

India: Capacity Building for Industrial Pollution Management Project (P091031)
Implementation Support Mission: June 5-16, 2017
Aide Memoire

I. Summary

1. A World Bank Team¹ carried out an implementation support mission for the “Capacity Building for Industrial Pollution Management Project (CBIPMP)” from June 5–16, 2017, being implemented by the Ministry of Environment, Forest & Climate Change (MoEF& CC), Andhra Pradesh Pollution Control Board (APPCB), Telangana Pollution Control Board (TSPCB), and West Bengal Pollution Control Board (WBPCB). During the mission, the team carried out a detailed review of project activities jointly with the implementing agencies and visited sub-project sites. The team wishes to thank the Government of India (GoI) and the Governments of Andhra Pradesh, Telangana and West Bengal, as well as officials of MoEF& CC, APPCB, TSPCB and WBPCB for the hospitality and courtesies extended to the World Bank team.

2. The objectives of the mission were to review the implementation status of the project and progress of various activities in the light of the upcoming project closing date on September 15, 2017 and the likelihood of achieving the Project Development Objective (PDO) and results framework of the project. The team reviewed the status of (i) three remediation sub-projects and the implementation of respective remediation plans; (ii) progress on the finalization of the framework for the development of National Program for the Remediation of Polluted sites (NPRPS); and (iii) progress of various capacity building and training activities being carried out by the implementing agencies.

3. This Aide Memoire summarizes the findings of the team during the visit and agreements reached with implementing agencies. The mission findings were discussed in the wrap-up meeting on June 15, 2017 chaired by Mr. Ajay Narayan Jha, Secretary, MoEF& CC. At state level, wrap up meetings were held with Mr. B.S.S. Prasad, Member Secretary, APPCB on June 6, 2017; with Dr. Rajeev Sharma, Advisor, Government of Telangana (GoT) and Chairman, TSPCB on June 7, 2017; and Dr. Kalyan Rudra, Chairman, WBPCB on June 9, 2017 to brief respective state governments on findings of the visit.

4. A debrief meeting was held with Mr. Lekhan Thakkar, Director, Department of Economic Affairs (DEA), Ministry of Finance, Government of India, on June 14, 2017.

¹ World Bank team included, Ms. Sangeeta Kumari (Senior Social Development Specialist), Ms. Swayam Siddha Mohanty (Senior Procurement Specialist), Mr. Arvind Prasad Mantha (Financial Management Specialist), Mr. N. Sampath Kumar (Consultant - Landfill Development), Mr. Pradeep Dadlani (Consultant - Environmental Specialist), and Mr. A.S. Harinath (Senior Environmental Specialist & Task Team Leader).

II. Key Project Data

Project Data		Project Performance Ratings*			
Board Approval:	03-June-2010	<i>Summary Ratings:</i>		<i>Last</i>	<i>Now</i>
Effectiveness Date:	13-October-2010	Achievement of PDO	MS	MS	
Original Closing Date:	30-Sept-2015	Implementation Progress	MU	MU	
Revised Closing Date:	31-March-2018	Project Management	MU	MU	
MTR Date:	15-June-2013	Procurement	MU	MU	
Restructuring:		Safeguards	MU	MS	
IDA cancellation:	19-Dec-2013	Financial Management	MS	MS	
Extension of Closing date:	25-August-2015				
Inclusion of Telangana:	17-May-2016				
Extension & Cancellation:	15-Sept-2017				
Project Disbursement (as of September 15, 2017)					
	Original, US\$	Revised, US\$	Cancelled, US\$#	Disbursed, US\$	
IBRD - 79240	25.21 million	14.71 million	10.50 million	0.36 million	
IDA - 47550	38.94 million	28.97 million	9.96 million	11.90 million	
	64.15 million	43.68 million	20.46 million	12.26 million (28.06 %)	

***Ratings:** HS=Highly Satisfactory; S=Satisfactory; MS=Moderately Satisfactory; MU=Moderately Unsatisfactory; U=Unsatisfactory; HU=Highly Unsatisfactory; NA=Not Applicable; NR=Not Rated
Doesn't include cancellations during the recent restructuring.

III. Implementation Status of the Project

5. The overall implementation progress of the project in its last (seventh) year of implementation continues to be slow. While majority of the capacity building activities under component 1 have been completed, pilot remediation activities (which constitute over 60 percent of the total financing) under component 2 are going slow. After multiple rounds of bidding, remediation activities at two of the three-pilot remediation sub-project sites were initiated in April/May, 2016. The progress of works at these two sites after one year of contract award, however, is very slow. The project so far has disbursed US\$12.26 million (as of September 15, 2017) with an overall disbursement ratio of 28.06 percent. Sections below, summarize the status of key project activities and component wise detailed progress is described in **Annex 1**.

- (i) **Implementation of Closure and Containment works at Kadapa Municipal Solid Waste Disposal Site (US\$5.24 million), Andhra Pradesh and Dhapa Municipal Solid Waste Disposal Site (US\$9.43 million), Kolkata, West Bengal are progressing very slowly; whereas the main contract for NMK Lake remediation works (US\$6.81 million), Hyderabad, Telangana could not be awarded.**

Closure and containment works at Kadapa (Andhra Pradesh) and Dhapa (Kolkata, West Bengal) municipal solid waste disposal sites, have commenced in February, 2016 and May, 2016 respectively. Physical progress of works in both the sub-projects, however is very slow.

In case of **Kadapa sub-project in Andhra Pradesh**, 40–45 percent of physical progress (after 16 months of contract award, as against originally envisaged 12 months) and 40 percent of financial progress is reported. Delays due to heavy monsoon and difficulties in the excavation for leachate collection wells, have been reported as the reasons for slow progress.

Similar reasons of delay due to heavy monsoon and long period of local holidays were sighted for the slow progress in **Dhapa sub-project in West Bengal**. While the contract was awarded in May, 2016, the actual remediation works have commenced only in November, 2016 and about 15 percent of physical progress and financial progress is reported for this sub-project. Another small

contract to construct leachate treatment plant (US\$ 0.6 million) at the disposal site, was awarded in November, 2016 and the contractor has just commenced initial site development activities. Regarding the **third pilot sub-project, remediation of NMK Lake at Hyderabad in Telangana**, bid process for the main package to carry out dredging and containment activities was finalized in July, 2016. However, the contract could not be awarded due to a writ petition in the High Court of Telangana about the ownership of some portion of the lake land². Remediation activities for this sub-project cannot be taken up until the uncertainty on the land ownership is resolved and the judicial process is concluded.

NMK Lake remediation plan also includes upgradation of existing sewage treatment plant from secondary to tertiary level, to meet standards of treated water disposal into the lake. Bid process for this activity however could not be initiated due to the issues of land ownership discussed above.

A small contract of about US\$0.32 million to construct weir and fence around the lake was also awarded in January, 2016. Works relating to this contract also could not be completed due to the issue of land ownership. It was agreed that TSPCB will try to complete the works related to this contract, to the extent feasible and close the contract as per the contractual terms.

Given the present status of the project and as indicated in the table below, the sub-project in Kadapa in Andhra Pradesh is likely to be completed by December, 2017, whereas the second sub-project in Dhapa, Kolkata in West Bengal is likely to be completed by March, 2018. Implementation of the third subproject, NMK Lake at Hyderabad in Telangana is unlikely.

Table 1: Summary Status Sub-Projects

Pilot Sub-Project	Cost, US\$M	Status	Likely Completion Time	
			Earlier	Now
1. Waste Disposal Site, Kadapa, A P	5.24	Works ongoing	April, 2017	Dec, 2017
2. NMK Lake Hyderabad, Telangana	10.98	Ongoing Pending Award Designs complete	Jan, 2017	Sept, 2017
Package 1 – Weir & Fencing	0.32		Aug, 2017	Unknown
Package 2 – Dredging & Containment	6.81		Aug, 2017	Unknown
Package 3 – Treatment Plant	3.85			
3. Waste Disposal Site, Dhapa, WB	10.03	Awarded	Sept, 2017	March, 2018
Package 1 – Closure & Containment	9.43		Sept, 2017	March, 2018
Package 2 – Leachate Plant	0.60	Awarded	Sept, 2017	March, 2018
Total (Sub-Projects)	26.25			

The overall status of the project and low disbursement even after 7 years of implementation, was discussed during the wrap up meeting with Secretary, MoEF& CC on June 15, 2017 and in the portfolio review meeting with DEA on July 21, 2017. It was agreed in both these meetings that, MoEF& CC will review the project and a request for cancellation funds that may not be spent by the project (IBRD and some portion of IDA) with reasonable extension of time for the completion of activities that are already committed, may be sent to DEA for its consideration and recommendation to the World Bank.

As a follow-up to this decision, MoEF& CC through DEA requested for (a) cancellation of US\$17.56 million (IBRD -US\$14.67 million and IDA- US\$2.89 million) and (b) extension of the project closing date to March 31, 2018, to enable completion of ongoing activities. Based on this

² In December, 2016, a writ petition was filed by a public trust claiming ownership of the land within Full Tank Level (FTL) of the lake and The High Court has issued a 'status quo' order on the proposed remediation works.

request, the project was restructured on September 15, 2017 by (i) cancelling US\$17.24 million (IBRD – US\$14.35 million, as US\$0.32 million IBRD allocation was already disbursed in June, 2016 and IDA – US\$2.89 million) and (ii) extending the closing date of the project to March 31, 2018, as requested by GoI.

