**West Bengal Accelerated Development of Minor Irrigation Project**

**Mid Term Implementation Support and Review Mission**

**August 18-28, 2014**

**Aide Memoire**

# Introduction

1. A World Bank mission[[1]](#footnote-1) visited West Bengal from Sep 18-28, 2014 for carrying out Mid-Term Review (MTR) of the West Bengal Accelerated Development of Minor Irrigation Project (WBADMIP). The main objectives of the MTR Mission among other things were to review the initial project design and assess the extent to which project activities together with their implementation process have remained relevant and achieved the project development objectives including measures to improve and accelerate project performance. The team reviewed the overall progress of project implementation, implementation arrangement, assessed the key challenges and lessons learnt and provided guidance on corrective measures for speeding up implementation and disbursement.
2. The team visited a number of scheme locations of the project area and held discussions with members of the Water User Association, field staff of the Support Organizations, District Project Management Units and Specialists of the State Project Management Unit. Focused interaction workshops were held with field staff including DPDs responsible for monitoring DPMU activities. The Mission including Mr. Michael Haney, Operation Advisor, had briefing with the Secretary (Minor Irrigation). The mission also had briefing with the Secretary (Finance), and Secretary (Irrigation and Waterways Department). The detailed discussions were held with the staff of the State Project Management Unit (SPMU), Department of Water Resources Investigation and Development (DWRID) and of various Government of West Bengal (GoWB) departments associated with the project. The Mission would like to thank all the concerned officers for their cooperation and the constructive discussions held. The mission members visited sites in five districts (Annexure 8). The aide memoire summarizes the mission’s main findings and recommendations, and is structured to provide a retrospective look on the projects implementation thus far, main achievements, issues identified and emerging challenges with recommendations on future direction of the project. The key priority actions to be taken during the next months are summarized in Annexure 1.

# Key Project Data: Table 1.Project Data and Performance Ratings

|  |  |
| --- | --- |
| **Project Data** | **Project Performance Ratings** |
| Board Approval | October 4, 2011 |  | **Last** | **Now** |
| Effectiveness Date | March 19, 2012 | Development Objectives | Moderately Unsatisfactory | Moderately Unsatisfactory |
| Closing Date | December 31, 2017 | Implementation Progress | Unsatisfactory | Moderately Unsatisfactory |
| Loan AmountCredit amount | USD 125 millionSDR 78.2 million(equivalent to USD 116.4 million) | Problem Flag | 1 |  |
| Total amount | USD 250 million |  |  |  |
| Disbursed Amount*(as of Aug 28, 2014)* | USD 15.46 million |  |  |  |
| Project Age | 3.0 years |  |  |  |
| **% Disbursed** | 6.2% |  |  |  |

# Assessment of Project Development Objective

1. The project development objective (PDO) is to enhance agricultural production of small and marginal farmers in the project area. This will be achieved through accelerated development of minor irrigation schemes, strengthening community-based irrigation management, operation and maintenance, and support to agricultural development, including provision of agricultural services, encouraging crop diversification and use of new technologies, and creating income generating opportunities.

1. The MTR assessment confirms that the PDO continues to be relevant and achievable. Though the project became effective in March 2012, as indicated in the earlier Aide-Memoires, the project suffered from some delays in setting up and strengthening district project management units with dedicated engineering and contracted multi-disciplinary team. This has resulted in significant implementation delays in delivering completed irrigation schemes to the farmers. However the ‘arms length’ assessment carried out by the MTR Mission confirmed that the project has clearly come out of the initial languor as evidenced from: (i) *the project has brought about qualitative improvements in planning the schemes* using advanced technology (including GIS and remotes sensing based) for targeting the most needy locations for project interventions; (ii) *the transition from traditional designs using conventional detailed project report (DPR) formats to more comprehensive and site specific Scheme Development Management plans (SDMP)* with socially-environmentally and technically viable solutions documented through meaningful consultation and active involvement of beneficiary farmers; (iii) *a promising leap start by completing over hundred schemes, out of the 402 schemes (against the total project target of 4,660 scheme) awarded for implementation*; (iv) *initiatives by Government of West Bengal for state wide adoption of design of Minor Irrigation Schemes* *following the ‘site specific process model’* introduced by the project; and (v) *increasing trends of productivity of major crops of paddy, mustard and vegetables through a number of on farm demonstration of promising technologies*.
2. The mission appreciates the project team for the positive signs of recovery and progress towards readiness grounds, however, it would be challenging to catch up with the lost time of three years and achieve the final result indicators within remaining project period of another three years. Since the inception of project, several adjustments have been introduced to expedite the implementation and target priority areas in the state. The focus of new scheme development has shifted to western part of the state where surface schemes are more suitable and where the potential command area will depend on water availability for each scheme. During project preparation, the potential command area was estimated considering benefitted area during Kharif season only while same system would be able to serve only 50% of Rabi crop in surface schemes. In order to minimize the social conflicts, the command areas of the scheme would refer to area served with optimum water demand at least during two seasons. Due to the change in focus to more expensive schemes in the western districts, various design changes introduced to devise appropriate and durable infrastructure, and increase in material and construction costs, the costs for the development of schemes have almost doubled, with a related reduction in benefitted area. The INR 1,080 crore originally allocated to Component B would be sufficient for around 2,000 numbers of schemes serving assured irrigation to around 50,000 ha against the project target of 4,660 numbers of schemes and 139,000 ha command area. Accordingly the achievement of PDO is maintained at “Moderately Unsatisfactory”. It would require to revise targets in result framework and its indicators in line with the proposed design.

# Overall Implementation Progress

1. In order to expedite the progress and ensure effective implementation in project intended areas, following adjustments have been introduced since the inception of project, which were confirmed by the MTR as important for a better implementation of the project: i) the interventions have been customized with increased focus on five under developed districts in western part of state with predominantly rainfed agriculture as focus area where more than 60 percent of the investments will take place; ii) the implementation will be in a cluster of selected blocks and villages in each district in order to be able to manage the logistical arrangements better provide effective multi-disciplinary support; iii) the reorganization of contracted positions at state and district project management units was done to match the business needs and MTR mission has further worked on revisions; iv) traditional designs have been updatedwith socially-environmentally and technically improved and viable solutions documented through meaningful consultation and active involvement of beneficiary farmers; v) qualitative improvements in planning and monitoring the schemes using advanced technology and community participation for targeting the most needy locations for project interventions; and vi) introduction of solar pump systems in place of diesel, initially on a pilot basis in some schemes. *Further MTR has suggested: i) to strengthen district and state units and finalize engagement of pending recruitment of 90 sub-assistant engineers within the next three months; ii) to strengthen the third party quality control and assurance; iii) to revitalize selected old minor schemes, based on the recommendation of a study in progress; iv) strengthen the Agricultural Support Services through engagement of Krishi Vigyan Kendra and recruitment of pending staff; v) pilot implementation of very small schemes through WUA or Panchayat; vi) increase scope of agriculture support services, including fisheries; and vii) introduce Irrigation and Waterways Department as implementing agency to rehabilitate a number of defunct minor schemes under its management and provide additional support in implementation of the project through utilization of its substantial manpower.*
2. To date, the project has identified around 713 minor irrigation schemes (against the project target of 4,660) to cover 22,399 ha out of which 402 schemes have been bid and contracts awarded. The identified schemes are expected to benefit 4,356 number of farm families (337 of them tribal families) against the targeted 1,66,000 farm families. Out of 402 schemes under implementation, 108 schemes have been completed and another 197 construction work is progressing. A total of 597 WUAs (the institutions of command area farmers) across villages have been formed against end of project target of 4,660, of which 335 (56%) have been registered. The WUA members mainly consisting of marginal and small farmers in the command area of schemes, from over 366 WUAs are being strengthened with skills to participate in the planning of schemes as well as to assume responsibilities of management, operation and maintenance of the schemes. Further, 439 demonstration with improved technologies has been conducted during Rabi in 2013-14. The results indicate that the productivity has been increased for paddy, Mustard, and vegetables. In spite of the total number of farmers trained on demonstrated technologies reached 1,866 (against targeted 21,138), it is too early to collect the details on the number of adopters of demonstrated technologies as the irrigation services of the commissioned schemes commenced in Jan 2014.
3. While the mission appreciates the project team for demonstrating rising trend of disbursement and achievement of a lot of readiness grounds, project disbursement is very low (6%) against the project target of 20%. The cumulative disbursement is USD 15.46 million, with actual expenditure of USD 9.00 million. The Component B for construction of new schemes accounts for 78% of project cost. During last one year, the project has picked up with promising leap start by completing over hundred schemes, out of the 402 schemes (INR 100 crore) awarded for implementation. Although, the project has prepared design of 150 (INR 40 crore) schemes with only 50 schemes approved, the project teams has projected to finalize implementation of 459 schemes (INR 250 crore) by June 2015. Furthermore, project team has projected that they would be able to implement a total of 2,500 schemes costing INR 1000 crore (USD 175 million) by June 2017 that would allow another six months for handover to WUAs. However, mission assessed that after accounting for assembly election during peak working season of 2016 and current preparedness for implementation, the project would be able to implement around 1,500 schemes costing (INR 750 or USD 125 million). This would be possible if the project team was strengthened in time with required staff including 90-200 sub-assistant engineers and additional staff for WUA mobilization and quality control.
4. During MTR, it has been proposed to include Irrigation and Waterways Department as an additional implementing agency, with an estimated allotment of INR 150 crores (about USD 25 million). However, before we can decide on this, the department should first submit a project concept paper with specific proposals for rehabilitation of existing schemes by October 30, 2014. If and when there is agreement on the concept, the department should prepare SDMPs following project approach.
5. After considering all of the above implementation arrangements and its pace, and accounting for USD 25 million for other components/additional activities of project, it is projected that the project would be able to disburse to a maximum of USD 175 million or USD 150 million of credit/loan by December 2017. Government of West Bengal should ensure that project implementation picks up momentum; otherwise at the current pace of implementation, it is likely that almost USD 100 million from the Bank’s loan may not be absorbed by the project, and hence may be subject to cancellation.
6. There are a number of critical actions that require close follow up in the next six months to demonstrate improved implementation progress including: (i) completion of 300 schemes which are in progress and award of contract for 459 schemes by February 2015; (ii) the arrangements (staff and consultancies) for further strengthening district units and agricultural support services are in place by November 30, 2014; (iii) delisting of the pesticides listed under class 1 &II by WHO and banned by Government of India; (iv) additional implementing agencies Irrigation and Waterways Department to be on board by December 2014; and (v) third party QA/QC in place by December 15, 2014.
7. Based on the above facts and status, the implementation progress is being rated as “Moderately Unsatisfactory’. The project ratings will be reviewed during next mission in February 2015, based on the progress demonstrated towards agreed targets.

