INDONESIA AUSTRALIA PARTNERSHIP FOR INFRASTUCTURE

Project Design Document Palembang City Sewerage Project

August 2017

Table of Contents

ACRO	DNYM:	S AND A	BBREVIATIONS	v		
EXEC	STRATEGIC CONTEXT AND ANALYSIS1					
-	1.1	SANITATI		1		
	1.2	Імраст (DE INADEQUIATE SANITATION			
	13	RESPONS	E BY GOL TO LOW SEWERAGE COVERAGE	2		
	1.5	REGIONA	ALTONOMY IN THE SANITATION SECTOR	2		
	1.4	SANITATI		·····		
	1.5	SANITATI	SECTOR STAREHOLDERS INSTITUTIONS AND POLICIES			
	1.6	FUNDING		4		
	1.7	POLICY O		4		
	1.8	OPERATI		5		
_	1.9	AUSTRAL	IA'S ONGOING SUPPORT TO THE SANITATION SECTOR	6		
2	RATIO	ONALE F	OR AUSTRALIA'S INVESTMENT	7		
	2.1	WHY AR	E WE SUPPORTING CITY SEWERAGE WITH AUSTRALIAN GRANT FUNDS?	7		
	2.2	THE CASI	E FOR GRANTS TO SEWERAGE	7		
	2.3	THE CASI	E FOR THE GRANT TO THE CITY	8		
		2.3.1	Addressing the Low level of LG Engagement	8		
		2.3.2	Greater Local Government Commitment Through Grants	8		
		2.3.3	LG Asset Ownership and Better Operation	8		
	~ ~	2.3.4	The Long View on Financing Sewerage Intrastructure	9		
	2.4		LEMBANG?	9		
	2.5	ALIGNME	ENT WITH AUSTRALIA STRATEGY FOR INVESTMENT IN ECONOMIC INFRASTRUCTURE	10		
	2.6	ALIGNME	ENT WITH OTHER DEVELOPMENT PARTNER SUPPORT	11		
		2.6.1	Partnership with ADB and Others in MSMIP	11		
		2.6.2	Australian Grant Funding Modality Influencing Gol and Other Donors	12		
	2 7	2.0.3		12		
	2.7	COMPAR	ATIVE ANALYSIS WITH CONVENTIONAL DELIVERY MODEL	12		
	2.8	ARGUME	INTS AGAINST IMPLEMENTATION THROUGH LGS	12		
	2.9	FINANCIA	AL AND ECONOMIC JUSTIFICATION	13		
3	PROJ	ECT DES	CRIPTION	14		
	3.1	DESCRIPT	TION OF THE PALEMBANG PROJECT WITHIN THE SCOPE OF THE MSMIP	14		
		3.1.1	Scope of PCSP	14		
		3.1.2	Cost Sharing in PCSP by Implementing Partners	15		
	3.2	DELIVERY	/ Арргоасн	16		
		3.2.1	Adopting Output-Based Modality for PCSP	17		
		3.2.2	Evidence-Driven Policy Reform	1/		
	3.3	PROJECT	GOAL, OBJECTIVES AND EXPECTED OUTCOMES	18		
		3.3.1	Project Goal and Objectives	18		
		~ ~ ~				
		3.3.2				
	3.4	3.3.2 Women	'S EMPOWERMENT AND INCLUSIVE DEVELOPMENT	21		
	3.4	3.3.2 Women 3.4.1	'S EMPOWERMENT AND INCLUSIVE DEVELOPMENT	21		

	3.5	ESTIMAT	ED PROJECT COST AND IMPLEMENTATION SCHEDULE	23			
4	PRO.	DJECT IMPLEMENTATION ARRANGEMENTS24					
	4.1	MANAGEMENT AND GOVERNANCE ARRANGEMENTS					
		4.1.1	MSMIP Implementation	24			
		4.1.2	PCSP Implementation Organisation	24			
		4.1.3	Implementation Support Consultants	26			
	4.2	FUND CH	HANNELLING	27			
	4.3	AUDITIN	G	27			
	4.4	Procur	EMENT				
		4.4.1	PCSP Procurement Plan	30			
		4.4.2	PCSP Procurement Organisation	30			
		4.4.3	Procurement Regulations and Procedures	31			
		4.4.4	MSMIP Procurement	31			
	4.5	Μονιτο	DRING AND EVALUATION	33			
		4.5.1	Overall Approach and Responsibilities	33			
		4.5.2	Key Evaluation Questions (KEQs)	33			
		4.5.3	DFAT Performance Assessment Framework (PAF) Indicators	35			
		4.5.4	Stakeholder Communication Strategy	35			
	4.6	SUSTAIN	ABILITY				
		4.6.1	Commitments made by Palembang City	36			
		4.6.2	Reform of Gol Infrastructure Investment Policy	36			
		4.6.3	Service Delivery Organisation	36			
		4.6.4	Legal Basis for Sewerage Service	37			
		4.6.5	Sewerage Service Charge				
		4.6.6	Septage Service				
	4.7	DFAT N	IANAGEMENT RESOURCES				
5	RISK	S, SAFEG	UARDS AND MITIGATING MEASURES				
	5.1	RISK ASS	SESSMENTS AND MANAGEMENT STRATEGIES				
		5.1.1	Investment Concept Risk Assessment	38			
		5.1.2	Working In Partner Systems Risk Assessment	39			
		5.1.3	Risk Assessment and Management	39			
	5.2	DISPLAC	EMENT AND INVOLUNTARY RESETTLEMENT	42			
		5.2.1	Safeguards Overview	42			
		5.2.2	Identified Impacts and Mitigation Measures	43			
		5.2.3	Grievance Redress Mechanism	46			
	5.3	ENVIRON	NMENTAL MANAGEMENT	47			
		5.3.1	Safeguards Overview	47			
		5.3.2	Identified Impacts and Mitigation Measures	48			
	5.4	INDIGEN	OUS PEOPLE	49			
	5.5	Child Protection					
	5.6	ANTI-CO	DRRUPTION ACTION PLAN	50			