- (ii) **Policy, Institutional and Methodological Studies for the development of National Program for Remediation of Polluted Sites (NPRPS) are completed and the Technical Review Committee (TRC) of MoEF & CC has recommended Draft Rules for the Remediation of Contaminated Sites.**

As part of the component 1 activities, the MoEF& CC, has completed three basic studies, (a) Inventory of polluted sites; (b) development of methodologies for remediation of polluted sites; and (c) development of policy & institutional framework that supports development of a framework for remediation of polluted sites in India. Subsequently, MoEF& CC has constituted a Technical Review Committee (TRC) to consider the recommendations of these studies and finalize 'Remediation of Contaminated Sites Rules, 2017'.

The TRC held several meetings and has recommended draft rules for the approval of MoEF& CC. MoEF& CC, intends to conduct series of consultations with various stake holders including state government on these rules, and disclose them for comments/ suggestions. The final guide lines are proposed to be notified, after incorporating the comments/ suggestions received.

In addition, the ministry has also constituted a Technical Expert Committee (TEC) for the formulation of soil standards. The ministry with the guidance from TEC has carried out detailed field sampling and assessment for the establishment of soil standards. These standards are expected to be finalized soon and are planned to be included as reference standards in the Rules for Remediation of Contaminated Sites in India.

In addition to contributing to the long-term remediation program in India, finalization of Remediation Rules and the Soil Standards will also enable achievement of PDO indicator of the project relating to the development of framework for the remediation of polluted sites and four other intermediate indicators of the project.

- (iii) **Procurement of Laboratory Equipment is completed, but training and capacity building activities are partially completed.**

Procurement of laboratory equipment and providing training to the implementing agencies and other regulatory agencies in remediation, are the main capacity building activities envisaged under component 1 of the project.

The Pollution Control Boards of Telangana and West Bengal, have completed procurement of laboratory equipment (in 2014 and 2015 respectively) required for the analysis of 76 parameters, including hazardous substances. Refurbishment of the laboratory in Telangana has also been completed and sample analysis using new equipment is being carried out, for the past two years. In case of West Bengal, refurbishment of the laboratory has just been completed, all equipment have been installed and sampling is being carried (except three equipment) for the past one year. **The mission also noted that the sampling apparatus for monitoring POPS and VOCs is not being utilized by both TSPCB and WBPCB for various logistical reasons, despite having procured them over two years ago. It was agreed that, both the agencies will conduct at least one monitoring before September, 2017, using this equipment and will also share a detailed annual monitoring program to MoEF& CC for monitoring POPS and VOCs.**

As agreed in the previous mission, APPCB has initiated the procurement of laboratory equipment, and the equipment is expected to be delivered by September, 2017. Completion of this activity will ensure that the project would have built the analytical capacity of three pollution control boards instead of two pollution control boards, as originally envisaged.

Regarding training, about US\$1.15 million has been allocated for programs to build capacity in remediation techniques, laboratory analysis and international exposure visits. So far one international visit / training program and three domestic trainings on design of remediation plans have been completed. As the remediation plans for the sub-projects have commenced, implementation and NPRPS studies have also been finalized, training programs are very critical to all the implementing agencies in supervising and managing the issues of remediation. The training programs are also important to achieve capacity building aspect envisaged in the PDO.

In view of the above the mission suggested to the implementing agencies to conduct specific training programs on (a) proposed Rules for the remediation of contaminated sites; (b) assessment of contamination, preparation, implementation and monitoring of remediation plans for all the key engineering staff PCB, including staff in zonal/regional/field offices; (c) use of advanced laboratory equipment procured through the project (for all the scientific staff of the PCBs including staff in zonal/regional/field offices); and (d) international experiences on development of remediation programs. It was agreed that, a time bound training schedule on these activities will be provided by the implementing agencies by August 31, 2017 and implemented before project closure.

(iv) Additional Capacity building activities agreed during recent restructuring are yet to be initiated.

To better achieve the development objectives of the project and at the request of MoEF& CC, few additional capacity building activities were included in Component 1, as part of the restructuring of the project in 2016. These included (a) support to studies for the development of 'Soil Standards in India'; (b) engaging academic institutions for research and capacity building activities in remediation; (c) development of management plan for industrial chemicals used in India; (d) expanding the 'Waste Management Information System' developed through the project, to the North-Eastern States and Union Territories of India.

The activities on development of soil standards (item (a) above) and industrial chemicals management plan (item (c) above), are being carried by MoEF& CC team with guidance from TEC and a National Co-ordination Committee (NCC), and are expected to be completed by December, 2017. However, the expansion of waste management information system (item (b) above) and engaging academic institutions for capacity building have not been initiated so far, due to various internal approval requirements of GoI and MoEF& CC. The mission believes that these activities are unlikely to be implemented within the project closing period.

(v) Project Management and Contract Management is Critical: As summarized in point (ii) above, two of the three major contracts awarded in the project are progressing very slow, thereby creating uncertainty on their timely completion and continued low disbursements. While all the implementing agencies have strengthened their construction management capacity by bringing in technical experts from other line departments of the state, it is important that the project activities are implemented without any slippage and contracts are managed well. Unfortunately, the critical actions, such as (a) development of monthly implementation plan for all the project activities and close monitoring by MoEF& CC; (b) immediate initiation of capacity building and other activities of MoEF& CC; (d) filling vacant positions of Safeguards and M&E Specialists at the PIUs of APPCB and WBPCB (e) filling vacant procurement, safeguards and technical specialists at Telangana, PIU; and (f) organizing "Project Oversight Committee", agreed during the previous mission, to improve the implementation progress have not been completed.

- (vi) **Disbursements continue to be low:** The total disbursements of the project in its seventh year (last quarter) of implementation is about US\$12.26 million (IDA– US\$11.90 million and IBRD– US\$0.36 million), around 28.06 percent of the total US\$43.68 million financing.

Works and capacity building activities of about US\$13 million (US\$ 10 million works and US\$3 million technical assistance activities) are committed. Given this scenario, disbursement of about US\$18 million is uncertain. Even to achieve above disbursement, adequate budgetary allocation, shall be made by MoEF& CC. The budget allocation for the project in the current financial year is only US\$9.5 million, and would require an additional US\$4.5 million to complete the activities.

As indicated above, based on the discussions during the wrap up meeting with Secretary, MoEF on June 15, 2017 and portfolio review meeting with DEA on June 21, 2017, DEA has forwarded a request to the Bank for (a) cancellation of US\$17.56 million (IBRD -US\$14.67 million and IDA- US\$2.89 million) and (b) extension of the project closing date to March 31, 2018, to enable completion of ongoing activities. Restructuring of the project, based on the above request has since been completed by (i) cancelling US\$17.24 million (IBRD – US\$14.35 million, as US\$0.32 million IBRD allocation was already disbursed in June, 2016 and IDA – US\$2.89 million) and (ii) extending the closing date of the project to March 31, 2018, as requested by GoI. Despite this cancellation and extension, completion of activities by March, 2018 would also require concerted efforts by all the implementing agencies.

IV. Achievement of Project Development Objective

6. The revised Development Objective (DO) of the project is ‘to strengthen the capacity of selected state pollution control agencies in the remediation of polluted sites and to support development of a framework to establish a national program for the remediation of polluted sites’.

7. The project has completed three basic studies on remediation of polluted sites that help development of a framework for remediation of polluted sites in India. MoEF& CC, as a follow up to these studies has constituted a Technical Review Committee (TRC) to consider the recommendations and finalize ‘Remediation of Contaminated Sites Rules, 2017’. Based on series of deliberations, the TRC has recommended draft rules for the consideration of MoEF& CC. MoEF& CC, intends to conduct series of consultations with various stake holders including state government on these rules, and publish them for comments/ suggestions. The final guide lines are planned to be notified, after incorporating the comments / suggestions received. Finalization of Remediation Rules will enable achievement of an important part of PDO on the development of framework for the remediation of polluted sites.

8. Further, the implementing agencies have (i) developed remediation plans for four polluted sites originally identified for implementation by the project, and additional five contaminated sites in West Bengal, two solid waste sites in Telangana and Andhra Pradesh; (ii) augmented their analytical capacity for hazardous substances through additional laboratory equipment procured through the project. These activities along with other training activities carried out by the project, enable achievement of capacity building part of the PDO.

9. Implementation of remediation plans for two sites (from (i) above) is also underway. Considering the above and the fact that all four PDO indicators are likely to be achieved and 6 of the 9 intermediate result indicators of the revised results framework (Annex 2: Status of outcome indicators), have already been achieved, the likelihood of achieving the PDO is rated as ‘Moderately Satisfactory’. This however requires finalization of remediation of rules and successful completion of ongoing two remediation pilot sub-projects, within the project closing period.

10. Regarding the implementation progress, implementation of two remediation sub-projects after more than 12 months of award continue to be very slow. Award of contract for the implementation of third remediation sub-project in Hyderabad (NMK Lake) is unlikely, and some of the capacity building activities are yet to be initiated. In view of the above, the implementation progress of the project has been retained as 'Moderately Unsatisfactory'.

