

REPUBLIC OF INDONESIA
Jakarta Urgent Flood Mitigation Project
(JUFMP)

Environmental and Social Management Framework
(Draft 24 December 2010)

Daerah Khusus Ibukota Jakarta
Republic of Indonesia

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ACRONYM AND ABBREVIATION

AMDAL	Analisis Mengenai Dampak Lingkungan – Process of environmental impact assessments
ANDAL	Analisis Dampak Lingkungan – environmental impact assessment/statement
BAPEDAL	Badan Pengendalian Dampak Lingkungan - Environmental Impact Management Agency
BAPPENAS	Badan Perencanaan Pembangunan Nasional – National Development Planning Board
BAPPEDA	Badan Perencanaan Pembangunan Daerah – Regional Development Planning Board
BBWSCC	Balai Besar Wilayah Sungai Ciliwung-Cisadane – Regional Office of Ciliwung-Cisadane River Basin (under DGWR)
BPLHD	Badan Pengendalian Lingkungan Hidup Daerah (Regional Environmental Management Agency)
CDF	Confined Disposal Facility
DGHS	Directorate General for Human Settlements (PU – MPW)
DGWR	Directorate General for Water Resources (PU – MPW)
DKI Jakarta or DKI	Daerah Khusus Istimewa Jakarta (Provincial government of DKI Jakarta)
EA	Environmental Assessment
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
ESMF	Environmental and Social Management Framework
ESWG	Environmental and Social Working Group
GoI	Government of Indonesia
JABODETABEK	Jakarta-Bogor-Depok-Tangerang-Bekasi
JEDI	Jakarta Emergency Dredging Initiative
JUFMP	Jakarta Urgent Flood Mitigation Project
KA-ANDAL	Kerangka Acuan – ANDAL (Term of Agreement of EIA)
MENLH	Menteri Lingkungan Hidup – MoE
MoE	Ministry of Environment
MoF	Ministry of Finance
MPW	Ministry of Public Works
NCEA	The Netherlands Commission on Environmental Assessment
NGO	Non-Governmental Organization
OP	Operational Policy
PAP	Project Affected Person
PI	Public Involvement
PIP	Project Implementation Plan
PIU	Project Implementation Unit
PMU	Project Management Unit
PP	Peraturan Pemerintahan – Government Regulation
PPC	Project Preparation Consultants
PT PJA	Pembangunan Jaya Ancol Ltd. (Ancol Authorities)
PU-MPW	Ministry of Public Works (Departemen Pekerjaan Umum)
RP	Resettlement Plan
RKL	Rencana Pengelolaan Lingkungan – Environmental Management Plan
RPF	Resettlement Policy Framework
RPL	Rencana Pemantauan Lingkungan – Environmental Monitoring Plan
SIA	Social Impact Assessment
USACE	United States Army Corps of Engineers
WASAP	Indonesia Water and Sanitation Program Trust Fund
WBC	West Banjir Kanal
WJEMP	Western Java Environmental Management Project

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

Jakarta Urgent Flood Mitigation Project

1 INTRODUCTION

1.1 Background

The severity of floods in the capital has become a national issue given the huge financial losses it incurs and the impact it has on communities in the Greater Jakarta area. Based on the results of several flood studies and simulation, Government of Indonesia (GoI) has identified a series of floodways, drains and retention basins that need an urgent rehabilitation. The rehabilitation of these flood control infrastructures will decrease risk of flooding and bring immediate benefit to more than one million beneficiaries living in flood-prone areas. The GOI has applied a loan from the World Bank to finance the Jakarta Urgent Flood Mitigation Project (JUFMP), a project that will remove sediment deposits which have cut the water conveyor capacity of the drains into half from the original designed capacity.

1.2 Project Development Objective

The Project Development Objective (PDO) is to contribute to the improvement of the operations and maintenance of a priority part of the flood management system in Jakarta. The PDO will be achieved through:

- a) Dredging sections of selected key floodways, canals and retention basins to improve their flow capacities, and disposing the dredge material in proper facilities;
- b) Rehabilitating and constructing embankment in sections of, and repairing or replacing mechanical equipment in, the same selected key floodways, canals and retention basins to sustain and improve their operations;
- c) Establishing institutional coordination between the three responsible agencies to encourage coordinated development, and operations and maintenance (O&M) of Jakarta's flood management system, and
- d) Strengthening the capability of the responsible agencies to improve the operations, maintenance and management of Jakarta's flood management system.

The project is aimed to support the dredging of the key floodways, canals and retention basins of Jakarta's flood management system and dispose the sludge material in a proper facility, using sustainable best practices (focusing on institutional coordination, and environment and social sustainability). These activities are expected to introduce improved Operations and Maintenance (O&M) practices in four pilot areas: (i) Dredging - modern technology and best practice; (ii) Environmental - responsible sludge disposal; (iii) Social - equitable resettlement practices; and (iv) Institutional - coordinated routine maintenance planning and practice.

1.3 Purpose and Scope of Environmental Management Framework (ESMF)

The physical works of the JUFMP will have potential negative environmental and social impacts, these impacts derives from the dredging, embankment rehabilitation and maintenance works, including in particular the significant quantities of sediment material and solid waste that would be generated and how these dredged materials would be handled, temporarily stored stockpiled, sorted, transported and finally disposed in urban areas that are densely populated and surrounded by surface and sea water would be managed. To

mitigate these impacts through environmental and social safeguards, there are laws, regulations, policies and procedures established at national, regional as well as the donor institution. The GoI has carried out an environmental impact assessments (EIA, locally term as AMDAL) in order to anticipate, manage and mitigate impacts due to the project implementation of Phase 1 activities¹.

For the Phase 2 activities (i.e. project sites which the DED and EIA have not been completed by the time of Appraisal), a framework approach will be applied. DKI Environmental and Social Working Group (ESWG or known as *Pokja*) has developed an Environmental and Social Management Framework (ESMF). The ESMF is to ensure that the EIA for Phase 2 project site activities will have the same quality as the EIA for the Phase 1 activities.

The approach and procedures set out in ESMF are intended to meet the legal and regulatory requirements for (EIA) of both the GoI (i.e. the AMDAL) and the World Bank safeguard policies (especially OP 4.01) that aim to: (i) address any adverse socioeconomic impacts on local population; (ii) protect human health and the urban environment; (iii) prevent degradation of the natural environment; (iv) mitigate negative impacts, and (v) enhance positive environmental and social outcomes.

The ESMF defines the laws, policies, guidelines, roles and responsibilities of the institutions for management of environmental impacts, project processing, relevant environmental setting; identifies potential environmental and social impacts, describes measures to avoid or minimize adverse impacts and measures to mitigate any unavoidable adverse impacts. Consultation and disclosure requirements and procedures are also set out in detail in the ESMF; these have been adapted in the first EIA for the Phase 1 project site activities, in which in addition to the minimum two meaningful public consultation (as per regulatory requirement), focused groups discussion (FGD) were also carried out for each site. The FGD aimed to encourage the local community to take part in the implementation of environmental management and monitoring during project construction.

The ESMF also covers social and urban environmental issues associated with the Project. However, the details on the assessment of social impacts involved involuntary resettlement, the number of project affected people (PAP), compensation procedures, categories of PAPs and their entitlements are presented in the project's Resettlement Policy Framework (RPF) which will guide the preparation of Resettlement Plans (RPs).

Finally, the ESMF will be disclosed at the concerned offices of the local and central government agencies, at important accessible public places throughout DKI Jakarta, as well as in the Public Information Center (PIC) of the World Bank office, Jakarta and in the World Bank's InfoShop in Washington. The RPF document will also be similarly disclosed.

2 PROJECT DESCRIPTION

2.1 Project Component

JUFMP has two components: (i) structural measures (dredging, embankment rehabilitation & maintenance); and (ii) non-structural measures (capacity building and studies). Types of structure measures eligible for funding are limited to dredging, embankment rehabilitation and maintenance

¹ The project will be implemented in two phases. Strategic floodways, major drains and retention basins that have immediate impact on the flood mitigation and have minor environmental and social impact are included into Phase 1 (four sites). In contrast to the Phase 1 sites that involve no resettlement issue, prior to the project construction of Phase 2 sites, seven resettlement plan (RP) (of the total 11 sites) will need to be prepared and implemented.

works (e.g. pump and screen reparation) related to flood mitigation effort in the selected 15 sites, consisting of three strategic drains, three floodways, five main drains and four retention basins agreed upon by the JUFMP Steering Committee (Table 2-1 and Fig. 2-1).

The Project will **not** finance (i) construction of any new disposal facilities because the existing disposal facilities will still have enough capacity to receive all the project dredged materials² (Fig. 2-2), (ii) construction of infrastructure other than for flood mitigation purposes, this includes but not limited to construction of recreation facilities, green-park, or other type of beautification works for the surrounding drains, floodways and retention basins.

2.2 Project Activities

Dredging, Transporting and Disposing. The dredging will concentrate on 15 selected sections of key floodways, canals and retention basins of Jakarta's flood management system. Volume to be dredged is estimated at 3.5 million m³, including 95 000 m³ of solid wastes to be taken out from the floodways, drains and *waduks*. Mechanical dredging will be employed, this method operates using a combination of equipments, i.e. floating bulldozer, backhoe dredge on a floating platform, long-arm backhoe and water jet. All dredged material will be transported to the disposal site using watertight dump truck during night-hours.

Embankment Rehabilitation and Maintenance Works. Rehabilitation of the embankment will include stone masonry, parapet work and sheet piling for unprotected earthen riverbank while maintenance works include pump repair and trash-rack installation.

2.3 Project Implementation

Project implementation. Strategic floodways, major drains and retention basins (i.e. Phase 1) that i) have immediate impact on flood mitigation; ii) have relative minor environmental and no involuntary resettlement issue; and iii) have DEDs, bidding documents and EIA (including EMPs) completed, will be appraised and implemented first (Table 2-1). Project sites that are less urgent and involve involuntary resettlement will be implemented in later stage of the Project. Depending on the final DED, seven project sites may involve involuntary resettlement. The majority of potential resettlement cases are the displacement of settlements occupying public lands and safety zone (i.e. structure built on the river active channel).

2.4 Potential Impact

Specific Project Impact. Result of AMDAL for the Phase 1 showed among potential significant impacts of the project implementation, impacts due to dredged material transportation from the dredging site to the Ancol Confined Disposal Facility (CDF) via roadways will be the most critical issue to mitigate. These impacts include the potential of an increase of traffic congestion and potential spillages of dredged material along the road corridor. To mitigate this issue, the Project Preparation Consultant (PPC, which has been hired by the PMU) has developed a transport management plan (TMP) for each project site, in which transportation of dredged material will only be allowed during off-peak hours (i.e. from 22:00 to 05:00 hrs) and using watertight dump truck. And to minimize the spillage, dredged material will be first placed into containers (2x2x1m) before they are loaded into the truck. During transportation to Ancol CDF, the material will be covered by

² There will be two main disposal sites that already exist, i.e. (i) ANCOL confined disposal facilities (Ancol CDF) for non-hazardous dredged material (about 3.5 million m³), and (ii) Bantar Gebang Sanitary Landfill for the disposal of non-hazardous bulky solid wastes (about 95 000 m³). In addition, to anticipate a very unlikely case in which the sediment is found to be classified as hazardous waste and that the environmental authority decides it to be disposed in a secure landfill, the project have agreed to transport and dump the material at PPLi Secure Landfill

tarpaulin. All dump trucks will be washed by PT Pembangunan Jaya Ancol (PT PJA) before leaving the disposal site.

Sediment Quality. The World Bank hired PT ERM Indonesia (ERM) in 2008 and later, the GoI appointed another independent consultant in 2009 (i.e. PT PPA – EIA/SIA Consultant) to carry out detailed analysis of sediment samples from JUFMP sites. All the chemical analyses results were assessed according to established national and international standards. ERM result was further reviewed by the United States Army Corps of Engineers (USACE) as well as PT PPA. Based on all results, the GoI concluded that the dredged material is not hazardous wastes and thus can be disposed of at Ancol CDF as per Ancol EIA requirement.