# Assessment of Output and Outcome of Project Components

# Component A: Strengthening Community-based Institutions

1. The component aims at mobilizing and strengthening community institutions of farmers in the command area of irrigation investments under the project and assumes greater significant not only on the continued operation and maintenance of the scheme but also on the judicious management of water resources. The mission noted that the component activities are progressing ‘*Moderately Satisfactory’*.
2. ***Strengthened Institutions of the Farmers:*** As at the end of July 2014, 597 Water User Associations have been formed (against the targeted 4,200 by end of project and 500 by year 3), with a total membership of 43,999 farmers (27% of the targeted 1,66,000 as at end of project and 88% of year 3 target) of which 4,151 are women, 3,747 belongs to tribal communities and 10,469 belongs to scheduled cast. The Water User Associations have been formed across 1,143 villages and over 56% have been registered under the West Bengal Society Act. There are 929 female members (23%) who have assumed decision making positions within the executive committee of Water User Associations against the end of project target of 25%. As confirmed during mission field visits, all Water User Associations formed are holding regular meetings and maintaining minutes books and other records.
3. ***Enhanced Impact of Commissioned Sub Projects:*** Ninety eight Water Users Associations have assumed management operation and maintenance responsibility of water supply schemes commissioned so far and 44 of them have started collecting water charges for meeting the operation and maintenance expenses (against the 80% end of project target and 40% year 3 target) while remaining yet to start utilizing the scheme. About 64% of the sub projects have implemented water meters and are ready to maintain water regulation registers. The status of formation of Water User Association and details of handed over schemes are given in Table 2a and 2b.

**Table 2. Status of formation of WUAs**

**Table 2a: Status of formation of WUAs**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Number** | **Male** | **Female** |
| **WUAs formed** | 597 |  |  |
| **WUAs registered** | 335 |  |  |
| **Membership of WUAs** | 43,999 | 91% | 9% |
| **ST members in WUA** | 3747 | 84% | 16% |
| **SC members in WUA** | 10,469 | 88% | 12% |
| **Governing body members** | 3975 | 77% | 23% |
| **Training days completed** | 1405 |  |  |

**Table 2b: Details of handed over Scheme**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Number** | **Male** | **Female** |
| **Schemes handed over** | 94 (Tube well- 52; Lift irrigation – 31; and PDW – 11) |  |  |
| **Registered WUA** | 94 |  |  |
| **Total membership of WUA** | 8210 | 91% | 9% |
| **Total ST members in WUA** | 473 | 88% | 12% |
| **Total SC members in WUA** | 2259 | 94% | 6% |
| **Governing body members** | 783 | 85% | 15% |
| **ST members in governing body** | 185 |  |  |
| **Sub-committee members** | 1888 | 60% | 40% |
| **Training days completed** | 388 |  |  |
| **WUAs who had exposure visits** | 53 |  |  |
| **WUAs collecting membership fee** | 44 |  |  |
| **Average attendance in WUA meeting** | 80% |  |  |
| **Subprojects with water meter installed** | 64% |  |  |

1. ***Facilitation Support to WUAs:*** The project hired the services of four support organizations to cover 18 districts who have deployed 12 units of 7 personnel each to provide facilitation support to WUA including mobilization, organization development, capacity building and hand holding support. The mission appreciates the back stopping support provided to the WUAs in planning the new Irrigation schemes including collection of social, environmental and economic aspects to complete the SDMPs with the full involvement of members.

# Component B: Irrigation System Development

1. The component is for developing new minor surface water and ground water irrigation schemes mainly in areas that are currently cultivated under rain fed conditions with the objective of improving availability of water for agriculture and fisheries. Though commendable design standards and technical facilitation processes have been evolved and successfully demonstrated for planning farmer friendly irrigation schemes, the speed of implementation yet to improve. Therefore, the mission rates the component activities as ‘*Unsatisfactory’*.
2. ***Investments for New Irrigation schemes:*** Since the beginning of the project, 909 locations have been identified. The improved site selection methodologies after Batch 1 not only used farmer participation and involvement but also used advanced GIS and remote sensing based technologies to ensure the selection of project intended beneficiaries. Bidding and contracting have been completed for 402 schemes out of which construction works initiated in 306 schemes. Out of the 108 completed schemes, 98 schemes have been commissioned and handed over to WUA. This achievement appears to have generated the required start up momentum but need to accelerate many folds to achieve the end of project target of 4,660 new schemes to be built by December 2017.
3. During last one year, the project has picked up with promising leap start by completing over hundred schemes, out of the 402 schemes (INR 100 crore) awarded for implementation. Following project approach, the project has already identified around 700 villages with a potential of more than 50,000 ha. Although, the project has prepared design of 150 (INR 40 crore) schemes with only 50 schemes approved, they have projected to finalize implementation of 459 schemes (INR 250 crore) by June 2015. Furthermore, project team has projected (Annexure 2e) that they would be able to implement around 2,000 schemes costing INR 1200 crore (USD 210 million) by June 2017 that would allow another six months for handover to WUAs. However, mission assessed that after accounting for assembly election during peak working season of 2016 and current preparedness for implementation, the project would be able to implement around 1,500 schemes costing (INR 750 or USD 125 million). This would be possible only when the required staff including 90-200 SAEs and staff for WUA mobilization and quality control is assured. Also, if the efforts are made to participate additional contractors. The assessment of scheme is based on the consideration to following facts and challenges: i) it has taken more than two years to implement 400 schemes and potential of DWRID has been to a maximum of 350 schemes while sixty percent staff is already committed with other state run programs; ii) Shortage of trained staff at DPMU to meet peak demand while DPMUs are yet to be fully strengthened for current requirement of the project; iv) No clarify about outsourcing the survey, design and implementation which could expedite the preparation of schemes; v) Shortage of contractors due to additional programs introduced in focus districts by the state vi) Assembly election in 2016.
4. The SPMU has calculated that for the next batch of schemes about 170 district staff will be needed, including 18 DPDs, 18 EEs, 34 AEs, and 100 SAEs. In place are 9 DPDs, 18 EEs, 41 AEs, and 100 SAEs. Especially the SAEs are important, as they are the ones that interact closest with the farmers and the WUAs. Each SAE is able to handle 4-5 schemes at a time, assuming that the needed transport is in place. As the number of schemes is expected to increase rapidly during the next year, as a new batch of schemes will be selected, the number of dedicated district staff will have to increase over time. The estimate is that the number of EEs will peak at 34, AEs at 67, and SAEs at 200. It is important that the management of DWRID assigns the needed number of staff in a timely manner for both technical as well Institutional support.