V. Procurement

11. The mission held discussions with the State Pollution Control Boards of Telangana, Andhra Pradesh and West Bengal and with MoEF& CC, on procurement issues related to specific contracts under implementation and capacity building aspects in all the four implementing agencies. In addition, the mission also reviewed the procurement status vis-à-vis the current procurement plan of each of the implementing agencies (MoEF& CC, APPCB, TSPCB and WBPCB).

Overall:

12. The implementing agencies have submitted the updated procurement plan in SEPA (Bank's online procurement plan tool). Since, SEPA is planned to be closed by the end of June, 2017, the project is closing soon, and no new procurements are envisaged during this period, the mission advised all the implementing agencies to submit any changes to the procurement plan in Bank's offline format for monitoring and clearance (as needed).

13. Bank team has completed the Procurement Post Review of contracts for the project for FY17 and the report shall be shared in due course. The mission also requested the IAs to share the list of post review contracts for FY18 by end of August, 2017.

14. The mission also informed, all the implementing agencies that the expenditure incurred for activities within the project closing period (revised to March 31, 2018 after restructuring), i.e. works completed, goods delivered and services completed by project closing date, only will be eligible for reimbursement through the project financing.

APPCB:

15. The key observations from procurement perspective in AP are summarized below.

- (i) Civil works for remediation of Kadapa is awarded to M/s.Ramky and the work is in progress. As per current schedule, the work is planned to be completed by August, 2017.
- (ii) The contract for inventorization of e-waste awarded to M/s. Environment Protection Training & Research Institute (EPTRI), Hyderabad, is in progress with some delay.
- (iii) The mission advised that the contract with the NGO at Kadapa and the contract with the supervision consultant needs to be extended till the completion of civil works.
- (iv) The IA has adequate procurement and contract management staff.
- (v) All contracts awarded by APPCB are not available on APPCB website. The mission advised APPCB to publish the same without further delay.

TSPCB:

16. The key observations from procurement perspective in Telangana are summarized below.
- (i) The contract for civil works for remediation of Noor Mohammed Kunta (NMK), Kattedan, Hyderabad has not been signed yet.
 - (ii) The mission was informed that, bid document for STP Civil Works is yet to be finalized.
 - (iii) The consultancy contracts for Asanikunta and Kazhipally lake studies is in progress, albeit with delay and is expected to be completed by January 2018.
 - (iv) The agency has adequate procurement and contract management staff.
 - (v) All contracts awarded by TSPCB are not available on TSPCB website. The mission advised TSPCB to publish the same without further delay.

17. **WBPCB:** The mission reviewed the status of various procurement activities of WBPCB and noted the following:

- Inventory and Characterization of Hazardous Waste: The Consultant, M/s. EPTISA, Spain have submitted the final report on 5th June 2017 which is under review by WBPCB. Balance payment of 20% is expected to be made after the approval of the report.
- Assessment of contamination and design of remediation plan of priority 5 contaminated sites: The consultant, M/s. ERM India has submitted the final ESMP report on 4th March 2016 which was reviewed by WBPCB and the Consultant was advised to incorporate the comments. 10% payment is still pending. WBPCB informed the mission that a reminder has been sent to the Consultant on 6th May 2017, to submit the report by 20th June 2017, failing which the contract will be terminated and closed.
- Procurement of Sampling Apparatus, Infra-Red Spectrometer and GC-MSMS: 90% payment against delivery of sampling apparatus has been made. Though final installation and training was not done by the Supplier, the equipment has been installed with help from CPCB.

Regarding Infra-Red Spectrometer and GC-MSMS, the equipment has been received, installed and training is expected to be completed soon. Balance 10% payment will be made after completion of training.

- The Civil works contract for Remediation of abandoned MSW dumpsite at Dhapa has been awarded to M/s. Saurashtra Enviro Projects Pvt. Ltd. at INR 479.10 million. During discussions, the WBPCB informed the mission that the physical progress of works is about 50% whereas financial progress is only 10%. The mission advised the PCB to expedite processing of payment.
- The mission advised that the contract with the NGO and the contract with the supervision consultant needs to be extended till the completion of civil works.
- WBPCB has adequate procurement and contract management staff.
- All contracts awarded by WBPCB are published on WBPCB website.

18. **MoEF& CC:** The ministry in addition to overseeing overall project, implements capacity building and other technical assistance activities of the project. A dedicated procurement consultant trained on Bank's procurement procedures, manages procurement aspects of these activities

19. The Bank has cleared the IA's proposal to undertake new activities under Bank funded CBIPMP: 'Capacity Building of Academic Institutions'. Under this activity, a Centre for Subsurface Contaminant Detection, Monitoring and Rehabilitation of Polluted Sites, shall be established which will include capacity building, procurement of advanced Field Equipment and demonstration Project at one or two polluted sites in and around Delhi. However, the contract has not yet been signed. The mission advised MoEF to expedite the process.

20. The procurement rating for the review period is “Moderately Unsatisfactory” due to delay in awarding the contract for NMK remediation works, delay in implementation of Civil Works contract for Dhapa and Kadapa remediation civil works, and delay in other procurement activities.

VI. Financial Management

21. **Budget & Funds Flow:** The MOEF &CC has been allotted a budget of Rs.600 million (US\$9.5 million) for financial year 2017-18. The APPCB, TSPCB and WBPCB have approximately Rs.110 million, Rs.43 million and Rs.54 million respectively in their bank accounts. Based on physical progress and present status of pending contractor bills, Bank team believes that PCBs may require additional funds of about Rs.300 million in the next six months to pay for contractor bills and other expenses. The MoEF& CC is therefore requested to make requisite provision in the revised estimate (RE) and in between, any urgent requirement of funds may be met from other budgetary sources of MoEF& CC.

22. **Disbursement:** The project has disbursed an amount of US\$11.89 million (including Designated Account Advance of USD 0.746 million) representing 40.64% of IDA allocation. MoEF& CC, is regular in the submission of consolidated IFR and has claimed expenditures till June 30, 2017 from the Bank. The PCBs are regular in the submission of interim financial reports (IFRs) to MOEF& CC. The IFR for expenses incurred till June 30, 2017 have been submitted by PCBs to MoEF& CC.

23. **Accounting and Financial Reporting:** The PCBs maintain adequate accounting records to support expenditures incurred under the project. The financial records of PCBs are regularly updated, supported with payment vouchers/invoices and bank reconciliations are carried out regularly. The revised closing date of the project after recent restructuring is March 31, 2018 with a grace period of four months ending on July 31, 2018. The PCBs and MoEF& CC have been informed that expenditures incurred by the project till closing date and payments made during the grace period of four months (for expenses incurred till closing date) will be eligible for financing under the Credit. The expenses incurred from April 1, 2018 on project activities including project management and staff costs will not be eligible for financing under the Credit. The PCBs have also been advised to pay the retention money deducted from running account bill to the contractor by obtaining a satisfactory bank guarantee, provided such civil work under the contract has been completed to the satisfaction of PCBs by project closing date. The amount can be claimed by the PCBs in the last IFR submitted to the Bank.

24. **Staffing:** The FM staffing arrangements in the PCBs are adequate. The positions are headed by Chief Accounts Officer / Finance Managers and are supported by junior accounts officers. For TSPCB, the FM support is provided by an experienced junior accounts officer of APPCB and this arrangement is working effectively between the two PCBs. The FM consultant in MoEF& CC is in place to carry out accounting and reporting functions.

25. **Internal Audit:** The AP and WBPCBs have internal audit systems in place. The internal audit is carried out by firm of chartered accountants appointed by the Board. The internal audit of WBPCB, TSPCB and APPCB for the financial year 2016-17 is under process and the internal audit report providing separate opinion on project transactions will be shared with the Bank on receipt from auditor.

26. **External Audit:** MoEF and PCBs have submitted acceptable audit report of FY 2015-16 with the Bank. The PCBs have closed books of accounts for FY 2016-17 and prepared draft project financial statements. It has been agreed with MoEF and PCBs that audit report for FY 2016-17 will be shared with the Bank before the due date of December 31, 2017.

27. The mission also advised MoEF& CC that closing date of CBIPM project has been extended on an exceptional basis, despite a long overdue audit report of FY 2015-16 under another MoEF implemented Project 'Design of Market Based Emissions Trading Scheme to Improve - P126356 (TF099872)'. It was agreed that this audit will be submitted along with FY 16-17 report. The mission advises CBIPM team at MoEF & CC, to coordinate with the team of P126356 (TF099872) and CAG audit officials and to obtain this audit report by December 31, 2017.

28. **FM performance rating:** The financial management performance of the project has been maintained as 'Moderately Satisfactory'.

VII. Environmental and Social Safeguards

Environment:

29. The mission visited, Kadapa sub-project site, where closure and containment works are being implemented. The mission noted that, based on the suggestions made during the previous visit in November, 2016, the construction site management, safety signage, has improved. However, aspects such as use of personal protective equipment, location, size and type of safety signage, storage of petroleum products and electrical wiring needs improvement.

30. The mission met the District Collector, Kadapa and re-iterated the urgency in improving the waste management practices at the new landfill site developed for Kadapa, which was a prior action for initiating the closure and containment works at the old disposal site. The mission expressed its concern, about the continued lack of action on this issue and requested the need for immediate improvement of practices at the new disposal site in compliance with the Municipal Solid Waste Rules of GoI.

