

**The World Bank**

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT  
INTERNATIONAL DEVELOPMENT ASSOCIATION

New Delhi Office  
70 Lodi Estate  
New Delhi - 110 003  
India

Telephone : 24617241/24619491  
Cable Address: INTBAFRAD  
Mailing Address : P.O Box 416  
Facsimile : 24619393

February 24, 2012

Mr. Debendranath Sarangi  
Chief Secretary  
Government of Tamil Nadu  
Secretariat, Fort St. George  
Chennai- 600 009  
Tamil Nadu

Dear Mr. Sarangi:

***Tamil Nadu Irrigated Agriculture Modernization and Water-Bodies Restoration and Management (IAMWARM) Project- Implementation Support Mission  
January 23-27, 2012***

We would like to thank the Multi-Disciplinary Project Unit and all the project counterparts who contributed to hosting the recent implementation support mission for the Tamil Nadu IAMWARM Project and for facilitating the program of field travel. We would also like to thank you for your support of this important Project. Please find enclosed the Aide Memoire of the mission. While the Aide Memoire provides full detail on the work and results of the mission, we would like to summarize the main points here.

***Pace of implementation:*** The pace of project implementation has picked up in recent months. All remaining civil works contracts for the Irrigation Systems Modernization Component will be awarded by mid-April of this year. The work of the participating line departments in the Agriculture Intensification and Modernization Component is moving apace. Despite the improved pace, the accumulated delays in project implementation of roughly two years, mean that planned project activities cannot be completed before the current credit / loan closing date of March 31, 2013. During the wrap up meeting, the Government indicated to the mission its interest in extension of the closing date by 18 months. The mission informed that any extension request for consideration by the Bank would have to be backed with appropriate justification, in particular regarding the likelihood to complete the project in the revised time frame, and would need to be endorsed by the Department of Economic Affairs, Government of India.

***Project savings:*** During the September 2011 mission it was agreed to add the Amaravathy Sub-basin in the Cauvery Basin to the Project. Despite this step, net project savings remain. The mission estimates these at Rs. 260 cr. The major reasons are cost under runs in the tank rehabilitation work – with actual expenses proving to be less than originally budgeted, and continued excess budget for certain other elements of the Project, particularly micro-irrigation. While the Bank is open to the reallocation of savings to other uses consistent with the project design and objectives, the time for

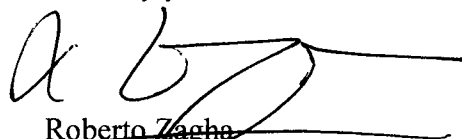
identifying such uses is winding down. At this point, the Bank cannot agree to the inclusion of additional sub-basins, but would encourage the Government to focus on qualitative improvement within the existing project sub-basins. We kindly request that a restructuring proposal to utilize and / or cancel the savings be sent to us through the Department of Economic Affairs by March 31, 2012. This would not only ensure that all the activities envisioned in the revised scope are implemented in time, but also that the expenditure is fully accounted for and reimbursed by the Bank.

***Institutional capacity building:*** Important areas of focus for the remainder of the Project are the Institutional Modernization and the Water Resources Management Components. The Bank is encouraged by the significant progress that has been made in the functioning of the State Water Resources Management Agency (SWaRMA), and the Government's demonstrated commitment to this body. We would like to see the same sort of progress in the area of Participatory Irrigation Management (PIM). An agreed program of training and capacity building is in place for the Water Users Associations (WUAs), which includes some innovative elements of broader stakeholder involvement and more effective liaising with the field engineers. The hoped-for progress since the September 2011 mission in carrying out this program of capacity building, however, did not materialize. We encourage you to take the action necessary to ensure that the program of WUA training and PIM capacity building moves ahead without further delays, as well-developed WUAs are essential for the sustainability of many of the project interventions. We would also appreciate your comments on the proposed institutional structure to strengthen PIM in Tamil Nadu which may have implications not just within the state, but also across other states in India which are facing similar challenges.

While these are the primary issues for your attention, we would like to underscore our continued satisfaction with the overall activity of the Project. The combination of improvement in irrigation systems, with large scale and multi-dimensional interventions in agricultural production and marketing are offering excellent opportunities for significant improvements in rural incomes consistent with more efficient use of water. Evidence so far is encouraging, and we look forward to more complete documentation of results during the remaining period of project implementation. Once again, thank you for your support of this important project. Please do not hesitate to contact Mr. Edward Cook (em: [ecook@worldbank.org](mailto:ecook@worldbank.org)) for any clarification on this letter or the Aide Memoire attached.

With regards,

Sincerely yours,



Roberto Zaghe  
Country Director, India

Attachment: *Aide Memoire*

cc: Mr. Venu Rajamony, Joint Secretary (MI), DEA, Ministry of Finance,  
Government of India  
Mr. B.S. Rawat, Director, DEA, Ministry of Finance, Government of India

Mr. D.V.Singh, Secretary, Ministry of Water Resources, Government of India  
Mr. G. Mohan, Special Secretary, Ministry of Water Resources, Government of  
India  
Dr. V.V. Sadamate, Advisor, Planning Commission, Government of India

Dr. M. Saikumar, Secretary to Government Public Works Department,  
Government of Tamil Nadu  
Mr. K. Arulmozhi, Secretary, Agriculture, Government of Tamil Nadu  
Mr. Gangandeeep Singh Bedi, Secretary Animal Husbandry and Fisheries,  
Government of Tamil Nadu  
Mr. K. Shanmugam, Principal Secretary, Finance, Government of Tamil Nadu  
Mr. Vibhu Nayar, Project Director, IAM WARM Project, Government of Tamil  
Nadu  
Mr. Bisuvash Selvakumar, Engineer-in-Chief, Water resources Organization,  
Government of Tamil Nadu

## AIDE MEMOIRE

### TAMIL NADU IRRIGATED AGRICULTURE MODERNIZATION AND WATER-BODIES RESTORATION AND MANAGEMENT PROJECT (TN-IAMWARM) - IMPLEMENTATION SUPPORT MISSION (JANUARY 23-27, 2012)

Project Data		Current Ratings and Flag		
<i>Board Approval Date</i>	<i>01/23/2007</i>	<i>Summary Ratings</i>	<i>Last</i>	<i>Now</i>
<i>Effectiveness Date</i>	<i>04/09/2007</i>	<i>Development Objectives</i>	<i>S</i>	<i>S</i>
<i>Closing Date</i>	<i>03/31/2013</i>	<i>Implementation Progress</i>	<i>MS</i>	<i>MS</i>
<i>MTR date- Actual</i>	<i>03/05/2010</i>	<i>Project flags</i>	<i>None</i>	<i>One<sup>1</sup></i>
<i>Original Loan Amount</i>	<i>US\$ 485 million</i>			
<i>Amount Disbursed</i>	<i>US\$ 209 million</i>			

#### I Introduction

1. A World Bank team<sup>2</sup> undertook an implementation support mission for the TN-IAMWARM project during January 23 to 27, 2012. The main objectives of the mission were to: (i) review progress against agreed actions for acceleration of project implementation; (ii) finalize proposals for the allocation of project savings; (iii) review the Quality Assurance mechanisms for tank improvement and other construction work; (iv) review the work of the Agriculture, Horticulture and Tamil Nadu Agriculture University (TNAU) sub-components of the Project; (v) review M&E performance and plans; (vi) assess the training programs for Water Users Associations (WUAs) and participatory irrigation management (PIM) and the program of PIM strengthening; and (vii) conduct other fiduciary review of the Project. This was an interim implementation support mission. Those sub-components of the Agricultural Intensification and Diversification Component not covered in depth during this mission will be included in the next mission. The mission would like to thank all Government of Tamil Nadu (GoTN) officers and staff of all implementing agencies and of the Multi-Disciplinary Project Unit (MDPU) for their hospitality, collaboration and for facilitating the field visits that were carried out. The mission held meetings with the Chief Secretary, and the Secretary, PWD. The wrap-up meeting was held on January 27, 2012, and was chaired by the Secretary, Agriculture. A draft copy of the Aide memoire was discussed during the wrap-up meeting.

#### II- Overview of Main Issues

2. **Pace of project implementation.** The pace of project implementation has picked up in the last six months. The majority of contracts for civil works in Phase IV of the Project have been awarded and work is well advanced now in Phase III sub basins. Outstanding commitments on existing civil works contracts come to approximately Rs. 330 cr. Remaining contracts under Phase III are to be

<sup>1</sup> Disbursement lag of 24 months.

