD staff includes modules on the Operational Manual on Social and Environment Management. Various aspects of construction management and tender committees etc at WUAs level were also incorporated in the training syllabus of farmers and WUAs office bearers training, as there was several construction activities conducted parallel to training programmes. This has brought transparency in irrigation system rehabilitation work and developed capacities of Water Users for monitoring the quality in rehabilitation of irrigation system. The project envisaged to sharpen WALMI focus on increased training needs of WUOs and particularly needs of women and vulnerable groups. Also through joint training courses involving WRD staff and famers/WUAs, it is helping the WRD to develop the cultural change within WRD to a “partnership with farmers. To this end and as a direct result of the project, GoM has committed to the further enhancement of the effectiveness of WALMI through the establishment of an additional permanent training unit with 19 new sanctioned staff posts. The role of this new unit is specifically for “Providing training support, monitoring and evaluation of WUOs”.

About 1,508 WUAs have been established and taken over the responsibility of irrigation systems below the minor head, all in accordance with the provisions of the MMISF Act 2005. Also, farmer input and direct influence on decision making in major and medium irrigation schemes has been enhanced with the formation of project level (PLA) and distributary level (DLA) associations having farmer representation from WUAs. These associations provide farmer input into key decisions affecting famers, including setting seasonal/annual bulk allocations to WUAs based on available water in storages and setting the number of seasonal irrigation rotations. The timeliness and transparency of these collective decisions then allows individual farmers to make their individual cropping decisions. However, a risk to development outcomes exists if the skills required to identify and carry out proper o&m of irrigation systems are not developed among that WUAs.

WALMI conducted a total of 315 training courses (92% of target) involving 23,789 trainees against a target of 21,201 (111%) including WRD managers and technical staff, WUA management committee members, and NGOs supporting project activities. Different type of training programmes for capacity building and HRD carried out by WALMI during MWSIP is given in Table 1 as under:

Table 1: Training Programs Conducted by WALMI under MWSIP

SI No.	Training	Training No.	Participants Trained No.
A	WRD Officers		
1	Orientation Course for Sr. Adman. Officers	01	58
2	TOT for core trainers team	13	371
3	Technical Training for middle level officers	58	1334
4	Refresher Training Course for Middle Level Officers	24	528
5	Refresher Training course for TOT Core Trainers	3	55
6	Training course on Public Relation & Communication	23	736
7	Course on water Entitlement for MWSIP & On-going (Under construction Project)	15	1194
8	MMISF Act for On-going (Under construction Project)	8	203
9	State Level workshop on Elections of WUA's MWSIP 4/10/2006	1	76
10	Workshop on Operationalizing of Water use Entitlement for Competent Authorities & Regulators	3	486
11	Training course on MMISF Act & Rules for competent Authorities	10	1033
12	Workshop on Contract Management Under MWSIP	1	30
13	Training Course on Quality Control under MWSIP	1	95
14	Training course for Officers on PIM (MWSIP) at Ghosikhurda Nagpur	3	322
15	Workshop on River Basin Organizations Sharing of National & International Experiences	1	76
	Total A	165	6897
B	Farmers		
16	Farmers Model Training courses for Capacity building of WUAs Members	101	11,940
17	Trainingcourse on PIM for Role, duties & responsibilities of Secretaries of WUAs under MWSIP	9	454
18	Training on PIM for Office Bearers of WUAs under MWSIP	2	58