31. At Dhapa sub-project site in Kolkata, West Bengal, the mission noted number of activities by the contractor for the closure and containment. However, the mission noted, blockage of local village road, improper labor accommodation, inadequate safety signs and use of personal protective gear for the project staff and advises WBPCB to ensure that these aspects are immediately addressed by the contractor.

32. The mission met the Commissioner, Kolkata Municipal Corporation (KMC), to discuss the progress on the prior actions agreed for Dhapa sub-project. These included (i) waste in the active dump site in Dhapa is disposed, as per the Municipal Solid Waste Rules of Government of India; (ii) new and alternate waste disposal site(s) is identified for the city, as the capacity of existing site is almost exhausted; and (iii) remaining part of Dhapa site is closed and contained based on the experience gained by remediating a portion of the site through the current project. The commissioner indicated that, KMC has identified two new sites for safe disposal of solid waste generated from the city and plans for their development are underway. The mission was also informed that, KMC developing another project through ongoing Kolkata Environment Improvement Project (KEIP), for the redevelopment of Dhapa disposal site. The mission requested, KMC to share the details of these plans along with the implementation schedules.

33. Regarding staffing, the environmental engineers of the respective pollution control boards are supervising the implementation of agreed EMP for the subprojects.

34. Overall, the project has implemented key environmental safeguard actions such as preparation of environmental assessments and management plans. However, prior actions that are important to ensure sustainability of project activities have not been fully complied with. In view of the above, the environmental safeguard performance of the project has been retained as 'Moderately Satisfactory'.

Social and Communications

AP Pollution Control Board:

35. **Staffing:** With the bifurcation of Andhra Pradesh, the social team with APPCB has now moved to Telangana. The need for a new social team in the PIU of APPCB is long pending. It was agreed earlier that, till the restructuring of the project is complete, the current social specialist will continue to provide support for Kadapa sub-project also. Now that the restructuring process is complete and the Contract for remediation of Kadapa waste disposal site is under implementation, APPCB has designated the procurement assistant to serve as social specialist to maintain continuity of activities under Social Management Plan (SMP).

36. Further, the NGO's term has been extended beyond the one year contract, to implement SMF until the remediation work is complete. As the NGO activities are coming to an end, the social audit needs to be completed before the project closure. It was agreed that the audit consultant shall be brought onboard by August 2017. The audit consultants should be able to document how the project has addressed social aspects, the good practices that are relevant for adaptation in future, highlighted aspects that could have been better managed with recommendations.

37. **ESMP implementation of Kadapa sub project:** The ESMP implementation is progressing well. The progress report on the same was shared during the mission. The training activities are in progress for the PAPs. Awareness activities on health and hygienic practices were carried out among PAPs and the community at large. Activity wise progress is summarized in the Table 2. Following are the balance activities for Kadapa sub project until the end of the project:

- Link the trained PAPs with market/jobs to enable income from the newly acquired skill.
- Ensure the SHG groups formed are formally recognized.
- Agree on a plan to keep in school, the drop out children of Project Affected Families with District education officer.
- Document the changes observed because of training on safe and hygienic practices linked to their current profession of rag picking and pig rearing.
- NGO services may also be utilized to mobilize community to participate in the development of remediated site into community Park (Green Public space).

Telangana Pollution Control Board:

38. **Staffing:** With the bifurcation of Andhra Pradesh, the social team with APPCB has now moved to Telangana. Further the NGO's term has been extended beyond the 1 year contract to implement SMF until the remediation work is complete. As the NGO activities are coming to an end, the social audit needs to be completed before the project closure. It was agreed that the audit consultant shall be brought onboard by August 2017.

39. **ESMP implementation of NMK sub project:** While the remediation of lake was not expected to cause any direct impact on loss of land and assets, however, due to restricting the access to the three open spaces for any further dumping in the Katedan Industrial Area caused partial impacts on the ragpickers income.

40. The NGO engaged during the preparation of remediation plan, has carried out identification of the Project Affected Persons (132 PAPs), providing training on alternate livelihood management, counselling the PAPs on health and hygiene, counselling the industrial unit representatives and also the neighborhood community on Solid Waste Management, motivating the parents to send their children back

to school and mass awareness program to sensitize the neighboring community on Solid Waste Management. Further, the efforts are made for securing social entitlements, formation of the Self-Help Groups and opening of the bank accounts. The progress report for the last one year was shared with Bank during the mission.

41. In the Katedan Industrial area (as part of NMK pilot site), the fencing of open ground being used for waste dumping and lake has been initiated but still not completed. All civil works are put on hold until the disputes regarding claims to the land within the lake boundary made in December, 2016 is not resolved. A note explaining the issue of land availability is requested from the TSPCB. The Draft ESMP prepared and disclosed for the project should be finalized to reflect any changes due to claim on land and verification of affected rag pickers and re-disclosed.

42. Following social safeguard activities are yet to be completed by TSPCB.

- Disbursement of Transitional Allowance to all 77 eligible PAPs by end August, 2017
- Note on land ownership issue and land availability to carry out NMK remediation works and fencing of lake. – Share with bank by end August, 2017.
- Completion of Training activities to eligible PAPs and SHG formation – September 15, 2017

43. Communication and complaint handling mechanism: Mission noted that GRC has been constituted for Kadapa and NMK sites. While good efforts are being made to engage with stakeholders for Kadapa site, proactive steps need to be taken for NMK to ensure necessary actions at the end of other stakeholders. A lake management committee cum grievance redressal committee was constituted for NMK site. GRC meetings are also held for Kadapa. Mission reiterated the need for maintaining the record of all the stakeholder consultations carried out and complaints/feedback received under the project and its disclosure through project websites in the respective states. All the developments of the project need to be uploaded in a timely manner and all grievances must be recorded and monitored regularly. The progress report for Kadapa and NMK was received during the mission.

West Bengal Pollution Control Board:

44. *Staffing:* WBPCB reported that the contract of the firm providing social and communication expert for the PMU has expired. It was agreed that WBPCB will make alternate arrangement to coordinate and ensure SMP implementation at the earliest.

45. *Implementation of Social Management Plan for Dhapa Site:* The NGO for SMP implementation has been mobilized in July 2016. Community mobilization and awareness activities with respect to health, hygiene and safe work place practices is being carried out for the 86 families of Makaltala village by the NGO. Further training activities for alternate livelihood opportunities is ongoing.

46. Complaints received regarding dust, eye irritation, disturbance of access to village, disturbance to cowsheds, opportunity to work in project must be responded through an urgent meeting called by Grievance Redressal Committee. The contractor's representative should be invited to this meeting to propose a time bound action plan to avoid and minimize the inconvenience to villages. The action Plan agreed with the community needs to be shared with the Bank at the earliest.

47. The labor facilities such as rest area, drinking water were found inappropriate during site visit. Immediate action from the contractor is required to be sought to comply with Labor laws and as agreed in the ESMP. Action taken report by WBPCB shall be submitted to Bank immediately.

48. The project has also considered some of the infrastructure needs which have a close bearing on the positive impact of the project and which are also amongst the prioritized needs of the community. The status of these activities is as summarized below.

- Repairing of KMC road connecting EM Bypass with Dhapa - Already completed by KMC.
- Up gradation of existing access road from weighbridge to the Makaltala village on the eastern side of the dumpsite outside the compound wall, and WBPCB reported that the road shall be improved from Makaltala village Bridge to the junction at the weigh Bridge (about 400mts.) prior to the monsoon.
- Replacement of the old dilapidated wooden bridge with RCC bridge across the canal at Makaltala village - bridge already provided by KMC.

49. It was agreed that all the studies completed under the project for other nine contaminated sites in the states of AP, Telangana and West Bengal, a roadmap shall be prepared with clear milestones based on two follow up consultations with the stakeholders by End August.

50. Considering the progress made in the implementation of SMP for Dhapa and Kadapa, in terms of payment of transitional allowance, community mobilization and awareness activities delivery of training programs and livelihood restoration activities performance of the project is upgraded as ‘Moderately Satisfactory’.

Table2: Status of SMP activities in the Project

Activity	Dhapa (WBPCB)	Kadapa (APPCB)	NMK (TSPCB)
Social and communication Expert with PMU	NGO contract extended on monthly basis until the Remediation of site is completed. The social officer has been designated for social and communication management and monitoring at PIU level.	PIU is in place. The procurement specialist in the PIU is entrusted with additional charge of Social expert. NGO contract is being extended on monthly basis.	Social expert on board. NGO contract is being extended on monthly basis to complete pending activities.
SMP implementation agency signing	Development Action Society mobilized on 22 nd July, 2016. Bimonthly reports being prepared. All the reports require to be shared by World Bank.	Centre for Environment and Development (CED) Agreement signed on April 22, 2015. Activity wise reports being prepared and shared with the Bank.	Centre for Environment and Development (CED). Agreement signed on May 14, 2015. Activity wise reports being prepared and shared with the Bank.
Grievance Redressal Committee	Compliant collection system in place. Members of the Grievance redressal committee have retired. New members need to be nominated.	Constituted. Seven GRC meetings conducted so far. Also, every Monday at corporation in commissioner’s office coordination meetings are being organized. In addition, monthly meetings are being	Constituted. 4 meetings completed so far. Claims have been made on land around lake to be remediated. The matter is under consideration of the Courts. No project activities are being undertaken until the