**Table 2. Status of scheme implementation**

|  |  |  |
| --- | --- | --- |
| **Description** | **No of schemes** | **Total cost** **(Rs. Crores)** |
| **Batch 1** |
| Approved for implementation | 366 | 101.67 |
| Tendered | 363 | 100.83 |
|  | Awarded | 351 | 104.24 |
| Handed Over | 94 | 19.7 |
| Work Completed and awaiting energisation | 16 | 4.78 |
| Ongoing civil works | 241 | 73.78 |
| Rejected or under evaluation | 12 | 3.41 |

|  |  |  |
| --- | --- | --- |
| **Description** | **No of schemes** | **Total cost** **(Rs. Crores)** |
| **Future Batches** |
| Contracts awarded in  | Contract Awarded by Sep 2014 | 19 | 2.79 |
| March 2015 | 459 | 250 |
| Work completed | June 30, 2015 | 459 | 250 |
| ***Jan- Dec 2016\**** | ***588*** | ***324*** |
| Jan-Jun 2017 | 897 | 497 |

\*Elections during peak working season April-June 2016

1. ***Coverage of Irrigation***: The commissioned schemes have been able to develop a cropped command area of 3,088 ha (end of project target of 139,000 ha). The number of WUA members provided with water delivery services reached 8,297 (against project target of 166,000) who are mostly small and marginal farmers. In addition, about 337 farmers belong to tribal communities who cultivate 252 ha.
2. ***Better Site Selection for Enhanced Results:***  In order to avoid unsystematic site selection spread randomly all over the district which prevented both efficiency and success of scheme implementation, the project introduced specific geographic areas for project intervention. Such delineated areas of polygon consist of a combination of watershed and villages. The specific sites for schemes are selected within the polygon using remote sensing and GIS based information, site verification as well as taking into consideration water availability and water quality issues. As in past, it has been observed that many schemes have failed due to non-availability in seasonal streams or wrong physical location. The polygon so far identified cover over around 1,000 villages in 75 blocks in 19 districts with a cultivable area of around 150,000 ha.
3. ***Segmentation Approach:*** Departing from ‘one model fits for all’ approach, the project approached implementation based on current status of irrigation development and potential diversities existing in the different project district. The 19 project districts have been segmented into two broad categories: (i) the Focused Districts consisting of predominantly rain fed areas, low cropping intensity, low ground water potential and characterized by seasonal flowing rivers where it is proposed to introduce 70% of the project schemes; and (ii) the remaining 14 districts with predominantly irrigated areas the project interventions will mainly focus on efficient water management through introduction of sprinkler/drip irrigation system and support to develop agri-business investments. The five focused districts in West are Purulia, Bankura, Bardhaman, Birbhum and West Midnapur with South 24 Paraganas in South.
4. ***Customizing ‘Fixed’ Designs to Enhance Performance:*** The selection and designs of new schemes have undergone a total transformation from the traditional fixed offers to more customized designs following repeated consultations with farmers in order to ensure the success of schemes and acceptance by the community. The iterated selection made the proposed schemes socially, environmentally and technically viable. The implementation experience resulted in further simplification of the menu of technology options by clubbing various categories and unifying the procedures for installations. The proposed scheme types are summarized in **Annexure 3**.
5. ***Transition from DPR Formats to More Dynamic SDMPs:*** In order to minimize the failure of schemes, the project has brought about a paradigm shift from the pre-decided, template driven DPR preparation which often ignored sites specific suitability of schemes; to a more comprehensive SDMP mode highlighting farmer participation and customized decisions considering farmer needs, social, technical and environmental feasibility. The SDMP covered systematic documentation to arrive at the most feasible solutions which would enhance the impact and sustainability of the schemes.

***Tapping Renewable Energy Sources:*** Constraints relating to energisation lead to initiating a pilot program for installation of solar energy system in 10 schemes. The project is closely monitoring the effectiveness for scaling up provision of solar energy in smaller schemes.

Figure : Pump dug well with Solar scheme

1. ***Revitalizing Existing Investments:*** The DWRID informed that there is large number of schemes which have gone defunct due to various reasons and perhaps some could be fixed with minor inventions and institutional strengthening. The project has initiated a study of existing scheme to understand reasons of success and failures. Simultaneously the department is compiling the status of schemes already implemented by the department. Based on the conclusions drawn and status of schemes, the consideration will give on case to case basis for revitalization under the project.

# Component C. Agriculture Support Services

1. The Agricultural Support Services (ASS) component aims at enhancing productivity and diversification of agriculture in the project areas by dissemination and adoption of improved production and water management technologies for agriculture, horticulture and fisheries; and more efficient and effective farm advisory services. The delay in commissioning of new schemes also affected the progress of implementation of the component which is rated moderately satisfactory.
2. ***Demonstrating Improved Technologies***: The project has been able to successfully implement 691 agricultural demonstration (11,987 expected at the end of the project) and 165 horticulture demonstration (8750 expected at the end of the project) so far. The total numbers of farmers trained through these demonstrations are 1,866 against the targeted 21,138 by the end of the project. The fisheries demonstrations are yet to start.
3. ***Increasing Yield:*** As the schemes have been recently commissioned and water has been made available since mid of 2014, it is too early to report on the benefits accrued from post scheme implementation on productivity and adoption. However, the crop cuttings done through these demonstrations have revealed that productivity of paddy improved to 0.4 per ha from the baseline of 0.2 per ha. The productivity of vegetables improved to 12.5 per ha from the baseline of 10.3 per ha. Similarly, mustard recorded a productivity improvement to 0.9 per ha from the baseline of 0.4 per ha
4. The SPMU agriculture unit has been strengthened with two agriculture specialists, one horticulture and one fishery specialists. The agricultural specialists in the DPMUs are in position in 16 out of 18 districts and they have been conducting demos in their respective districts. A ‘bio-village pilot’ has been initiated in 6 villages for establishing and disseminating village wide good agricultural practices. The results are still emerging and will be scaled up to 15 villages if found successful. Although, the project has developed good rapport with the Agricultural Department and their officers are providing the necessary advisory services, on the job training to field staff yet to be streamlined.

# Component D. Project Management

1. The project Management component aims at ensuring smooth implementation of project activities, monitoring and project implementation and learning from project experience. The mission assessed the rating of the component as ‘*Moderately Satisfactory’*.
2. ***Multi-Disciplinary Skill Set at SPMU:*** The SPMU having the overall state level project implementation is staffed with 28 against 32 approved staff positions. The staffing at SPMU include core engineering staff from DWRID, and a multi-disciplinary team including Institutional, MIS and M&E through SPMU consultancy (EGIS Ltd). The mission appreciates the leadership of the senior management, Secretary (minor irrigation) and Project Director in providing the much required strategic guidance to the engineering staff as well as contracted specialists. The mission highly appreciates the leadership and performance of engineering staff and their internalization and adaption to project approach. The leadership from SPMU consultancy is also highly appreciated however some improvement in his team would further strengthen their support. During the early period, an exercise was done to rationalize these positions. Recently another round of reorganization has been introduced with the inclusion of some experts in groundwater and agri-business expertise. In particular, it has been observed that the SPMU core team of engineers has been effectively performing the activities on procurement, NGO coordination and social activities. Therefore it is advised that the consultancy is reorganized to meet the current needs of project and use accountable staff of DWRID for some sensitive roles.
3. ***DPMUs*** *f****or Decentralized for Project Management:*** Similar to the arrangements at the SPMU, 18 DPMUs have been set up and functioning at the district level. The mission noted that majority of the core technical staff from the DWRID have been deployed including the dedicated Executive Engineer to lead the district staff. In order to augment the engineering staff with the required soft skills, contracted staff 157 numbers deployed against 217 planned) including specializations in agriculture institution development, data base management have been deployed.
4. ***Technology Supported Monitoring:*** The mission appreciates the GIS team and MIS team for providing excellent technology back up for the preparation of SDMPs as well as providing data support for project monitoring. Web based and mobile based applications are being developed.

# Key Risks and Challenges

1. The mission assessed the risk associated with the project implementation and continue to rate it as ‘*Moderate’*. In addition, based on the implementation experience and lessons learned, the mission identified the following challenges for the focused attention and thoughtful actions of project management.
	1. In absence of organized survey maps of sites, the resource mapping is very slow and hence the preparation of SDMP with recommendation to appropriate type of schemes.
	2. Non-availability of feasible water service solutions in vulnerable areas.
	3. Delays in energisation of schemes.
	4. Maintaining the apolitical nature of WUA
	5. Selection and continued management of personnel and agencies having required competencies and experience.
	6. Chances of poor response in e-tendering being introduced first time in the state, coupled with shortage of contractors with required skill and capacity and other work load.

# Way Forward: MTR Recommendations

**On Strategic Issues**

1. ***Fine Tuning Results Framework:*** The mission found that the result framework needs a ‘cleaning up’ to fully reflect the implementation experience so far. With the aim to introduce less water intensive crops during non-monsoon season in focus districts, some of the indicators have become irrelevant like the one on SRI cultivation, and there are some duplicating indicators. The mission recommends the project to have a close look at result framework and suggest improvements as needed.
2. ***Segmentation Approach:*** Departing from ‘one model fits for all’ approach, the project approached implementation based on current status of irrigation development and potential diversities existing in the different project district. The 19 project districts have been segmented into two broad categories: (i) the Focused Districts consisting of predominantly rain fed areas, low cropping intensity, low ground water potential and characterized by seasonal flowing rivers where it is proposed to introduce 70% of the project schemes; and (ii) the remaining 13 districts with predominantly irrigated areas the project interventions will mainly focus on efficient water management through introduction of sprinkler/drip irrigation system and support to develop agri-business investments. The five focused districts are Purulia, Bankura, Birbhum, Pashim Midnapur and South 24 Paraganas.
3. ***Bringing Institutional Sustainability of WUA to focus:*** The mission commends the project team for fully transferring the management of all commissioned schemes to WUAs. The WUAs have started collecting the operation expenses from users and continued maintenance and management would depend on institutional capacity and sustainability of WUA through proper training and handholding support. The mission recommends: (i) *institutional sustainability* by providing further handholding support to build capacity of WUA on social accountability and governance, conflict resolution mechanisms and continued handholding during post implementation, a phasing out strategy for project support and implementing a grading and graduating frame work; (ii) *financial sustainability* by promoting setting up of a corpus fund for WUA, further support on fixing water charges and its timely collection; and (iii) *continued* *performance of schemes* by integrating WUA feedback on scheme performance for payment of final settlement to contractors and involving contractors to provide AMC support through a tripartite agreement among WUA, DWRID and Contractors.
4. ***Empowering WUAs by Providing Direct Access to Financial Resources:*** The mission appreciates the involvement of command area farmers in the preparation of SDMP which is unprecedented. For further empowering and broadening decision making roles of WUA the mission recommends direct funding of WUAs. In order to gain experience for directly funding WUA for implementation the mission recommends piloting of three options:
	1. *Option 1:  Support through SOs:* Under this pilot, one or two SOs with required experience and presence in the selected district(s) would be contracted by the project on the basis of a three way grant agreement between the SO, DPMU and WUA.  These separately contracted SOs would be responsible for providing intensive support for all project activities through WUAs including capacity building, scheme implementation and agricultural interventions. This would mean that all financial transactions would be through WUAs only and SOs would be paid separately for their administrative costs only as per their grant/consultancy agreement with the project.   The objective of this option is that scheme implementation will become a shared responsibility with the DPMUs.  Also, this process would ensure better quality and satisfaction as the facilitation role will be handled by experienced professionals who will provide maximum hand-holding support to farmers.  SOs will be responsible for ensuring that simple accounting records are maintained and monthly financial reports are compiled and submitted to DPMUs to allow the expend to be documented against the advances provided to WUAs;