<sup>2</sup> The Team consisted of Edward Cook (TTL), Shankar Narayanan (Senior Social Development Specialist), Ranu Sinha (Operations Analyst), Dharendra Kumar (Senior Procurement Specialist), R.K. Malhotra (Construction Quality Specialist), and Benjamin O'Brien Agricultural Specialist). Geeta Alex (Program Assistant) provided administrative support to the mission from the Bank's Delhi Office. Grahame Dixie (Agribusiness and Marketing Specialist) visited Tamil Nadu on February 3-4 and his contribution is reflected in this Aide Memoire.

awarded by January 31, 2012, and for Phase IV by April 15, 2012. The value of these contracts comes to approximately Rs. 400 cr. This pipeline of contract commitments and pending contract award will ensure a continued increase in the disbursement rate of the Project in the coming year. Despite the increase in implementation pace, it is now clear that the accumulated delays in implementation since project effectiveness cannot be overcome within the existing Closing Date of the Project of March 31, 2013. Government communicated to the mission its interest in extending the Closing Date by 18 months. In accordance with this plan, all major contracts under the Project will be awarded as noted above by April 15, 2012, and works completed by September 30, 2013. Supporting interventions from participating line departments in Phase IV sub-basins would be completed by September 30, 2014. The mission informed that any extension request for consideration by the Bank would have to be backed with appropriate justification and would need to be endorsed by the Department of Economic Affairs, GoI.

3. **Use of project savings.** In accordance with the agreement reached during the September 2011 mission to add the Amaravathy sub-basin to Phase IV, the MDPU provided the revised project budget with the proposed reallocation of project funds by component and sub-component (Annex 2). Savings remain in comparison with the original project budget for the Agriculture Engineering sub-component, the Agri-Marketing sub-component, and activities under the Institutional Modernization Component.<sup>3</sup> In total, remaining savings of Rs. 220 cr. are identified. In addition, the mission reviewed with AED prospects for expenditures under the agricultural machinery program and is of the view that an additional savings of Rs. 10 cr. are likely.
4. **Intervention of the line departments.** The mission is pleased with the continued progress in the field of the participating line departments. By and large, the agreed targets for interventions are on track, and the reported yield and performance increases are encouraging. Looking ahead, the mission feels that there are important further gains that can be achieved by giving additional attention to the coordination of these efforts among the line departments. Convergence of efforts can be pushed forward and could serve as an important model for the entire country. Efforts to bring stronger coordination at the district and local levels are appreciated by the mission, including the work on convergence in the model villages. The mission would like to emphasize the importance of more developed economic analysis of the respective technology interventions that are being implemented, particularly with regard to the goal of sustainability of these efforts beyond the life of the Project.
5. **WUA and PIM strengthening.** The Project has been gaining momentum in the area of participatory irrigation management. This is a critical piece of the puzzle for achieving the goal of more income per drop of water. Progress in this area since the last mission has been slowed by administrative factors, and in part by natural factors. During this mission agreement has been reached on strengthening the PIM structure of Tamil Nadu for the long term, and the steps that will be necessary to get there. Important among these are the programs of training, improved mechanisms for administering the contracts with the Support Organizations, and the need for more efficient revenue flows to support the functioning of the Water Users Associations.

---

<sup>3</sup> The AED expenses are lower due to earlier agreed reductions in the extent of micro-irrigation as a result of weaker than anticipated farmer demand for installation of such systems. The Ag. Marketing expenses are lower due to elimination of the Agribusiness Development Facility. Expenses under the Institutional Capacity Component are lower due to reductions in investments in the IT systems, elimination of topographic surveys, and others.

### III – Component A: Irrigation Systems Modernization in a Sub-basin Framework

6. All 76 packages, worth Rs. 451 crores, under Phase I sub basins have been awarded out of which 75 packages have been completed. The balance one package is under implementation and is expected to be completed by 31 March, 2012. As of December 31, 2011, works worth about Rs. 441 crores are reported to have been completed marking an overall completion level of 98 % (95 % last mission in September 2011).
7. In respect of Phase II sub basin works, all 43 packages worth Rs. 188 crores have been awarded out of which 40 packages have been completed. The balance 3 packages are under implementation and are expected to be completed by 31 March, 2012. Works amounting to Rs. 177 crores are reported to have been completed ending 31 December, 2011, marking an overall completion level of 94 % (88% last mission).
8. As for 30 Phase III sub basins comprising 136 packages, estimated to cost about Rs. 428 crores, 115 packages worth RS. 329 crores have since been awarded out of which 10 packages amounting to about Rs. 19 crores are reported to have been completed and the other 105 packages are under implementation. Out of the balance 21 packages, 6 packages worth Rs. 34 crores have been awarded and the remaining 15 packages amounting to Rs. 65 crores are planned to be awarded by 31 January, 2012.
9. The Phase IV sub basin works comprise 69 packages worth Rs. 300 crores including 22 packages of the newly included Amravathi Sub-basin costing Rs 128 crores. 10 packages costing Rs. 38 crores have been awarded recently. The procurement process is under progress for the remaining 37 packages.
10. Out of 22 packages of the Amravathi Sub basin, 2 packages come under pre-review category. The bid documents of both these pre-review packages worth about Rs. 27 crores have been cleared by the Bank. WRD should now expedite the tendering process.
11. The mission feels that completion of Phase IV Sub basin packages would spill over substantially beyond the project period of 31 March, 2013. Completion of some Phase III sub basin packages is also likely to spill over beyond the project period.
12. The mission during field visits observed that where as provisions had been made in the Phase III works for the construction of measuring devices, bed bars and lining of irrigation channels ( in a short reach immediately downstream of irrigation sluices), these works were not being carried out. It is suggested that any package should be considered to have been completed only after these works are also constructed.
13. *Construction Quality Control / Quality Assurance and Quality Management System.* The mission made field visits to 4 Phase III tank system works in the Madurai region. It was satisfying to observe that on all these tank bunds hydraulic excavators incorporating steel plate fixtures attached to their boom ends had been deployed for consolidation of the earth fill on the side slopes. Furthermore, it was also encouraging to observe that heavy duty roller compactors, capable of moving up & down the slopes, had also been deployed on 2 tank bunds for speedy compaction of side slopes. This is indicative of mechanized compaction of earth fill having taken firm roots. The O.K. Card system, duly involving WUAs, was also observed to be operational and well maintained. The requisite quality control tests were also being conducted to the specified frequency and documented.

14. The mission is happy to observe that one of its repeatedly stressed key action points relating to the commissioning of the available non functioning 'Nuclear Density Testers' has been fulfilled by WRD. One of the 4 nuclear density testers has been made functional and is being actually deployed for rapid on-site determination of earth fill compaction parameters on the tank bunds in Madurai region. The mission commends the efforts of WRD and Engineer-in-Chief in particular for accomplishing this difficult task through sustained efforts and also raising a dedicated nucleus team of assistant engineers and assistant executive engineers for conducting tests with the nuclear density testers. The mission during visit of the Nanguneri Big Tank got one sample compaction test on this tank bund done with the nuclear density tester and found both the Assistant Engineer (Mr. J.Senthil Kumar) and the Assistant Executive Engineer (Mr. S. Palanivel) to be well conversant in conducting the test. Being a very versatile device for quick on-site testing of compaction parameters, WRD should continue efforts to make the other 3 nuclear density testers also functional the soonest possible. This would greatly help in expediting the progress of earth work compaction and promoting construction quality.
15. *Construction Quality Management and Technical Supervision Consultancy.* Though delayed initially, this Consultancy is now fully operational. The Consultant has established 2 well equipped 'mobile laboratories' on new truck chasis and fitted with generating set also and 2 'ground laboratories', one of each type in Madurai and Chennai region respectively. The needed laboratory staff comprising site engineers, laboratory supervisors, laboratory technicians and helpers have also been recruited and put in place by the Consultant. Conducting specified quality control tests independently has been undertaken by the Consultant. Apart from conducting and recording quality control tests, checking of the execution of works through field visits is also being done.
16. *Monitoring of Works and Construction Quality by WRM Specialist, MDPU.* The mission perused some of the reports of the field visits made by the WRM Specialist and found these to be quite comprehensive on the construction and quality control aspects. Such visits on regular basis should continue to be made for monitoring the works, addressing deficiencies and effecting improvements in construction quality, wherever needed, on a continuing basis.
17. *Tank Bunds Raised & Strengthened in Phase I and Phase II Packages.* It is of paramount importance that timely corrective measures are taken on any such tank bunds rehabilitated in Phase I and Phase II Packages as were identified to be associated with loose earth fill on side slopes, deficient slopes, and deep erosion gullies due to inadequate compaction through detailed inspection by the concerned Superintending Engineers and Regional Chief Engineers.
18. *Quality Control Mechanism in Amravathi Sub-basin.* The newly included Amravathi Sub-basin works comprising 22 packages involve large scale placement of cement concrete lining, manual as well as mechanized through deployment of concrete pavers in main canals and slip form steel gantries in distributaries. From considerations of quality assurance of concrete lining and reinforced concrete structures, it is considered essential that WRD establishes an effective quality control mechanism prior to commencement of works. Also, the Third Party Quality Control Consultant should be a part of the quality control mechanism.