Tables :

Table 1.1 : Access to Improved Sanitation in Southeast Asia (2015)	1
Table 1.2 : Centralised Wastewater Treatment Plants in Indonesia	6
Table 2.1 : Cost Sharing for PCSP and MSMIP Cities	8
Table 2.2 : Sewerage Indonesia - Contributing Stakeholders for Project Preparation	11
Table 3.1 : PCSP Financing	15
Table 3.2 : Estimated Cost and Proposed Funding Arrangements for PCSP	23
Table 4.1 : PCSP Components and Implementation Responsibilities	25
Table 4.2 : Summary of Contract Packages and Costs by Source of Funds	30
Table 4.3 : MSMIP Source of Funds and Procurement Method by Sub-project	32
Table 5.1 : Investment Concept Risk Assessment	
Table 5.2 : Compensation under Indonesian Regulations and ADB Safeguards	44

Figures :

Figure 1.1 : Indicative Piped Sewer Coverage in Countries with a Comparable GDP per Capita	1
Figure 3.1 : Components of the PCSP	15
Figure 3.2 : The DFAT Funded Wastewater Treatment Plant	16
Figure 3.3 : Key Outcomes for the Palembang City Sewerage Project	19
Figure 4.1: PCSP Organisation and Structure for DFAT-funded contracts	29

Annexes :

Annexe 1	:	Sector/Problem and other relevant analyses
Annexe 2	:	Project Preparation
Annexe 3	:	Detailed Description of the Project and related Activities
Annexe 4	:	Cost Estimate and Effect on Project Scope and Funding
Annexe 5	:	Project Management and Implementation Arrangements
Annexe 6	:	Fund Channelling
Annexe 7	:	Project Implementation Schedule
Annexe 8	:	Procurement
Annexe 9	:	Risk Assessment and Management
Annexe 10	:	Environmental and Social Safeguards
Annexe 11	:	Women's Empowerment and Inclusive Development
Annexe 12	:	Economic Analysis
Annexe 13	:	Indicative Monitoring, Evaluation and Reporting Framework
Annexe 14	:	Stakeholder Communication Strategy

Annexe 15 : Anti-Corruption Action Plan

ACRONYMS AND ABBREVIATIONS

ABR	Anaerobic Baffled Reactor
ACAP	Anti-Corruption Action Plan
ADB	Asian Development Bank
AH	Affected Household
AIF	ASEAN Infrastructure Fund
AIIG	Australia-Indonesia Infrastructure Grant
AMDAL	Analisa Mengenai Dampak Linkungan
	Environmental Impact Assessment
AMPL	Air Minum Penyehatan Lingkungan
	Water and Environmental Sanitation Steering Committee
AP	Affected Person
APBD	Anggaran Pendapatan dan Belanja Daerah
	Local Government Budget of Income and Expenditure
APBN	Anggaran Pendapatan dan Belanja Negara
	National Budget of Income and Expenditure
AusAID	Former Australian Agency for International Development
Bappeda	Badan Perencanaan Pembangunan Daerah
	Local Government Development Planning Board
Bappenas	Badan Perencanaan Pembangunan Nasional
	National Development Planning Agency
BI	Bank Indonesia
BLH	Badan Lingkungan Hidup
	Environment Agency
ВРК	Badan Pemeriksaan Keuangan
	State Audit Board
BPKD	Badan Pengelola Keuangan Daerah
	Local Financial Management Agency
ВРКР	Badan Pengawasan Keuangan dan Pembangunan
	Finance and Development Supervisory Agency
BTF	Biological Trickling Filter
CBD	Central Business District
CDTA	Capacity Development Technical Assistance
CEMP	Contractor's Environmental Management Plan
CMC	Construction Management Consultant
CPIU	Central Project Implementation Unit
CPMU	Central Project Management Unit
CPMUSC	CPMU Support Consultants
DAU	Dana Alokasi Umum
	General Purpose Funds from Gol
DED	Detailed Engineering Design
DFA	Direct Funding Agreement
DFAT	Department for Foreign Affairs and Trade (Australia)
DGHS	Directorate General Human Settlements, Ministry of Public Works and
DIDA	Housing
DIPA	Daftar Islan Pelaksanaan Anggaran Dadaat Aadha isatiaa tid
0.00	Budget Authorisation List
DJPB	Directorate General of Treasury, Ministry of Finance