* 1. *Option 2:  Support for accounting and financial reporting through independent accounting support agencies:*  These independent private agencies [CA firms] would be engaged by the project to support the financial accounting and reporting and auditing functions for a cluster [50-60] of WUAs.  Their responsibilities will include maintenance of WUA books of accounts and preparation of monthly financial reports are prepared, compiled of monthly financial reports for all WUAs and submission of the same to DPMU. This model has been tested successfully and is operational in the Orissa Community Tank Management Project.  In addition to the maintenance of the books of accounts, the audit firms will also provide training to selected book keepers and office bearers of WUAs. SOs would continue to provide the implementation support and DWRID will remain responsible for the technical aspects of scheme implementation;

* 1. *Option 3:  Support through Gram Panchayats:* Under this option, project funds will be transferred to WUAs through Gram Panchayat (GP).  Four ways agreements will be entered between GP, WUA, SO and DWRID detailing roles and responsibilities. GPs will be required to transfer funds to WUA bank accounts within x days along with their [nominal] own contribution. Besides supervising and monitoring scheme implementation, GPs will be responsible for accounting and reporting for the project funds.  GPs in West Bengal are being recognized widely for their performance as they have substantially improved on annual plan preparation, financial management including audit, accounting and financial reporting, absorption capacity of untied grants, project execution and service delivery and ensuring participation, transparency and disclosure of information.  Also in West Bengal, all the GP accounts are web-based and can be accessed online.  Keeping this in mind, a suitable arrangement can be worked out  and this approach, if well planned and executed, could provide the much needed oversight and handholding support to WUAs with timely solutions, improve WUA governance and ensure their long term sustainability.
1. ***Revitalizing Already Made Minor Irrigation Investments:*** The mission noted the need for mapping existing minor irrigation schemes for assessing their status and need for revitalizing the underperforming and defunct installations. The mission is of the view that the reasons of success and failures of already made investments would go a long way in making the new investments more effective. Hence following studies have been planned: (i) the Study on Assessment of Old Minor Irrigation Schemes; and (ii) Geo-Physical Investigation of Existing Tube Wells. The contract has already been awarded for the first study while for other one, the agency is yet to be finalized. Simultaneously, the department is collecting the status of schemes and estimate of required funding. Once the project picks up, the revitalization of some schemes may be funded on case to case basis.
2. ***Strengthening SPMU Capacity for Accelerating Implementation:*** The mission observed that the current implementation arrangement needs further strengthening for accelerating project implementation so that the disbursements catch up while at the same time implementation quality further improve. The recommendations for further capacity support are: (i) more involvement of State Water Investigation Department (SWID) for accelerating the planning process; (ii) partnering with Irrigation and Waterways Department for implementing surface irrigation schemes and/or rehabilitating minor irrigation schemes operated by them; and (iii) outsourcing through involving highly experienced agencies having successfully demonstrated performance, on a pilot basis farmer based implementation of minor irrigation schemes including farmer institution strengthening, planning and implementing farmer friendly small surface irrigation solutions following community procurement, supporting agriculture, horticulture and fisheries development and produce marketing.
3. ***Honing Need Based Skill Mix within SPMU/DPMU:*** The SPMU consultancy is times based and allows flexibility to vary the staffing as per need of the project. Over the time several DWRID engineers have been strengthened to take some of key roles of consultancy. The mission appreciates the performance of the Executive Engineers of DWRID who have been able to efficiently take care of all procurement needs of the program and as wells coordination of NGO and social development. Therefore the mission reiterates that procurement specialist position and NGO coordinator should be continued to be occupied by the EE who remains accountable to the Government. Similarly, the mission commends the design engineers at SPMU who have been instrumental in updating the design and approach.
4. Therefore, the SPMU positions as decided during preparation have changed with the advancement of project implementation and the mission noted a mismatch between the existing positions and what are required for effective monitoring and supervision. In the past, two rounds of reorganization were undertaken. Besides it is recommended to replace/add some experts such as Capacity Building expert, and Accountability and Governance experts. It was further noted that the NGO Coordinator and Social Development Specialist positions are not required full time. Hence it is recommended that the roles of these positions may be combined with the proposed positions and competent persons may be hired with the combination of both. Similarly the mission would like to remind that the position of procurement specialist was curtailed during first reorganization. Also the agricultural specialist may also be supplemented with other short term experts including Agri-business and horticultural specialists.
5. In order to address the needs of survey and design, the mission would like to further remind to strengthen with the consultancy. The organized mapping of resources in village will support in preparation of SDMP at faster rate. As envisaged during PAD, the DWRID team needs to open up for other possible structures for water harvesting, therefore it was recommended to engage design consultancy. For instance the diversion structures with series of small tank following Tamilnadu system tanks model would have been ideal solution for western districts of the state.
6. ***Enhancing Adoption:*** Since the project is focusing on enhancing production of agriculture, horticulture and fisheries by marginal and small farmers, the mission noted that provision of knowledge input alone may not be sufficient for enhancing adoption and improved production. The adoption of an improved technology especially with small and marginal farmers can be improved many fold by ensuring availability of seeds/planting materials, other inputs, small equipment and machinery and availability of market information. The mission recommends that the project may consider investment and support to WUAs in removing these constraints which prevents community wide adoption.
7. ***Innovations to Provide Agri-Business Support:*** Enhancing production of agriculture, horticulture and fisheries need not necessarily translate into improvements in farmers’ income. The mission recommend introduction of activities which will provide for aggregation, bulking, grading and other value addition activities and to link up with market operators for better price realization. The project may explore various options in providing this support.

**On Operational Issues**

1. ***Leadership of Project Management:*** Senior management has further demonstrated their commitment by maintaining the Project Director despite his promotion as Engineering-in-Chief. The mission appreciates the services of Project Director and recommends providing support to him to perform the dual roles by appointing an Additional Project Director on full time basis.
2. ***Streamlining Facilitation Support to WUA:*** Currently some SO teams are dividing their support to more than one district. This is not only affecting provision of timely support to WUA but also cause coordination issues at DPMU level. The mission recommends that the services of one SO unit should be dedicated to one district. In districts, where the services of SO units are not available DPMU may be strengthened with additional staff having required experience in community mobilization and facilitation support. In addition, the mission also recommends extension of the current SO contracts by 24 months to provide continued support to WUA to help them graduate and function on their own. The project shall prepare the scope and description of services and a performance based payment system to SOswith clear timelines based deliverables.