Impact due to Non-Hazardous Dredged Material Disposal. Ancol CDF is not a project site for the reason that the project will not in any way be financing the design or construction of these works, and that this is an existing facility being built with a different objective. The Project however requires confined disposal³ principles in order to minimize environmental impacts. The Project will thus carry out an environmental due diligence to ascertain that the facility fulfilled the requirement as stated in its environmental permit, i.e. a confined facility is to be built in advance before material dumping can commence (**Annex 1: Ancol CDF Processing and Approval**). In addition, Ancol EIA requires the project to identify and ascertain that the sediment to be placed into CDF is not hazardous wastes. For this, the project has developed a provision to be applied during project implementation, including testing of sections prior to dredging. (see **Annex 2: Identification of Hazardous Waste as per Ancol EIA Requirement**)

Table 2-1 Description of Floodways, Canals and Retention Ponds under the Project

³ Construction of the Ancol CDF will be self-financed by the *PT Pembangunan Jaya Ancol* (PT PJA). The planned Ancol CDF will have sufficient capacity to receive the dredge material from all 15 sites. The Regional Environmental Agency (BPLHD) of DKI Jakarta has already approved the AMDAL for the CDF. The Ancol CDF AMDAL which covers a 119 ha disposal areas (12 million m³ capacity) that was initially approved on the basis that sand as filling material, has now been revised to include dredged material.

Package	Location	Dredging Estimates			Embankment Works (m)
		Dredging Depth (m)	Volume Dredge Material (m3)	Volume of Solid Waste (m3)	
Phase 1					
1 (DKI)	Ciliwing-Gunung Sahari Drain	1.90 ~ 2.70	156,970	3,140	4,832
	Waduk Melati (Kali Gresik & Cideng Hulu)	2.20 ~ 3.10	99,490	1,250	1,905
2a (DGWR)	Cengkareng Floodway (including sea side)	1.50 ~ 3.50	1,225,500	22,510	4,600
2b (DGWR)	Lower Sunter Floodway ^{Note 1}	1.60 ~ 2.30	399,250	19,970	1,800
Phase 2					
3 (DGCK)	Cideng Thamrin Drain (Round Road drain)	0.60 ~ 2.30	33,230	810	2,570
4 (DKI)	Sentiong-Sunter Drain (including Ancol Canal)	0.50 ~ 2.10	140,150	7,010	3,865
	Waduk Sunter Utara (Outlet drain)	1.30 ~ 2.10	413,400	10,340	5,000
	Waduk Sunter Selatan	1.00 ~ 2.10	48,200	1,210	3,057
	Waduk Sunter Timur III	0.70 ~ 3.30	51,000	1,280	305
5 (DGCK)	Tanjungan Drain	1.10 ~ 1.90	11,500	290	1,092
	Lower Angke Drain	2.00 ~ 3.60	248,000	6,200	821
6 (DGWR)	West Banjir Canal (sea side)	1.70 ~ 2.50	350,080	8,760	1,190
	Upper Sunter Floodway ^{Note 1}	1.80 ~ 3.40	82,000	4,100	1,850
7 (DKI)	Grogol – Sekretaris Drain	0.70 ~ 2.30	40,500	1,020	2,391
	Pakin – Kail Besar – Jelakeng Drain	0.60 ~ 1.60	100,000	5,000	2,882
	Krukut Cideng Drain ^{Note 2}	0.70 ~ 0.80	28,700	1,440	1,658
	Krukut Lama Drain ^{Note 2}	0.50 ~ 0.80	14,900	750	2,400
			3,441,870	95,080	42,218

^{Note 1} For contracting purposes, the Sunter Floodways has been divided into two sub-packages – Upper Sunter Floodway and Lower Sunter Floodway.

^{Note 2} For contracting purposes, the Krukut Drain has been divided into two sub-packages – Krukut Cideng Drain and Krukut Lama Drain

Impact due to Solid Wastes Disposal (95 000 m3) and Hazardous Waste (if found). Similar to Ancol CDF, the Bantar Gebang Sanitary Landfill where the solid waste material would be taken and the PPLI secure landfill where hazardous waste (or locally term as B3 waste) will be taken if found, are both existing and operating facilities before the project. Thus, the project will carry out environmental due diligence to ensure that those facilities are operating under valid environmental permit and in compliance with local regulation.

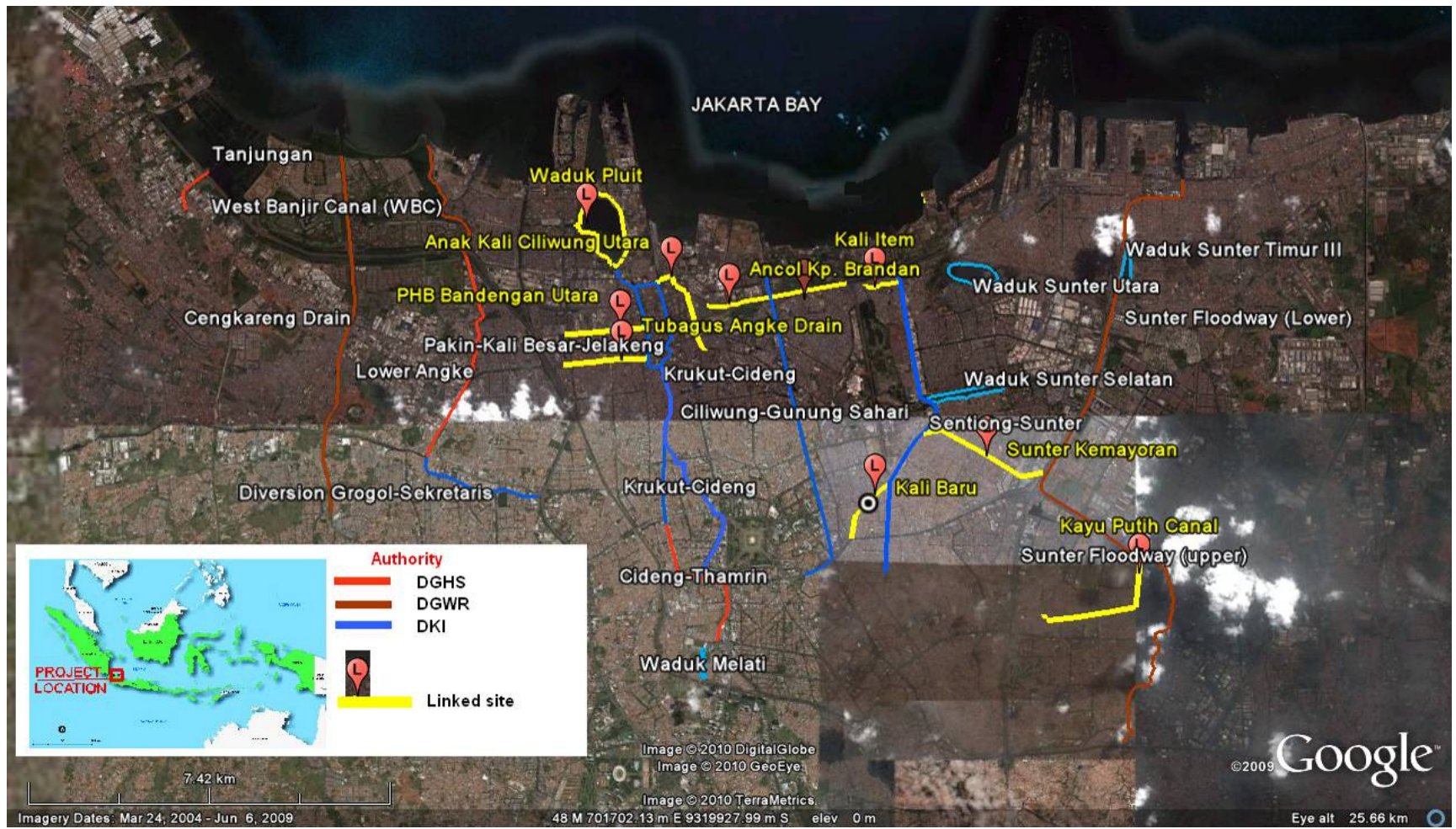


Figure 2-1 JUFMP Project Location and Linked sites

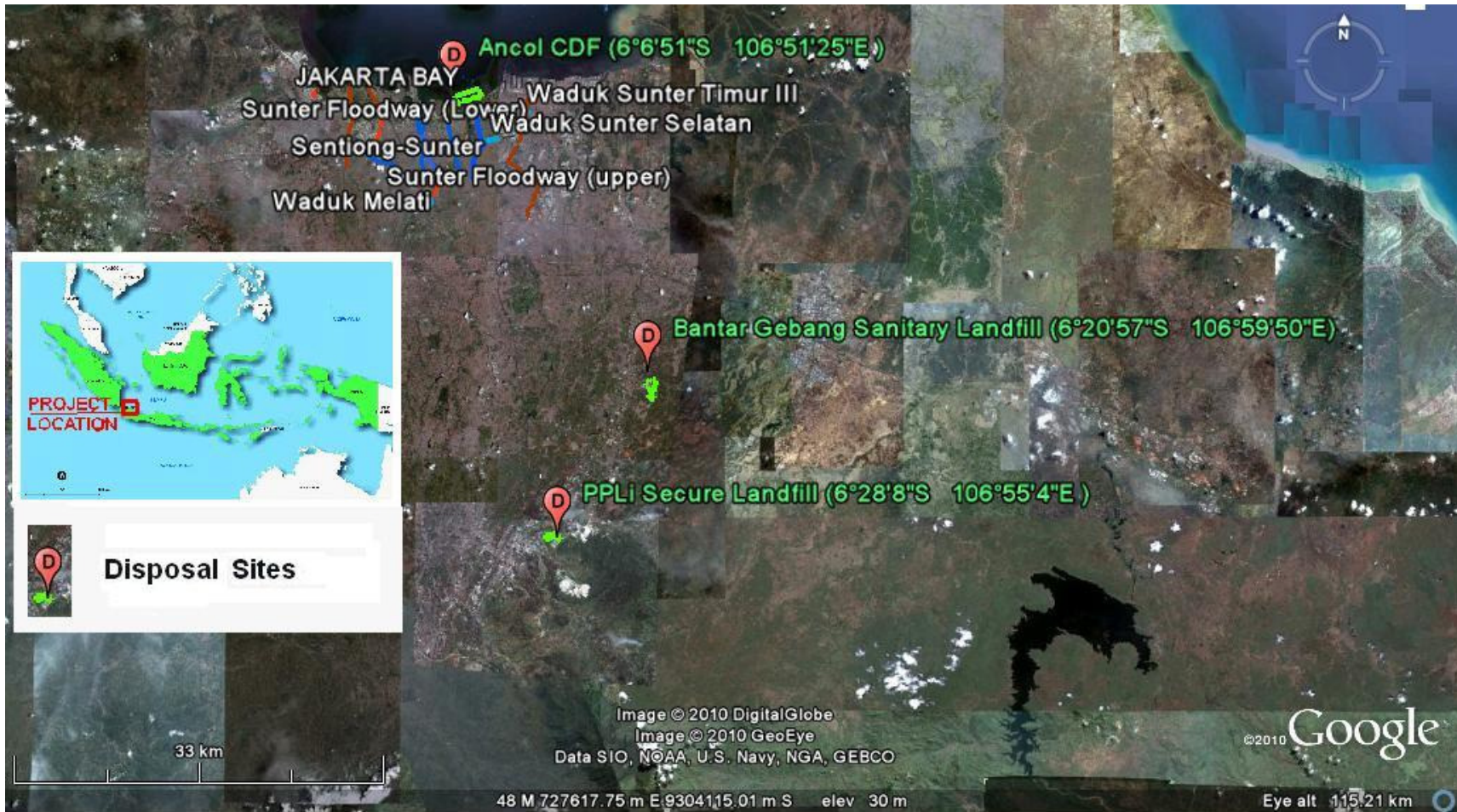


Figure 2-2 Existing Disposal Facilities for JUFMP Dredged Material

3 ROLE AND INSTITUTIONAL RESPONSIBILITIES

3.1 Institutional Arrangement

The JUFMP requires coordination amongst three implementing agencies (Fig. 3-1): (i) Directorate General of Water Resources (DGWR) of Ministry of Public Works (MPW), (ii) Directorate General of Human Settlements (*Cipta Karya*) (DGHS) of MPW, (iii) Provincial Government of DKI Jakarta. To oversee project coordination at the policy level and to ensure that national policies are adhered to by the Project, a Joint Steering Committee (JSC) has been established. The Committee comprises representatives from: MPW, National Development Planning Board (Bappenas), Ministry of Finance (MoF), Province of DKI Jakarta, Reclamation Agency, and the World Bank. The JSC is supported by a technical team of six staff from DGWR, one from DGHS, one from the Office of Planning and Overseas Cooperation of the MPW and one from Provincial Government of DKI Jakarta.