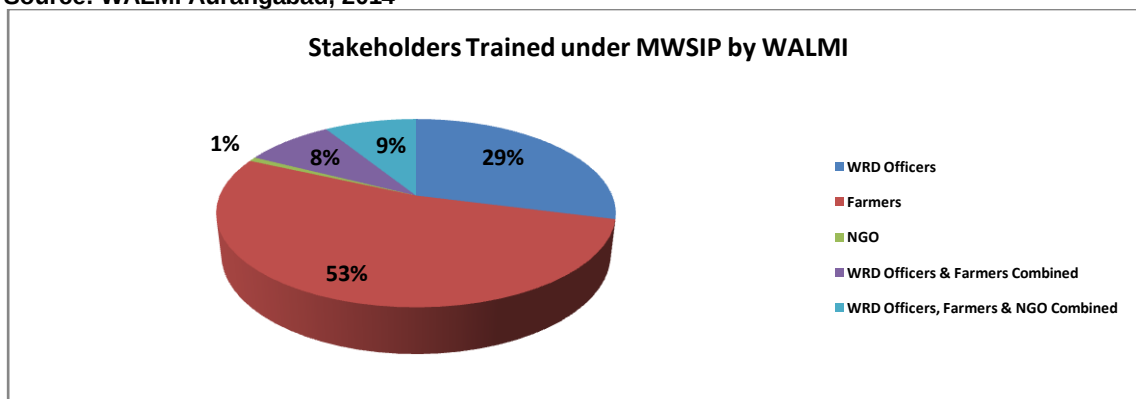
Sl No.	Training	Training No.	Participants Trained No.
19	Training Course for WUA-MC Members. (Pilot course for Mula Irrigation Project, Ahmadnagar.)	1	62
20	General Orientation course for M.C. Members of WUAs	1	35
	Total B	114	12549
C	NGOs		
21	Training course on Monitoring & Evaluation of WUA	2	37
22	Training course for facilitators and Zonal Coordinators	3	102
23	Training Course on PIM & IWM for NGOs (at WALMI).	1	38
	Total C	6	177
D	WRD Officers and Farmers Combined Training		
24	Special course on Working Procedure of WUAs (NIC Nanded& Pune	2	193
25	Interstate exposure visit cum training of on PIM	1	10
26	Workshop on Water Entitlement	11	1842
	Total	14	2045
E	WRD Officers, Farmers & NGO Combined Training		
27	State level seminar on PIM for WUAs office /officers of WRD & NGO representatives	10	1690
28	National Seminar and exhibition on PIM	3	314
29	MMISF Act for Grass root level functionaries in Command area Under MWSIP	3	117
30	Total	16	2121
	Grand Total	315	23789

Source: WALMI Aurangabad, 2014

In the context of the Gender involvement and Participatory Irrigation Management (PIM), WALMI conducted 36 training courses specifically tailored for women. The courses were designed to cover about 3600 women participants, but the courses proved so relevant and popular, the actual number of active women participants was 4009 at project end. The participants included Technical staff and officers of the WRD, management committee members of WUAs, WUA members/farmers, WUAs secretaries, NGOs. Training included participatory irrigation management / irrigation water management, technical training for mid-level officers, MMISF Act, water entitlement, training courses for training of trainers, M&E of WUAs, and communication, state level seminars on Participatory Irrigation Management. Abstract of Training Courses conducted under MWSIP by WALMI is as under:

Sl No.	Training	Training No.	Participants Trained No.
1	WRD Officers	165	6897
2	Farmers	114	12,549
3	NGO	6	177
4	WRD Officers & Farmers Combined	14	2045
5	WRD Officers, Farmers & NGO Combined	16	2121
	Total	315	23,789

Source: WALMI Aurangabad, 2014



Building the Master Trainers:

Realizing the huge size of the stakeholders in terms of numbers to be covered it was decided to develop a team of master trainers in the state. Accordingly, WALMI developed a Training of Trainers programme for core trainers of WRD. As such 13 training programmes were organized for training 373 master trainers. These master trainers are the potential resource persons available with Water Resources Department. Their capacities can be used for organizing follow up training programmes in cascading mode either at Division level or project level.

Use of IEC:

WALMI was instrumental in developing various publications pertaining to subjects covered in training programmes. Information, education and communication is an upcoming aspect in water management. WALMI has realized the importance of IEC material and developed posters, charts and video films etc in following subjects:

- Water Users Association (in Marathi)
- Participatory Irrigation management (in Marathi)
- WUAs information Diary (in Marathi)
- Crop Production Practices (in Marathi)
- Irrigation Methods for field and horticultural crops (in Marathi)
- Soil-water-plant relationship (in Marathi)

These IEC materials are being used by WALMI during their farmers training programme and are found to be very effective in creating awareness on water related issues.