1. ***Fire Walling Quality Assurance:*** The mission recommends engagement of third party QA/QC agencies for quality audit of all completed schemes. This should be further strengthened through Farmer Assessment Process tools which would help WUA fully understand schemes implemented through contracting and help smooth kick start of management operation and maintenance of schemes.
2. ***Making Demonstrations Farmers Centered:*** The mission noted the delays in laying out demonstrations due to different levels of sanctioning funds for the provision of inputs. As these are small amounts, it is recommended that the funds for conducting demonstrations and small equipment be release directly to WUA and quality inputs procured through community procurement guidelines.
3. ***Smoothened Logistic Support to Field Staff:*** The mission reemphasized the need to provide mobility to all field staff be it core staff or contracted staff. The project management needs to issue fresh guidelines and clarify the arrangement for ensuring logistic support to all field staff. On a connected ground, the mission also urged the project to finalize a travel policy for all the contracted staff at SPMU and DPMU.
4. ***Freeing the Agricultural Coordinators to provide Quality Support to Field Staff:***  The mission noted that the three coordinators appointed to provide field based support to DPMU and SOs are tied up with desk work within the line agencies. These coordinators shall be released to constitute the Agriculture Support Cell within SPMU led by the Senior Agriculture Specialists. Their liaison with the line departments should be purely through their nodal officers for technical convergence without jeopardizing their availability for field based facilitation and implementation support. The mission recommends necessary computer and network support to them.
5. ***Partnering with KVKs for Knowledge Support:*** The mission noted that protracted discussions with agriculture universities and public run KVKs have not led to any logical conclusion in providing training support to farmers. Hence it is recommended that in the districts of Purulia, Paschim Midnapur and South 24 Paraganas, the KVKs may be used to expand ASS activities. In addition one of the KVKs can also be used to prepare the required training materials for the project. All farmer training programs have to be invariably linked to one farm demonstrations.
6. ***More Emphasis on Performance Monitoring of DPMU and SO Staff:*** There are still some gaps in the job descriptions of SPMU staff and SO staff. Therefore the mission recommend the project to draft and communicate a clear job description for all the positions at all levels and their performance be closed monitored by the persons in charge of their performance. Necessary capacity building shall also be organized to help them understand fully the job description and on performance monitoring.
7. ***Post Implementation Capacity Building to WUA:*** The WUA and sites need to be equipped with required measurement devices (water level gauges in surface schemes, water level recorder for groundwater schemes).The WUAs needs to be trained to monitor water level, water usage and irrigated areas. The project should collect this information from WUA on regular basis. The mission also recommend to set up a monitoring cell within DWRID to monitor post implementation operations of all commissioned schemes entrusted with WUA. Moreover, the mission recommends providing strengthened/graduating WUAs based on their performance to be provided with a small office and minimum furniture and equipment. Wherever possible convergence with GP for office space support could be explored.
8. **Continued Improvement on Design of Type of Schemes:** The mission appreciates the efforts taken by the engineering team on this direction. In order to further strengthen this it is advised to form advised to form a design team independent of the divisions in order to provide a technically feasible solution instead of mechanically delivering target oriented solutions. The procedure for type of schemes should be done after thorough analysis of water budget, hydrology in a watershed and based on geo- hydrology of aquifer. In order to enhance the performance of lift irrigation scheme it is recommended to introduce check dams and other storage structures to ensure water availability. For arriving future water availability estimates, actual measurement of steams and hydrological models be used.
9. Revisiting Batch-I Schemes to Enhance Performance: The mission noted that some of the Batch-I schemes are not equipped with adequate structures in particular lift irrigation schemes. To enhance performance of these schemes the mission recommends to reinvestigate the Batch-I schemes and provide adequate structures wherever needed.
10. Strengthening MIS and GIS system: The project needs to ensure all the information from various disciplines including physical progress, procurement, fiduciary, geophysical investigations in the field are integrated with MIS. The SPMU needs to ensure smooth accessibility of maps to DPMU so that they can actively contribute to the mapping of resources and implementation. The M&E team and concerned experts needs to ensure the data quality and develop tradition of reporting and analyzing the information.

### Governance and accountability

1. The project has now functional website (<http://www.wbadmip.org/>) and has started toll free number under Grievance Redressal Mechanism. However, the system is yet to be made fully functional with dedicated staff. The project has received 6 enquiries through email or correspondence out of which 3 are resolved.

### Financial Management

1. Disbursement Profile: Against the original allocation of USD 125 million under IBRD 8090-IN, the disbursement as of 10-Feb-2014 stands at USD 1.225 million [1%] and reflects (a) front end fee of USD 0.313 million; and (b) documented reported project expenditures up to 30-Sep-2013 amounting to USD 0.912 million.
2. The disbursement as of date against the signed amount of SDR 78.2 million for IDA-5014-IN stands at SDR 9.310 million [equivalent of USD 14.235 million at 11.9%] and (a) reflects the expenditures related to reinstatement of PPF and reported project expenditures up to 31-Mar-2014 amounting to USD 6.867 million; and (b) advance of USD 7.369 million against projected expenditures for the two quarters ended 30-Jun-2014 and 30-Sep-2014.
3. At current rates of exchange, the consolidated undisbursed balance of USD 229 million will allow expend of approx. INR 1,680 crores [factored at about 80% for Bank share] in the remaining life of the project. As of 31-Mar-2014, the project has reported cumulative expend of INR 50 crores; the revised project cost therefore stands at INR 1,730 crores.
4. IUFRs for the quarter ended 30-Jun-2014 have not yet been submitted to the Bank. Provisional financial reports shared with the mission indicates expend of INR 1.6 crores during the quarter, taking the total project expend up to INR 51 crores.
5. **Adequacy of Financial Management Arrangements:**At present levels of operations, the financial management arrangements, as determined at appraisal remain valid. There have been delays in preparation of quarterly IUFRs – largely on account of late receipt of AG appropriation accounts and late submissions of financial reports from the districts. With the objective of accelerating disbursements, it has been agreed that the IUFRs will be prepared on the basis of the provisional expend reports compiled from the divisional statements of expend and adjusted with the AG reports in the next IUFRs. The consolidation of accounting centers into 18 DPMUs [discussed later] will help timely submission and compilation of quarterly IUFRs.
6. In an effort to streamline operations at the district level, the project has decided to consolidate the implementation arrangements into dedicated [18 in total] District Project Management Units headed by Executive Engineers [AI or AM]. This move is expected to help and contribute to the significant scaling up of operations at the district level.
7. **Contract Management:** The information on contracts awarded, physical and financial progress included in the IUFRs is presently being prepared on the basis of separate monthly reports provided by the district units. In parallel, the computerized MIS has been developed to track physical and financial progress on the various schemes [contracts awarded]. In order to eliminate the duplication in efforts and to ensure that the reports are reliable and correct, it has been agreed that the report will be generated from the MIS and reconciled on a quarterly basis with the financial reports on scheme expenditures.
8. The financial management performance remains unchanged at **Moderately Satisfactory (MS).** FM arrangements at the district/divisions and business processes with respect to contract management need to be significantly strengthened to facilitate the planned scaling of up operations.

### Procurement

1. Mission reviewed the Procurement Plan dated 27th May 2014(Revision 5) with updates. It is noted from the procurement plan that the estimated cost of the total civil works proposed is approximately INR 255 crore and total estimated cost for goods and services proposed are INR 15 and INR 20 crore respectively. Till date total procurement planned is Rs. 290 crore which is approximately one sixth of the project cost. Unless the project include more items in the procurement plan and focus their attention in contract award and afterwards contract monitoring, it will be difficult to spend the total project amount.
2. As on date, out of 108 packages in Batch-I for civil works, the contract is awarded for 103 packages with total award amount of INR 103.79 Crore. In Batch – II, out of 134 packages with estimated cost of INR 92.64 crore, the bids are floated for 72 packages and out of which the contract has been awarded for 19 packages only with total award amount of INR 2.79 crore. Mission noted that these 19 packages for pump dug wells are small packages, which are awarded in Jalpaiguri district. Mission was informed that the updated plan and with a revision number will be submitted to the Bank for clearance immediately after mission after incorporating all the activities discussed and suggested during mission. However, new items not identified in the Plan (unless of substantial nature) can be procured with clearance from the Bank. Such items must be included in the next revision of the plan. Out of 21 consultancy activities proposed in the procurement plan, for 10 activities the consultancy contracts are already awarded with total award amount of INR 18 crore. Project may work on the balance 11 consultancy activities for early contract award.
3. During last mission, project agreed to switch over to e-procurement mode of procurement using NIC platform after March 2014. Mission is happy to note that the project has adopted e procurement method for all procurement above INR 5 lakh from July 2014. The first batch of procurement is already done through e procurement system. It was advised that the officials handling procurement may be given e procurement training so that there is a smooth transition from manual system to e procurement system.
4. Post Procurement Review (PPR): As done in last year, the Bank is going to carry out ex-post reviews of all contracts finalized between 1st July 2013 and 30th June 2014 by a Bank appointed external consultant. The project is required to furnish the list of contracts awarded in the said period. Consultant will fix the dates for review in consultation with project officials. Consultant will also undertake field visit for asset verifications and review field records. It is requested that all required documents must be kept ready and produced to the Consultant for review.
5. The contract management needs to take place in organized manner. Mission would like to reiterate that the project team at SPMU should review all contracts including at the districts on monthly basis, and prepare the Minutes/ exceptions and include in the monthly reports to be sent to the Bank.
6. Scheme implementation: The project teams needs to improve the bidding document for scheme implementation in order to improve the response of bidders as needed. So far the contracts have liability duration for 6 months only. The project may think of increasing it to one year. Also the project should work on including AMC in consultation with WUA for key items. WUA may be consulted to have tripartite arraignments for AMC.
7. In the last mission, the project was reminded that Procurement Manual need to be updated with new thresholds and specific procurement procedures for items like seeds, etc. Mission is happy to note that the project has now updated the procurement manual and shared a copy with the mission. While going through the revised procurement manual, some discrepancies are noted which are conveyed to the project officials, which they have agreed to incorporate in the manual.
8. Though there is some progress made in procurement front, a lot of activities/schemes need to be planned and included in the procurement plan with follow up procurement action for early award of contracts. Therefore the procurement rating is retained as moderately satisfactory (MS).