DKI Daerah Khusus Ibukota Special Capital Region DPA Dokumen Pelaksanaan Anggaran Budget Authorisation Document DPKD Direktorat Pembiayaan dan Kapasitas Daerah Directorate of Local Finance and Capacity Development Dewan Perwakilan Rakyat Daerah Local Council of Representatives EA Executing Agency EIA Environmental Impact Assessment EMP Environmental Impact Assessment EMP Environmental Impact Assessment EMP Environmental Impact Assessment FMC Facility Managing Contractor FOPIP Financial and Organisational Performance Improvement Plan GoA Government of Australia GoI Government of Indonesia GRM Grievance Redress Mechanism IA Implementing Agency ICB International Competitive Bidding IEE Initial Environmental Examination Indil Indonesia Infrastructure Initiative – Managing Contractor for AllG IPAL Instalasi Pengolahan Air Limbah Sewage Treatment Plant FIPIC Kornis Pengolahan Air Limbah Sewage Treatment Plant KEQ Key Evaluation Question KPK Komisi Pengolahan Air Limbah Sewage Treatment Plant KEQ Key Evaluation Question KPK Konris Pemberantasan Korupsi KPK Konris Perberantasan Korupsi KPK Konris Perberantasan Korupsi KPPIP Konrite Percepatan Penyediaan Infrastructure Delivery LARP Land Acquisition and Resettlement Plan LG Local Government ILDAP Local Institutional Development Action Plan LKPP Lembaga Kebijakan Pengadan Penerintah National Public Procurement Agency LIDAP Local Institutional Development Action Plan LKPP Lembaga Kebijakan Pengadan Penerintah National Public Procurement Agency LIDAP Local Institutional Development Action Plan LKPP Lembaga Kebijakan Pengadan Penerintah National Public Procurement Agency LIDAP Local Institutional Development Action Plan LKPP Lembaga Kebijakan Pengadan Penerintah National Public Procurement Bank MDG Militateral Development Goal MoF Ministry of Health	DJPK	Direktorat Jenderal Perimbangan Keuangan Director General of Fiscal Balance, Ministry of Finance
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MoF Ministry of Finance MoH Ministry of Health	MDG	Millenium Development Goal
MoH Ministry of Health	MoF	Ministry of Finance
•	МоН	Ministry of Health

MoHA	Ministry of Home Affairs
MPWH	Ministry of Public Works and Housing
MSMHP	Metropolitan Sanitation Management and Health Project (ADB)
MSMIP	Metropolitan Sanitation Management Investment Project (ADB)
Musrenbang	Musyawarah perencanaan pembangunan
Ũ	Development planning meeting
NCB	National Competitive Bidding
NUWAS	National Urban Water and Sanitation program (World Bank)
0&M	Operation and Maintenance
PAD	Pendapatan Asli Daerah
	Locally obtained revenue
PAL	Pengelolaan Air Limbah
	Wastewater Management
PAM	Project Administration Manual
PACS	Project Anti-Corruption System
PCSP	Palembang City Sewerage Project
ΡΟΡΔΙ	Perusahaan Daerah Pengelolaan Air Limbah
IDIAL	I G-owned wastewater management company
ΡΠΛΜ	Perusahaan Daerah Air Minum
FDAIN	I G-owned Water company
חחת	Project Decign Decument
PDD	Project Design Document
PelliDa	Less Covernment
DerDe	Local Government
PerDa	Peraluran Daeran
DerCub	Local Government Regulation
PerGub	Peraturan Gubernur
PerPres	Presidential Regulation
PFM	
PGS	Partner Government Systems
PISC	Project Implementation Support Consultant
PIU	Project Implementation Unit
PMU	Project Management Unit
Pokja	Kelompak Kerja
	Working Group
PP	Peraturan Pemerintah
	Government Regulation
PPH	Persetujuan Penerusan Hibah
	On-granting Agreement
РРК	Pejabat Pembuat Komitmen
	Commitment Officer (Government)
PPLP	Direktorat Pemgembangan Penyehatan Lingkungan Permukiman
	Directorate of Environmental Sanitation Development at DGHS
PPMU	Provincial Project Management Unit
PPSP	Percepatan Pembangunan Sanitasi Permukiman
	Accelerated Program of Urban Sanitation Development
РРТА	Project Preparation Technical Assistance
PU	Kementerian Pekerjaan Umum dan Perumahan Rakyat
	Ministry of Public Works and Housing
PUBM	Dinas Pekerjaan Umum Bina Marga
	Local Government Public Works Highway Agency

PUCK	Dinas Pekerjaan Umum Cipta Karya
	Local Government Public Works Human Settlements Agency
PWD	Public Works Department
QBS	Quality-based Selection
QCBS	Quality and Cost-Based Selection
Renja	Rencana Kerja
	Annual Work Plan
Renstra	Rencana Strategi
	Strategic Plan
RKA-K/L	Line Ministry Budget Work Plan
RKL	Rencana Keria Linakunan
	Environmental Work Plan
RKM	Rencana Keria Masyarakat
	Community Work Plan
RKP	Rencana Keria Pemerintah
	Government Work Plan
RPIMN	Rencana Pembanaunan Janaka Menenaah Nasional
	National Medium Term Development Plan (2015-2019)
SΔ	Subsidiary Arrangements
sAllG	Australia Indonesia Infrastructure Grants – Sanitation
Satker	Satuan Keria
Satist	Cita Kanya (DGHS) provincial project manager
SDG	Sustainable Development Goal
500	Service Delivery Organisation
Sokhor	Selvice Delivery Organisation
JEKDEI	Joint corretariat of convice departments
SIAD	Sustainable Infrastructure Assistance Drogram (DEAT program)
	Satuan Karia Daranakat Daarah or Satuan Karia Damarintah Daarah
SKPD	Begional Work Unit or LC Work Unit/Agonau
SOD	Standard Operating Presedure
SUP	Standard Operating Procedure
3PZD	Surat Perintum Pericunan Dana
CDV	Payment Instruction
SPK	Surat Perjaman Kerja
CDN4	work Order
SPIVI	Surat Perintan Perinbayaran
	Payment Request
ЗРРН	Surat Persetujuan Penerusan Hiban
CDDCC	Grant Notification
SPRSS	Summary Poverty Reduction and Social Strategy
SPS	Safeguards Policy Statement (ADB)
SPSE	Sistem Pengaaaan Secara Elektronik
T 4	Electronic procurement system (Linux-based open source software)
	Technical Assistance
IBN	To be named
ToR	Terms of Reference
ULP	Unit Layanan Pengadaan
	Government Procurement Services Unit
UPTD	Unit Pelaksana Teknis Daerah
	Local Government Technical Services Unit
UU	Undang Undang
	Laws