		organized barring a couple due to non-availability of commissioner. However, proceedings of these meetings are required to be documents and filed.	complaint is resolved.
No of Project Affected Families	0	33 pig rearing families from Yerukala tribe and 22 ragpicker families' dependent on dump site.	41 out of 61 Families mentioned in ESMP are identified.
No. of Project affected persons	0	175 PAPs of the total 207 PAPs in the ESMP have been identified and physically verified their credentials. Unfortunately, 11 PAPs expired and 21 are not in the project area.	132 persons out of 195 PAPs have been verified. 9 PAPs migrated to other towns. 3 PAPs expired. PAPs that could not be traced are 48.
ID Cards distributed	NA	Collected ID proof and issued identity cards to 175 PAPs. All 109 adults out of 175 now have bank accounts (includes 73 new account with the support of NGO.	So far ID cards distributed for 106 PAPs. Supporting documents being collected for another 18. Need to be expedited.
Disbursement of compensation allowance for loss of livelihood	NA	Disbursement of transitional allowance is completed for 100 PAPs	Yet to start.
Awareness and counselling meetings	Few sessions organized by PMU. Workshop organized by DAS in the adjoin villages on safe health and hygiene practices. For waste disposal, further activities are planned.	17 group counseling session have been organized to the PAPs on health and hygiene-activity completed. 3 mass awareness rallies for PAP children and other children on health promotion and sanitation.11 awareness programs on solid waste management were also conducted.	10 awareness program on solid waste management and one on health awareness. 13 counselling sessions conducted thus far.
Training Needs Assessment	Completed. Training being facilitated by the NGO itself.	Completed. Training completed. Market linkages are ongoing.	Completed.
Delivery of training	Training on around tailoring and beauty	Training completed. Market linkages are	Ongoing.

	services have been initiated. Training for drivers needs to be initiated. Training around better Rearing of cows and horticulture is planned.	ongoing.	
Education support to school age children	NA	As per the ESMP, 55 children are identified and Tie up with schools is under follow up.	40 children in school going age as per ESMP. 5 out of 9 school dropouts joined school again after counselling.
Social security entitlements		54 onsite consultations so far to encourage for social security entitlements. Involved PAPs in Janma bhoomi programme, facilitated opening of their first bank accounts, SHG formation, voter ID campaign are some of the major activities. Facilitated 5 PAPs and applied for ration card 3 PAPs applied for old age pension 1 PAP applied for widow pension One PAP applied for disabled pension 6 PAPs submitted applications for house patta. 2 PAPs applied online for ST Loans with subsidy.	50 onsite consultations so far to encourage PAPs for alternate livelihood and social security schemes. SHG formation being initiated. Facilitation for caste, income proof and residence proof certificated being done. Loan applications for 5 PAPs being facilitated. Facilitated 2 PAPs for driving license, 6 PAPs for voter ID cards, 4 PAPs for SC certificates, 31 PAPs facilitated for new bank accounts. One PAP introduced at e seva Kendra for application for govt. program support. Efforts being made for formation of SHGs of rag pickers
Income restoration/alternate livelihood option		Once the work started the PAPs were given the opportunity to work with contractor on barricading of the premises and completed the work on 25 th march 2016 for Rs 40,000 (Rs 350 per day per person). Training on PPE kit given to PAPs	69 PAPs identified as livelihood losers. Only 9 Males and 16 Females wish to change their livelihoods. Alternate livelihood options being explored with TSIIC, industry units and shops at KIE.

		continuing to work on dump yard. Nearly PAPs are involved in daily wage on shift system at dump yard.	
Access roads and Bridge	Access road upto Makaltala bridge to be completed before monsoon.		

VIII. Key Issues and Agreed Actions

51. Based on the review of the project activities during the mission, the actions summarized below are critical for achieving the PDO of the project and shall be monitored by MoEF& CC and project implementation agencies. In addition, a detailed list of actions (included in Annex 3) agreed for each of the implementing agencies (including the status of actions agreed during the previous mission) shall also be completed to improve the performance of the project.

- Expedite finalization of ‘Remediation of Contaminated Sites Rules’ and ‘Soil Standards’.
- Ensure availability of adequate funds (additional US\$4.5 million in FY17-18) and ensure that all the committed activities are completed within the revised closing date of the project.
- Monitor the implementation of remediation sub-projects in Kadapa, Andhra Pradesh, and Dhapa, Kolkata, West Bengal to ensure completion of all activities within the revised project closing date.
- Review training and capacity building programs of the project and ensure completion of all activities envisaged under the project.
- Expedite activities of MoEF& CC, related to management plan for industrial chemicals; Waste Management Information System; engagement of academic institutions for remediation research and ensure completion within the project closing period.
- Organize POC meeting immediately, to review the project activities and provide guidance for future course of action.

Annexes

Annex 1 - Component Wise Status of Implementation

Annex 2 – Status of Results Framework

Annex 3 – Status of Agreed Actions and New Actions Agreed

Annex 4 – Governance and Accountability Action Plan

Annex 5 – List of Persons Met

Annex 1
Component wise status of Implementation

1. **Overall:** During the mission, the Bank team conducted a detailed review of each activity of the implementing agencies, visited pilot remediation sub-project sites and noted that majority of the capacity building activities under component 1 have been completed. However, pilot remediation activities (which constitute over 60 percent of the total financing) under component 2 are going slow, even after one year of contract award. Further, MoEF& CC has completed three basic studies and has constituted a Technical Review Committee (TRC) to consider the recommendations of these studies and finalize 'Remediation of Contaminated Sites Rules, 2017'. Sections below present a component wise implementation status of the project activities.

Component 1 - Strengthening Environmental Institutions: Building Capacity for Remediation (Original: US\$16.74 million, Revised – US\$15.10 million)

2. This Component continues to perform 'Moderately Satisfactorily', due to the completion of number of capacity building studies, completion and commissioning of laboratory equipment that strengthened the analytical capacity of the implementing agencies, but slow progress of training activities.

Sub-component 1(a) – Developing a Framework for establishment of National Program for the Rehabilitation of Polluted Sites (NPRPS): Three basic studies (i) Financial, Institutional and Legal study for development of NPRPS; (ii) development of methodologies; and (iii) Inventory and Mapping of polluted sites have been completed. In line with the roadmap agreed during last restructuring of the project MoEF& CC has constituted a Technical Review Committee (TRC) to consider the recommendations and finalize 'Remediation of Contaminated Sites Rules, 2017'. Based on series of deliberations, the TRC has recommended draft rules to MoEF& CC. MoEF& CC, intends to conduct series of consultations with stake holders including state government on these rules, and publish them for comments/ suggestions. The final guide lines are planned to be notified, after incorporating the comments / suggestions received.

In addition, the ministry has also constituted a Technical Expert Committee (TEC) for the formulation of soil standards. The project team with guidance from TEC has carried out field sampling and assessment for the establishment of soil standards. These standards are expected to be finalized soon and are planned to be included as reference standards in the Rules for Remediation of Contaminated Sites in India.

3. **Sub-component 1 (b) - Environmental Compliance Assistance Centers (ECAC):** Since, establishment of ECAC is not critical for the achievement of PDO and at the request of MoEF& CC, this component was dropped from the project in the last restructuring of the project, in 2016. As reported earlier, the business strategy for ECAC in Andhra Pradesh, and West Bengal has been prepared. The ECAC in West Bengal is also functioning from the past three years and has conducted two sectoral studies and number of stake holder workshops. Post restructuring, number of these activities however, have reduced.

4. **Sub-component 1(c) - Institutional Capacity Building of State Pollution Control Boards: *Laboratory Strengthening:*** Procurement of all the lab equipment envisaged under the project and refurbishment of the central lab for Telangana was completed in the year 2014 (in the undivided state of Andhra Pradesh). The refurbished lab is fully functional and has analyzed over 80 hazardous waste samples so far. In West Bengal, all the equipment was procured in 2015, however the activities for the refurbishment of central lab have just been completed. Subsequently, pending commissioning of three equipment (Sampling apparatus for POPs and VoCs, GC-MS MS and Infrared Spectro Meter) was commissioned and training of PCB staff is being provided. Overall, WBPCB has used the equipment extensively for hazardous waste analysis (AAS - 3041 samples, ICP AES – 2882 samples, RCDU – 1810 samples, XRF – 1465 samples, organic solvent extractor – 470 samples, hand held XRF – 67 samples and TCLP 25).

5. Despite this good usage, the mission noted that sampling apparatus for monitoring dioxins and furans is not being utilized by both TSPCB and WBPCB since its purchase three years ago, citing the difficulties in transporting the equipment to the sampling site and lack of laboratory analysis facilities. The mission expressed its concern on this and based on discussions with PCB staff, it was agreed that, both the agencies will conduct at least one monitoring before September, 2017, using this equipment and will also share a detailed annual monitoring program to the Bank and to MoEF& CC.

6. *Training:* The project has not organized any training program for about three years. While MoEF& CC has proposed training programs by NPRPS consultants and agreed for APPCB / TSPCB's proposal for an exposure visit in Europe to understand the effectiveness of Geo-tubes in remediation, neither of them have been undertaken. As the remediation pilots, have commenced implementation and NPRPS reports are finalized, the training programs are very critical to all the implementing agencies in supervising and managing issues of remediation. The mission however was informed of MoEF& CC's decision to drop the exposure visit to Europe due to delays in implementation of remediation sub-projects.