### Social and Environmental Management

**Social Safeguards**

1. **Social Aspects:** Key social issues under the project relate to: (i) community participation; (ii) human and institutional development; (iii) lands; and (iv) indigenous peoples/ tribal people development. While the WUAs serve as a vehicle of ‘participation’, substantial efforts are to be made to ensure that community is strengthened and empowered adequately to sustain. WUA formation is quite evident in all the project villages; however, the institutional development is yet to take place. The efforts are needed to share the details of schemes so that they can participate in more effective manner. Therefore information sharing right from the beginning is a key including details of schemes and it implications while allowing a particular structure in their land. There are substantial delays in energization and commissioning, which may affect the enthusiasm and motivation of groups. In some schemes, the poor quality of work may also affect the group adversely and there is a need of training them to check the quality. Similarly, the planning for agricultural support services needs proper need assessment with the community so that acceptability of innovations is there.
2. **Land Donation**: Project does not acquire lands involuntarily. Rather, it resorts to voluntary donations/ purchases. Rules governing such ‘donations’ have been formulated. The requirement under MI schemes depends on the size of the scheme but the requirement is quite modest. So, it had been decided that in case private lands are required for source works (pump house and head works), it can be secured on a voluntary contributions through donations. Central to such rules was that no donations shall render the donor landless/ affect the livelihood. Land donation status has been updated for 366 batch 1 schemes. A total of 1193 farmers have donated land and 20 schemes were installed on government owned land. The percentage of land donated varies from less than one percent to 8 percent. All such transactions would adopt the traditionally prevailing practice of community extending its ‘gratitude’ to the donor, e.g. through cash, waive water charges, employment as pump operators, or location of spout. While WUA coordinates land transactions with facilitation by SOs, water users do extend some ‘gratitude’ to the land donors. Such gratitude normally hovers around either provision of free water supplies or job of a pump operator. Same time, project has to ensure that the donor’s livelihood is not affected as result of parting of the lands. However, information of 155 land owners is yet to be collected.
3. **Tribal Development:** West Bengal has significant tribal population, and about 6 percent (4.5 million people) of the total population are categorized as Scheduled Tribes (ST). It had been recognized that while the project interventions will not affect adversely the tribal households, these groups do require special attention from the viewpoint of ensuring inclusion and equity. Against this context, a Tribal Development Plan (TDP) has been prepared. Out of 366 schemes under Batch I, there are eleven schemes (tribal population being 40% or more) in five districts viz., Jalpaiguri; Bankura; Dakshin Dinajpur; Birbhum; and Paschim Midnapur. Tribal beneficiaries in these villages account for 60- 100% of the total population. It was agreed that schemes having large number of tribal (as high as 60%) beneficiaries, will also qualify as a tribal habitation. So far, project under batch 1 schemes, has benefitted 35,329 households of which 2897 are tribes; 11,437 are from scheduled caste and rest are from general category. The tribal beneficiaries accounts for 8.2% of the total beneficiary households. Though it was agreed that 13% of total project cost will go to tribal village, the revised estimate shows that percentage of money going to tribal villages is just 2.2 percent of the total estimate. Things however are looking up in Batch 2 as out of 232 schemes, 32 are in tribal villages which approximately come to 14% of the total estimate.

### Environment Safeguards

1. Project has been screening the feasibility of schemes on environment level. The team is advised to follow the norm through proper field verification. For instance, lift irrigation scheme and some groundwater schemes have been proposed wherein the water availability is questionable either due to seasonal rivers or in critical block. The department is advised to assess the sites through site verification and then only recommend the location. Irrespective of size of schemes, the project has been advised to seek permission of SWID for its feasibility so that the tube wells are not introduced in critical or semi critical areas.
2. Field level water quality testing using colorimetric field testers should be taken up for analyzing critical parameters like fluoride, arsenic, chloride, nitrate, iron. Suspect sample only should be sent to regional/state laboratory for detailed analysis.
3. Overall, the environmental screening has been satisfactory for “batch I” subprojects, even if the delay in recruitment of environmental specialists at the DPMUs is now likely to hamper environmental screening of “Batch II” subprojects. There has been good progress in awareness campaigns by support organizations and the SPMU which included 465 training sessions on awareness of the environmental issues; 356 training sessions on issues such as optimum water use, use of pesticides and fertilizers; and 233 training sessions were conducted on environmental screening in the project. A total of 270 WUAs already involved in the project have received these trainings. However, there had been avoidable delay in implementation of the “Bio-village” program, in spite of which there is a chance to achieve the first year targets by December 2014; slow or partial progress on water quality monitoring; and no progress on the issue of delisting of the WHO Class 1B and Class 2 pesticides in spite of repeated agreements (which is now a very important issue to resolve).
4. As of now the implementation of the environmental management plan is being rated as Moderately Satisfactory, however if above issue is not addressed by next mission, it will downgraded to *Moderately Unsatisfactory*.

# List of Annexures

|  |  |
| --- | --- |
| 1 | List of Agreed Actions |
| 2 | Progress Indicators and Status of implementation (a,b,c,d, e,f) |
| 3 | Scheme Implementation:1. Implementation and Irrigation System
2. Action for State water Investigation Department
 |
| 4 | Agricultural Support Services |
| 5 | Project Management |
| 6 | Social Development |
| 7 | Environmental Management |
| 8 | Sites visited by Mission |
| 9 | Procurement Aspects |
| 10 | Financial Management and Disbursements |

Figure 2: Schemes under implementation in Batch 1 schemes and villages selected for Batch 2



##### Annexure 1Agreed Key Actions

| **S.No.** | **Action** | **By Whom** | **By When/ revised** | **Status****(Mar 10, 2014)** | **Revised/follow on Action and revised date** |
| --- | --- | --- | --- | --- | --- |
|  | Finalize Implementation of 351 schemes for Batch 1. | SPMU | July 31, 2013/March 2015 | 118 schemes are completed and work is in progress remaining 233 are in progress  | Energization is taking 3-6 months. |
|  | DMPU multi-disciplinary team and Dedicated team of engineers and contracted SAE mobilized. | SPMU | June 2013/November 2014 | 140 out of 240 contracted DPMU team are hired with arrangement for one year of SAE. Dedicated team is in place. | Senior management has committed to appoint 90 engineers by November. Field staff for agriculture has delayed. |
|  | Prepare SDMP for 459 schemes of Batch 2. | SOs/DPMU/SPMU | June, 15 2013/December 2014 | SDMP preparation has been initiated for 150 schemes. | Substantially delayed particularly due to no dedicated engineers at DPMU and new process for DWRID |
|  | Third Party QA/QC consultancy | SPMU | Dec 15, 2014 | Delayed substantially | Should expedite the hiring of consultancy before the construction picks up in Batch 2 schemes. |
|  | Engage KVKs and field staff for Agricultural Support services | SPMU | October 30, 2014 | It has been pending for past one year. | Training material for agriculture needs to be prepared with their help for field staff. |
|  | Proposal for Irrigation and waterways cleared and included as implementing agency | SPMU | October 30, 2014 | New Activity |  |