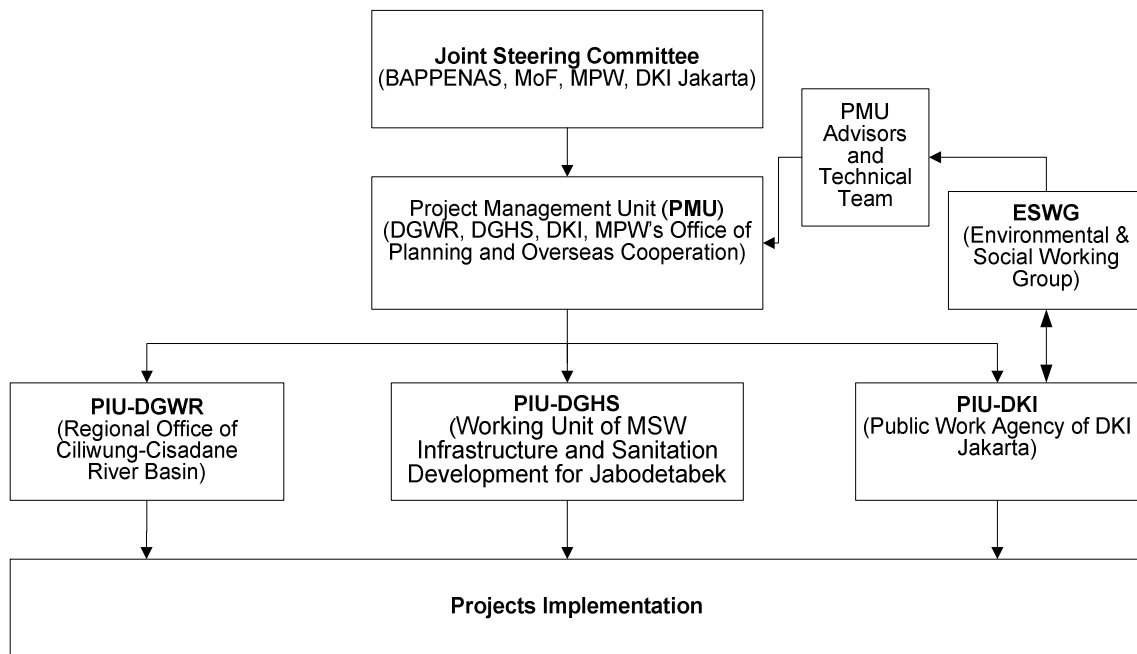


Figure 3-1 Project Implementation Institutional Arrangement

The DGWR is the executing agency and has established a Project Management Unit (PMU) for the purpose of preparing and executing JUFMP. The PMU is comprised of three staff from DGWR, three from DGHS, three from DKI and one from MPW's Office of Planning and Overseas Cooperation. While the PMU will retain responsibility for supervision of all project construction, the project implementation itself including procurement for the contractor will be in the hands of three Project Implementation Units (PIUs):

- PIU-DGWR will be represented by the Regional Office for the Ciliwung-Cisadane River Basin (*Balai Besar Wilayah Sungai Ciliwung-Cisadane, BBWS-CC*);
- PIU-DGHS will be represented by the Working Unit of Municipal Solid Waste (MSW) Infrastructure and Sanitation Development for Jabodetabek (*Satuan Kerja Pengembangan Infrastruktur Persampahan dan Sanitasi Jabodetabek*); and
- PIU-DKI will be represented by the Public Work Agency (*Dinas PU DKI Jakarta*) of the Provincial Government of DKI Jakarta.

3.2 Institutional Roles and Responsibilities

3.2.1 Project Management Unit (PMU)

PMU is responsible for (i) overall project coordination; (ii) project preparation (i.e. hiring PPC consultants for the preparation of DED and bidding document, and the EIA/SIA consultant for EIA and RPs preparation) and (iii) project supervision (including hiring of the construction supervision consultant).

Project Preparation Consultant (PPC). The consultant is (i) to provide engineering design for dredging, and embankment in coordination with the EIA/SIA Consultant; (ii) to prepare bidding documents for all works within the Project and to work together with the EIA/SIA consultant for the inclusion of EMPs into the bidding documents and the construction contracts; (iii) to provide advisory services to the Project Management Unit (PMU). The PPC works closely with the EIA/SIA consultant to prepare designs that will minimize adverse environmental and social impact.

EIA/SIA Consultant. The consultant is responsible for (i) preparation of EIA documents and RPs that comply with the requirements of both the Government of Indonesia and the World Bank; (ii) preparation of EMPs to be included in the bidding documents and construction contracts; and (iii) providing assistance to the PMU with documents disclosure and public consultation.

Supervision Consultant (SC). PMU will hire the SC that will be on-board during Project implementation. The SC will supervise the construction in all project sites on behalf of the PMU and ensure that the responsibilities and protocols specified in the contracts are being properly followed. The SC will monitor compliance of contractors with the safeguard requirements embedded in the construction contracts. Based on the World Bank approved TOR, the SC is tasked, among others, (i) to supervise works on structure measures, (ii) to conduct environmental monitoring as per the requirement of the EMP (RKL/RPL) and provide supervision on the implementation of RKL/RPL by the contractor, (iii) to supervise implementation of RP of the JUFMP, (iv) to prepare, design and establish a reporting system of the areas under JUFMP, including establishment of project website (for broader stakeholders) and simple maps and methods of dredging be made available through brochure (for dissemination to people close to the dredged areas). Website and brochures should provide address to report or complain through complaints handling mechanism, and (v) to design, develop and operate a web-base reporting system whereby the results of the supervision in the form of visual pictures and technical data will be reported through the website which will enable the PMU, PIU's and others stakeholders to see the reports and real conditions of the works close to real time.

During preparation, the PMU is responsible (i) to ensure the inclusion of EMPs (RKL/RPL) into the bidding documents; (ii) to carry out public consultations and document disclosures; and (iii) to sign an environmental commitment, in that EMPs will be implemented if the AMDAL (Andal, RKL/RPL) is approved.

During construction and operation, the PMU will hire supervision consultant (SC) to carry out supervision of EMP implementation on its behalf. The consultants to be employed will be reputable and experienced in supervising and monitoring EMP implementation. The PMU will receive monthly environmental monitoring reports from the SC and maintain them as part of the project files. The PMU will also receive and review quarterly monitoring reports that will be submitted to BPLHD as part of the environmental commitment agreed with the BPLHD.

3.2.2 Project Implementation Unit (PIU)

The PIU as the budget holder is responsible for the construction works. Each PIU will establish its own procurement committee for the selection of contractors. The committee will be composed of representative from each PIU.

Except for PIU-DKI Jakarta that is also responsible for environmental and social safeguard aspects during preparation stage, the other two, i.e. PIU-DGWR and PIU-DGHS will be mainly responsible for managing construction and project works. Under the PIU-DKI, an environmental and social working group (ESWG) has been established for formulating policy guidelines that will govern all environmental and social impact-related issues of JUFMP, as set out and described in the (i) ESMF and (ii) RPF. The ESGW comprises technical staff from PMU, PIUs, Regional Environmental Agency (BPLHD) of DKI Jakarta Province, university experts, Regional Development Planning Board (Bappeda) of DKI Jakarta Province, and other relevant DKI Jakarta provincial staff.

For any project site that requires resettlement, the PIU will ensure that **no** contract is finalized unless the RP(s) has been implemented, that is the PAPs have received their compensation and entitlements, and those physically displaced have been properly resettled.

During construction, the PIU will also have an oversight role of supervision of the EMPs implementation by the contractor. The PIU will conduct spot checks, or audits as necessary.

3.2.3 Regional Environmental Agency (BPLHD)

The Regional Environmental Agency (BPLHD) of DKI Jakarta province was established in 1968 (<http://bplhd.jakarta.go.id/index.php>).

During project preparation stage, BPLHD is an agency responsible for reviewing and providing clearance and approval for EIA documents. As per the GOI legislation, the agency forms an AMDAL Commission, i.e. an ad-hoc commission to evaluate EIA documents. The AMDAL Commission consists of representatives from BPLHD (2-3 persons), university experts (or known as Technical Team, 5-7 persons from different areas expertise), representatives from sub-district (*Kecamatan*) and neighborhood (*Kelurahan*), and representatives from NGOs. The agency will also assist the EIA/SIA consultant with the assessment of the quality of dredged material, and will form a review panel when further assessment of the sediment quality is required.

During the construction stage, BPLHD has a supervision role for the EMP implementation by the various contractors and will conduct regular checks or audits. The agency will review the implementation of EMPs submitted by PMU and decide if any corrective action is required.

3.2.4 DKI Jakarta Municipalities Administration (*Kotamadya*)

An urban municipality (*Kotamadya*) in DKI Jakarta is chaired by a *Walikota* (Mayor); four DKI Jakarta Municipalities will be affected by the Project, i.e. North, West, Central and East Jakarta. The *Walikotas* will be assisted by the heads of the sub-districts (*Kecamatan*) and the head of the neighborhoods (*kelurahans*) and by the EIA/SIA Consultant hired by the PMU. The *Walikotas* will mainly be involved in the mitigation of **social impacts**; they will be responsible for coordinating activities at *kelurahan* level during the preparation and implementation of RPs.

The *Walikotas* with their apparatus at the sub-district and *kelurahan* levels are the front-line officials responsible for the operational activities during the preparation and implementation of RPs. This includes activities for determining the cut-off date and for actually implementing the resettlement, and for handling any grievances and complaints. In addition, the municipality office is

also responsible for the appraisal of dwellings and other buildings affected by the project. The roles of the municipalities are further discussed in the RPF.

3.2.5 Contractors

Contractors will be selected by the procurement committee in each PIU. All dredging and embankment works packages will follow International Competitive Bidding (ICB) process and will require Pre-Qualification steps. Contractors will be requested to include a proposed environmental and social action plan in their technical proposal during bidding process, the action plan should outline their proposed efforts to minimize social and environmental impacts. During construction, the contractor is responsible to carry out the EMP embedded in the contract. Supervision of the environmental and social management plan implementation will be carried out by SC.

3.2.6 World Bank (WB)

The WB maintains an oversight role in the JUFMP, to ensure compliance with the World Bank safeguards policies, review and provide clearance and approval for the EMPs and RPs of each project site. The WB will maintain an oversight role of the supervision of the EMPs implementation by contractors, and may conduct spot checks or audits as necessary. The WB will conduct regular supervision missions throughout the project implementation, and local specialists at the World Bank Office in Jakarta (WBOJ) will monitor the progress of the project construction. In case the WB considers the implementation to be not acceptable and no improvements can be expected, it will require that institutional capacity building measures be taken to strengthen the PMU and PIUs.

3.3 Project Processing

3.3.1 Phase 1 Project

Review and approval by the World Bank. There are two packages for the Phase 1 to be appraised: (i) Package No.1 for PIU-DKI (Gunung Sahari-Ciliwung Drain and *Waduk Melati*), (ii) Package 2 for PIU-DGWR (Lower Sunter Floodway (2a) and Cengkareng Floodway (2b)).

For Phase 1 activities the AMDAL and corresponding management and monitoring plans, also known as the RKL and RPL respectively in Indonesia have been prepared by the Project Management Unit, consulted upon, reviewed and approved in March 2010 by the provincial environmental agency known as the BPLHD as required by national and sub-national regulations of Indonesia. As these activities are financed by the project, the World Bank has also reviewed the Phase 1 AMDAL, RKL and RPL and has provided extensive comments resulting in the PMU having to prepare a supplementary Phase 1 report and further recommendations which will also be applicable to the project. This ensured that these combined environmental safeguards documents for Phase 1 were compliant with the World Bank's own safeguards policy requirements

EMP Implementation during Construction, Supervision and Monitoring. Compliance with the EMP during project construction will depend upon (i) the implementation of EMP by the contractor, (ii) supervision and monitoring of EMP implementation by SC, and (iii) oversight of EMP implementation by the PIU, WB and BPLHD.

Supervision by the SC is the day-to-day process whereby the SC supervises contractors to ensure that environmental commitments and EMP provisions as stipulated the contract are complied with.

An oversight is the process that the PIU, WB, BPLHD undertakes to make sure that the contractor is in compliance with EMP commitments stated in the contract. Monitoring will be done by the contractor and SC to measure and document EMP performance in terms of how much mitigation measures succeed in eliminating or reducing impacts to an acceptable level.