7. In view of the above and considering that capacity building is one important outcome indicator of the project, the mission suggested to conduct specific training programs on (a) proposed Rules for the remediation of contaminated sites; (b) assessment of contamination, preparation, implementation and monitoring of remediation plans for all the key engineering staff PCB, including staff in zonal/regional/field offices and also to the other pollution control boards in the country; (c) use of advanced laboratory equipment procured through the project (for all the scientific staff of the PCBs including staff in zonal/regional/field offices) and (d) international experiences on development of remediation programs. It was agreed that, a time bound training schedule on these activities will be provided by the implementing agencies by August 31, 2017 and implemented before project closure.

8. *Sectoral Studies by APPCB / TSPCB:* The studies on inventory and characterization of hazardous waste and municipal solid waste dumpsites are completed, for Andhra Pradesh and Telangana prior to state bifurcation. The findings of these studies are being used by both APPCB and TSPCB. An online inventory of hazardous waste substances has also been created and is being used by the various regional offices of both the agencies. Updating the inventory, based on the recently amended Hazardous Waste Management Rules, 2016, that includes few additional substances, is however still pending. In case of municipal solid waste studies, an update from the respective municipal authorities about the implementation of the recommendations of the study, is not available.

9. On the other hand, the mission noted that the progress of the study to prepare an 'Inventory of Electronic Waste' in Andhra Pradesh and Telangana, after more than a year of award of work is very slow. The consultant has just initiated field data collection. The mission, advises both APPCB and TSPCB to closely monitor the progress of the study and ensure its timely completion.

10. Another study to prepare remediation plans for two other polluted lakes (Asani Kunta and Khazipally) in Hyderabad was awarded by TSPCB in May, 2016. Progress, however after more than a year is very slow. The consultant is yet to commence field sampling program. Considering the two-season field sampling and the need for the design of remediation plans, this study is not expected to be completed even in the extended project period. The mission, advises TSPCB to make all efforts to expedite the study and ensure its completion within project period.

11. *Sectoral Studies by WBPCB:* Final report of the study on inventory and characterization of hazardous waste has been submitted incorporating GIS data base, and is expected to be completed after PCBs approval. Study to assess the five contaminated sites in naphthalene and mercury industrial clusters also has not been completed. As noted earlier, (i) environmental assessment of the remediation plan recommended and (ii) implementation modalities of the suggested remediation is yet to be agreed with owners of the respective industries. The mission advises, WBPCB to expedite completion of both studies.

Component 2- Investments in Priority Remediation and Environmental Improvements in orphan hazardous waste sites&municipal dumpsites(Original-US\$52.80 million, Revised–US\$30.86 million)

12. Performance of this component has been downgraded to ‘Moderately Unsatisfactory’, as the contract for remediation of NMK Lake in Hyderabad has not been awarded by TSPCB and slow progress in implementation pilot sub-projects on closure and containment of disposal site in Kadapa, Andhra Pradesh and Dhapa disposal site in Kolkata, West Bengal, even after one year of contract award.

13. Further, small works for construction of fence and weir at NMK Lake is also going very slow, after more than 15 months’ award (as against the contract duration of 3 months). Similarly, the procurement process for another contract package for upgradation of existing sewage treatment plant at NMK Lake, could not be initiated, due to delay in award of main contract for remediation.

14. Given the present status of the project and as indicated in the table below, the sub-project in Kadapa in Andhra Pradesh is likely to be completed by December, 2017, whereas the second sub-project in Dhapa, Kolkata in West Bengal is likely to be completed by March, 2018. Implementation of the third subproject, NMK Lake at Hyderabad in Telangana is unlikely.

Table 1: Summary Status Sub-Projects

Pilot Sub-Project	Cost, US\$M	Status	Likely Completion Time	
			Earlier	Now
1. Waste Disposal Site, Kadapa,A P	5.24	Works ongoing	April, 2017	Dec,2017
2. NMKLake Hyderabad,Telangana	10.98			
Package 1 – Weir & Fencing	0.32	Ongoing	Jan, 2017	Sept,2017
Package2-Dredging&Containment	6.81	Pending Award	Aug, 2017	Unknown
Package3–Treatment Plant	3.85	Designs complete	Aug, 2017	Unknown
3. Waste Disposal Site, Dhapa, WB	10.03			
Package1–Closure&Containment	9.43	Awarded	Sept, 2017	March,2018
Package 2- Leachate Plant	0.60	Awarded	Sept, 2017	March,2018
Total (Sub-Projects)	26.25			

15. To strengthen capacity for implementation, each implementing agency have sought assistance of other technical agencies of the respective states such as, Kadapa Municipal Corporation for Kadapa Sub-Project, Irrigation Department for NMK Lake sub-project, Kolkata Municipal Corporation for Dhapa. Senior engineers from these agencies have been deputed / assigned to supervise the implementation of respective sub-projects in the states. In addition, a Project Management Consultant has also been hired by the implementing agencies to supervise and monitor the progress of the works. Agencies for implementation of Social Management Plan have also been hired by all the three implementing agencies.

Detailed Review of sub-projects in implementation:

16. **Closure and containment of waste disposal site at Kadapa, Andhra Pradesh:** The team visited Kadapa disposal site to review the ongoing closure and containment works. During the visit, mission noted that the contractor has excavated and shifted about 55,000 tons of waste and segregated about 80% of waste. As required by the contract, screening is being done through a trommel with 3 screens of sizes: 0 to 4mm, 4 to 8mm and 8 to 32mm, and other fractions. About 35,000 tons of segregated waste is placed back at the reshaped dumpsite and with a compacted density of 0.8. About 2400 tons of plastic has been segregated and is planned to be used for boiler operations of Zuari Cements, situated at 50 km from the site.

17. Overall, the contractor after 15 months of award (as against original period of 9 months), has completed (i) profiling of waste; (ii) construction of leachate wells; (iii) segregation of waste; (iv) toilet

blocks and (v) about 70% of compound wall. The major pending activities are (i) laying of HDPE liners; (ii) Gas collection system; (iii) leachate treatment plant; (iv) final cover; (v) land scaping; and (vi) other works such as internal roads and finishing works, etc.

18. In terms of specific issues, the mission advises APPCB to ensure that (i) quality of drainage layer used by the contractor, meets the specifications of contract; (ii) HDPE liners and drainage layer are laid, prior to the monsoon to avoid the issues of pollution and other construction issues; (iii) the segregated plastic, is sent to co-processing at the cement plant, at the earliest. It is also important that the material for final cover system be obtained in advance to avoid quality issues during monsoon. In addition, the HT line passing through the site shall be shifted at the earliest, to avoid safety concerns and similarly the surrounding area of the site, used for various construction activities shall be cleaned and restored completely, immediately after the remediation activities are completed.

19. Status of prior actions agreed for closure and containment of Kadapa waste disposal site: Prior to the finalization of the closure and containment plan for Kadapa waste disposal site, development of a new disposal site for the city and its operation in line with the Municipal Solid Waste (MSW) Rules of India, has been agreed as a prior action with Kadapa Municipal Corporation (KMC). In line with this commitment, KMC identified an alternate site of about 100 acres, at about 18 km from the city and started disposing city's waste at this site from the year 2014. The disposal practices at the site however, didn't comply with MSW Rules of India. Based on Bank team's concern during earlier missions in 2014, a small landfill cell sufficient to handle waste disposal for six months was developed with financial assistance from APPCB. In parallel, based on GoAP's initiative, a contract for the development of waste energy plant at the site was awarded to a private agency on PPP basis. During the mission, the Bank team noted that neither the landfill cell is being used by KMC, nor the waste energy plant has been set up.

20. As a follow, up, the mission met with the District Collector of Kadapa and reminded his earlier commitments on improving the waste management practices at the new landfill site and to understand their plans for maintaining the closed landfill site after project closure. It was agreed that, the improvements will be made, using the funds available for solid waste management for the city.

21. Closure and containment of Dhapa disposal site, Kolkata, West Bengal: Despite the award of work in May, 2016, the contractor has commenced his activities only in November, 2016. The progress made by the contractor, so far includes (i) profiling of waste; (ii) laying of geo-grid up to 31 m (highest level to be achieved is 33m); (iii) 30% of drainage layer work; (iv) about 15% HDPE liner work; (v) about 20% of peripheral leachate drain, and (vi) access road to the top of the landfill. While this is a good progress from November, 2016, since the contract was awarded in May, 2016, the overall progress is very slow. Some important activities such as (i) leachate treatment plant; (ii) compound wall; and (iii) other infrastructure, has not been initiated.

22. Considering the status of the project and to expedite completion of works, the mission advises that the contractor should (i) complete maximum amount of liner works, prior to the monsoon; (ii) procure soil for final cover prior to the monsoon and store adequately, so that this activity is not affected due to rains; (iii) develop strategies for carrying out other infrastructure work during rains, and (iv) take up as many works concurrently.

23. The mission also reviewed the progress of Leachate Treatment Plant works and observed that the contractor is yet to finalize his designs and drawings. Considering that the contract was awarded in November, 2016, this is very slow progress for a contract of six-month duration. The mission expressed its concern and requested WBPCB to ensure that the physical works are commenced immediately.