**Component wise detailed actions**

| **S.No.** | **Action** | **By Whom** | **By When/ revised** | **Status****(July 31, 2014)** | **Revised/follow on Action** |
| --- | --- | --- | --- | --- | --- |
| **Component 1: Strengthening Community based Institutions** |
|  | WUA’s formed for selected schemes and mobilized.  | DPMU/SO | Ongoing | In progress. Total of 451 WUAs formed and 335 registered; | Their MOM training need to be done immediately.Training of WUAs need to be more effective |
|  | Reporting system by SOs for their progress and data collection of schemes. | SPMU/DPMU/SO | Nov 15, 2013/ Jun 15, 2014 | Initiated and but yet to be strengthened and streamlined. | Baseline of Batch 1 schemes yet to be completed. |
|  | Preparation of training manual for induction of SO field staff, DPMU and training of WUAs. | SO/SPMU | Jan 31, 2013/April 2014 | Partially completed; WUA training manual finalized; SO manual prepared;  | Needs to strengthen the training setup with some Institute.  |
|  | Project orientation training for key staff and field staff. | SPMU/DPMU/SO | Ongoing | Should do more frequently as new member joining. | Training setup need to make more effective. |
|  | Provide schemes details from detailed project reports to WUAs of Batch 1. | DPMU/SO | Immediately | Partially completed. | It is critical to share scheme information. |
|  | Prepare QA/QC manual for WUAs. | SPMU | May 30, 2013/  | Not done.  | The supervision has been weak by DPMU and WUA should learn to take the ownership of schemes and support in supervision. |
|  | Introduce water resources monitoring at schemes before and after handover through WUA | WUA/SO/DPMU | Immediately | Not done | Provide water level tape, and install gauges in streams. Water meters are already provided.  |
| **Component 2: Irrigation system development** |
|  | Selection of Batch 2 schemes : 300 SDMP | SPMU/DPMU/ DLIC | Sep 30, 2013/March 2015 | Delayed, Villages have been identified and SDMPs are yet to prepared | Need DWRID’s active support and dedicated staff. |
|  | Complete civil works of the Batch 1 (351) schemes | SPMU/DPMU/ DWRID  | Dec 1, 2012/March 2015 | Delayed;Completed for In 118 schemes, work is in progress for 2 33 schemes.  | Increase supervision to ensure the quality of construction. |
|  | Supervision of schemes | DPMU/WUA | Ongoing | Needs improvement. | Mobile based and quality control needs to be put in place. |
| * 1. PR
 | Survey of schemes/mapping water resources at watershed level. | DPMU | Ongoing | Delayed. Project has been advised to engage Survey and design services. | For some schemes it is initiated but not in practice in SDMP yet. DPMU needs to participate actively in resource mapping. |
| * 1. R
 | Revise bid documents with updated specifications and simplified BOQ | DPMU | Sep 30, 2013/ March 2014 | Updated for tubewells and Lift irrigation. For surface schemes, it is in progress. |  |
| * 1. U
 | Pilot testing of solar system in Batch 1 schemes | DPMU | Nov 2013/ Dec 2015 | Two schemes completed. Contract awarded for 8 schemes. | Monitor their performance in terms of area irrigated and volume of water pumped. |
| **Component 3: Agricultural Support Services** |
|  | Field based demonstrations  | DOA/SOs | Ongoing | Completed for Rabi 2013.Initiated for Kharif 2014.  | The team needs to work on improving the demos and record their impact. |
|  | Procure consultancies to engage regional partners such as KVK or University and well performing NGO. | SPMU/DPMU | April 2014/October 30 2014 | Not completed | The arrangement with University did not materialize. Three KVKs are possibility. |
| * 1. De
 | Devise implementation plan and organize resources for implementing farm field school | SPMU | April 2014/  | Not done |  |
| * 1. E
 | Engage PPP and community resource providers (CRP) | SPMU/DPMU | April 2014/October 2014 | Delayed substantially. | Plan has been cleared to engage through SPMU consultancy for PPP but yet to be materialized. |
|  | Initiate procurement of agri-business services | SPMU/DPMU | Dec, 2014 | Not yet initiated. |  |
| **Component 4: Project Management** |
|  | Strengthen and manage SPMU consultancy with the required staff | SMPU/consultancy | Feb 15, 2013 | Needs reorganization to match with the current business needs. | SPMU core team of engineers has been conducting some key roles including procurement and NGO coordinator very effectively. The duplication of team should be avoided and sensitive roles should be with the accountable staff. |
|  | Mobilize team for DPMUs and SAEs | SPMU | May 2013/Nov 2014 | Partially completed. The team of engineers from both sides (DWRID and hired) are not appointed yet. | Impacting project progress significantly. |
|  | Induction training to new staff in overall project and their field of work. | SPMU | Ongoing | Some trainings have been conducted. For field staff it needs to be done immediately. | The training material and approach need to be more effective and more frequent. |
|  | Conduct a study to assess the status of old schemes and understand their needs. | SPMU | June 2013/Dec 2014 | Delayed. Now the study is in progress. | Based on the recommendations and inventory assessment of old schemes, the renovation sub-component will be introduced. |
|  | Consultancy for hydro-geological assessment of old groundwater schemes. | SPMU | April 2014/ | Delayed substantially. |  |
| **Upgradation of water information system at SWID** |
|  | Upgrade surface water monitoring system at lift and surface irrigation schemes | SPMU/SWID | June 30, 2014/Dec 2014 | Delayed. Set up combination of real time and community based monitoring.  |  |
|  | Upgrade groundwater monitoring system  | SPMU/SWID | June 30,2014/Dec 2014 | Delayed. The draft bid document for DWLR was shared. |  |
|  | Upgrade database management system in SWID: Prepare monitoring plan | SPMU/SWID | Oct, 2013/Dec 2014 | Delayed. The software for organizing Groundwater database is recently procured. The information is yet to be computerized or updated through field investigation. | Engage the services to upgrade other information at SWID |
|  | Prepare a draft plan for comprehensive monitoring of water availability and water quality with estimates. | SWID/SPMU | Oct 31, 2013/Dec 2014 | Delayed | Some plan is there but needs to be more organized well. |
|  | Update spatial database of old schemes with their status | SWID/SPMU | June 2014/ Dec 2014 | New activity.  | Engage the services to finalize this survey. |
| **MIS and M&E system** |
|  | Develop web-based MIS for project immediately. | SPMU | March 2013/ Sep 2014 | Bet version is under testing. Update all the modules including physical, procurement and financial. |  |
|  | Update Batch 1 data for both MIS and GIS platform with the details up to beneficiary/field level | DPMU/SPMU | Oct 2013/ Dec 2014 | Delayed. Batch 1 has been pending long due. | Some attempts have been made but quality needs to be ensured. |
|  | Make GIS based mapping accessible to DPMU | SPMU | February 2013/ Immediately | Partially done. The experts have been engaged Not done.  | Explore with Bhuwan or put on your server, |
|  | Finalize M&E framework | SPMU | June 2013/ October 2014 | WUA grading tool & self-assessment, monitoring system draft prepared. | Reporting is still very weak and time consuming. |
|  | **Financial management** |  |
|  | Forecast of expenditures for next two quarters (Jan-July, 2014) in IUFR 1B to be sent to the World Bank. | SPMU | Ongoing (prior to each semester) | Delayed. Yet to streamline for timely submission. |  |
|  | Office orders issued to clarify the business processes * For the sanction and payments of operational expenditures at DPMU level.
* with respect to the sanction of works, award of contracts, contract revisions on account of price variations and/or time extensions
 |  | March 31, 2014/  |  |  |
|  | Update the expenditures with respect to physical progress in various contract and review on monthly basis.  | SPMU/DPMU | March 31, 2014 | Update for existing ones by April 15, 2014 |  |
|  | Training to be provided to Divisional DWRID staff, including Divisional Accountants on the business processes and financial reporting requirements | DPMU/SPMU | April, 30 2014 | The appointment of staff is delayed.  |  |
|  | **Procurement** |  |
|  | Updated procurement plan. | SPMU | Every mission | Revised procurement plan of 2014-2014 version 5 was shared prior to mission. |  |
|  | Procurement of civil works contracts for Batch 1 works | DPMU | March 1, 2014 | Completed. |  |
| * 1. E
 | E tendering system for Batch 2 | SPMU/DPMU | Jan 2014/ April 2014 | Completed. |  |
|  | Finalize procurement of 459 schemes for Batch 2 | SPMU/DPMU | March 15, 2015 | Commenced for 19 schemes. For remaining 40 it is in progress. | Needs to introduce improvement in bids to ensure the success of bids and invite bidders from out of state to address peak needs of project. |
|  | **Social Development** |  |
|  | Issue Guidelines to SOs on addressing the issues related to Lands, Impacts and Tribal Development  | SPMU/SO | Ongoing | Ongoing activity. Keep updating the SOs as there is large turn over  |  |
|  | Update information on actual land acquisition in Batch 1 schemes  | DPMU/SPMU | Ongoing | In progress. Report on profile of the donors, gratitude, impact on livelihoods | Yet to be done in organized manner. WUAs are yet to be clear about fee and cost of AMC. |
|  | Update Action Taken Report on implementing the TDP | SPMU/DPMU | Sep 30, 2013/ Oct 2014 | In progress. |  |
|  | Initiate the process of mutation of land parcels donated by the community members. | SPMU/DPMU | Nov 30, 2014 | New Activity |  |
|  | **Environment** |  |
|  | Organize and complete training for the DPMU staff, support organizations staff on the scope of environmental due diligence  | SPMU | Ongoing | Field Staff yet to be trained. |  |
|  | Issue of Government Order to delist WHO Class I/ Class II pesticide from state approved list of pesticides | Department of Agriculture (WRIDD to coordinate) | July 15, 2012/Dec 2014 | Delayed. During last mission it was agreed but no progress thus far. | If not issued by next mission, the project rating will be downgraded. |
|  | Consultancy for Bio-Village program. | SPMU | Sep 30, 2013/March 2014 | Two contracts are awarded for 6 bio villages. Incept report is prepared and interventions yet to commence. | The consideration for providing the schemes may also be considered as necessary. |
|  | Finalize terms of reference, adopt an approved selection procedure, and award contract for the study on bio-accumulation of synthetic and persistent pesticides in food crops in the state. | SPMU | Oct 31, 2013/Apr, 30 2014 | Delayed.  |  |
|  | **Governance** |  |
|  | Establish a grievance cell | SPMU | Feb 25, 2014/ Immediately  | Partially done. Toll free and MIS is place  | Yet to put in full practice by sharing number with WUAs/community and dedicated person to it. |
| * 1. P
 | Provision of display boards and project information system | SPMU/DPMU | Immediately | Delayed | During construction and post construction, the display boards are needed and mechanism for sharing the scheme details with villagers needs to be practiced. |