#### **IV Component B: Agriculture Intensification and Diversification**

##### **Department of Agriculture, Department of Horticulture and Tamil Nadu Agriculture University**

19. These three implementing agencies report approximately 122,000 ha of demonstrations and expansion in area has been achieved to date (113,500 ha last mission) with more than 250,000 ha of

impact area adopting promoted technologies (300,000 was reported in the previous mission<sup>4</sup>). For more detail on the agriculture and horticulture aspects of the Project, see Annex 4.

20. During the previous mission it was recommended that the project prepare reports that include progress on the project outcome indicators (as outlined in the results framework of the PAD), to some extent these were covered by the impact assessment consultancy however largely overlooked by the implementing agencies. *The mission recommends that each agency prepares tables that show progress against the outcome indicators in the PAD<sup>5</sup>.*
21. The financial status of Agriculture, Horticulture, and the TNAU is given below. The disbursement rates over the last nine months have improved on the previous years, particularly for the Department of Agriculture. If the activities of these departments are to be completed by project closure the disbursement rates will have to continue to increase.

**Financial Status (Rs. Crore)**

Implementing Agency	PAD	Expenditure <sup>^</sup>	Expenditure against PAD
Agriculture Department	98.0	45.18	46%
Horticulture Department	73.0	45.34	62%
TNAU	88.9	42.9	48%
<b>Total</b>	<b>259.9</b>	<b>133.42</b>	<b>51%</b>

<sup>^</sup> up to 31/12/11

**Amaravathy Sub Basin**

22. The Amaravathy Sub Basin plans were received last December for review. It was noted at the DPRs were a repetition of activities undertaken in the previous sub-basins, without accounting for experiences or any lessons learned. For instance, there has been considerable difficulty in achieving the targeted “impact areas” under the first three sub-basins<sup>6</sup>, however no modifications have been made to address this issue.
23. The Department of Agriculture are conducting a large number of SRI demonstrations under the National Agriculture Development Programme. As the Amaravathy Sub Basin is new, it would be expected that a number of these demonstration would have been conducted within the proposed project areas. The DPR should reflect how ongoing activities of the Department will be managed to avoid duplication with the project. The DoA is now providing subsidies for SRI demonstrations at half the rate of the project<sup>7</sup>, i.e. 3000 Rs./ha. *Given that the project in the past has taken the stance of*

<sup>4</sup> In the previous mission anomalies in the accounting methods for determining the adoption area in Phase I sub basins were discovered, subsequently the DoA revised the achievement down from 136,000 ha to 59,000 ha.

<sup>5</sup> PAD pages 29-33

<sup>6</sup> TNAU has achieved about 47% of the target while DoA reports to be at 62%

<sup>7</sup> This does not include the additional benefits to farmers of the systems approach where project farmers also get support for production of green manure crops and pulses. Nor does it include the capacity building activities that are associated with the demonstration.



*aligning subsidies with those of the government it is recommended that the project continue with this policy.*

### **Tamil Nadu Agriculture University**

24. TNAU undertook nine additional activities last year, it has been reported that these have now all been initiated and progress is underway. Of significance is the expansion of the E-Velanmai ITC technology transfer model, which is now reported to have 4500 clients who have paid close to 300,000 Rs for the use of the service. TNAU is now investigating the potential of a PPP model to scale up the service. TNAU is also experimenting with the concept of SRI Green Army, a service provider model for mechanical transplanting of paddy, which includes the raising of the nursery as well as the transplanting of the crops. *It is recommended that TNAU determine the cost recovery rates required to sustain these models and determine the economic benefits of clients for future promotion.*
25. While it is reported that there have been good outcomes from the community water management initiative and convergence appears to be occurring between the various line agencies, the linkages between the agriculture activities and the irrigation investments could be improved. Discussions with TNAU outlined potential areas for training farmers on soil water and crop water requirements that could link with the water management trainings being developed by IMTI (for the PIM training modules). This would potentially include practical field level trainings that would result in the development of crop water budgets for WUAs. *TNAU to develop training materials for WUAs on soils, crop water requirements and irrigation scheduling, integrate this with IMTI training and test on a small number of pilots.*

### **Agricultural Engineering Department**

26. **Buried pipe system.** The Agriculture Engineering Department (AED) has installed two buried pipe distribution systems, the mission inspected the system in the Devanur periya eri Tank in the Varahanadhi Sub Basin. The system is designed to cover an Ayacut of about 72 ha at a cost of Rs 31,860/ha, with the aim of improving conveyance efficiencies and the equity of distribution throughout the command, and provide a potential alternative to surface distribution systems. The system is split into 4 blocks and 12 sub-blocks, the piped system serves approximately two thirds of the command (head and middle) with 28 outlets while the tail area is served by field canals fed from the last outlet on each of the 4 blocks.
27. The AED are to be commended on the considerable achievement of mobilizing farmers to accept buried pipe technology and to successfully install the system. Monitoring is now necessary to determine its efficiency (compared to alternative systems) and cost effectiveness. On the other hand if this system is intended to be a pilot to convince policy makers to support buried pipes then a considerable effort is required to turn these pilots into showcases. Two critical observations were that the system provides a better service to farmers who already had access to the tank water, as only the head and mid regions are served, and that no attention was paid to converging agriculture activities to maximise the productivity of the improved system. The following should be addressed:
- Integration with agriculture activities such as SRI and ridge and furrow to optimize irrigation efficiencies in field,
  - Tail end field canals to be re-sectioned to match the updated system design (it was observed that there was no connectivity between the last outlet of the first block and the existing field canals),
  - Designs to include field canals in the complete system to avoid inefficient field to field irrigation (WUAs encouraged to complete canal development),
  - Designs should consider drainage requirements,

- Old canals and trenches should be filled, levelled and returned to agricultural use (possibly managed by the WUA), this small increase in area would add to the economic benefits,
- All leaking pipes and fittings should be fixed,
- All farmers should be encouraged or supported to level fields,
- Records to be kept of the daily delivery of water to individual farmers including time delivered, plot number, area and crop,
- Conduct an end of season analysis.

28. **Farm Machinery:** The issue of providing farm machinery on a subsidized basis to individual farmers was raised by AED representatives to the MDPU. The mission reiterated its position expressed in the September 2011 Aide Memoire as to why it was opposed to use of project funds for this activity. Barring this intervention, it is unlikely that the budgeted allocation for farm machinery will be utilized. *The mission recommends that this allocation be adjusted downward to reflect actual expected expenses for agreed activity.* This will likely result in savings of roughly Rs. 10 cr.

### **Agricultural Marketing**

29. The mission reviewed progress against the agricultural marketing action program agreed to during the September 2011 mission. The three areas of work are: (i) investment in Commodity Groups (CGs); (ii) establishment of District Facilitation Centers (DFCs); and (iii) a set of studies on selected value chains and on the operation of the CGs and Agribusiness Centers. The detailed findings of the mission on these issues are provided in Annex 4.

30. With respect to the DFCs, it was agreed that the Department of Agricultural Marketing will take responsibility for these, but will continue to liaise with the district offices of the Directorate for Industries and Commerce. The mission provided additional guidance on the program of investment support for the CGs. *It was agreed that the Project will set a cap on the size of clusters of CGs for shared investment and provide that to the Bank by March 1, 2012. It was further agreed that the Project will provide DPRs for the proposed investment in marketing infrastructure and equipment for the CGs by March 31, 2012.*

### **V -- Component C – Institutional Modernization for Irrigated Agriculture**

31. **Proposal for Strengthening the PIM Structure:** The 13<sup>th</sup> Finance Commission-Gol has recently mandated institutionalization of the direct engagement of community members into the process of irrigation and water resources management. In line with this requirement, there is a need to ensure the long-term sustainability and development of Water User Associations (WUAs) in Tamil Nadu. In discussions with the WRO, it was agreed that the current structure of the PIM units within WRO needs to be reformed to create a stronger institutional structure that oversees all PIM related activities in the state in the future. Full information on the proposed strengthening measures is included in Annex 3.