Reporting. The SC will provide the PMU with monthly reports of the results of the EMP implementation by the contractor. The PMU will review the reports for any non-compliance and may request the PIU to undertake spot checks or audits as necessary. The SC will also provide the PMU with a formal quarterly monitoring report. The PMU will review this report for any non-conformances and then submit it to BPLHD and the World Bank. The BPLHD and the World Bank will review the quarterly monitoring report and will decide whether a spot check, field visit or audit is necessary.

3.3.2 Phase 2 Project

Phase 2 project processing begins with a screening if the proposed project site is eligible for financing (Fig. 3-2), the screening will be first carried out by PMU and PIUs and finally decided by Joint Steering Committee. When project is eligible for financing, PMU will request the PPC to prepare the DED. While preparing the DED, PPC will work closely with the EIA/SIA Consultant to avoid and minimize environmental and social impacts, particularly impact related to involuntary resettlement. After the DED is finalized, environmental and social screening will be performed, this screening includes if the proposed Phase 2 activities require RP, full EA or Mini EA. all necessary Phase 2 environmental (Full EA or Mini EA) and social (RPs) documents will be prepared by the EIA/SIA Consultant. Once the documents have been approved by authorized agencies (i.e. EA by BPLHD and RPs by Provincial Government of DKI), they will be submitted to the World Bank for review and approval. In case that the World Bank considers the documents have not met the safeguard policies requirement, it can request supplemental EA (or info) to fulfill the OP 4.01 requirement or revision of the RP to satisfy the OP 4.12.

Environmental Safeguard Instruments for Phase 2. The AMDAL process for the Phase 2 will follow the same procedure as for the Phase 1. This ESMF will also apply to government dredging works that are not financed by the World Bank, but are (1) directly and significantly related to JUFMP; (2) necessary to achieve JUFMP objectives; and (3) contemporaneous to JUFMP (See RPF for details). The EA preparation for such linked sites will follow the same process as the JUMFP project site. In the case of linked sites, where the work has already been carried out, the World Bank will be allowed to carry out a due diligence assessment to ascertain whether social and environmental impacts have been addressed satisfactorily.

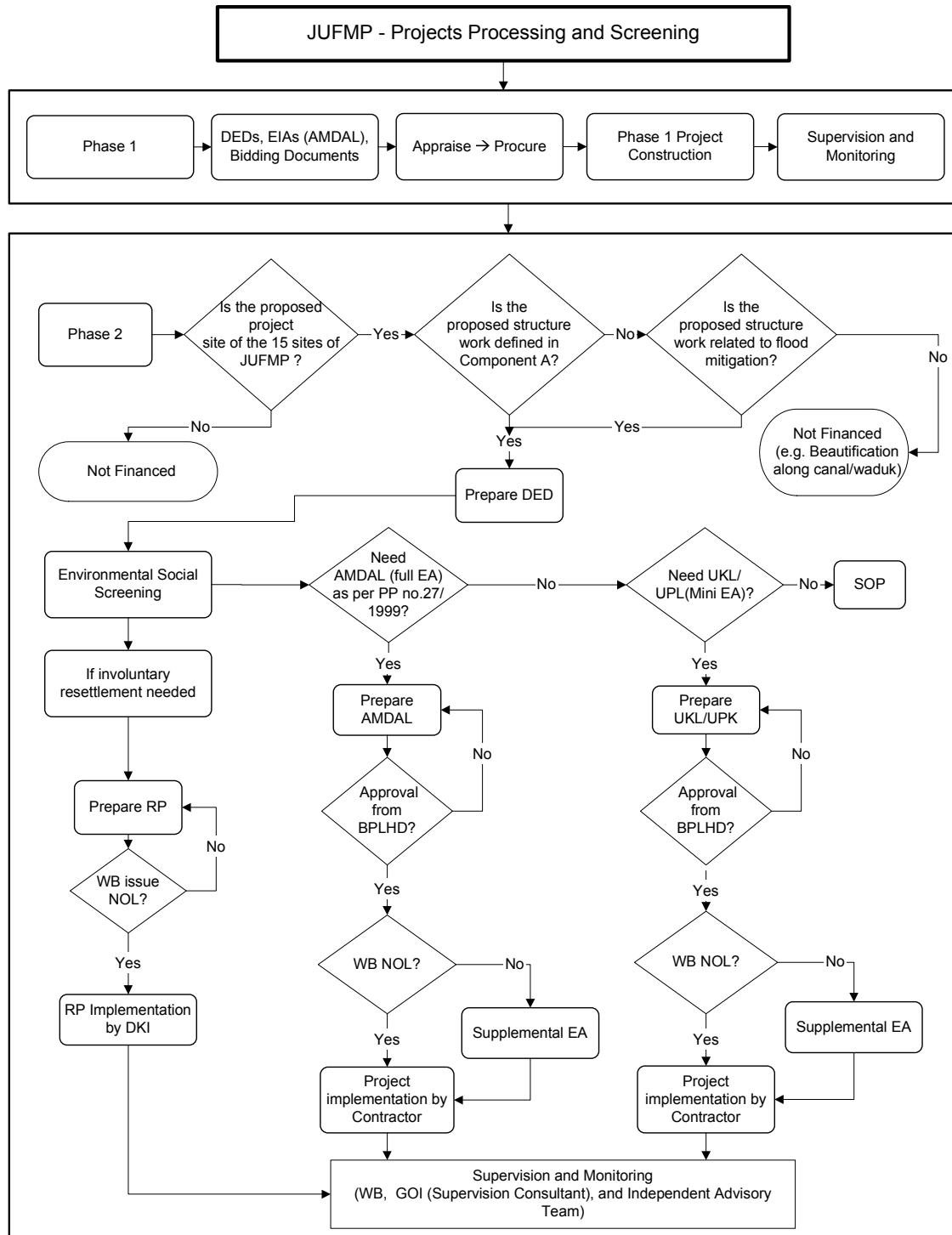


Figure 3-2 JUFMP Project Screening and Processing

EA Process. PMU is responsible to notify the BPLHD regarding the proposed Phase 2 project activities. PMU with assistance by EIA/SIA Consultant will advertise a Public Notice in local media, e.g. newspaper. After the notification, the BPLHD forms an AMDAL Commission (Fig. 3-3). The EIA/SIA consultant will prepare the EIA Term of Agreement (KA-ANDAL) and PMU to submit the KA-ANDAL to AMDAL Commission for review before the first public consultation is held. BPLHD will invite all relevant stakeholders to provide input and comment on the KA-ANDAL. BPLHD will take minutes of meeting for the first public consultation and request the consultant to incorporate input agreed during the consultation. PMU will re-submit the KA-ANDAL to the Commission for clearance, once it is cleared, the EIA/SIA consultant will proceed with the preparation of EIA documents, i.e. ANDAL (i.e. environmental impact assessment) and RKL/RPL (i.e. environmental management and monitoring plans). Once the EIA documents are prepared, PMU will submit it to the AMDAL Commission. Then the AMDAL Commission will request the consultant to present the results of the EIA in which all members of the AMDAL Commission and public are given an opportunity to comment on the results. BPLHD will prepare minutes of the meeting and request the consultant (on behalf of PMU) to incorporate the comments and revise the EIA documents and re-submit it to the AMDAL Commission. Final clearance and approval with specific conditions/recommendations (or rejection) of the EIA documents by the head of BPLHD will be based on the AMDAL Commission recommendation.

EA Public Consultation. Stakeholders such as local people, NGOs, academic institutions, etc. are represented in the AMDAL Commission and are therefore, given the opportunity to make comments during the preparation and review of the KA-ANDAL as well as during the review of ANDAL and RKL/RPL. The existing Indonesian EA process requires at least two public consultations, and the results of the consultations are to be attached to the EIA. A public consultation is conducted to address both environmental and social aspects of the project activities. A public consultation should introduce the project activities to the local residents and determine if there are any particular concerns with proposed activities. The first public consultation is conducted at the earliest 30 calendar days after the Public Notification in the national or local media, e.g. newspaper, radio. During this period of time, people who would like to respond to the proposed activities can submit their comments to BPLHD or the PMU. Comments will be addressed and attached in the KA-ANDAL. The second public consultation takes place after the final draft of EIA has been submitted to BPLHD. Minutes of the public consultation and other documentation (e.g. photos, presentation materials, attendee list, etc.) will be attached to the EIA as an appendix. The documentation reflects all comments, whether or not the PMU agrees or disagrees. The minutes will also have signatures (name, title) of the chairperson of the consultation.

EMP Implementation during Construction, Supervision and Monitoring and Reporting. Supervision, monitoring and reporting of EMP implementation during project construction of Phase 2 activities will follow the same process as the Phase 1, in which the primary responsibility for implementing the environmental measures detailed in the AMDAL, RKLs and RPLs lies with the civil works and dredging contractors. The RKLs and RPLs are being embedded in these contracts as legally binding covenants that these contractors are legally obligated to follow. Doing it this way also ensures that the measures in the RKL and RPL are adequately priced and budgeted for by the potential contractors through the bidding process. Then in ascending order of hierarchy, the next level of responsibility will be that of the Supervising Consultant (i.e., the SC), who will in turn report to the PMU. The World Bank will also supervise the project primarily through the PMU who will be adequately staffed with suitably trained, experienced and competent environmental engineers to provide the quality of oversight monitoring needed. The SC will be responsible for day to day supervision of the civil works and dredging contractors. Also, given that the selected drains and

canals lie in the province of Jakarta and run across sub-provincial jurisdictional city boundaries, the local environmental agencies, the BPLHD, at both the Provincial level (i.e. the office that reviewed and approved all the AMDALs, RKLs and RPLs) and the city level BPHLD (i.e. Walikota level), both will also be undertaking their mandated routine direct monitoring of works.

RP Preparation, Review, Approval and Disclosure. Preparation of the RPs will be responsibility of the Provincial Government of DKI-Jakarta, i.e. the municipalities concerned, with assistance from the EIA/SIA consultants (see RPF for details). All RPs will be prepared based on the RPF that has been agreed by both parties, i.e. the World Bank and the DKI Jakarta. Once prepared, RPs - full or abbreviated - for each project requiring RP will be reviewed by the PMU and the PIU – DKI before they are submitted to the World Bank for review and approval. A version in Indonesian (*Bahasa Indonesia*) of the approved RPs will be made available at the respective municipal office of DKI and will also be disclosed on the associated project website, as well as in the field project offices (*kelurahan*). Versions in English and Indonesian language will be disclosed in the Public Information Center (PIC) of the World Bank Office in Jakarta.

RP Implementation. Each RP will be implemented by the concerned municipalities after its approval by the World Bank. The concerned municipal coordinators will ensure that the resettlement entitlements are provided to eligible PAPs and affected communities before they are moved from the place they currently live within the project area.

The project will adhere to the following important principles in its implementation:

- No civil works contracts for proposed projects site will be initiated unless land free of any encumbrance is made available; this could be done in phases.
- No construction should be undertaken unless PAPs are compensated for their losses, and have received their resettlement entitlements.
- There will be transition arrangements for displaced families until they get their replacement housing.
- Information sharing and consultation with PAPs will continue throughout the planning and implementation phase of the program, including the relocation and the restoration of livelihoods.
- A completion survey of the delivery of compensation and resettlement entitlements will be undertaken as per the RPF requirement.

RP Reporting and Supervision. The municipalities (North, Central, West and East) that implement RPs will provide regular reports to the Governor and copy them to the Support Team. For monitoring purposes, the SC will work together with the *Kelurahan* and *Walikota* offices to assist them in documenting complaints from the PAPs, and in following up on any complaints. The SC will also assist the municipalities and PIU-DKI in the preparation of a consolidated report on complaints and the manner in which they were followed up. The consolidated report will be submitted to the PMU. This report will become part of the project monthly progress report to be submitted to the World Bank. Details of each institution role in the RPs implementation are provided in the RPF.

To clarify and strengthen the roles of the current PIU DKI Jakarta, there is a need to improve its internal organizational structure with clear coordination lines and responsibilities that will be required for preparing and implementing the RPs. The current PIU DKI Jakarta will be reorganized and will comprise of several working groups (*Pokja*): Environmental and Social, Project Management and Quality Assurance, Monitoring and Reporting, and other *Pokjas* as necessary to cover all activities required for JUFMP implementation. The members of each working group will

consist of representatives from relevant agencies and institutions within the DKI Jakarta Provincial Government, based on their scope of works and functions; the membership in *Pokjas* will be established through a Governor’s Decision – *KepGub*).