##### Annexure 2: Progress Indicators and Status of implementation

Annexure 2 a: Physical Progress Indicators

| **Indicator** | **Unit** | **Progress till date** | **End of Project target** |
| --- | --- | --- | --- |
| **Component A: Strengthening Community Based Institutions** |   |   |   |
| WUAs formed(Batch I&II) | Nos. | 597 | 4660 |
| WUAs trained(Batch I&II) | Nos. | 366 | 4660 |
| WUAs registered(Batch I&II) | Nos. | 335 | 4660 |
| SDMPs prepared (DPR) (Batch I&II) | Nos. | 452 | 4660 |
| SDMPs approved(Batch I&II) | Nos. | 426 | 4660 |
| No. of WUA staff trained by SOs | Nos. | 17530 | 932000 |
| No. of Members in WUA | Nos. | 23939 | 326200 |
| No. of female membership in committees (1/3rd of the total) | Nos. | 732 | 13980 |
| **Component B: Irrigation System Development** |   |   |   |
| Schemes in identification stage | Nos. | 860 | 4660 |
| Schemes in implementation stage | Nos. | 257 | 4660 |
| Schemes in post-implementation stage | Nos. | 94\*(Handed Over) | 4660 |
| Number of Beneficiaries with schemes completed | Nos. | 5712 | 166000 |
| Number of Males | Nos | 2181 | 136000 |
| Number of Females | Nos | 176 | 30,000 |
| No. of WUAs functioning (having General Body Meeting) | Nos. | 133 | 4660 |
| CCA developed | Ha | 3088 | 138901 |
| CCA developed in Tribal areas | Ha | 252 | 22788 |
| Participating farm families | Hhs | 4356 | 166000 |
| Number of tribal farm families | HH | 337 | 21580 |
| **Component C: Agriculture Support Services** |   |   |   |
| Agriculture demonstrations | Nos. | 691 | 11987 |
| Ha | 276 | 4795 |
| Horticulture demonstrations | Nos. | 165 | 8750 |
| Ha | 22 | 1166 |
| No. of fisheries demonstrations | Nos. | Nil | 117 |
| Ha | Nil | 989 |
| Farmers trained | Nos. | 1866 | 21138 |
| Farmers taken on exposure visits  | batches | 2 | 300 |
| Schemes covered under fisheries  | Nos. | Nil | 117 |
| No. of FIGs trained | Nos. | Nil | 120 |
| Farmers adopting Improved agricultural practices | Ha | 106 (1%) | 40% |
| Farmers adopting SRI practices |   |   |   |
| Departmental staff trained – (Agriculture, Horticulture & Fisheries) | Nos. | Nil | 2000 |
| No. of Bio villages established  | nos. | 6 in progress | 50 |
| **Component D: Project Management** |   |   |   |
| DPMUs established | Nos. | 18 | 18 |
| Staffing in SPMU (including gov. staff) | Nos. | 32 | 28 |
| Staffing in DPMU (Contracted staff) | Nos. | 155 | 188 |
| Staffing in DPMU (Dedicated Engineers) | Nos. | 139 | 139 |
| No. of workshops organized | Nos. | 20 | 72 |
| No. of project staff trained in project activities | Nos. | 121 | 500  |

**Annexure 2b: Financial Progress**

|  |  |
| --- | --- |
| **Project Components/Sub components** | **Expenditure Reported (Rs in crores)** |
| **FY 11-13** | **FY 12-13** | **FY 13-14** | **FY 14-15 (till July)** | **Total** |
|
| A. | Strengthening of Community Based Institutions |   | 1.06 | 2.96 | 0.0016 | 4.0216 |
| B. | Irrigation System Development and Improvement |   | 0.16 | 30.61 | 0 | 30.77 |
| C (i) | Agriculture Development |   |   | 0.16 | 0.023 | 0.183 |
| C (ii) | Horticulture Development |   |   | 0.11 | 0.0389 | 0.1489 |
| C (iii) | Fisheries Development |   |   | 0.01 | 0.014 | 0.024 |
| D (i) | Project Management - SPMU | 1.03 | 2.17 | 6.05 | 0 | 9.25 |
| D (ii) | Project Management - DPMU | 0.89 | 1.85 | 2.75 | 1.58 | 7.07 |
|  | **GRAND TOTAL**  | **1.92** | **5.24** | **42.65** | **1.6575** | **51.4675** |

**Annexure 2d: Time taken to complete schemes with energization**

|  |  |  |
| --- | --- | --- |
| **Duration taken****(In months)** | **Number of schemes energized after civil works** | **Number of schemes handed over** |
| 0-3 | 62 | 0 |
| 3-6  | 22 | 1 |
| 6-12  | 0 | 37 |
| 12-15 | 0 | 49 |
| 15-18  | 0 | 0 |
| **Grand Total** | **84** | **87** |

**Annexure 2e: Selection of area for Batch 2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **District** | **Single cropped area in Kharif as per land use 2010-11, (ha)**  | **Target area selected in the project (ha)** | **Area already identified (Ha)** | **Approx. number  of schemes (@20/ha)** |
| **Focus districts** |
| 1 | Bankura | 6314 | 3320 | 1660 | 83 |
| 2 | Purulia | 1080 | 640 | 820 | 41 |
| 3 | Paschim Midnapore | 1669 | 580 | 400 | 20 |
| 4 | Birbhum | 4330 | 960 | 500 | 25 |
| 5 | South 24 Parganas | 5346 | 1280 | 480 | 24 |
| **Water Management districts** |
| 6 | Barddhaman | 2835 | 520 | 260 | 13 |
| 7 | Malda | 798 | 440 | 360 | 18 |
| 8 | Murshidabad | 497 | 460 | 200 | 10 |
| 9 | Dakshin Dinajpur | 3304 | 2280 | 940 | 47 |
| 10 | Purba Midnapore | 1330 | 780 | 440 | 22 |
| 11 | Jalpaiguri | 1610 | 980 | 760 | 38 |
| 12 | Uttar Dinajpur | 0 | 140 | 180 | 9 |
| 13 | Koch Behar | 1808 | 1040 | 620 | 31 |
| 14 | North 24 Parganas | 1203 | 240 | 100 | 5 |
| 15 | Nadia | 1004 | 300 | 240 | 12 |
| 16 | Hooghly | 346 | 240 | 120 | 6 |
| 17 | Darjeeling | 1019 | 420 | 140 | 7 |
| 18 | Howrah | **20\*** | 100 | 180 | 9 |
|   |   | 34493 | 14720 | 8400 | 420 |

**Annexure 2f: Projection of Schemes implementation and Staffing requirement required as estimated by the SPMU**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **OPTION-1** | **Batch-I** | Number of schemes( Excluding batch-I) | **Cost(Rs In Cr)** | **Cost($ In M)** |
| **Type of scheme** | Mar-15 | Mar-16 | Mar-17 | Dec-17 | Total |
| **WDS(CD)** | **construction under progress** | 40 | 80 | 100 | 80 | 300 | 360 |   |
| **PDW(solar/elec)** | 60 | 100 | 120 | 120 | 400 | 200 |
| **WDS(WHT, Reexcavation)** | 50 | 120 | 150 | 120 | 440 | 132 |
| **STW(TW)** | 75 | 75 | 120 | 80 | 350 | 70 |
| **LDTW(TW)** | 70 | 100 | 120 | 110 | 400 | 200 |
| **RLI(LI)** | 50 | 80 | 80 | 100 | 310 | 108.5 |
| **SFMIS** | 50 | 60 | 80 | 60 | 250 | 87.5 |
| **Total** | 395 | 615 | 770 | 670 | 2450 | 1158 |
| **Add Batch-1** |   | 104 |
| **Total cost(Rs in cr)** | **104** | 178 | 296 | 365 | 319 | 1158 | 1262 | 210 |
| **POSITION OF HUMAN RESOURCES (ENGINEERS)** |
|  | **IN PLACE** | Mar-15 | Mar-16 | Mar-17 | Dec-17 | **THIS IS AVERAGE REQUREMENT , IT VARIES DISTRICT TO DISTRICT** |
| **SAE (REQD)** | **100** | 100 | 160 | 200 | 200 |
| **AE (REQD)** | **41** | 34 | 54 | 67 | 67 |
| **EE (REQD)** | **18** | 18 | 27 | 34 | 34 |
| **DPD (REQD)** | **9** | 18 | 18 | 18 | 18 |
| **SAE E/S)** | **100** | 0 | **-60** | **-100** | **-100** | **INITIATION IS ALREADY BEEN STARTED TO FILL UP THE SHRT FALL OF THE ENGINEERS** |
| **AE (E/S)** | **41** | 7 | **-13** | **-26** | **-26** |
| **EE (E/S)** | **18** | 0 | **-9** | **-16** | **-16** |
| **DPD(E/S)** | **9** | -9 | **-9** | **-9** | **-9** |

|  |
| --- |
| **PLAN & PROGRESSS OF BATCH II ( UPTO MARCH 2015 )** |
| **Type of scheme** | **WDS(CD)** | **PDW(solar/elec)** | **WDS(WHT, Reexcavation)** | **STW(TW)** | **LDTW(TW)** | **RLI(LI)** | **SFMIS** | **Total** |
| TARGET UPTO MAR 2015 | 40 | 60 | 50 | 75 | 70 | 50 | 50 | 395 |
| SCHEME IDENTIFIED | 40 | 80 | 14 | 40 | 66 | 38 | 48 | 326 |
| DPR RECIVED |   | 175 |
| ADMINISTRATIVE APPROVAL DONE |   | 134 |
| BID INVITED(AUGUST 14) |   | 77 |

1. The Mission comprised Mmes/Messrs. Anju Gaur (Sr. Water Resources Specialist & Task Team Leader), Joop Stoutjesdijk (Lead Irrigation Engineer), Jacqueline Julian (Operations Analyst), Manvinder Mamak (Sr. Financial Management Specialist), Satyanarayan Panda (Procurement Specialist), Parthapriya Ghosh (Sr. Social Development Specialist), Tapas Paul (Sr. Environmental Specialist), Jun Matsumoto (Sr. Water Resources Management Specialist), C.S.Renjit (Institution Specialist Consultant), K.A.S. Mani (Groundwater Specialist – Consultant), Paul Singh Sidhu (Agriculture Specialist – Consultant) and Konda Chawa (Adult Learning and Farmer Field Schools Specialist) [↑](#footnote-ref-1)