32. The approach includes staffing of remaining vacancies in the PIM Cell and regional PIM Cells, and deputing of technical staff at the regional, circle, and division levels. A key feature of this proposal is to attract technical staff who are knowledgeable in PIM and demonstrate strong motivation to work on these issues. *The mission recommends that MDPU provide a list of the 20 AEs who have undergone change management training to be nominated to the division level offices to the E-in-C at the earliest so that they may be deputed to the divisions.* The new proposed PIM structure should be headed by a senior WRO official (Chief Engineer) who has sole charge of managing all PIM activities in the state and who will serve as the new head/Director of the PIM unit.

33. **Financial devolution to WUAs:** Two important Government orders (G.O.) issued to enhance financial devolution to WUAs need sustained follow up for them to take effect. In January 2011, GoTN issued a G.O. enabling WUAs to take on fisheries management in WRO owned tanks where this is possible and sharing of up to 40% of the proceeds with them. Similarly in 2003 GoTN has issued a G.O. specifying the allocation of Additional Water Cess to WUAs, Distributory Committees (DCs) and Project Committees (PCs) in the ratio of 60:20:20 respectively. Both of these G.O.s have not resulted in WUAs receiving their entitlements till date as the detailed procedure in this regard is yet to be worked out. The mission urges that as has been done in States such as Andhra Pradesh and Maharashtra, the detailed procedure for the amounts due to WUAs, DCs and PCs to reach them be worked out in coordination with the Finance and Revenue departments. Financial empowerment of WUAs through such devolution would go a long way in enhancing their active involvement in operations and maintenance and water management activities.
34. **Financial recordkeeping by WUAs:** WUA Presidents and TC members as well as WUA member farmers expressed considerable concern that the delays in the process of financial devolution were considerably retarding their functioning. The importance of training WUA functionaries in systematic accounts and record keeping was emphasized to them as true financial devolution requires them to be adequately capable in this aspect. The WRO PIM Cell is urged to ensure that the financial records as required by the TNFMIS Act are indeed printed and made available to the WUAs and required training and capacity building in financial record keeping is provided to the WUA functionaries at the earliest.
35. **Training:** The mission notes that there has been only slow progress in implementing the WUA and PIM-related training that was agreed to during the previous mission. A key part of this is the in-depth training in PIM for the Support Organizations (SOs) which will be critical for the necessary capacity building of the WUAs. The Mission learned that the Government Order that is necessary for release of funds to CEC to conduct the trainings has still not been received by the MDPU. *The Mission strongly urges the Government of Tamil Nadu to process and issue the necessary GO for conducting in-depth training of the Phase 1 and 2 Support Organizations at the earliest.*
36. The Mission recommends that current staff of the PIM units participate alongside Phase I SOs in the next set of in-depth training modules to be held in mid-February. In addition, as WUA Competent Authority training is to be held in mid-April 2012 for engineers, the Mission recommends that current and any future officials of the PIM units participate alongside WRO engineers in these proposed training and capacity building activities. The E-in-C agreed with these two proposals.
37. Further information on the program of WUA and PIM related training is provided in Annex 4.
38. **SO Payment Procedures:** Support Organizations are facing a number of delays in receiving payments. Necessary sign-off and approval of progress reports have been delayed; therefore, payments are not being made on time. In order to address this issue, the Mission discussed potential solutions with the E-in-C, the Project Director, and the MDPU staff. Based on these discussions, the Mission recommends the two following solutions: a) for MDPU to hold a one-day workshop for all nodal WRO officers who are responsible for reviewing and signing off on SO reports and payments in Chennai in early February and; b) to revise the ToR for the Phase 3 and 4 Support Organization contracts to simplify the composition of the technical evaluation committee as well as mandate a specific number of days within which reports have to be sent to the E-in-C's office in Chennai after evaluation by the evaluation committee. *The Mission requests that the ToR for Phase 3 and 4 SOs be revised accordingly and submitted to the Bank for clearance by February 3.*

## **VI -- Component D –Water Resources Management**

39. The Government of Tamil Nadu has proposed that SWaRMA act as a nodal agency for the water sector in accordance with the Government of India's recent recommendation for establishment of water commissions at the state level. In this role, SWaRMA will advise the Government of Tamil Nadu on water policies including water resources development, regulation, and management within a holistic river basin framework.
40. The Mission held discussions with the SWaRMA team which presented details of recent activities undertaken and the considerable progress that has been made at the initiative of the E-in-C WRO by the Government of Tamil Nadu since the September 2011 Mission. The Mission learned that SWaRMA has taken the Vaippar river basin (one of the basins included in the Hydrology II Project) as a pilot for establishment of water data base, conducting a micro level reappraisal study in conjunction with Institute of Water Studies (IWS), and calculating the water potential and water demand activities.
41. To assist in building its data base, SWaRMA has forwarded the draft Terms of Reference for hiring a web database consultancy to the Bank for review. The Bank is currently in the process of reviewing this ToR and will provide SWaRMA with feedback to revise the ToR by February 3, 2012. The Bank has also been provided with a cost estimate for the operation of SWaRMA to be financed by the Project and will revert on this in conjunction with the response on the consultancy ToR.
42. The SWaRMA team also informed the Mission that the sanction of the Executive Wing to include membership from other line departments has yet to come through from the Government. *The Mission recommends the Government of Tamil Nadu approve and sanction the membership of additional line departments to the Executive Wing at the earliest.*

## **VII -- Component E – Project Management Support**

43. *M&E Consultancy.* The mission received an update from the M&E Consultancy Firm on the status of its work. The presentation was based on the Mid-Term Review Study (MTR) and provided very generalized information. The draft MTR was submitted in August 2011 and had still not been finalized and cleared by the MDPU. The mission was disappointed to see that much of the presentation was devoted to individual 'success stories' which are of an anecdotal nature. The mission reiterates its position from September that the work of the M&E Consultant should focus on quantitative analysis and in particular on the output indicators associated with Component B. The M&E Consultant also informed the mission that the PMIS software was launched Dec. 15, 2011 and that training on the software took place on Jan. 23-24.

## **VIII – Procurement**

44. It is good to learn that the procurement wing of MDPU has been strengthened by posting of two new Assistant Engineers, who have been newly recruited. They have joined recently and are familiarizing themselves with the project under the guidance of Head Procurement. It was agreed that they would be provided suitable training on "Procurement under World Bank financed projects" after they grasp the basics and fundamentals of the Project.
45. The quality of the documents being sent to the Bank for review needs to be improved. It was agreed that all documents shall be first reviewed in the procurement wing of MDPU before sending to the

Bank for review, so that at least the typographical errors and formatting errors are avoided and the quality of the document becomes better.

46. As per agreed actions during the last implementation support mission (Sept. 2011) the Head Procurement MDPU has conducted 2 day procurement training programs in the field. Eleven such programs have been held which were attended by the officials of Agriculture, Horticulture and Environment departments of third phase sub basins. The total attendance for the eleven programs was 358. Out of the eleven, one program was conducted for the officials of all implementing agencies and was attended by 35 persons. It was agreed that similar procurement training programs shall be conducted for the officials of 4<sup>th</sup> phase sub basins (4 sub basins) covering 10 districts.
47. It was agreed that the Procurement Plans for 2012-13 for all implementing agencies shall be sent to the Bank for review by March 31, 2012 along with the updated procurement plans for the previous years (updated up to February 28, 2012).
48. The PPR observations contained in the PPR report FY-11 of GPCL were shared with all implementing agencies in a meeting held on January 25, 2012 and they were advised to take the required precautions to avoid recurrence of such incidences in future procurements. The Bank consultant GPCL is likely to start the PPR review of post review contracts awarded during the period July 01, 2010 to June 30, 2011 on sampling basis very soon (may be in February or March 2012). They would advise their program directly to the Head procurement. They may be provided the necessary assistance and facility for completing their work.
49. The project has planned to select 16 more support organizations (Packages 11 to 26) for capacity building of Water User's Associations in the field. The short lists have been finalized on the basis of REOI and RFPs are under finalization. Four RFPs have been sent to the Bank for review. Keeping in view the lessons learnt from the performance of the first batch of support organizations (Packages 01 to 10) it is important to review the TORs and the evaluation criteria at this stage with a view to ensure that only capable and experienced firms capable of satisfactory performance get selected for the assignments. Suitable modifications to the TOR and evaluation criteria, if any, shall be advised to the Bank within a week.
50. The mission discussed the complaint letter received concerning procurement by the Horticulture Department. The MDPU informed that the allegations raised in the letter do not have to do with the use of IAMWARM Project funds. *It was agreed that a response to the complaint letter would be provided to the Bank by February 3, 2012.*
51. A few procurement issues were discussed with the representatives of implementing agencies and necessary guidance was provided. Keeping in view the procurement performance of the project, the procurement rating remains "Moderately satisfactory".