There were however a number of limitations on institutional capacity to provide training to a growing number of WUAs in future.

- a. Lack of arrangements for monitoring the performance and impact of trained trainers under the ToT program
- b. To upscale and ensure future sustainability of training and capacity

Social and legal aspects: During the course of the project a total of 1677 WUAs have been formed with 70% representation of men and 30% of women in the Managing Committee. Each group of users (e.g. WUAs), are progressively being allocated a bulk water entitlement. For irrigation users, as the reliability of irrigation services are improved, collection efficiency is improving. WUAs collect the charges levied based on the measured volume of water at the head of the WUA. Money collected is then passed to government through the WUA and a 50% proportion is then refunded back to WUAs to cover their maintenance costs. However, there are still some unacceptable delay in the refunds reaching the WUAs and performance needs to be improved. WUAs have the legal right to charge farmer members more to cover specific costs associated with running the WUAs. These additional charges are determined by the WUAs and 100% of this additional revenue is retained by them in separate WUA bank accounts.

There is genuine empowerment of farmers through the formation of WUAs and the taking over of the irrigation systems. Also a genuine partnership has developed between the WRD and WUOs based on improved irrigation system performance, reliability, equity and access during the operational phase of the project. As a result more mature WUAs were operating in the state with commitment and support provided by GoM through the WRD. However, there are still a lot of immature WUAs that will need further assistance beyond the project for which continual support from GoM will be required to bring these WUAs up to the mature stage.

Service delivery to each and every WUA relative to its bulk water entitlement is independently monitored by the MWRRA and WRD has established a Benchmarking system to monitor system performance and service levels. To this end, the underlying capacity and skills base in the WRD and

WUAs needs further significant strengthening and broadening, particularly with respect to the MOM of their respective parts of the irrigation systems, which is essential for further culture and management change.

Conclusions:

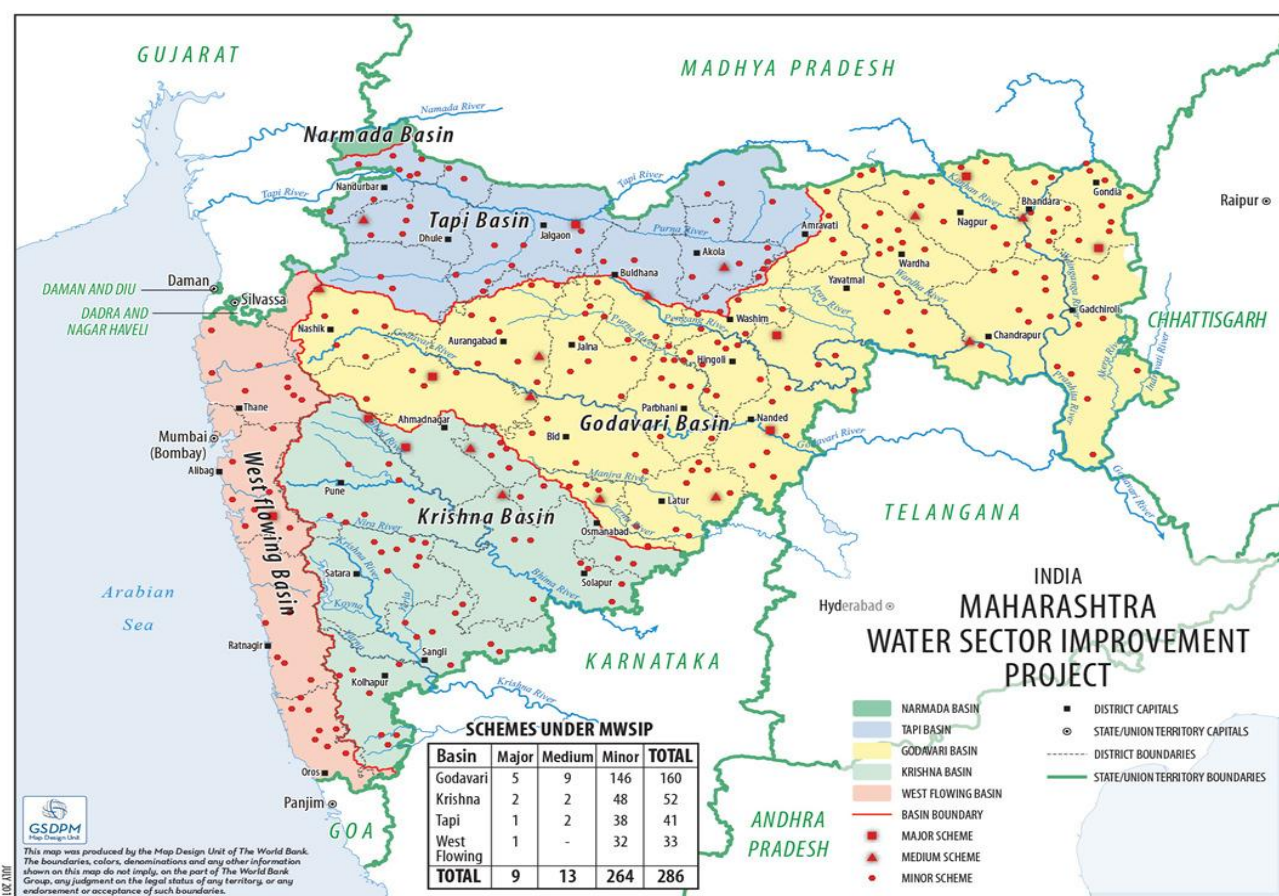
At project completion, 23,789 staff and famers benefitted by participating in a total of 315 training courses conducted by WALMI. In addition to the intended *direct* beneficiaries, because of the strong momentum for public sector reform in Maharashtra, *indirect* project beneficiaries included key decision and policy makers in the public administration, who gained an appreciation of the underlying principles of resource and sector planning, allocative efficiency and cost recovery underscored by the MWSIP. Some of these reform principles in the water sector have been adopted by the Central Government (GoI) which cites Maharashtra as the model to follow. Similarly, in social development tribal population was also covered through targeted training and capacity programs conducted by WALMI. Moreover, WRD has set up a state level cell under the aegis of WALMI in Pune to assess institutional sustainability of WUAs; develop capacity building strategies for training and monitor performance of WUAs. The efforts of WALMI are step forward in achieving the the objective of improving water use efficiency in command area of irrigation project besides providing a functional irrigation system to benefit the rural people.

References:

WALMI Aurangabad various reports submitted to WRD, GoM
Draft ICRR Report No. ICR00001350 July 25, 2014, Global Water Directorate, India Country Management Unit and South Asia Region ICRR

Annexure I

Map of Maharashtra Water Sector Improvement Project



Annexure II

About WALMI Aurangabad

Water And Land Management Institute, popularly known as WALMI was established by Government of Maharashtra on 1st October 1980 as an autonomous registered society under Societies act. Water Resources Department Government of Maharashtra is the administrative department of WALMI and provides grant in aid for its establishment and activities. WALMI, Aurangabad is one of the first and foremost training Institute in water and land management all over the country. The defined mandate of WALMI is to create awareness among water managers and users about integrated approach towards water & land management with reference to irrigated agriculture in the command area of water resources project. Besides this institute also plays a pivotal role in demonstrations and researches related to agriculture, water resources management, participatory irrigation management, and information and communication technology, legal and social perspective of water management in command area, water and soil conservation and related management technologies. The Institute established centre for handling various national and international assignment and provide advisory and consultancy services for capacity building and other technical matters related to water and land management. The institute has successfully tackled multifaceted problems related with management of land and water resources within the state and the country. WALMI is also technical backup institution, facilitator, and trainer in several capacity building initiatives for various govt. departments. While doing its mandated activities WALMI also maintains a live contact with various international, national and state level organizations to collaborate with their similar objectives. Various quality publications of WALMI are available on its efforts for promoting irrigation water management and achieving its aims and objectives.