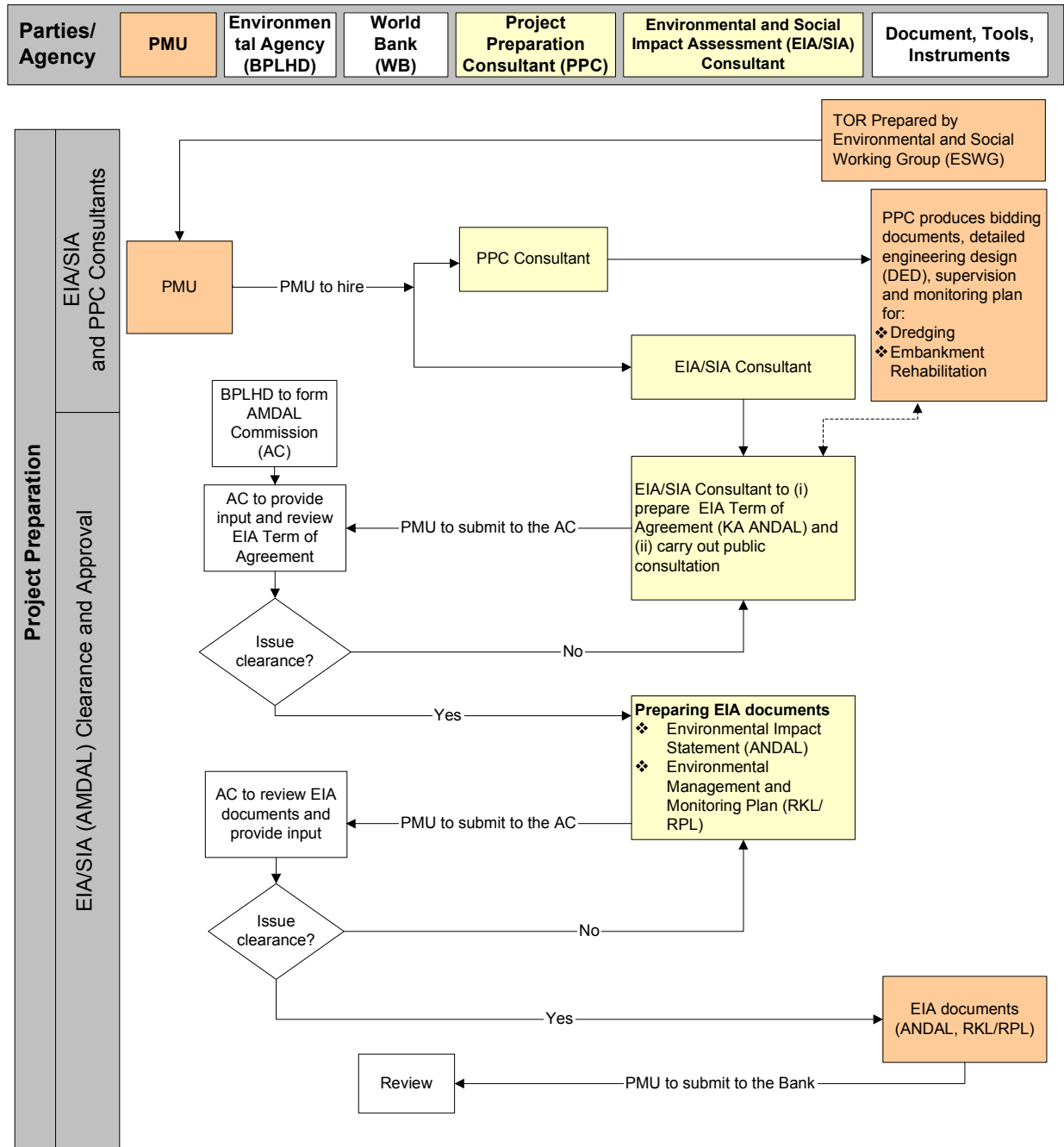


Figure 3-3 Flowchart of EA process during project preparation

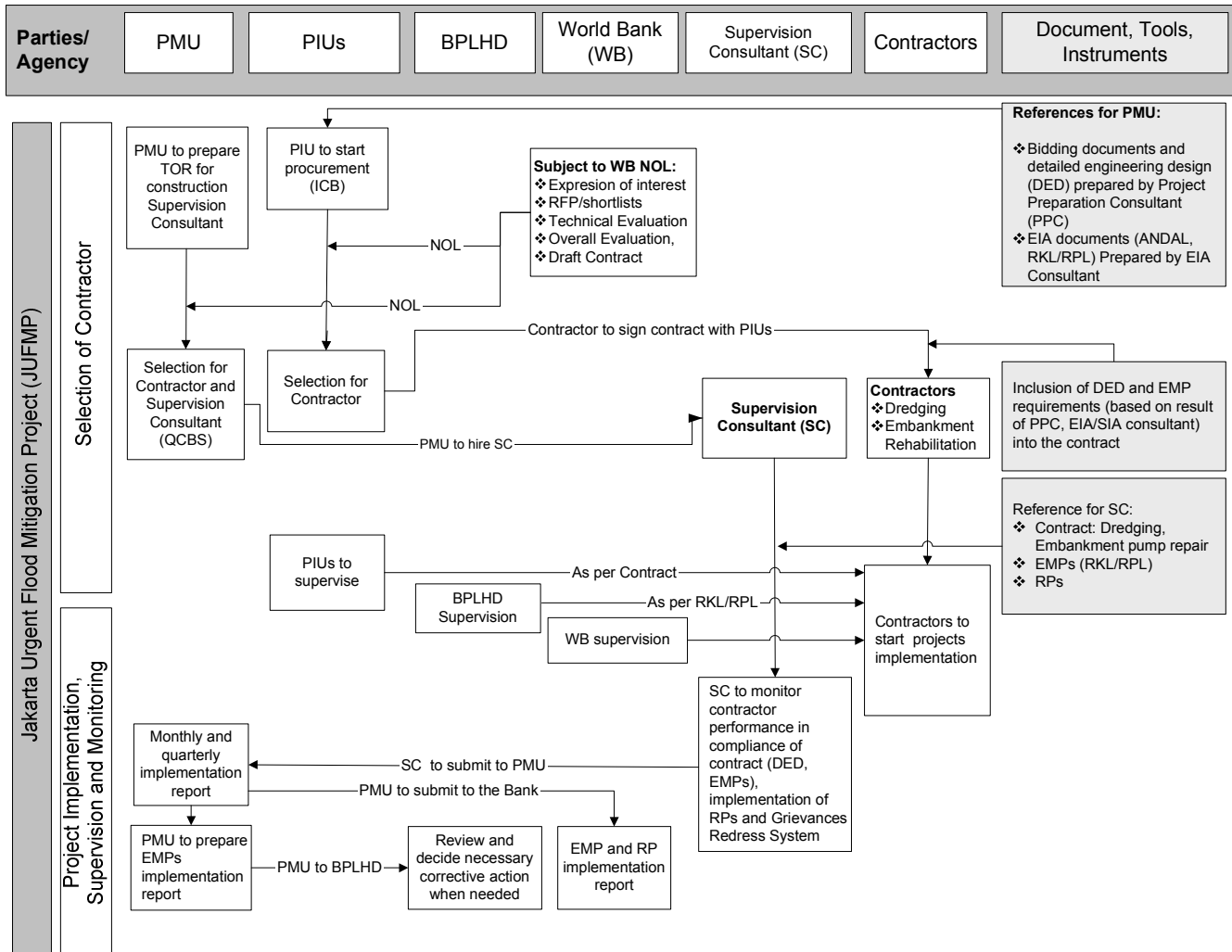


Figure 3-4 Selection of contractors, project implementation and monitoring

4 APPLICABLE ENVIRONMENTAL AND SOCIAL POLICIES, LAWS AND REGULATIONS

4.1 Environmental

4.1.1 Government of Indonesia

Relevant national and regional legislations that will be considered when preparing for the AMDAL include:

- Law No. 1/1970 on Work Safety
- Law No 23/1997 on Environmental Management
- Government Regulation(PP) No: 27/1999 on Process of AMDAL
- PP No. 19/1999 on Control over Marine Contamination and/or Damage
- PP No 18/1999 *jo* PP No. 85/1999 on Hazardous and Toxic Wastes Management (*B3* Waste)
- PP No. 41/1999 on Air Pollution Control
- PP No. 82/2001 on Water Quality Management and Water Pollution Control
- Ministry of Environment (MoE) Decree No. 11/2006 on Activities Require AMDAL
- MoE Decree No.8/2006 on Guidelines for AMDAL Preparation.
- MoE Decree No.2/2000 on Guidance for Evaluation of AMDAL Documents.
- MoE Decree No.40/2000 on Guidance for Working Procedure of AMDAL Commission.
- MoE Decree No.42/2000 on Guidance for Formation of Evaluation Team and Technical Team for AMDAL.
- Head of Bapedal (Environmental Impact Management Agency) Decree No.8/2000: Guidance for Public Participation and Information Disclosure in AMDAL.
- Governor of Jakarta Decree No. 582/1995 on Standards for River, Surface Water, and Wastewater
- Governor of Jakarta Decree No 76/2001 on Operative Guidance on Public Involvement and Information Disclosure in AMDAL
- Governor of Jakarta Decree No. 551/2001 on Standards for Air Quality and Noise Level for the DKI Jakarta

4.1.2 World Bank Policies

Environmental Assessment (OP. 4.01).

JUFMP is a Category A project as both embankment rehabilitation and dredging activities may have significant positive and adverse impact on environmental and social. The impacts are most likely prevalent at i) locations where embankment rehabilitation is to be carried out, ii) locations close to and along dredging sites, iii) along transportation corridors, and iv) at disposal sites (and vicinity). The purpose of environmental assessment is to improve decision making, to ensure that project options under consideration are sound and sustainable, and that potentially affected people have been adequately consulted.

4.2 Social

4.2.1 Government of Indonesia

Indonesian laws and regulations that govern land acquisition for projects in the public interest, including the following:

- Law No. 5 of 1960, also known as UUPA (*Undang-undang Pokok Agraria*) or Basic Agrarian Law;

- Law No. 20 of 1961 on the Revocation of Land Rights;
- Government Regulation (*PP*) No. 24 of 1997 on Land Registration;
- Presidential Regulation (*Perpres*) No. 36 of 2005 on Land Provision for Development Activities in the Public Interest;
- Presidential Regulation No. 65 of 2006, which revises *Perpres* No. 36 of 2005; and
- Implementation Guidelines No. 3 of 2007 for *Perpres* No. 36 of 2005 and *Perpres* No. 65 of 2006 issued by the National Land Agency (Badan Pertanahan Nasional—BPN).

4.2.2 World Bank Policies

- Involuntary Resettlement (OP4.12)
The safeguard policy on Involuntary Resettlement (OP4.12) is triggered by this project. While no major land acquisition is required to undertake the proposed physical works, the project would result in loss of land, residences and businesses. This would necessitate resettling those affected by project interventions. To address this issue, the DKI has prepared an RPF (for details, see the draft of the RPF). The RPF is to ensure that PAPs are treated in accordance with the World Bank's OP 4.12. The RPF will be used to guide RPs for any project site that requires involuntary resettlement. In addition to the JUFMP sites that result in involuntary resettlement, the RPF also applies to other activities resulting in involuntary resettlement that in the judgment of the World Bank, are (a) directly and significantly related to the World Bank-assisted project, (b) necessary to achieve its objectives as set forth in the project documents; and (c) carried out, or planned to be carried out, contemporaneously with the project.

5 ENVIRONMENTAL SETTING

DKI Jakarta is located at the coastal plain of northern Java which has been formed by a delta of rivers flowing from the southern mountainous area into Jakarta Bay. The low lying area of DKI has suffered from flooding since Dutch period (1800s to 1940s). The intensity and severity of floods have considerably increased recently and have resulted in serious social and economic costs. The construction of the West Banjir Canal (WBC) in 1920 showed that the flooding has occurred frequently in Jakarta since that time.

Sedimentation. A WJEMP study showed sediment deposits in the downstream reaches were up to 2-3 m thick while average sediment deposit in the *waduk* varies from 0.9 to 1.9 m thick. Based on the sedimentation assessment, a series of hydraulic simulation showed that the level of protection for all rivers has dropped far from the initial design of 25 year of protection, which in most of cases for within the areas of DKI Jakarta, the level of protection dropped to 2-5 years.