#### **IX – Next Steps**

52. The next implementation support mission is tentatively scheduled for latter May/first half of June. In addition, individual members of the Bank task team will be requesting short visits to the Project between missions to follow up on specific activities as agreed with the MDPU. The summary of key agreed actions is contained in Annex 1.

### Annex 1 -- Key Agreed Actions

S.No	Actions	Date by	Responsibility
1	All Phase III civil works contracts awarded (done)	Jan. 31, 2012	WRO, MDPU
2	Provide comments on draft TORs for consultancy for providing web-based data base for SWaRMA (in process)	Feb. 3, 2012	World Bank
3	Revised TORs for Phase III and IV SOs submitted to the Bank for review (in process)	Feb. 3, 2012	MDPU
4	Reply of the Project on the pending complaint alleging irregularities in procurement (done)	Feb. 6, 2012	MDPU
5	Provide ICT consultant to review EIMS program implementation (done)	Feb. 28, 2012	World Bank
6	Determine the cap on the size of CG clusters in shared equipment and define the higher level review arrangements	March 1, 2012	DoAM, MDPU
7	Submit for review DPRs for marketing equipment and infrastructure for CGs	March 31, 2012	DoAM, MDPU
8	Commissioning of the remaining 3 nuclear density testers	March 31, 2011	WRD
9	Rectification of all Phase I & II tank bunds which suffer from inadequate consolidation of earth fill on side slopes, deficient slopes and deep erosion gullies.	March 31, 2012	WRD
10	Procurement Plans for 2012-13 for all implementing agencies along with the updated procurement plans for the previous years (updated up to February 28, 2012) shall be sent to the Bank for review.	March 31, 2012	MDPU
11	All Phase IV civil works contracts awarded	April 15, 2012	WRO, MDPU
12	Ensure that effective quality control mechanism is in place including 'third party quality control consultancy' being part of such mechanism prior to commencement of execution of Amravathi Sub-basin works	April 15, 2012	WRD
13	Training on "Procurement under World Bank financed projects" to be provided to the officials of 4 <sup>th</sup> phase sub basins consisting of 4 sub basins covering 10 districts	Completed by end of April, 2012	MDPU

**Annex 2 -- IAMWARM PROJECT**  
**STATEMENT SHOWING THE PROJECT OUTLAY AND SAVINGS**  
**( Rs. in Crores)**

Sl. No.	Department	Outlay as per PAD including Physical & Price contingencies	Revised outlay				Savings / Excess (7-3)
			Outlay as per Phase-I,II,III&IV DPRs already approved	Outlay for additional DPRs	Outlay for Amaravathi Sub Basin DPR	Total (4+5+6)	
1	2	3	4	5	6	7	8
1	Component - A WRD	1481.40	1280.56	70.85	128.31	<b>1479.72</b>	-1.68
2	Component - B						
	(i) AGRICULTURE	98.00	87.82	3.50	7.67	<b>98.99</b>	0.99
	(ii) HORTICULTURE	73.00	75.66	0.00	4.26	<b>79.92</b>	6.92
	(iii) TNAU	86.68	85.03	0.00	1.51	<b>86.54</b>	-0.14
	(iv) AED	237.00	167.82	0.00	12.18	<b>180.00</b>	-57.00
	(v) AGRI-MARKETING	94.50	24.67	27.09	2.94	<b>54.70</b>	-39.80
	(vi) AHD	41.40	22.59	14.17	1.69	<b>38.45</b>	-2.95
	(vii) FISHERIES	17.80	9.53	7.73	0.33	<b>17.59</b>	-0.21

(Rs. in Crores)

Sl. No.	Department	Outlay as per PAD including Physical & Price contingencies	Revised outlay			Savings / Excess (7-3)	
			Outlay as per Phase-I,II,III&IV DPRs already approved	Outlay for additional DPRs	Outlay for Amaravathi Sub Basin DPR		Total (4+5+6)
1	2	3	4	5	6	7	8
3	Component – C						
	(i) WRD	237.00	120.00	0.00	0.00	120.00	-117.00
	(ii) Line Departments	5.00	5.00	0.00	0.00	5.00	0.00
4	Component - D						
	WRD	24.72	16.00	0.00	0.00	16.00	-8.72
5	Component - E						
	Operating Cost	37.50	37.50	0.00	0.00	37.50	0.00
	<b>Total</b>	<b>2434.00</b>	<b>1932.18</b>	<b>123.34</b>	<b>158.89</b>	<b>2214.41</b>	<b>-219.59</b>
	Farmers Contribution	113.00	113.00	0.00	0.00	113.00	0.00
	<b>Grand Total</b>	<b>2547.00</b>	<b>2045.18</b>	<b>123.34</b>	<b>158.89</b>	<b>2327.41</b>	<b>-219.59</b>

Net Savings

219.59



### Annex 3

#### Additional comments and observations regarding agriculture and horticulture activities

1. During the Mission visits were made to Phase I and III sub-basins: Varahanadhi, Ongur, and Araniyar, where demonstrations, impact and expansion areas were observed on SRI, vegetables, spices, vermi-composting and discussions were held with representatives from the district line departments, officers from TNAU and members of the water users associations. These are observations to supplement the main text of the Aide memoire and to serve as reference for the next mission.

Table 1. Achievements regarding demonstrations, impact and expansion areas (hectares)

	Demonstrations	Impact area	Area expansion
DoA	52,107	162,045	
TNAU	37,106	94,015	
DoH		474	32,713
Total	89,213	256,534	32,713

2. A number of interesting interventions are starting to emerge such as the Single Window Information Centre, and the promotion of community planting for groundnuts using machinery provided to the Water users Associations, however, as with other interventions it is recommended that the relevant agencies assess the benefits, both social and economic. MDPU is promoting a number of SWICs in model villages, this is a successful intervention in other projects as a means of convergence and extending outreach to farmers. It is important that records be kept of the number of contacts the SWIC has with farmers and the types of information they are looking for, once again to quantify the benefit of the investment and to further refine the services offered. It could be interesting to check if there are any synergies between the SWIG and the E-Velamni pilot.
3. The project has been promoting the concept of 'impact areas' to promote adoption of technologies promoted through the demonstrations and has been very innovative in adopting this approach however it is evident that there are some difficulties achieving the targets and it will be interesting to analyse the impact survey data to see how well the model is achieving adoption. It is also noted that the Department of Agriculture (or other line departments) are not adopting the 'impact areas' concept. Preliminary findings from the Impact Assessment consultants indicate that area planted using SRI technology in Phase I project tanks is roughly 12%, considerably lower than the area reported to be covered by demonstrations (~20%), and drastically lower than the reported 'impact area'.
4. **Water Use efficiency (WUE) in SRI** is reported by TNAU to be in the order of 25%, with an average reduction in 'water used' of 295 mm. This information is providing some very interesting information, of relevance directly to the project PDO and particularly because of the implications of climate change and the increase in competition from urban and industrial users. However the analysis provided needs to be strengthened to provide a better understanding of the accuracy of these findings and the source of the savings. For example the accuracy would be effected by the methodology of determining effective precipitation (measured or estimated) as SRI is likely to make much better use of rainfall. In terms of the source of the water savings some assessment should be made as to the portion coming from

either reduction in deep drainage losses, a reduction in evaporation and/or others. Understanding these parameters can greatly assist in the further development of management techniques to improve WUE. At a minimum reporting on water use studies needs to state what information was directly measured and what was estimated to determine the crop water use (i.e. was rainfall measured at the site, and how was the effective rainfall determined), it should also be stated whether the measurements included the water requirement of the nursery and for puddling. It is likely that the report can only state the water use efficiency of the 'irrigation' water applied.