52. **Status of prior actions agreed for the closure and containment of Dhapa disposal site:** Prior to the finalization of the closure and containment plan for Dhapa sub-project, both Kolkata Municipal Corporation (KMC) and GoWB, have agreed to ensure that (i) waste in the active dump site in Dhapa is disposed, as per the Municipal Solid Waste Rules of Government of India; (ii) new and alternate waste disposal site(s) is identified for the city, as the capacity of existing site is almost exhausted; and (iii) remaining part of Dhapa site is closed and contained based on the experience gained by remediating a portion of the site through the current project. The mission met the Commissioner, Kolkata Municipal Corporation (KMC), to discuss the progress on these agreed prior actions and was informed that, KMC has identified two new sites for safe disposal of solid waste generated from the city and plans for their development are underway. The mission was also informed that, KMC developing another project through ongoing Kolkata Environment Improvement Project (KEIP), for the redevelopment of Dhapa disposal site. The mission requested, KMC to share the details of these plans along with the implementation schedules.

Component 3: Project Management (Original - US\$5.85 million, Revised – US\$5.32 million)

24. Performance of this component continues to be 'Moderately Unsatisfactory'. This is due to the (i) slow progress in the implementation of two remediation sub-projects, despite award of contracts six months ago; (ii) inability to award contract for the third remediation sub-project for NMK Lake in Hyderabad; (iii) number of contract management issues with all the three agencies; and (iv) pending in filling up the vacant positions in the PIUs of Telangana and Andhra Pradesh. The mission advises MoEF& CC and all the three implementing agencies to focus on these actions, so that project completes all the project activities within the closing period.

Annex 2
Status of Project Outcome Indicators

PDO Level Indicators	Unit	Baseline	End Target	Status	
PDO Indicator: Framework for the establishment of NPRPS comprising inventory of polluted sites, remediation methodologies, and policy and Regulatory reviews developed	Yes /No	No	Yes	No	All three studies on Inventory, Methodology and Policy & Institutional studies approved and Draft Framework recommended to MoEF& CC.
PDO Indicator: Contaminated Land Managed or dump sites closed under the project	Ha	0	16.3 ha	0	Dump sites in Andhra Pradesh (4.2ha) and West Bengal (12.10ha) completed 50% & 30% closure.
PDO Indicator: Capacity of technical staff of the participating agencies strengthened to prepare, implement and monitor remediation plans	Score	0	3	1	Preparation capacity developed&implementation underway. Assessed through-1.Preparation of remediation plans, 2.Implementing remediation plans,&3. Post remediation monitoring
PDO Indicator: Direct project beneficiaries (number) of which female (%)	Number (%)	0	157,362 (45%)	0	Implementation of remediation plans commenced. Project beneficiaries estimated from Kadapa - 25669 Dhapa - 131,693
Intermediate results					
Component 1: Strengthening of Environmental Institutions – Building Capacity for addressing pollution remediation					
IR Indicator: Inventory of Polluted Sites in India developed	Yes /No	No	Yes	Yes	Inventory of polluted sites has been finalized.
IR Indicator: Methodologies for remediation of polluted sites in India developed	Yes /No	No	Yes	Yes	Methodologies for remediation of polluted sites finalized
IR Indicator: National Guidelines for the remediation of polluted sites developed	Yes /No	No	Yes	No	Guide lines / Rules for remediation have been recommended by TEC to MoEF&CC
IR Indicator: Policy options for remediation of polluted sites developed based on a review of existing legislations and international experiences	Yes /No	No	Yes	Yes	Policy options have been analyzed and recommended to MoEF& CC
IR Indicator: Number of parameters that can be analyzed by the laboratories of Andhra Pradesh, Telangana and West Bengal Pollution Control Boards, increased	Number	26	76	76	Parameters that can be analyzed by TSPCB and WBPCB has been increased to 76 parameters. Similar capacity is being developed in APPCB.
IR Indicator: Online network of State Pollution Control Boards for remediation established	Yes /No	No	Yes	No	On line network of pollution control boards is being established
Component 2: Investments in Priority Remediation and Environmental Improvements					
IR Indicator: Remediation plans prepared based on risk based approach and ready for implementation in all the three participating states	Percentage	0	100	Yes	Remediation Plans for all the three pilot sub-projects prepared and have been tendered out for implementation.
IR Indicator: Post-remediation monitoring system with appropriate infrastructure and approved indicators established for all three pilot sites by the completion of remediation works	Yes/No	No	Yes	No	Post remediation monitoring system as recommended in the TEP approved remediation plan, is established.
IR Indicator: People with reduced direct exposure to pollution from sites remediated by the project	Number	0	17,238	0	Total estimated from sub-projects (Kadapa - 12420, and Dhapa - 4818)

Annex 3
Status of Agreed Actions and New Actions

Agreed Actions	Responsibility	Target	Status	Revised Target
1.Hire experts in HW and MSW	MoEF& CC	July 31, 2016	Completed	Completed
2.Organize POC meeting	MoEF& CC	Due Sept, 2016	Pending	Immediate
3.Complete training activities	All Agencies	Share schedule	Pending	Immediate
4.Develop SPCB Network	MoEF& CC	Immediate	Pending	Immediate
5.Agree with 5 industry owners on financing of remediation	WBPCB	Immediate	Pending	Immediate
6. Monitor the re-bid / bid process for the pilots	MoEF& CC	To be continued	NMK Lake Pilot Pending	Dropped
7. Closely Monitor the implementation of sub-projects	MoEF& CC	Continuous	Needs improvement	Continuous
8. Initiate procurement activities and commission new activities agreed during restructuring	MoEF& CC	Aug 31, 2016	Pending	Immediate
<u>10.Action Plan for NMK</u>				
i. Award Remediation Contract	TSPCB	June 30, 2016	Pending	Dropped
ii. Award STP contract	TSPCB	Aug 31, 2016	Pending	Dropped
iii. Appoint Supervision Consultant	TSPCB	July 31,2016	Pending	Dropped
iv. Fill vacancies & re-activate NMK Lake Management Committee	TSPCB	July 31, 2016	Pending	Dropped
v.Prepare monthly activity plan for the sub-project and monitor implementation	TSPCB	Immediate & Continuous	Dropped	Dropped
vi. Strengthen monitoring to ensure no dumping in the open areas of Katedan Industrial Estate	TSPCB	Immediate & Continuous	Immediate & Continuous	Immediate & Continuous
<u>11.Closure and Containment of Kadapa Municipal Solid Waste Site</u>				
i. Ensure Kadapa Municipality complies to the prior to actions agreed for new landfill site	APPCB	Immediate	Pending	Immediate
ii. Prepare monthly activity plan for the sub-project and monitor implementation	APPCB	Immediate & Continuous	Pending	Immediate & Continuous
<u>12. Closure and Containment of Dhapa Municipal Solid Waste Site</u>				
i. Monitor progress of main contract for timely completion	WBPCB	New	Immediate & Continuous	Immediate & Continuous
ii. Monitor progress of leachate treatment plant Work	WBPCB	New	Immediate & Continuous	Immediate & Continuous
iii. Remobilize Social & communication expert	WBPCB	June 30, 2016	Delayed	Immediate
iv. Provide update on the prior actions from Kolkata Corporation on active Dhapa Site	WBPCB	June 30, 2016	Pending	Immediate
13. Complete Laboratory refurbishment works and install all the equipment	WBPCB	June 30, 2016	Completed	Completed

Financial Management				
14. Allocate additional budget in FY 2017-18 for project activities	MOEF& CC	Immediate	New	Immediate
15. Co-ordinate with the project team of 'Emission Trading Scheme (TF099872)' and submit overdue audit report of this project along with FY 16-17 Audit Report for CBIPM.	MoEF& CC	December 31, 2017	New	December 31, 2017
Environmental Safeguards				
16. Improve construction site management, safety and use of PPEs at Kadapa sub-project site	APPCB	Immediate	Improved	Continuous
17. Appoint dedicated environmental specialists at PIUs	APPCB/TSP CB/WBPCB	Immediate	Completed	Completed
18. Ensure no impact on adjoining graveyard at NMK Lake and consult community to manage cultural properties	TSPCB	Continuous	Ongoing	Continuous
Social Safeguards & Communications				
19. Hire Social & Communication specialists at APPCB	APPCB	July 31, 2016	Completed	Completed
20. Update PAPs at Kadapa, NMK Lake through verification exercise& implement SMP actions	APPCB/ TSPCB	July 31, 2016	Completed	Completed
21. Update ESMP for NMK Lake and re-disclose at TSPCB web site	TSPCB	July 31, 2016	Dropped	Dropped