Water quality. With only about 2% coverage of integrated wastewater treatment system, rivers and retention basins in DKI Jakarta have served for decades as open-sewer for domestic wastes and wastewater generated from local communities. As a result, studies⁴⁻⁵ have shown that water in the rivers and retention basin are polluted with domestic wastes, accounting for more than 70% of the pollution. In these studies, water quality in all sampling stations was classified as Class 4, i.e. water that can only be used for greening purposes.

⁴ Djadjadilaga, M., Sigit, H., Tejalaksana, A. *From Data to Policy (Ciliwung River Water Quality Management)*, The Ministry of Environment, Jakarta. Monitoring data: 2004-2006. <http://www.wepa-db.net/pdf/0810forum/paper22.pdf>

⁵ MoPW (2005) Outline Plan for Major Drainage and Small lakes management in JABODETABEK Area, WJEMP Pusat 3-10, Report no. 10. Directorate General of Cipta Karya, Ministry of Public Works.

Sediment Quality. As JUFMP project preparation evolved, three independent baseline studies of the quality of the sediment material in the drains and canals in Jakarta were carried out at different time horizons assessing various aspects including the adequacy of sampling and testing methodologies used, the test results, and the adequacy of Indonesian requirements against various other international standards.

- ERM⁶ 2008

The ERM 2008 sediment quality study represents the first comprehensive and detailed primary sediment quality study for Jakarta's drains and waduks, and supported much of the initial planning for the JUFMP project including the ANCOL Updated RKL / RPL and the JUFMP Phase 1 AMDALs. Sampling covered all the Project sites (i.e. 15 sites) plus three others that were originally in the long list of potential JUFMP projects but have subsequently been removed. The total number of analyzed composite samples was 36 obtained from 180 sampling stations plus duplicate samples for quality assurance and quality control.

Collected samples were sent to an international accredited laboratory (i.e. ALS Bogor, Indonesia) for physical and chemical analyses. Chemical parameters analyses were based on international best practices technical guideline for dredged material characterization (London Convention 1972⁷; OSPAR 2004), covering heavy metals, total petroleum hydrocarbon (TPH), polycyclic aromatic hydrocarbons (PAH), organo-chlorine pesticide (OCP), polychlorinated biphenyls (PCBs) and total organic matter (TOM). In addition, toxicity characteristics leaching procedures (TCLP) based on USEPA SW 846⁸ was also performed to determine the toxicity characteristic of the sediment.

- DHV 2008

In 2008 DKI Jakarta in association with DHV (with Dutch government donor funding undertook some pilot dredging in a minor drain within Jakarta (not part of the project). As part of this study, a total of eight composite samples from nine sampling stations was sent out to an international accredited laboratory (i.e. ALS Bogor) and were analyzed for all tests required under Indonesian regulation for B3 (hazardous) waste identification, i.e. (i) physical test and screening (i.e. flammable, corrosive, explosive, infectious (only for medical wastes), reactive) (ii) chemical test (total content analyses and TCLP for both inorganic and organic pollutants); and (iii) biological test (Lethal dose 50 - LD50). In addition, a composite sample from Kali Mati was also sent abroad to an international accredited laboratory in the Netherlands (i.e. Eurofins) for the purpose of cross-check.

- AMDAL for Phase 2 activities, sampling and analysis 2010

In 2010 a further set of primary sediment quality studies in proposed Year 2 sub-project areas was undertaken as part of preparation of AMDALs for these Phase 2 sub-projects. The areas sampled also included the 3 sites now excluded from the project

Composite samples (9 sub-samples each composite – 3 rows about 100-200m apart, 3 samples across each row) were collected considering both the location of the ERM sampling and the current (as at time of sampling) physical limits of each sub-project area. Analysis

⁶ The World Bank in 2008 commissioned ERM to carry out these tests.

⁷ http://www.imo.org/includes/blastDataOnly.asp/data_id%3D17020/1-DredgedMaterial.pdf

⁸ <http://www.epa.gov/epawaste/hazard/testmethods/sw846/pdfs/chap7.pdf>

was by an accredited laboratory using local standard methodologies, concentrating on (i) physical characteristics, (ii) total metals, (iii) TCLP metals and (iv) TCLP organics.

In summary, sediment quality studies specific to Jakarta’s drains and waduks were undertaken in 2008 and 2010 involving more than 350 sub-samples compiled into a total of 70 samples for Toxicity Characteristic Leaching Procedure (TCLP) and total metals and organics analysis.

The results and interpretation from all three studies were similar and are discussed in terms of:

TCLP testing. This is the definitive chemical test in Indonesia and elsewhere to establish whether waste material is deemed hazardous or otherwise in terms of whether the extract contains levels of organics and metals above specified “Regulatory Limit”. All samples from the three studies met the standards.

TCLP organics. Again all samples from the three studies met Indonesian standards

Total metal analysis showed almost all samples met international “soil quality” screening levels for almost all metals. (for details, See Sediment Quality Report)

Acute toxicity testing (conducted on the DHV samples) demonstrated that in terms of lethal dose 50 (LD50) the dredged sediment had a low toxicity, lower than the acute toxicity of table salt (NaCl).

The review of sediment quality assessments also considered the health risks posed by the arsenic levels in the sediment. Results of acute toxicity level identified the sediment material as relatively harmless (i.e. very high amount of sediment required to be ingested to produce a lethal dose). Assessments of likely exposure pathways of construction workers to the sediment during the project as well as likely exposure due to the future usage of the disposal site also concluded that the health risks are low, particularly given the requirement in the AMDAL for Ancol CDF for the capping of the disposed material with sand and clay.

6 PUBLIC CONSULTATION AND DISCLOSURE

Both GOI and WB have clearly defined principles and objectives for public involvement (PI) in the AMDAL (i.e. EA process). The implied expectations are that meaningful PI will help in smooth project implementation, transparency and active participation by the stakeholders. Good PI throughout all stages will improve project implementation effectiveness and lead to achieve intended outcomes. The National Environment Management Agency (BAPEDAL) Decree 08/2000 serves as a guideline for the improved and strengthened PI. The decree clearly spells out the rights of the public to: (a) receive all relevant information about a proposed project, (b) seek relevant information about the proposed project, and (c) have a representative of the directly affected public sit as a member of the AMDAL Commission that reviews the draft EA. **Usually, the emphasis for PI is at the preliminary, i.e. the scoping stage of the EA process, but for this project PI will be ensured throughout the project preparation and implementation.** This approach is based on a recent study of PI in the AMDAL process in Indonesia (QIPRA 2005) study which found that there are a number of critical success factors throughout the AMDAL process (Table 6-1).

Table 6-1 Critical Success Factors for Public Involvement in AMDAL Process

Process Stage	Critical Success Factors
Announcement In Various Media	
Newspaper Announcements	Placement in more than one paper, preferably all local papers and also national newspapers
Notice board near project site	Posters located in strategic locations and many public places frequented by community
	Multiple posters that present information in different manners
Radio and local television	Effective for announcing invitations to public consultation events
Internet	Notices on website of proponent and environment agency

Public Consultations In Preparation Of Tor (Ka-Andal)	
Representations	Scoping or pre-survey of affected communities is conducted to understand social structure, formal and informal leaders, and the different interests and concerns in the community
	Use focused group discussions and small group meetings for community consultation on scoping
	Encourage the support and involvement of local NGOs
	All levels of local government are consulted in the planning stage
Dialogue during public consultations	Local government authorities are present and active in dialogue
	Proponent is directly involved in dialogue (instead of being only represented by his AMDAL consultants)
EA-Andal Study	
During study preparation	In-depth interviews with affected informed community members
Representation & Discussion In Amdal Commission	
Representation	The "Affected Community" is clearly defined and can easily select a representative who knows, and can speak, for their concerns
Discussion in AMDAL Commission	Key findings and draft EA-ANDAL study (with summary) are provided to community representatives
	Community representative(s) have discussed issues to be raised in AMDAL Commission prior to the review meeting
	Community representatives participate in EA-ANDAL study review
Other Considerations	
Access to information	Delivered to community members close to location of activities
	Presented in easy-to-digest format, also using pictures and graphs
Decision & Clearance By Environmental Agency	
Prior to decision	Environmental agency visits community for review of all comments received during prior stages
Clearance	Community representative meets with environmental agency for final consultation and feedback

7 ENVIRONMENTAL AND SOCIAL MITIGATION PLANS

7.1 Environmental Mitigation, Monitoring and Reporting

The EIA/SIA consultant will prepare site specific EMPs for Phase 2 project activities. The EMPs will provide detail set of mitigation, monitoring, and institutional measures to be taken during the project implementation in order to eliminate adverse environmental and social impacts, offset them, or reduce them to acceptable levels.

Example of mitigation and monitoring effort is presented in Table 7-1. Mitigation and monitoring are carried out to protect the natural environment and people's health and well-being. Although complaints may a times be due to subjective perceptions of a nuisance or problem caused by project activities, they usually arise because a mitigation action is not complied with or a threshold is exceeded, such as a blocked access, loud equipment noise, excessive dust, or local flooding.

Therefore, the complaints and grievance mechanism will also be part of the monitoring program (See GRS system in RPF for details). It is essential that the affected communities and the public in general have adequate opportunities for recourse if they are impacted by the project in a significant way.

The Supervision Consultant (SC) will be responsible for environmental monitoring, the result is to be reported as separate data as and when they are collected. The report should be submitted as consolidated monitoring reports at regular, set or agreed intervals between the PMU and BPLHD who will receive and review the report. In case that any standards are not met or set thresholds are

exceeded, the BPLHD will decide (i) What remedial action(s) will be taken, (ii) Who is responsible for taking action? Lastly, it must be recorded which standards or limits were exceeded, and what action was taken when to remedy the problem.

7.2 Social Management

The major adverse social impact resulting from the proposed project interventions will be the involuntary resettlement of people. RPF will guide the project to address resettlement issues of the project. Those affected by the project will be supported through the provisions available in RPF and RP (see RPF for details).

7.3 Community Complaints Management during Construction

A record of (i) number and types of complaints received, and (ii) manner and time frame in which they are dealt with the party responsible is a very good indicator of the contractor's environmental and social performance. It shows (i) how active and assertive the community is, (ii) how often the contractor is at causing situations that give rise to complaints, and (iii) and how well and promptly the contractors deal with problems that arise due to their activities. A contractor that is responsive to reasonable complaints will get better cooperation from the community, and then a community that feels they are being heard when they have a justified complaint, will be more cooperative – all of which contributes to smooth project implementation. For detail of grievances and complaint management, see the RPF section of Grievances Redress System (GRS).