5. Subsequently TNAU have calculated the amount of water required to produce one kg of paddy decreases from about 2300 liters to about 1400 liters when farmers convert from conventional to SRI production. It is suggested that TNAU check these numbers against national and international statistics.
6. It would be useful to also collect data relating to the water use efficiencies of other technologies promoted under the project, particularly those on precision agriculture.
7. The mission also notes that an indirect impact has been the response of the Government of Tamil Nadu to adopt some of the interventions promoted by the project, SRI would appear to be one, as it is now being promoted on a large scale by the DoA through the National Agriculture Development Program and the National Food Security Mission (and possibly others). It is also noted that the DoA has a number of precision farming schemes similar to those promoted by the project. These indirect impacts should be documented.
8. The DoA and DoH are reporting considerable increases in yields of demonstrations over the state average yields. This is a very good indication of the improved practices adopted by farmers in the demonstration fields and achieved by the project. To quantify the project impacts the economic analysis conducted at the Implementation Completion and Results Report (ICRR, end of project) will use the likely yields achieved by the majority of project farmers against either the project baseline and/or 'without' project farmers (from comparable locations, i.e. non-project tanks). It is therefore important to assess the number of farmers adopting the technology (at a project scale) and their average yields. The Bank ICRR team will look at a range of information, including project achievements, impact assessments and secondary data and verify through a number of random field visits. Also important will be the targeting, if possible it is important for the MDPU to collate data on the numbers of small and marginal farmers that have received demonstrations and trainings.
9. As mentioned in the previous mission, and stressed again in this mission, the use of economic analysis is important to quantify the benefits from each of the interventions, it is requested that for each of the various demonstrations crop gross margins be prepared comparing the technology with farmers practices.
10. The mission visited one field that was noticeable out of the 'command' area, while this is observed as the exception the mission strongly recommends that interventions be limited to command areas, so as to better integrate the agriculture and irrigation investments.

## TNAU

11. TNAU undertook nine **additional activities** last year, as listed below, TNAU reports satisfactory progress, budgets and expenditures have been requested.

#### **Additional activities**

- (i) up scaling of E-Velanmai
  - (ii) introduction of Furrow Irrigated Raised Bed (FIRB) in transplanted rice
  - (iii) implementation of Sustainable Sugarcane Initiative (SSI) in sub basins
  - (iv) pilot of Conservation Agriculture
  - (v) demonstration of SRI concept in Direct Wet Seeding of rice
  - (vi) installation of Agro - Advisory through Touch Screen
  - (vii) identification and Up scaling of GHG emission reduction technologies in SRI for carbon trading
  - (viii) statistical investigation of the inter and intra variability in yield data
  - (ix) development of farm level optimal cropping pattern (Scientific Farm Advisories) to maximize the farm income.
12. **Furrow Irrigated Raised Bed (FIRB)** paddy field trials have been transplanted and are under way. The FIRB is seen as an alternative to SRI that may have an even greater WUE. Ten demonstrations have been established, each consists of one hectare of FIRB, one of SRI and one of conventional paddy. Water is being measured into each field.
13. Preliminary information on the **direct wet seed seeded paddy** is positive, with 30 ha of demonstrations in various stages of crop growth in three sub-basins. This intervention has the potential to provide a low cost alternative to transplanting of SRI and broadcast planting.
14. The **conservation agriculture** pilot has been initiated, maize, vegetable and cotton based farming systems have been identified in three sub-basins; covering a total of 30 locations of 0.4 ha. The project is supplying inputs and using existing machinery available with the University. Three technologies have been identified; no-tillage, stubble retention, and production of intercrops to be investigated in the pilot areas.
15. The **Greenhouse Gas Initiative** has been undertaken in the Agniyar Sub-basin, and the first of four trials is under progress. Eight flexi methane collection chambers are to be installed later in January, four on an SRI plot and the other four on the conventional plot. Samples are to be collected daily from tillering to harvest.

#### **Department of Agriculture**

16. The Department of Agriculture has been moving along with activities, and has dramatically increased disbursements, in the last quarter of 2011 added almost 50% to the total disbursements made since the project start. To successfully complete the planned activities by the current closing date of March 2013 DoA would have to maintain and increase this disbursement rate, as more than 50% of the estimated costs are remaining.
17. The previous mission approved three further activities, including 1000 ha each of maize and pulse demonstrations for the wider scale promotion of two plant productivity improvement agents developed by TNAU, and 250 ha of the sustainable sugarcane initiative. It is reiterated that for the pulse and maize interventions, it is imperative that these agents are tested against current best practices, for example as an alternative to foliar DAP sprays on pulses, and that the yields, production costs, and control plots are kept for each, and an economic analysis conducted at the conclusion of each demonstration. A follow up on the status of these activities is required in the following mission.

### **Department of Horticulture**

18. The DoH has been making steady progress against its planned activities, and is currently at 62% of the costs estimates in the PAD. Expenditure was low in the last quarter of 2011, however it is expected that a large number of receipts will be received before the close of the financial year in March.
  
19. The DoH is now reporting on the incomes recorded in a number of the area expansion activities, this is a very good, and it is recommended that this analysis be refined to create a series of crop budgets for the major horticultural crops included in the project. The DoH has reported a number of impacts from the independent monitoring and evaluation consultant, the mission looks forward to receiving the report and verifying this information.

## Annex 4

### Agricultural Marketing

#### Situation

At the last supervision mission a way forward on IAMWARM marketing was chartered between the Project's team and the WB. This plan can be divided into three. (i) The Department of Agricultural Marketing (DoAM) would continue and expand its, to date very successful, role in creating and developing Commodity Groups (CGs) of producers. (ii) At the same time the Department of Industries Commerce (DIC) would develop specialized District Facilitation Centers for Promoting Agro Entrepreneurship (DFC). Their primary role would be transitioning of the more successful CGs into operating at a significantly higher level, expanding into producers companies and taking over the management of some of the existing Agribusiness Centers (ABC). And, (iii) three studies would be commissioned. The first two, to learn from the ground lessons on the success, or otherwise, of both how CGs and ABC have operated. The third will study important value chains in Tamil Nadu. The then planned involvement of DIC was based on two factors. That, although DIC do not have any particular expertise in agribusiness, they have a fair degree of commercial acumen coupled with strong local business knowledge and linkages. And, secondly, the issues of coordinating two institutions were significantly lower because both had management oversight by the PD. This is now no longer the case.

Over the last 5 months the Project has refined their plans in the light of deeper reflection, changes in circumstance and better on-ground knowledge.

#### Issues and Recommendations

##### 1. Planned Studies

The 2 studies of both CGs and ABCs have been commissioned to be undertaken by the Department of Economic and Applied Research (DEAR)

It is important that this work, and that of the project's M&E unit, can capture insights into the development, or otherwise, of CGs and ABCs over time<sup>1</sup>. This should include their

---

<sup>1</sup> The mission believes that the current level of benefits that the Project calculates that the CGs have generated is an under estimate. This is because only the incremental income through improved prices (at about 7.5% of turnover) in their 1<sup>st</sup> year of operation has been used in the calculation. We would anticipate that in the majority of cases, CGs will have continued to benefit in the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> years of operation, not only through improved prices, but also through some value addition and increases in volume that the increased returns will have incentivized. The Project should estimate the actual aggregate level of incremental income generated through this intervention by revisiting a sample of mature CGs.

classification in grades<sup>2</sup> and an analysis of key success and or failure factors. This will build a picture of the proportion of these interventions which are robust, continue to deliver benefits and have a fair chance of being sustainable.

The value chain studies will be carried out at the district level by the DFC.

This is a better solution as it will more directly inform local level knowledge of market and partnership opportunities.