Annex 4

STATUS OF GOVERNANCE AND ACCOUNTABILITY ACTION PLAN

Item	Issues/Risk/ Rating	Mitigating Actions	Responsibility	Timeline	Early warning indicators	Status
Implementati on of remediation pilots	Demonstration effect diminished due to lengthy implementation (M)	Agree on roles of project oversight structure and progress reporting	MOEF& CC and State PCBs	Agreement during appraisal/ negotiations	-Delayed progress reports -Delayed contracting of independent supervision -Delays in detailed engineering design	Observed despite mitigating measures in place, due to complex nature of remediation
	Poor performance by implementing agencies (M)	-Use project resources to strengthen and rationalize the technical capacity of State PCBs -Nominate staff of PIU according to agreed TORs -Prepare timelines for implementation	MOEF& CC and State PCBs	Y1	-Failure to nominate technical staff for training - Substantial deficiency in staffing of PIU - Failure to submit progress reports	Observed in all the agencies despite mitigation actions.
	Failure to sustain remediation results (M)	-Expand community outreach to change behaviors and prevent secondary pollution -Agree on a plan for regular monitoring of industries in the area by PCB	State PCB	Y1 and onwards	PCB fails to inventorize and monitor units generating HW in the project area	Remediation actions not completed hence not observed, yet.
	Lack of appropriate communication to public and communities on remediation results (M)	Expand community outreach activities using project resources	State PCBs	Public consultations during preparation of ESA and Y1 onwards	-Complaints from communities continue - Social and Environmental issues inadequately addressed in progress reports	Communication generally effective and all mitigating actions implemented.
	SEMF and site specific mitigation measures not properly integrated in the	Technical documentation and Bidding documents for site remediation includes safeguards	State PCBs	Y1 and onwards	Social and Environmental issues inadequately addressed as witnessed	Mitigation actions included in

	pilots (L)	provisions			during site visits	designs and contracts. No issues, so far.
Project execution and contract management	Poor quality of technical documents causing delays (M)	-Early involvement of independent supervision in review of technical specs - Periodic review of bidding process and post review of contract awards just below the prior review threshold	State PIU	Y1 and Y2	Poor quality of bidding documents	Quality of bidding documents is good. No delays occurred, due to poor designs & bid documents
	Inaccurate invoicing of works (M)	- Strengthen technical supervision and introduce mandatory field checks - Ensure adequate capacity of PIU FM - Establish a register of late payments	State PIU	Y2 and onwards	-Costs either too low or too high and/or do not match with progress of contract milestones -No compliance of completed and certified works	No issues observed yet.
	Payments made without prior verification of quantities and quality of site works (M)	- Mandatory site visits and reporting by independent supervision consultant - Combined Procurement & FM audits - Intensify site visits of completed works suspend payments if at fault	State PIU	Y2 and onwards	Slow progress of site works	No issues observed yet.
	Non-compliance of contractors with site specific safeguards and site mitigation measures (L)	Contractors workshops periodic review of quality of contractor's documents	State PIU	Y2 and onwards	-Poor quality of bidding documents -Obvious omissions of safeguards requirements in contractor's documents	No major issues observed. Safeguard measures are complied.
Procurement	Incomplete technical specifications (M)	Pre-bid briefings and quality written clarifications to bidders in timely manner	MOEF and State PIU	Prior to effectiveness Y1 and onwards	-Procurement delays -Lack of response from bidders	Issues observed and bid requirements modified

	Procurement delays and higher cost (L)	- Mandatory uploading on bidding documents at PCB website -Avoid 'slice and packaging' to attract bidders -Review quality of bidding documents	MOEF and State PIU	Y1 and onwards	-Winning bids too high compared to similar works - Delays in commencement of work after contract	Higher bid prices and delays experienced. Re-bidding with suitable modifications was successful.
	Poor supervision of contracts (M)	Maintain procurement staff of adequate quality	State PIUs	Y1 onwards	-Lack of proper reporting -Frequent changes in the procurement timeline	Procurement staff are of good quality.
	Collusion among contractors (M)	Records of public openings of bids kept on the public domain and disseminated within 15 days of contract award	State PIU	Y1 onwards	-Bidders use same bank for security deposit and bank guarantees -Bids far too low	Complied. No issues observed, yet.
	Delays in bid evaluation (M)	-Create procurement database for each pilot site with procurement plan - Keep accurate records of all documents with data of EOI, and bids -Undertake internal audits	State PIU MOEF	Y1 and onwards	-Lengthy time between bid submission and award -Number of extensions of bid validity exceeds the acceptable standards	Observed in all three agencies, despite mitigation action.
	Submission of forged documents to win contracts (M)	Random verification of references of firms	POI and State PIUs	Y1 and onwards	Incomplete of missing bank guarantee documents	Not observed
Financial Management System and Internal controls	Inadequate and unreliable FM information and incomplete FMR (M)	- Ensure FM training before effectiveness -Obtain TA to improve the quality of record keeping (electronic and manually)	- PCB PIUs	Prior to effectiveness and Y1 onwards	-Inordinate delays in submission of quarterly FM reports - Pending receipts unaudited reports	Not observed yet
	Lack of compliance with established internal financial controls (M)	Strengthen financial management oversight through line ministry and State Governments	MOEF and States	Y1 onwards	Significant variation of expenditure and budgets	Not observed yet
	Delays in hiring auditors and overdue audits (H)	-Hire auditor for three years with an agreed schedule	MOEF and state PCB	Y1 By December 2010	No evidence of hiring audit firm during supervision	Not observed yet

	Inability of auditors to provide quality and independent opinion (M)	-Same as above -Prepare TOR and agree with Bank	PCB	After negotiations	-Inability of auditors to pick up information on FM issues noted in supervision	Not observed yet
Monitoring and evaluation	Achievement of PDO adversely affected by the lack of project information (M)	-Disclosure policy agreed with pilot states -Abide to the provisions of RTI	MOEF State PCB	After effectiveness, onwards	-Large number of request for information -Lack of evidence on timely responses	Not observed yet
	Achievement of PDO affected by inability to implement mid-term corrections (M)	Carry out beneficiary survey at midterm review to assess public perception	PCB PIUs	Y1 onwards	-Continuous delays -Absence of information from monitoring and evaluation of progress/results	Not observed yet
	Achievement of PDO affected by the lack of engagement of citizens in oversight of project pilots (M)	Agree on the design and implementation arrangements of social accountability mechanism and public engagement	MOEF and PCBs	Y1 Mechanism to be in place by end of Y1	Non-compliance with procedures and arrangements related to community involvement and beneficiary surveys	Not observed yet
After-care and monitoring	Resources for after-care not planned adequately (H)	-Include first year after care in the remediation contract - Assign reasonability to PCB for regular monitoring of environmental parameter of the site and plan budget resources	PCB State Government	Y3-4 onwards Prior to Project completion	Complains for violation or improper management of the site reported (media or elsewhere) Site/Beneficiary survey during Y5 reports concerns from citizens	Not observed yet
	Transfer of responsibility for aftercare monitoring to other agency (M)	-Agree and ensure implementation of after care plans prior to completion of site remediation and transfer of site for management to municipality -Provide evidence for change of land use as necessary	States and MOEF	Y4-5 depending on completion of sites	Delays in agreeing on site management and monitoring arrangements	Not observed yet
	Environment improvement in the area affected by neglect (L)	Engage citizen's groups/Ag University AP/Chrome Producers Association (WB) monitoring of site	PCB and Municipalities	Y4-5	Number of complains, media reports	Not observed yet
Overall risk.	M					

Note: N =High; M= Moderate, L= Low

Annex 5
List of Persons Met

Ministry of Environment, Forests & Climate Change

1. Mr. Ajay Narayan Jha, Secretary
2. Dr. R.R. Rashmi, Special Secretary
3. Mr. A.K. Mehta, Joint Secretary
4. Mr. Biswanath Sinha, Joint Secretary & Project Director
5. Mr. Manoj Gangeya, Director, Hazardous and Solid Waste Management Division (HSMD)
6. Mr. Aditya Narayan Singh, Additional Director, HSMD
7. Mr. R.K. Gupta, Procurement Consultant, CBIPIMP
8. Ms. Neha Dharmashaktu, Technical Consultant, CBIPMP
9. Mr. Rohit Rewani, Financial Management Specialist, CBIPMP

Department of Economic Affairs

10. Mr. Lekhan Thakkar, Director, MI Division

Government of Telangana

11. Dr. Rajeev Sharma, Advisor to the Government & Chairman, TSPCB

Andhra Pradesh Pollution Control Board

12. Mr. B.S. Prasad, Member Secretary & Project Director
13. Mr. A. Ramchand, Chief Environmental Engineer & PIU Head, CBIPMP
14. Mr. S.S.S. Murali, Environment Engineer
15. Mr. Y. Achyutha Ramayya, Procurement Specialist
16. Mrs. Padmavathi, Chief Accounts officer

Telangana State Pollution Control Board

17. Mr. P. Vishwanathan, Chief Environmental Engineer
18. Mr. L. Vishveswar Goud, Senior Environmental Engineer & Head, PIU, CBIPMP
19. Dr. D. Prasad, Monitoring Evaluation Specialist, CBIPMP
20. Mr. Ramesh Gupta, Senior Environmental Engineer
21. Mr. Vinay Kumar Naidu, Chief Accounts Officer

West Bengal Pollution Control Board

22. Prof (Dr). Kalyan Rudra, Chairman
23. Mr. Subrat Mukherjee, Member Secretary & Project Director
24. Mr. Rohit Tiwari, Officer on Special Duty
25. Mr. Debasis Sarkar, Project Engineer, CBIPM
26. Mr. S.K. Adhikari, Advisor, WBPCB
27. Mr. S.K. Khamrui, Finance & Accounts Manager
28. Mr. Subashish Pal, Accounts Officer

Other Agencies

29. Dr. T. Babu Rao Naidu, District Collector, YSR District, Kadapa
30. Mr. P. Chandra Mouliswar Reddy, Kadapa Municipal Corporation
31. Mr. Khalil Ahmed, Commissioner, Kolkata Municipal Corporation
32. Mr. Subhashish Chattopadhyay, Director General (Solid Waste), Kolkata Municipal Corporation