WB	World Bank
WIPS	Working in Partner Systems
WSP	Water and Sanitation Program, World Bank partnership with Gol
WWPS	Wastewater Pumping Station
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

This paper presents the design of the Palembang City Sewerage Project (PCSP), a AUD 109 million project jointly financed by the Government of Australia (GoA), Government of Indonesia (GoI), Provincial Government of South Sumatra and Palembang City Government. The PCSP aims to establish and demonstrate a new decentralised modality for sanitation service delivery, with the development of a sustainable urban sewerage system that is fully owned, operated and effectively maintained by a city-level government. Australia will contribute AUD 45 million for construction of the PCSP, and the remaining AUD 64 million will be provided by central, provincial and city level government.

PCSP will be implemented within the broader context of the Metropolitan Sanitation Management Investment Project (MSMIP), a GoI initiative supported by a loan from ADB to provide large-scale municipal sewerage. In addition to the PCSP in Palembang, the MSMIP will also deliver systems in Makassar, Jambi and Pekanbaru. With a total investment of AUD 415 million (which includes Palembang \$109 million), MSMIP will add 221,500 direct beneficiaries through 44,300 property connections, of which 60,000 beneficiaries and 12,000 connections will be in Palembang. The Local Government (LG)-focussed delivery modality for PCSP contrasts with the more traditional centralised approach employed for the other three MSMIP cities, setting up a useful experiment with important implications for GoI policy and for other donors.

Background

Decades of under-investment has left Indonesia with one of the lowest rates of urban coverage in Asia. Only 12 cities have functioning sewerage systems, and these serve less than 2 percent of the urban population. Although Indonesia achieved its 2015 MDG for 'improved sanitation', it did this almost entirely through the provision of small individual and communal on-site facilities. As a result, most urban households are served by septic tanks, built as permeable structures and poorly managed, resulting in widespread contamination of groundwater and neighbourhood drains when tanks are full. These and other sanitation and hygiene problems translate into significant economic and health costs, particularly for the urban poor who are less likely to have access to clean water. Rates of urbanisation are high, and urban areas provide drivers for economic growth. Thus, the provision of adequate sanitation is an increasingly important economic and health objective.

Recognising the need to redress poor sanitation infrastructure, the Gol has prioritised investment in sewerage in its current five-year development plan. Gol has committed to providing investment for municipal sewerage in 12 cities, including Palembang, as well as a major expansion of the Jakarta sewerage system.

Resources for sanitation continue to be centralised to a large extent, and allocated through ministry budgets, in particular that of the Ministry for Public Works and Housing (MPWH). Post-decentralisation, sanitation is a locally defined function, so Gol has been providing progressively larger budget allocations for regional implementation, such as through the special allocation grants (DAK), village grants, and notably the development of the on-granting *hibah* mechanism. Nevertheless, further effort is required to rebalance resource flows in favour of LGs. This can be seen with the DAK grants, which in practice represents the only investment in sanitation for the vast bulk of LGs. In 2016, the total DAK allocations for sanitation were AUD 60 million, just AUD 150,000 per LG on average, and just one-seventh of the total MPWH budget for sanitation (AUD 420 million).

Despite having an extensive sanitation budget, the MPWH has relied on external funding from Multilateral Development Banks (MDBs) and bilateral donors for large scale municipal sewerage, due largely to institutional capacity constraints in design, planning and implementation. This means that the pace of rolling out major city-wide sewerage systems has been dictated by the infrequent rate at

which external funding can be secured. Moreover, the technical quality of delivery has tended to be compromised by Gol's reluctance to include borrowing for supporting TA services, and by limited MDB supervision budgets.

In addition, when loan funds are available, GOI has preferred to directly implement projects on behalf of LGs, rather than on-lend or on-grant the funds to LGs. This, coupled with a general lack of interest on the part of LGs to borrow, results in LGs playing a marginal role in the implementation of large city-wide sewerage projects. Instead, they have tended to focus on implementing small DAK-funded facilities.

Another problem with the model of centralised provision relates to the delays and/or uncertainties associated with the transfer of assets from MPWH to the LGs. Many LGs are reluctant to accept ownership of assets built by the central government for reasons of contested valuation or questionable quality, and this in turn reduces incentives for effective operation and maintenance. Notably, 7 of the 12 municipal schemes built by MPWH since 1982 have been transferred to LGs and are operating satisfactorily. Clearly a simple solution to the problem of asset management and sustainability is for the LG to build and take ownership of the assets from the start. Demonstrating this is a key objective of the PCSP.