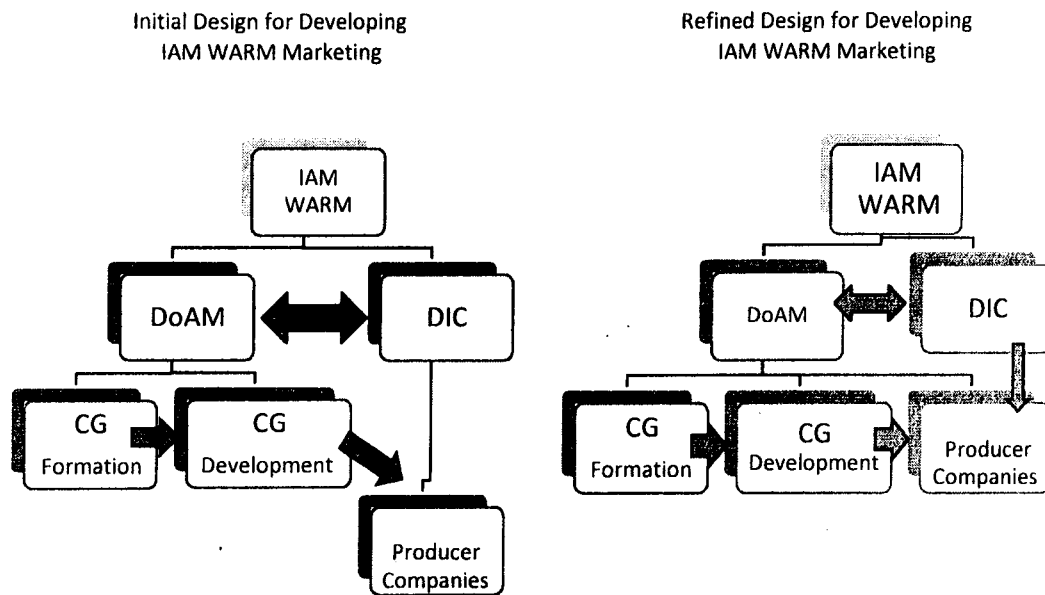
## **2. The roles and Institutional location of the DFC in relation to DIC and DoAM**

In view of the recent changes in the overall management of DIC, interest shown by DoAM in operating District Facilitation Centers (DFCs), coupled with a greater appreciation of the success of DoAM, the project team has recommended that the DFC would be better embedded in the DoAM than within DIC.

The mission has no objection to this revision in design. This will be easier to manage in terms of role co-ordination. The mission has one proviso. The potential benefits of good co-operation between DoAM and DIC, such as the possibilities of creating partnerships with the agribusiness sector and being able to provide technical and commercial advice, are real. The measurement of DFC performance must include indicators on the level of the co-operation and partnership with local DIC offices.

---

<sup>2</sup> A, B, C & D category on the basis of a few key indicators e.g. fund management, evidence of innovation & pro-activeness, trained individuals in each of the CG official roles, satisfaction levels of members and the existence of a clearly articulated plan for the future



### 3. Ownership and Management of Productive Investments

The Project has suggested a split in the direct investment in CG of 60:40, between market infrastructure and productive equipment. Sixty percent of this funding will be targeted on infrastructure, or fixed assets. These will be selected by the local Assistant Agricultural Officer (AAO) in consultation with the CG. The 40 percent of investments in productive assets (i.e. non-fixed assets such as equipment) will be the decision of the CG, with guidance from the AAO. These decisions have been made by the project team on the basis of a ground validation exercise with CGs.

The mission has no objection to this division and level of funding. However, in many cases the scale of the investment requested can only be satisfied by CGs combining their funds collectively. This raises important questions about ownership, equity, sustainability and professional management. However, the benefits of a large group in terms of being able to make large scale and more ambitious investments is in some measure counterbalanced by the difficulty of aligning the interests of large and culturally and geographically diverse groups. In the WB's view merely providing a selected CG with an expensive piece of equipment and encouraging them to enable other CGs in the overall cluster of CGs to have access to the equipment at a nominal charge both lacks development ambition, and ultimately may deliver little more than a surge in profits for a limited number of producers until the equipment's useful life is over.

The WB has four recommendations which it believes will embed a progressive and more commercially savvy way of operating by CGs. This will in turn increase the chances of these investments becoming a platform for producers to gain greater control over the potential for adding value in the supply chain and in sustainable producer companies emerging with a clear comprehension of commercial realities.

1. That a management committee representing the interests and investments of the multiple CGs is constituted. This would be a preferable governance structure of the public funds involved. It will help encourage the emergence of a shared fund for reinvestment and of greater equity between beneficiaries. It should provide a foundation of the mutual trust necessary for even greater aggregation of production and co-operation between producer organizations.
2. The grouping of CGs for a combined investment in value added equipment should not extend beyond a tank or WUA, or villages that are close culturally and geographically. Concern was expressed that with the current ceiling of grant and the lower numbers of CGs that are expected to club together to make an investment, that there may be situations that the needed investment is not affordable. The project team needs to provide guidance that in these exceptional circumstances what would be the absolute maximum level of funding for a group of CGs and the processes of oversight from the Project for these investments.
3. That the planned training course for developing CGs and CG groups, which currently is envisaged to cover technical and financial issues, should be expanded. The Financial training must include a section of the course on full cost recovery, to enable office holders within the CG to grasp the concept of not only covering O&M costs, but being able to generate sufficient funds for re-investment. The training should also aim to create a vision of how generating a fund of this nature will provide the CGs with option of not only re-investment but also growth and diversification. Additionally, a third course should be provided to CGs on marketing. This should include practical elements such as facilitating 'buyer – seller meets' and presentations by potential trading partners of product needs and opportunities.
4. That a sensible sample of different investments will be analyzed and assessed as economic and financial investments, so that the value of alternative investments options is better understood by other CGs in the future.



## Annex 5

### WUA and PIM Related Training

**Support Organization (SO) In-Depth PIM Training:** The Mission traveled to Muttukkadu near Mahabalipuram to participate in the opening day of the first four day module of in-depth training for Phase 1 and 2 Support Organizations (SO) that was organized by IMTI and was being conducted by Centre of Excellence for Change Management (CEC). The training was held at the 'Centre for Research on New Economic Order' in Muttukkadu. The participants of the training included members of the PIM units in Chennai and some regional PIM staff as well as six Competent Authority (CA) engineers (Assistant Engineers) from relevant basins. During this training eight Support Organizations were present, which included one Team Leader and two Community Organizers from each Support Organization. Two Support Organizations were absent from this training.

The Mission found the training activities that were conducted on the day to be extremely valuable for informing members of the Support Organization teams on the concepts of Water User Association development and capacity building, the key tenets of Participatory Irrigation Management and relationship development among both Support Organization staff and Competent Authority engineers. The first module of this training is to be conducted over four days, which is to be followed by two additional modules, one from February 21-24 and the last module is to be held in the second week of March for four days. As noted in the main text of the Aide Memoire, this hinges upon issuing the necessary G.O. for CEC participation.

**SO Phase 3 Training:** The Mission recommends that the three modules of CEC led in-depth training should continue to encompass the Phase 3 SOs, which will include an additional 16 SOs under Phase 3 of the IAMWARM project. Therefore the Mission recommends that the SO--ToRs should be modified to include details of the CEC in-depth training into the text of the ToR so that this set of trainings is finalized into the operational activities of the next set of SO in addition to the three day orientation. *The Mission urges MDPU to modify the text of ToR accordingly and submit to the Bank for review and clearance.*

**Competent Authority Training:** The Mission observed that the presence of WRO staff and PIM unit staff in conjunction with SO undergoing training had a valuable impact in building strong bonds and working relationships among SOs and WRO officials, namely Competent Authorities who they will interact with regularly during their operational activities in the field. Based on this learning, the Mission recommends that during the next two modules of SO training that all relevant PIM unit staff as well as any Competent Authority engineers that are able to attend the training in mid-February be deputed for four days to participate in the training along with the SOs. Lastly, the Mission recommends that the Superintending Engineers (SE) who are responsible for SO payments and progress report review in the Phase 1 and 2 jurisdiction areas also be deputed to participate in the four day training along with SOs. The Mission discussed these training recommendations with the E-in-C and MDPU and PIM Cell staff. The E-in-C agreed that all Chennai based and regional level PIM staff as well as all SE staff responsible for SO payments and monitoring also attend the next batch of trainings. For Competent Authorities, the E-in-C indicated that the February to March period is very busy for field level officers due to

operational activities for the WRO in the field and therefore he suggested that a smaller number of CAs who have not previously attended the training should be requested to participate. Further training details for the Competent Authorities is provided below.