Table 7-1 Environmental and Social Mitigation and Monitoring Plan

Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget
<p>Pre-construction</p> <ul style="list-style-type: none"> Displacement of PAPs occupying areas required for the project 	<p>Component : Social</p> <p>Issue: Permanent or temporary displacement of persons occupying area required for project activities</p> <p>Potential impacts:</p> <ul style="list-style-type: none"> Loss or disturbance of income sources and/or livelihoods Loss of full or partly dwellings and commercial structures <p>Consideration: Although implementation of JUFMP is expected to have immediate positive impacts for over one million people living in flood prone areas, there will also be adverse social impacts that require mitigation. The main adverse impacts of JUFMP may be the displacement of people occupying areas required for JUFMP dredging and construction work. A rapid survey by the World Bank social team revealed an overwhelming proportion of potentially affected people to be informal occupants on public land.</p> <p>Mitigation: (i) consider alternative design that will avoid and minimize the number of people need to be resettlement, (ii) if not avoided, Resettlement Plans (RPs) will be prepared based on agreed RPF. (see RPF)</p>	<p>Monitoring</p> <ul style="list-style-type: none"> <i>Statutory requirement:</i> RPF embedded in the Loan Agreement <i>Performance criteria:</i> PAPs living standard <i>Object:</i> Temporary or permanent displaced PAPs <i>Parameter, method and frequency:</i> to be specified in RPs <i>Reporting:</i> Details are provided in RPF <i>Timing:</i> Before construction period and monitor throughout the project until the objective is achieved. <p>Responsibility: Provincial Government of DKI Jakarta</p> <p>Budget: Provincial Government of DKI Jakarta has allocated budget to provide compensation in cash (see Project Cost for latest figure) or in-kind (e.g. rental housing) for the PAPs</p>


<p>Construction</p> <ul style="list-style-type: none"> Dredging 	<p>Component : Natural Environment</p> <p>Issue: Water quality (TSS, turbidity, odor, DO, BOD)</p> <p>Potential impact: (i) Dredging causes temporary increase of TSS in the water column and release of oxygen depleting substances (organic or anaerobic sediments), nutrients and contaminants, (ii) Removal of biota at dredge site and smothering benthic of adjacent site, (iii) temporary disturbance of aquatic life due to the drop of DO level (notably fish),</p> <p>Consideration: (i) Increase of TSS and BOD levels are unavoidable. The extent depends much on method and magnitude of dredging and hydrodynamics. However condition of the baseline is already turbid, eutrophic and high in BOD, thus such increases of TSS and BOD will be only temporary and localized. (ii) Benthic organism removal is inevitable; however most of the drains and retention basins are in polluted condition (mostly by domestic waste) that creates unfavorable condition for benthic ecosystem. The condition of benthic community may improve after the dredging.</p> <p>Mitigation: (i) Select appropriate equipment and dredging method, (ii) Install silt curtain when necessary, (iii) Monitor the benthic species diversity before and after dredging.</p>	<p>Monitoring</p> <ul style="list-style-type: none"> <i>Statutory requirement:</i> PP 82/1999 on Water Quality Management and Water Pollution Control; Governor Decree Kep. Gub KDKI Jakarta No. 582/1995 on Standards for River, Surface water, and Wastewater <i>Performance criteria:</i> Background level <i>Location:</i> Near-field (e.g. within radius 100 m) and far-field (e.g. radius 1000 m) of the dredging activity and dredged material processing. The definition and near-field and far-field to be determined in EIA. <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1205 607 1860 967"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>Standards</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Total suspended solid (TSS)</td> <td>Laboratory</td> <td>< 80 mg/L</td> <td>Monthly</td> </tr> <tr> <td>Biological oxygen demand (BOD)</td> <td>Laboratory</td> <td>< 20 mg/L</td> <td>Monthly</td> </tr> <tr> <td>Turbidity</td> <td>Field Measurement</td> <td>NA</td> <td>Weekly</td> </tr> <tr> <td>Dissolved oxygen (DO)</td> <td>Field Measurement</td> <td>> 3 mg/L</td> <td>Weekly</td> </tr> <tr> <td>Benthos</td> <td>In-situ and laboratory</td> <td>NA</td> <td>Quarterly</td> </tr> <tr> <td>Nekton (e.g. fish)</td> <td>In-situ and laboratory</td> <td>NA</td> <td>Quarterly</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <i>Reporting:</i> Monthly reporting to PIUs and every six months reporting from PIUs to BPLHD for review <i>Timing:</i> Before construction period and monitor throughout the project until the background level is achieved. <p>Responsibility: Contractor (for implementation) and Supervision Consultant (SC) for supervision and monitoring (taking samples)</p> <p>Budget: Contractor (included into contract), SC (from Loan)</p>	Parameter	Method	Standards	Frequency	Total suspended solid (TSS)	Laboratory	< 80 mg/L	Monthly	Biological oxygen demand (BOD)	Laboratory	< 20 mg/L	Monthly	Turbidity	Field Measurement	NA	Weekly	Dissolved oxygen (DO)	Field Measurement	> 3 mg/L	Weekly	Benthos	In-situ and laboratory	NA	Quarterly	Nekton (e.g. fish)	In-situ and laboratory	NA	Quarterly
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Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget																				
Construction <ul style="list-style-type: none"> Dredging 	<p>Component: Urban Environment</p> <p>Issue: Temporary increase level of noise, odor, dust, vibration</p> <p>Potential impact: dredging will general impact on urban environment, such as noise, odor, dust, and vibrations</p> <p>Consideration: Traffic within DKI Jakarta is highly congested, alternative mean of transport via water or railroad will be investigated in the EIA.</p> <p>Mitigation: Monitor regularly the equipments' integrity, modify work practice as required, e.g. avoid operating high noise generating equipment during night time.</p>	<p>Monitoring</p> <ul style="list-style-type: none"> <i>Statutory requirement:</i> Government Regulation PP No. 41/1999 on Air Pollution Control; MoE Decrees Kep-50/MenLH/11/1996 and Governor Decree SK Gub. KDKI Jakarta no 551/2001 on Air Quality, Noise, Odor, and Vibration. <i>Performance criteria:</i> Background level <i>Location:</i> Near-field and far-field of the dredging activity and dredged material processing. The definition and near-field and far-field to be determined in EIA. <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1205 672 1860 899"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>Standards</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Dust</td> <td>In-situ and laboratory</td> <td>230 µg/m³</td> <td>Monthly</td> </tr> <tr> <td>Noise</td> <td>Field measurement</td> <td>70 dBA</td> <td>Weekly</td> </tr> <tr> <td>Vibration</td> <td>Field measurement</td> <td>Normal</td> <td>Weekly</td> </tr> <tr> <td>Odor</td> <td>Field measurement</td> <td>Normal*</td> <td>Daily</td> </tr> </tbody> </table> <p>* Require more than 50% of the minimum eight respondents to confirm normal odor</p> <ul style="list-style-type: none"> <i>Reporting:</i> Monthly reporting to PIUs and every six months reporting from PIUs to BPLHD for review <i>Timing:</i> Before the activity and then monitor throughout the project until the background level is achieved. <p>Responsibility: Contractor (for implementation) and SC for supervision and monitoring</p> <p>Budget: Contractor (included into contract), SC (from Loan)</p>	Parameter	Method	Standards	Frequency	Dust	In-situ and laboratory	230 µg/m ³	Monthly	Noise	Field measurement	70 dBA	Weekly	Vibration	Field measurement	Normal	Weekly	Odor	Field measurement	Normal*	Daily
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Vibration	Field measurement	Normal	Weekly																			
Odor	Field measurement	Normal*	Daily																			
	<p>Issue: Temporary disturbance of access/livelihood</p>	<p>See embankment work section in this table for detail mitigation</p>																				
Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget																				

<p>Construction</p> <ul style="list-style-type: none"> • Transport (overland using watertight dump truck) 	<p>Component : Urban environment</p> <p>Issue: Traffic disruption, leakage and spill of material during transport</p> <p>Potential impact: Transportation of dredged materials to the disposal site, if carried out day- hours will worsen the traffic which is already congested. In addition, leakage or spill of sediment during transportation will cause increase of particulate matter, i.e. after the sediment dries.</p> <p>Mitigation: (i) Only transport the material during night hours (i.e. from 22:00 – 05:00), (ii) Load dredged material into steel containers before loaded to the watertight dump truck, (iii) dredged material will be transported using GPS-tracking dump truck, (iv) integrity of the vehicles will be checked regularly, (v) maximum speed limit will set at 30 km per hour.</p>	<p>Monitoring</p> <ul style="list-style-type: none"> • <i>Statutory requirement:</i> XX • <i>Performance criteria:</i> public complaint, number of spill, traffic congestion and travel time • <i>Location:</i> from dredging site to disposal site, for both disposal of municipal solid waste and sediment. • <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1207 581 1864 699"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>Standards</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Traveling time</td> <td>Recording</td> <td>NA</td> <td>Daily</td> </tr> <tr> <td>Spill (number)</td> <td>Visual</td> <td>NA</td> <td>Weekly</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • <i>Reporting:</i> Monthly reporting to PIUs and every six months reporting from PIUs to BPLHD for review • <i>Timing</i> monitor throughout the project. <p>Responsibility: Contractor for the implementation, SC for supervision and monitoring</p> <p>Budget: Contractor (included into contract), SC (from Loan)</p>	Parameter	Method	Standards	Frequency	Traveling time	Recording	NA	Daily	Spill (number)	Visual	NA	Weekly
Parameter	Method	Standards	Frequency											
Traveling time	Recording	NA	Daily											
Spill (number)	Visual	NA	Weekly											

Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget																																												
Construction <ul style="list-style-type: none"> Disposal (Ancol CDF) 	<p>Component : Natural environment</p> <p>Issue: Smothering of benthic habitat in 120 ha, reduce of seawater quality (TSS, turbidity, nutrients), and algae blooming.</p> <p>Potential impact: Dredged material disposal at the Ancol CDF causes smothering of benthic communities at the site due to an increase of TSS.</p> <p>Consideration: The Project introduces and requires confined disposal principles in order to minimize environmental impacts due to dredged material disposal. More importantly however, introduction of CDF principles will help restoring the ecosystem of Jakarta Bay considering all the sediment (polluted by domestic activities and solid waste) from the rivers and <i>waduks</i> will eventually end up in the Jakarta Bay. Smothering is inevitable at disposal site however, considering that (i) the size of CDF (120 ha) is minuscule compared with the whole Jakarta Bay (200 km²), (ii) the ecosystem of the area is already “dead”, impact on benthic is likely low. Although the material is predominantly clay and silt based, the energy (current) at the disposal site is low based on Ancol’s study, therefore it is less likely that TSS to disperse to larger area. However, considering the source of filling material which is likely contaminated by the human wastes as well as the proximity of the reclamation site to the receptor i.e. public beach, pathogens contamination will be monitored.</p> <p>Mitigation: Early construction of the dike and breakwater, lined with an appropriate geo-textile fabric will contain the TSS within the disposal area. Close the public beach when pathogen contamination is detected. Close the public beach when harmful algae blooming occurs.</p>	<p>Monitoring</p> <ul style="list-style-type: none"> <i>Statutory requirement:</i> PP No 19/1999 on Marine Pollution Control and MoE Decree No. 51/MENLH/2004 on seawater quality for marine biota <i>Performance criteria:</i> Background level <i>Location:</i> Near-field (e.g. within radius 100 m) and far-field (e.g. radius 1000 m) of the CDF. <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1205 532 1957 945"> <thead> <tr> <th>Parameter</th> <th>Test type</th> <th>Standards</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Turbidity</td> <td>Field Measurement</td> <td><5 NTU</td> <td>Weekly</td> </tr> <tr> <td>Dissolved oxygen (DO)</td> <td>Field Measurement</td> <td>>5 mg/L</td> <td>Weekly</td> </tr> <tr> <td>Total suspended solid (TSS)</td> <td>Laboratory</td> <td>20 mg/L</td> <td>Monthly</td> </tr> <tr> <td>Biological oxygen demand (BOD)</td> <td>Laboratory</td> <td>< 20 mg/L</td> <td>Monthly</td> </tr> <tr> <td>Total coliform</td> <td>Laboratory</td> <td>0</td> <td>Weekly</td> </tr> <tr> <td>Fecal coliform</td> <td>Laboratory</td> <td>0</td> <td>Weekly</td> </tr> <tr> <td>Total ammonia nitrogen (T-NH₃)</td> <td>Laboratory</td> <td>0.3 mg/L</td> <td>Monthly</td> </tr> <tr> <td>Total phosphorus (TP)</td> <td>Laboratory</td> <td>< 0.015 mg/L</td> <td>Monthly</td> </tr> <tr> <td>Benthos</td> <td>In-situ and laboratory</td> <td>NA</td> <td>Quarterly</td> </tr> <tr> <td>Nekton (e.g. fish)</td> <td>In-situ and laboratory</td> <td>NA</td> <td>Quarterly</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <i>Reporting:</i> Monthly reporting to PIUs and every six months reporting from PIUs to BPLHD for review <i>Timing:</i> Before the activity and monitor throughout the project until the reference/background level is achieved. <p>Responsibility: : PT PJA (Ancol) as part of RKL/RPL implementation and SC for supervision and monitoring</p> <p>Budget: Contractor (included into contract), SC (from Loan)</p>	Parameter	Test type	Standards	Frequency	Turbidity	Field Measurement	<5 NTU	Weekly	Dissolved oxygen (DO)	Field Measurement	>5 mg/L	Weekly	Total suspended solid (TSS)	Laboratory	20 mg/L	Monthly	Biological oxygen demand (BOD)	Laboratory	< 20 mg/L	Monthly	Total coliform	Laboratory	0	Weekly	Fecal coliform	Laboratory	0	Weekly	Total ammonia nitrogen (T-NH ₃)	Laboratory	0.3 mg/L	Monthly	Total phosphorus (TP)	Laboratory	< 0.015 mg/L	Monthly	Benthos	In-situ and laboratory	NA	Quarterly	Nekton (e.g. fish)	In-situ and laboratory	NA	Quarterly
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Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget									
<p>Construction</p> <ul style="list-style-type: none"> Embankment Work (assuming the major will include concrete/steel sheet piling while the minor work will only involve masonry stone, parapet work) 	<p>Component : Urban environment</p> <p>Issue: noise, vibration</p> <p>Potential impact:</p> <ul style="list-style-type: none"> Short-term localized increase level of noise and vibration during the operation of construction equipments. Sensitive receptors in the project area include people living adjacent to the project area <p>Mitigation: (i) inform local communities regarding type of embankment work and for how long the construction will take place, (ii) concrete sheet-piling work will only be allowed during day-hours and shall stop temporary during praying time.</p>	<p>Monitoring</p> <ul style="list-style-type: none"> <i>Statutory requirement:</i> MoE Decrees on air quality, noise, and vibration. <i>Performance criteria:</i> community complaint <i>Location:</i> project site involving embankment rehabilitation. <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1207 643 1864 760"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Noise</td> <td>Field measurement</td> <td>Weekly</td> </tr> <tr> <td>Vibration</td> <td>Field measurement</td> <td>Monthly</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <i>Reporting:</i> Monthly reporting to PIUs and every six months reporting from PIUs to BPLHD for review <i>Timing:</i> Before the activity and then monitor throughout the project until the background level is achieved. <p>Responsibility: Contractor for implementation, SC for supervision and monitoring</p> <p>Budget: Contractor (included into contract), SC (from Loan)</p>	Parameter	Method	Frequency	Noise	Field measurement	Weekly	Vibration	Field measurement	Monthly
Parameter	Method	Frequency									
Noise	Field measurement	Weekly									
Vibration	Field measurement	Monthly									

Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget						
<p>Construction</p> <ul style="list-style-type: none"> • Embankment Work (assuming the major will include concrete sheet piling while the minor work will only involve stone masonry or parapet work) 	<p>Component : Social</p> <p>Issue: Livelihood of people who rely on river or <i>waduk</i></p> <p>Potential impact:</p> <ul style="list-style-type: none"> • Temporary disturbance of livelihood; • Social conflict between the PAPs and the project labor <p>Consideration: There are small number of PAPs (rapid survey: about 30 people); who rely on the river and <i>waduk</i> for their source of income. During the project construction (dredging and embankment work), temporary disturbance may occur to those who operate <i>Eretan</i> (i.e. boats tied to metal cables that can carry around a dozen of people, or a few motorcycles and a few people, across the city's rivers). Other potential impact include livelihood disturbance to scavengers who operate in the river and <i>waduk</i>.</p> <p>Mitigation: In addition to management measure outlined in the Community Complaint Management Section, contractors (dredging and embankment work) will give priority to the PAPs when recruiting non-skilled labor prior to the construction work in the areas where those PAPs are located. An alternative to the non-skilled labor job opportunities, in case of <i>eretan</i> the contractor may also help to shift the PAP <i>eretan</i> to slightly upstream or downstream so that the <i>eretan</i> can still operate during dredging and embankment work</p> 	<p>Monitoring</p> <ul style="list-style-type: none"> • <i>Statutory requirement:</i> ESMF and RPF • <i>Performance criteria:</i> number of PAP employed and complaint from PAP • <i>Location:</i> Embankment work and dredging locations. • <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1207 618 1860 675"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Complaint/conflict</td> <td>Survey/interview</td> <td>Monthly</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • <i>Reporting:</i> SC to PMU and PIUs, DKI to PMU to World Bank • <i>Timing:</i> Before the activity (non-skilled labor hiring) and after the work in the PAPs area is completed (termination) <p>Responsibility: DKI (Monitoring and Reporting <i>Pokja</i>) and SC</p> <p>Budget: Provincial Government of DKI and Contractor</p>	Parameter	Method	Frequency	Complaint/conflict	Survey/interview	Monthly
Parameter	Method	Frequency						
Complaint/conflict	Survey/interview	Monthly						

Phase / Operation	Issue, Potential Impact	Monitoring, Responsibility and Budget												
Post-construction <ul style="list-style-type: none"> Disposal (Ancol CDF disposal) 	<p>Issue: Changes in hydrodynamics and geomorphology at disposal sites</p> <p>Potential impact: Change of longshore current, and subsequently alter abrasion and sedimentation pattern in the adjacent areas. The existence of reclaimed land is also vulnerable to abrasion.</p> <p>Consideration: Simulation of longshore current carried out by PT PJA's consultant showed that the longshore current pattern will not change after the reclamation, it will however slow down from 1.52 m/s to 1.42 m/s. Furthermore, the TSS will increase slightly while the bathymetry showed insignificant changes.</p> <p>Mitigation: Monitor the longshore current and TSS level to understand the dispersion pattern. Consider other beneficial use schemes such as habitat restoration.</p>	<p>Monitoring</p> <ul style="list-style-type: none"> <i>Statutory requirement:</i> PP No 19/1999 on Marine Pollution Control <i>Performance criteria:</i> longshore current, sedimentation pattern and abrasion <i>Location:</i> Ancol CDF <i>Parameter, method and frequency:</i> <table border="1" data-bbox="1207 613 1860 760"> <thead> <tr> <th>Parameter</th> <th>Method</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>Longshore current</td> <td>Field measurement</td> <td>Quarterly</td> </tr> <tr> <td>Sedimentation pattern</td> <td>Field measurement</td> <td>Quarterly</td> </tr> <tr> <td>Bathymetry</td> <td>Field measurement</td> <td>Quarterly</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <i>Reporting:</i> Monthly reporting to PIUs and every six months reporting from PIUs to BPLHD for review <i>Timing:</i> Before the activity and monitor throughout the project until stable <p>Responsibility: PT PJA (Ancol) as part of RKL/RPL implementation, SC to supervise and monitor</p> <p>Budget: PT PJA as part of it RKL/RPL implementation</p>	Parameter	Method	Frequency	Longshore current	Field measurement	Quarterly	Sedimentation pattern	Field measurement	Quarterly	Bathymetry	Field measurement	Quarterly
Parameter	Method	Frequency												
Longshore current	Field measurement	Quarterly												
Sedimentation pattern	Field measurement	Quarterly												
Bathymetry	Field measurement	Quarterly												

7.4 Inclusion in Contract Documents /Specifications

Environmental and social management plan (EMPs and GRS) will be embedded into construction contract. Likewise, management and monitoring plan (EMPs, GRS, RPs) will also be incorporated into the supervision consultant (SC) contract. This ensures that the SC and contractors have a contractual obligation and can be held accountable.

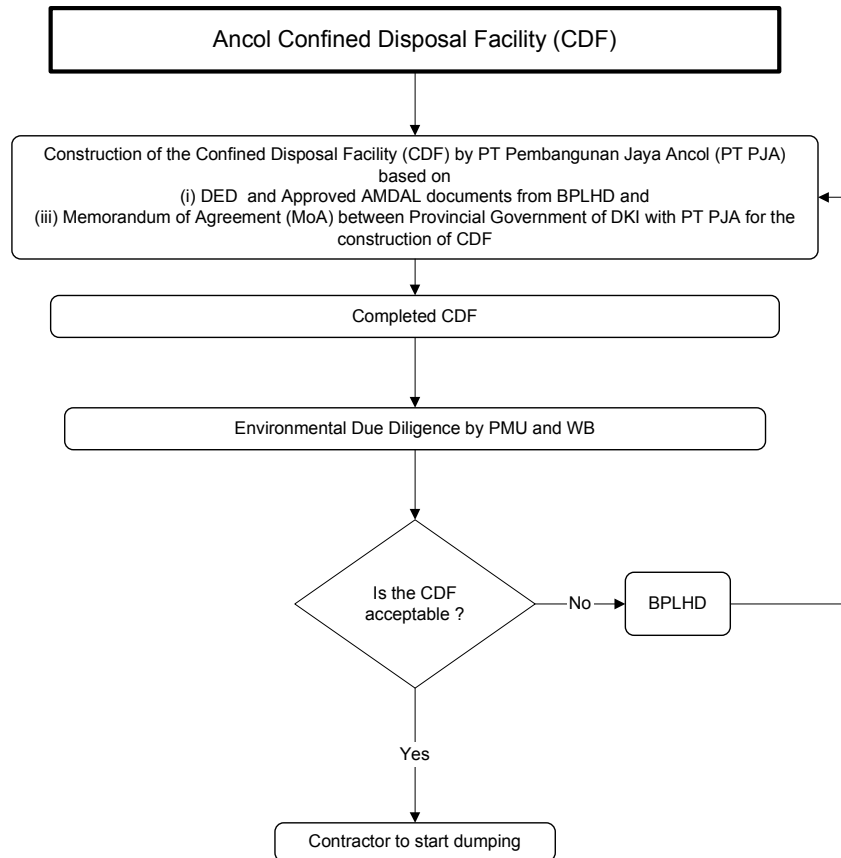
8 CAPACITY BUILDING FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT

In order to ensure the implementation and monitoring of environmental and social management plan (EMPs, RPs, GRS), a portion of Loan will be allocated to the PMU to hire the SC. Additionally, PMU has also a portion of the WASAP (Indonesia Water and Sanitation Program) grant that can be used to provide necessary resources for oversight during project preparation of EMPs and RPs via the Panel of Experts. The PMU has intention to hire consultants to develop training programs that will engage stakeholders who will have responsibilities for implementing the EMPs and RPs (e.g. community leaders, NGOs, service providers, workers, and key local officials). The training program will distinguish among their different training needs in terms of raised awareness (i.e. those who need to appreciate the significance or relevance of environmental and social issues), sensitization to the issues (i.e. those who need to be familiar enough with the issues that they can make informed and specific requests for technical assistance, and detailed technical training (i.e. those who will need to analyze potentially adverse environmental and social impacts, to prescribe mitigation approaches and measures, and to prepare and supervise the implementation of management plans)

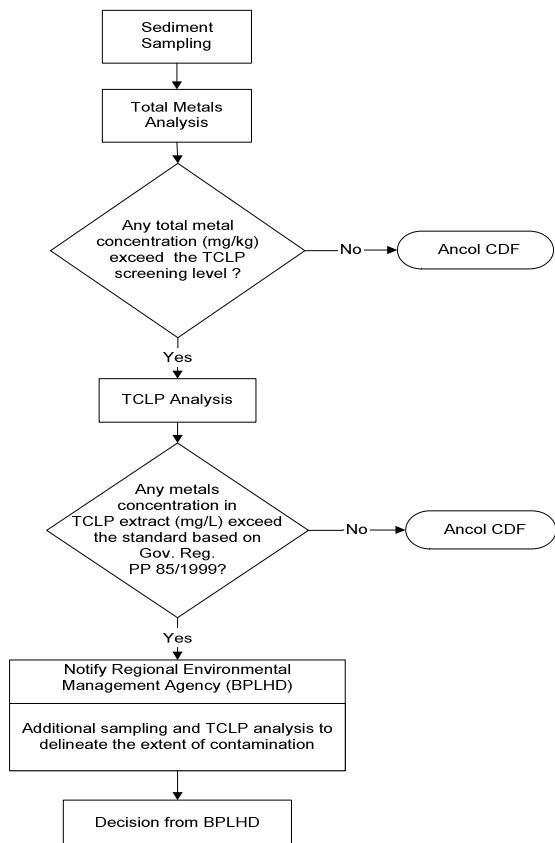
9 BUDGET FOR ESMF IMPLEMENTATION

The Government of Indonesia (GOI) has obtained a US\$ 5 million grant (TF#054683) (Indonesia Water and Sanitation Program – WASAP) from the Netherlands Government through the World Bank and has applied a portion of this Grant (Component J) for the implementation of the ESMF by hiring PPC and EIA/SIA consultant.

Annex 1: Ancol CDF Processing and Environmental Due Diligent



Annex 2 : Hazardous wastes screening as per requirement of Ancol CDF AMDAL



Parameters	TCLP Screening Level (mg/kg dry-weight)	TCLP Standard (mg/L) Gov. Reg. PP No. 85/ 1999
<i>Arsenic</i>	100	5
<i>Barium</i>	2000	100
<i>Boron</i>	10000	500
<i>Cadmium</i>	20	1
<i>Chromium</i>	100	5
<i>Copper</i>	200	10
<i>Lead</i>	100	5
<i>Mercury</i>	4	0.2
<i>Selenium</i>	20	1
<i>Silver</i>	100	5
<i>Zinc</i>	1000	50

if no metals level exceeds the Toxicity Characteristic of Leaching Procedure (TCLP) screening level, TCLP (USEPA SW 846) will not be carried out