Rationale for Australia's Investment

The section above describes the urgent need for investment in large municipal sewerage schemes to address the serious sanitation deficit in Indonesia. As noted, the prevailing approach that favours a MDB-funded and centrally implemented model tends to marginalise LGs in the planning and delivery process, and provide insufficient technical assistance (TA) resources for key supporting activities such as supervision. These issues combine to undermine the overall technical quality and the sustainability of the investment.

The PCSP is designed to demonstrate a new model for delivering large scale municipal infrastructure in Indonesia: one that ensures much greater engagement and ownership by the LG, and provides the requisite technical support to ensure improved quality and sustainability of the investment.

Australia is well positioned to assist in this regard. Australian bilateral support in the development of grant programs for water and sanitation has been recognised for providing comprehensive TA support to establish, implement and consolidate the mechanisms for delivery of the programs. Australia also has recognised technical and managerial expertise and capabilities in the sanitation sector along with a sound understanding of Indonesia's sector policies and institutions. Importantly, Australian assistance has played a critical role in the piloting and roll out of the output-based water hibah, a program that has successfully incentivised greater LG investment and engagement in expanding the network of households with access to piped water.

In the PCSP, Australia's contribution is designed to maximise LG engagement and ownership. The grant funding mechanism will allow Palembang to implement the Australian grant portion of the PCSP as their own project, and thereby retain ownership of the assets. By contrast, those parts funded from the MPWH budget (approximately 25 percent) will remain assets of GoI pending a lengthy asset transfer process. The Australian grant will be used to build the treatment plant and pumping station, allowing Palembang City ownership of the core components of the system. Since the city will also implement half the primary network with support from the Provincial Government, they will effectively own and control 75 percent of the system, allowing operation in a more sustainable manner.

Through the use of the Australian grant, the PCSP should demonstrate the advantage of the LG assuming a more engaged role in implementation process and the ownership of assets. The PCSP allows for an experiment to test the effectiveness of the modality through an impact evaluation against the natural counterfactual provided by the conventional project delivery approach for the other MSMIP cities. Evaluation of the performance of the two modalities will be carried during

implementation and operation of assets, and will include a comprehensive evaluation of institutional and operational parameters, resulting in an overall assessment of the value-for-money achieved. This will provide valuable input to GoI in its long term objective of providing greater access to investment financing directly to city governments through the Regional Infrastructure Development Fund, RIDF now in its final stages of preparation¹.

The investment in PCSP is consistent with DFAT's *Aid Investment Plan for Indonesia 2015-16 to 2018-19* and aligns closely with Gol's current priority for investment in sewerage². The PCSP also demonstrates close alignment with programs of other development partners and reflects a growing convergence on the use of grants as a preferred option towards strengthening the role of regional government in development of municipal infrastructure and services.

Palembang City has demonstrated its commitment and capacity to be the first LG to trial the ongranting approach proposed for the PCSP. It has shown itself to be a strong performer in previous DFAT-supported programs including the water hibah and the Australia-Indonesia Infrastructure Grants for Sanitation (SAIIGs).³ Moreover, the central government has identified Palembang as one of its priority cities for infrastructure investment, perceiving the city as having strong political will and good commitment. Together with the PCSP, the city will have a comprehensive portfolio of transport and other infrastructure investment programs supported by donors and the central government, reflecting the high regard in which the city government is held.

The City government's demonstrated support for the PCSP, through a number of measures, greatly enhances the sustainability of the project. These include financing the acquisition of the land and involuntary resettlement of affected households, the issuance of regulations for the creation of a wastewater division within the LG's PDAM to operate and manage the WWTP, and a commitment to charge fees that will fully recover O&M costs (including depreciation), amongst others.

Project Summary

The PCSP is based on a masterplan prepared by IndII during 2010-11 that defined the staged development of a city-wide sewerage system for Palembang. The masterplan initially prioritises inner city areas, as they offer potential clients most likely to value the availability of sewerage services and be willing to pay the tariff.

The designed scope of the PCSP consists of a 220 km network of sewers covering 665 ha of the city centre, divided into five catchments and serving 21,700 commercial and domestic properties. The PCSP will serve 100,000 people, 5 percent of the city population. Sewage is collected by the sewer network, gravitating to four underground stations that pump it through a 10 km, 1200 mm diameter pressure pipeline to the Waste Water Treatment Plant (WWTP). The sewage treatment process utilises a covered Anaerobic Baffled Reactor (ABR), Biological Trickling Filter (BTF), Clarifier, Chlorinator and sludge drying beds. Odour from the plant is controlled, with gas extracted from the covered ABR units being flared, while foul air extracted from the pre-treatment units, BTF and ancillary works is treated by a biological filter unit. The WWTP will be constructed on 5.9 ha of land that the LG purchased for this purpose in 2012. The level of the site will be raised by at least 2 m with engineering fill which will be allowed to settle and stabilise for at least 12 months before WWTP construction commences. Effluent from the WWTP will flow through a short gravity channel to a shoreline discharge point into the Musi River.

¹ Regional Infrastructure Development Fund (RIDF) as a retail domestic financial intermediary located within PT. SMI to increase access to finance for basic environmental, productive and social infrastructure.