**Ensuring effective coordination between CAs and WUAs:** The Mission finds that there is little awareness among the Competent Authorities on how to work with farmers on WUA capacity building activities and there is little awareness on how to work with SOs that are to be deputed to their respective divisions. Moreover, CA responsibilities with WUAs will continue even after SOs withdrawal from the field. Therefore, the Mission finds that there is a need to strengthen the competencies of CAs to ensure that the WUA capacity building process is sustainable and will be continued even after the withdrawal of SOs. Under Phases 1, 2, 3, and 4 of the TNIAMWARM project, there are currently 390 CAs (Assistant Engineers). The Mission strongly recommends that they should be trained in 13 batches on specific modules to deliver their responsibilities as CAs of WUAs efficiently and effectively. In addition, all PIM unit staff including any newly deputed staff should also be requested to participate in this in-depth training. There is a provision of \$190,000 unspent allocation for training funds with WRD. Therefore, the Mission strongly recommends that the requisite amount from these unspent funds should be utilized to conduct in-depth WUA capacity building and PIM-related trainings for all of the Competent Authority Engineers under all four phases of the project. The Mission also recommends that the training programs should be organized by IMTI, Trichy by hiring the technical expertise of CEC utilizing the model that is currently being utilized for the in depth trainings for SOs. The Mission discussed the need for CA training with the E-in-C. The E-in-C agreed and gave his consent that the training for the first and second phase sub-basin CAs in 5 batches covering 150 CAs shall commence from 15 April 2012 onwards. In consultation with the WRO, Training Coordinator, MDPU has estimated cost that the cost of each training program is approximately Rs. 5 Lakhs, which includes the logistic arrangements by IMTI and hiring cost of CEC services. The Mission recommends that the budgetary provisions for conducting the above training should be obtained by getting the Administrative sanction in advance. As in the case of SOs in-depth training, the Mission recommends that a MoU should be signed between IMTI, Trichy and the Centre of Excellence for Change Management (CEC) for hiring CEC services for conducting the proposed trainings to CAs. *The Mission recommends that a detailed training proposal for WUA capacity building and PIM training for CAs should be prepared by IMTI, Trichy and submitted to the World Bank for clearance at the earliest.*

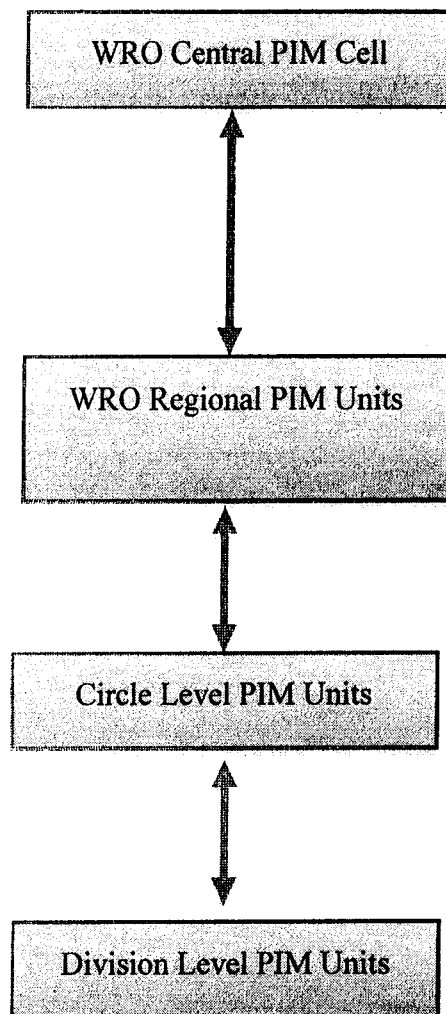
## **Annex 6**

### **Proposal for Strengthening the PIM Structure in Tamil Nadu**

Currently there is a functioning PIM cell within the WRO with 13 technical staff at the E-in-C's office in Chennai. However, of these 13 staff positions, only seven are currently filled which includes one Executive Engineer, two Assistant Executive Engineers, and four Assistant Engineers. One Superintending Engineer (on diversion from MDPU) is in charge of the PIM cell. Also, there are 3 member PIM Units at the four Regional Chief Engineers' offices, including one Deputy Chief Engineer, an Officer Technical and one Assistant Engineer. However, not all of these posts are currently filled at the regional levels.

The PIM structure in Tamil Nadu needs to be reorganized by further decentralizing PIM cells at the circle and division levels within these four regions. Also, additional staff would need to be redeployed for PIM activities at the circle and division levels as well as each of these cells to be further strengthened with new roles, responsibilities and further training on PIM-related functions. The Mission held detailed discussions with the current E-in-C, the staff of PIM cell, the Project Director and MDPU PIM staff to determine the necessary reforms in detail. Based on these discussions, the following structure and functions for the PIM unit is proposed. The details are provided below.

**Structure** – The recommended new structure of the PIM cell & the PIM Units within the WRO includes:



- Appointment of a PIM Cell head/Director (SE or CE rank official) to oversee and manage all PIM units
- Should be staffed by 1 EE, 4 AEEs, 8 AEs
- In charge of high level policy decisions related to PIM (e.g. implementation & amendments to TNFMIS Act, ensuring effective implementation of capacity building and financial devolution to Apex Committees, Project Committees Distributary Committees WUAs etc.)
- Provide overall coordination of WUA development, vision, coordination with all concerned line departments and policy advice to GoTN
- Located in Chennai
- Four regional PIM units at the Regional Chief Engineer offices in Madurai, Coimbatore, Chennai, and Trichy)
- Each one to be staffed by one Deputy CE, 1 OT(AEE), 2 AEs
- Will report on monthly basis to Central PIM cell based on data from the circle and divisions
- Assist the regional CE in ensuring flow of funds to SOs
- 11 circle level PIM units to be created; in 3 Circles in Madurai region ; 4 Circles in Chennai region; 3 circles in Trichy region 3 circles, and 1 circle in Pollachi/Coimbatore region.
- Each circle to be staffed by 1 Deputy SE to be in charge of transmitting information from division to corresponding regional units
- 20 divisional level PIM units are to be created with 7 divisions in Madurai, 8 divisions in Chennai, 3 divisions in Trichy, and 2 divisions in Pollachi/Coimbatore regions.
- Each division to be staffed with a nodal PIM unit staff at EE rank supported by 2 AEs
- Each division to be in charge of overseeing a range of 40 to 240 WUAs & around 16 Competent Authorities
- The role will be to coordinate directly with Competent Authority engineers at the field level and assess the status of WUA performance and provide requisite support.
- Conduct an annual exercise which includes preparing an annual report (score card) of the performance of all WUAs within the Division
- Monitor the performance of the Competent Authority engineers and provide required support.
- Assess training needs and provide recommendations for less well performing WUAs.
- Monitor any GoTN schemes for WUAs (e.g. matching grants, etc.)
- Ensure regular and efficient elections for upcoming WUAs

**Leadership** – The new proposed PIM structure should be headed by a senior WRO official (Chief Engineer) who has sole charge of managing all PIM activities in the state and who will serve as the new head/Director of the PIM unit. He/She should have sole responsibility for overseeing the management of PIM and be responsible for successful implementation of the TNFMIS Act in the state. The Mission recommends that the PIM head/Director should be someone with experience working on PIM related issues and has had experience interacting and working with WUAs.

**Staffing** – The overall staff strength of the current PIM cells should be increased to 13 staff in Chennai and 3 staff at the regional levels to include additional PIM staff in the circle and division levels. A total of 11 existing Deputy Superintending Engineers should be deputed to work on PIM related activities as additional charge at the circle levels. A total of 20 AEs should be redeployed to work at each of the division level PIM cells as additional charge. In addition, a total of 20 new AEs should be deployed to each of the division PIM cells who have sole charge of PIM related activities. These AEs will oversee a range of 40-240 WUAs per division and about 16 Competent Authorities. A combination of some new AE's who have been recently recruited by the WRO should be located within one of the PIM cells throughout the state for a specified period of time, specifically at the division levels to ensure that they are well oriented to working in partnership with WUAs. Lastly, the WRO should redeploy those staff within the WRO who have undergone some change management training and have some experience in working with communities at the farm level to specific posts within the PIM cells to take full advantage of and provide the benefit of their training to further the PIM approach in the State.

**Responsibility & Functions** – The Mission recommends that the specific roles and functions of each of the PIM cell staff at the central, regional, circle, and division levels be clearly detailed and specified in a proposal. In addition, clear reporting structure from the CA level to the division levels and upwards to the central cell also needs to be specified. *The Mission recommends that the MDPU PIM staff in conjunction with the WRO PIM cell staff should submit a detailed proposal to the E-in-C on these agreed lines for review, clearance and implementation at the earliest.*