The institute has rich and varied experience of well trained and highly qualified faculty members of all disciplines related to irrigation water management. The Institute is located on Paithan road near to Kanchanwadi, have picturesque and lush green area, close to Asia's fastest Industrial growing city and near to proposed IT hub Bidkin. It has well developed campus, state-of-art facilities, well developed infrastructure, well equipped computer center, video conferencing, library, information center, e- learning center and laboratories are the asset of Institute. The orientation of faculty members of institute, supportive technical personnel's and administrative staff is having high level of dedication and commitment to achieve institute objectives.

Objectives of Institute:

- To provide in-service training of interdisciplinary nature to staff engaged in irrigation water management and land development in irrigation and agriculture departments.
- Action and adaptive research pertaining to irrigation project commands.
- Providing consultancy services, production of training materials (in print and electronic media), conducting seminars / workshops and organizing farmer's training programmes.

Faculties:

WALMI has five faculties for training and research:

- 1) Faculty of Engineering
- 2) Faculty of Agriculture
- 3) Faculty of Social Sciences
- 4) Faculty of Science
- 5) Faculty of Integrated Watershed Development & Management

An optimal mix of core faculty and senior field officers on deputation to WALMI constituting the faculty is one of the unique characteristic of this Institute's strength & performance. Sustained and well-

planned efforts of WALMI for more than three decades have contributed significantly in the overall development and improvement in irrigation water management & irrigated agriculture in Maharashtra.

Key Functional Area:

- Training,
- Research and Co-ordination
- Consultancy
- Transfer of Technology and Information Technology
- Monitoring and Evaluation

Training Infrastructure and Amenities Available at Institute Campus

- Spread over 500 acres of land
- Administrative block-housing the Director's office, seminar and meeting halls and eight class rooms with varying sitting capacity.
- Hostel block with double - bed rooms, dormitories etc for housing approximately 200 participants at a time and a well equipped mess capable to cater more than 100 persons at a time.
- Residential buildings consisting of houses for faculty / office staff.
- Other Facilities includes – soil and water-testing laboratory, computers center, Library, Demonstration Farm, Meteorological Observatory, Hydraulic Lab, Transportation, Recreation, sports ground, indoor hall, Medical aid, shopping complex, bank and school etc to support the training function.

Institutes Stakeholders:

- Human Resources- Farmers, Engineers, Agriculture experts, Social scientists, Social activists, Officers of state / central Govt. and NGOs, Women, Technocrats, Decision and policy makers, PRI representatives, Environmentalists, Foresters, Scientists of different streams,
- Institutions/Department- Panchayat and Rural Development Department , Agriculture Department, Water Resources Department, Watershed Development Organizations etc

Training capabilities

Institutes is well equipped to organize the training load of 50000 training man days per year with existing hostel and mess facilities along with training halls availabilities

Annual Training Plan:

Annual training plan development is initiated in the month of December every year. Need assessment of various stakeholders is conducted in one or joint meetings. Training plans are prepared for the department as per their need and suitability to spare their manpower for training in particular months of the year. Training slots are booked for decided training. Annual training load assessment is done every year and internal distribution of training activity is done as per the expertise available and subjects to be covered. Institute annual training plan is approved by GoM and provided to Water Resources Department for sending nominations of officers for various agreed courses. For all the official purposes training year is considered as APRIL to MARCH.

Training Facts: Some of the important achievements are as below:

Progress (Up to March 2014)		
✓	Total training courses for professionals	1723
✓	Officers & staff trained	67306
✓	Farmers' training courses	332
✓	Farmers trained	38506
✓	Training of trainers (national level)	544
✓	Seminars / workshops organized	3
✓	Publications (English / Marathi)	78
✓	Video films produced	113
✓	VCDs produced	19

✓	Computer software developed	29
✓	Action Research studies completed	31
✓	Consultancy jobs completed	52