² See link <u>http://dfat.gov.au/about-us/publications/Pages/aid-investment-plan-aip-indonesia-2015-16-to-2018-19.aspx</u>

³ Importantly, Palembang was one of the eight cities for which a sewerage masterplan was prepared through IndII assistance in 2010/11. From these eight cities, five (including Palembang) were selected by ADB and GoI for the MSMIP program. In the PCSP, the selection of the service area of the sewerage scheme follows the previously prepared masterplan and takes into account economic returns, impacts to the environment and health benefits.

Due to budget constraints, the scope of the project that will be implemented in the first phase includes only the largest of the network catchments, serving 12,000 properties (1,500 commercial and 10,500 residential). This catchment has been divided into four sub-catchments A1, A2, A3, and A4. The service areas cover the eastern part of the Palembang Central Business District as well as the inner city along the north bank of the Musi River. The properties served are determined by topography and geographical features, which also dictate the catchment area boundaries.

Only one pumping station is needed for this catchment. However, the WWTP and the pressure pipeline will be constructed with sufficient capacity for all 21,700 properties. The detailed design and tender documents for the full scheme have been prepared so it will be a relatively simple matter to implement the full scope of the design in stages, as funding becomes available in the future.

The PCSP will be financed through contributions by GoI (AUD 32.8 million), the City/Province (AUD 31.05 million) and DFAT grant (AUD 45 million).

The DFAT grant will be implemented using Ministry of Finance (MoF) on-granting regulations on an output basis, where Palembang progressively implements the work and progressively reimbursed for outputs completed, pending satisfactory review and verification of the works. Measurement and verification will be carried out by the Construction Management Consultant (CMC), which will be funded by DFAT and procured through the FMC⁴. The City government pre-finances the work and pays the contractor on the basis of measured works. Pending a positive recommendation from the CMC, the city government can then claim reimbursement from the Executing Agency (MPWH) for those works that are DFAT grant-funded. The grant will be paid after joint review of the claim by MOF and DFAT's Facility Managing Contractor (FMC).

The direct goal of the PCSP is to improve the health and productivity of the direct beneficiaries in the City. Given the demonstration nature of the project, an additional goal is to inform GoI and also donor policy related to the financing and delivery of large scale municipal infrastructure. The objectives of the project also follow this two-track approach, and are as follows:

- 1. To develop a sustainable city sewerage system that from the outset is owned, operated and maintained by the Palembang City Government
- 2. To demonstrate the viability of an alternative approach to urban sewerage system delivery that better aligns with the principles of regional autonomy.

At the end of the project, all physical works will have been completed and handed over and all DFAT grant payments made. Expected end-of-project outcomes are as follows:

- 1. The Palembang City Government owns a fully functional city sewerage system that has been delivered on time, within budget and in full compliance with applicable financial management requirements, as well as environmental and social safeguards.
- 2. The institutional and management arrangements are in place to enable the ongoing operation and maintenance of financially efficient and environmentally sustainable systems.
- 3. The GOI and development partners are equipped with relevant evidence about the effectiveness of the on-granting model for urban sewerage financing and delivery.

Project Implementation Arrangements

Management and governance arrangements for the PCSP will be established and delivered within the context of the broader MSMIP project, and are described in greater detail in the Project Administration Manual (PAM). The ADB loan-funded components of the MSMIP will have a separate PAM, consistent with the PCSP PAM except for differences related to grant versus loan funding.

⁴ The CMC will be funded by the KIAT facility and is not included in the \$45 million investment grant from DFAT.

Overall oversight of the project – to monitor compliance with funding and loan agreements, to monitor project implementation and to provide guidance in relation to GoI policy – will be provided by a Bappenas-chaired MSMIP steering committee that also includes MPWH, MoF, Ministry of Home Affairs (MoHA), Ministry of Health (MoH) and the participating LGs.

As with the other elements of the MSMIP program, the MPWH Directorate General for Human Settlements (DGHS) will act as the Executing Agency for the PCSP⁵. Within DGHS, a Central Project Management Unit (CPMU) in the Directorate of Environmental Sanitation (PPLP) will monitor and report on physical and financial progress, recommend grant reimbursements to the City government, and conduct periodic M&E. Importantly, the CPMU will appoint an Environment Officer to oversee compliance with ADB's required safeguards.

The City Government will be responsible for the implementation of the DFAT- and LG-funded components of PCSP (approximately 75 percent of the project). To that end, it will establish a Local Project Management Unit (LPMU) to provide oversight (primarily to ensure compliance with the ongranting agreement and to ensure necessary resources and support are provided by the City government), and a Local Project Implementation Unit (LPIU) to function as the budget delegate (with responsibilities that include checking contractor statements, approving contractor payment applications and preparing the grant reimbursement applications). Upon completion of the PCSP, the City's water utility (PDAM) will be the operator of the WWTP, and will be engaged during the construction process for training and capacity building. In addition to these city-level arrangements, consultants will be engaged to provide various support functions for the PCSP, in project preparation, supervision, M&E, communications and capacity building, and other areas.

PCSP procurement will follow the national e-Procurement system and will comply with all relevant GOI policies and procedures, which currently allow foreign companies to compete for construction works in excess of Rp 100 billion (AUD 10 million) and consultant services in excess of Rp 10 billion (AUD 1 million), conditional on having an Indonesian subsidiary or partnering with an Indonesian company. Bidders for the DFAT grant-funded work will be subject to pre-qualification, with prior review of the short list by DFAT. This assessment will include specific criteria providing evidence of past successful delivery of large sewerage projects, and only firms that satisfy pre-qualification criteria will be invited to bid. Importantly, no preference of any kind will be given to domestic bidders or for domestically manufactured goods.

Given the demonstration nature of the PCSP, monitoring and evaluation (M&E) will play a crucial role in project delivery and oversight. The Performance M&E framework, as outlined in **Annexe 13**, describes the main features of the proposed M&E system including initial performance indicators, responsibilities and reporting schedules.

All stakeholders, including central and local government, donors and consultants, have a role to play in the PCSP M&E. The CPMU, with support from the LG management and implementation units, will provide overall oversight of project performance, with ongoing monitoring provided by the FMC and project consultants. DFAT, supported by the FMC, and ADB will carry out periodic supervision, including oversight of safeguards. The CPMU, DFAT and ADB will jointly assess project implementation twice a year. Evaluation efforts to compare the PCSP on-granting (LG-led) model with the traditional model for central financing and delivery as used for the other MSMIP cities will be coordinated and funded through the FMC.

A number of initial key evaluation questions (KEQs) have been identified, to be further refined during implementation. These KEQs serve as a frame for performance information covering

⁵ Whilst DGHS acts as the Executing Agency for the broader MSMIP, including the PCSP, for the Australian-funded grant component the Directorate General of Fiscal Balance at MoF will function as the Executing Agency.

technical, gender and social inclusion and environmental outcomes across a range of criteria including impact, effectiveness, sustainability, appropriateness/compliance, as well as performance comparisons across the two delivery models. In addition to the KEQs, the M&E framework will include relevant performance indicators from the DFAT Performance Assessment Framework (PAF), covering outcomes associated with leverage, policy change, service access and skills training, amongst others.

Risks, Safeguards and Mitigating Measures

Risks associated with the PCSP were first assessed in the Investment Concept Template, as prepared in 2014. The highest rated individual risks were associated with safeguards, fraud and reputational issues. The main concern under Safeguards was the involuntary resettlement of households from the WWTP site which might result in homelessness, child protection issues and loss of livelihood. Potential fraud issues stem from the inputs-based nature of the project, with the risk that funds might not be used for their intended purpose. Safeguards and Fraud risks also combine to generate high reputational risks. For the purposes of this executive summary, the primary focus will centre on the key risks and mitigation measures associated with the involuntary resettlement of households.

When the 5.9 ha WWTP site was purchased by Palembang City in 2012 it was already occupied, with the permission of the previous land owners, by 16 households living in wooden structures. These Affected Households (AH) need to be resettled before construction can begin. Twelve of the households are classed as vulnerable, with 6 below the poverty line and 6 female headed, all of whom will receive additional assistance, and an offer of employment from the PCSP contractors, as well as compensation.

The first Land Acquisition and Resettlement Plan (LARP) for the Palembang scheme was prepared under ADB's MSMIP in 2012, with public consultation, loss inventory, socio-economic survey, and cut-off following during 2012-13, all conducted in accordance with ADB's Safeguards Policy Statement (SPS) 2009. DFAT has therefore agreed to continue following the SPS. In November 2013 DFAT requested Palembang to undertake further public consultations, and advised the Mayor that satisfactory implementation of social safeguards would be critical to DFAT's final decision on the provision of funding for the PCSP. Palembang City has no experience of resettlement under donor projects but has shown its commitment to follow ADB process.

The PCSP is categorised as Involuntary Resettlement Category B under ADB's SPS due to there being less than 200 Affected Persons (AP) on the WWTP site; a total of 76 persons in 17 households were identified at the cut-off date. Three years on one of these AHs was found to be outside the site boundary and only 8 houses remain occupied, with 5 of the 16 structures having been abandoned or dismantled. Nevertheless, those AHs that have moved or whose abandoned structures have since been dismantled will receive compensation and treatment consistent with ADB's operational guidelines. The remaining structures within the site boundary will be demolished as part of the site preparation works, which will include substantially increasing the existing ground level.

In late 2016 Palembang City commissioned an independent appraiser to value the structures on the WWTP site and calculate the compensation due to AHs based on the Indonesian Society of Appraisers (MAPPI) *Standar Penilaian Indonesia* (SPI). The total compensation to be paid is consistent with the amount calculated in accordance with the SPS in the original LARP. Palembang City Government has allocated funds for compensation in their 2017 budget (APBD), accepting the need to go beyond the requirements of the Indonesian legislation in order to fully comply with the provisions of the SPS on Involuntary Resettlement.

In February 2017 demographic data was updated and it was found that another 11 sub-households (relatives of the main householder) were living within these 16 structures, giving a total of 27 AHs comprising 98 Affected Persons. The LG has agreed to compensate the additional 22 people who

have moved in since the cut-off date. The LARP document was updated in February 2017 with input from a joint ADB / DFAT mission in January and, after further reviews by both ADB and DFAT, was submitted by DGHS on 26 May; formal approval of the LARP was issued by ADB on 16 June 2017.

Palembang City held a Public Consultation with the AHs on 14 February 2017, attended by representatives of the LG, KJPP, DFAT, IndII and DGHS. Most of the AHs who have already moved remain in the vicinity of the WWTP site and representatives of all AHs attended. Following this meeting each AH, including the timber mill, individually accepted the compensation offered and agreed to the resettlement.

The SPS also requires the LG to establish a mechanism for receiving and resolving Affected Persons' (AP) grievances about involuntary resettlement and other project impacts. The MSMIP CPMU, through the PPIU in South Sumatra and the LPMU in Palembang City, will ensure that all grievances and complaints are addressed in a timely manner. In the first stage the LPIU and the *Lurah* (neighbourhood head) will try to resolve the issue, failing which the AP may bring their grievance to the Mayor of Palembang. The third stage would be to involve the Governor of South Sumatra, with the final stage being to go to court.

1 Strategic Context and Analysis

1.1 Sanitation Sector Overview

Indonesia has one of the lowest rates of urban sewerage coverage in Asia. Only 12 of Indonesia's cities have sewerage systems and treatment plants, and these serve less than 2 percent of the national urban population. This is a direct result of protracted underinvestment in sewerage over three decades. Although the Government of Indonesia (GoI) achieved the United Nations MDGs (2000–2015 Millennium Development Goals) for 'improved sanitation', it did this almost entirely through the provision of small individual and communal on-site facilities⁶. Over the 15 years of the MDGs, there has been little investment in municipal sewerage infrastructure.

Indonesia's performance compared to other Southeast Asian nations in meeting MDG targets is shown in Table 1.1, while Indonesia's position on sewerage coverage compared to other countries with similar GDP is shown in Figure 1.1.

Country	Percent of Population
Singapore	100
Malaysia	96
Thailand	93
Myanmar	80
Vietnam	78
Philippines	74
Laos	71
Indonesia*	61
Cambodia	42

Table 1.1 : Access to Improved Sanitation in Southeast Asia (2015)⁷

*Self-reported value from Statistics Indonesia (BPS) data is 62.1 percent



Figure 1.1 : Indicative Piped Sewer Coverage in Countries with a Comparable GDP per Capita

Source; UNICEF/ WHO JMP, 2012; World Bank, 2012

 ⁶ Directorate General of Human Settlements (DGHS) reported value from Statistics Indonesia (BPS) 2014.
 ⁷Source: Millennium Development Indicators: Country and Regional Progress Snapshots – United Nations Statistics Division <u>http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Data/snapshots.htm</u>

This means that most urban households in Indonesia are served by septic tanks which are built as permeable structures, allowing waste to seep into groundwater or overflow into neighbourhood drains when the tanks are full. As a result, the groundwater and drains in most densely populated areas are heavily polluted with domestic wastewater. In some densely developed neighbourhoods that do not have septic tanks, waste is discharged directly into open drains. These urban households, together with other dwellings that have no access to safe sanitation, are estimated to account for 26 percent of the population and are the immediate target of GoI in pursuit of the 2016–2030 Sustainable Development Goals (SDGs) aimed at achieving universal access to safe sanitation.

1.2 Impact of Inadequate Sanitation

Poor sanitation in Indonesia imposes high economic and health costs, as determined by a World Bank study in 2007⁸. The key findings for Indonesia include:

- In 2006, Indonesia lost an estimated USD 6.3 billion due to poor sanitation and hygiene, equivalent to approximately 2.3 percent of GDP.
- Poor sanitation, including hygiene, caused at least 120 million disease episodes and 50,000 premature deaths annually, with resulting economic impact of more than USD 3.3 billion per year.
- The associated economic costs of polluted water attributed to poor sanitation exceeded USD 1.5 billion per year.
- Poor sanitation contributed up to USD 1.2 billion per year in population welfare losses (due to additional time required to access unimproved sanitation), USD 166 million per year in tourism losses, and USD 96 million in environmental losses due to loss of productive land.

Diarrhoeal diseases are the fifth leading cause of death in Indonesia, while individual households bear much of the economic burden of these diseases through lost productivity. The urban poor are disproportionately affected by poor sanitation, being also less likely to have adequate access to clean water. With growth in urbanisation in Indonesia amongst the highest in the region, and recognising that urban areas provide the drivers for economic growth, the provision of adequate sanitation is an increasingly important economic and health objective.

1.3 Response by Gol to Low Sewerage Coverage

Recognising the impact of underinvestment in sewerage, particularly in the largest metropolitan cities, the Gol has signalled that investment in sewerage is a priority in the current 5-year development plan (RPJMN)⁹. This is reflected in the Ministry of Public Works and Housing (MPWH) Strategic Plan (RENSTRA) for 2015-19. During the RENSTRA period MPWH plans to provide investment for municipal sewerage in 12 cities, including Palembang and the other three cities that are part of the Asian Development Bank (ADB)-funded Metropolitan Sanitation Management Investment Programme (MSMIP). The RENSTRA also includes a provision for the initial stage of Jakarta sewerage expansion. The investment for Jakarta sewerage alone is conservatively estimated to require AUD 2.5 billion by 2022, and AUD 7 billion by 2030 at current prices. Australia's Department of Foreign Affairs and Trade (DFAT) is currently supporting GoI with a review of the Master Plan for Jakarta Sewerage to identify and assess priorities and opportunities for strategic intervention using public and private investment in Jakarta sewerage¹⁰.

⁸ The Economics of Sanitation Initiative was launched with a study by the World Bank's Water and Sanitation Program (WSP).

⁹ This includes six cities without sewerage and populations of over 1 million: Surabaya, pop. 3 million; Semarang, 2 million; Palembang, 1.7 million; Bekasi, 1.5 million; Makassar, 1.3 million; and Pekanbaru, 1 million.

¹⁰ Jakarta Sewerage Scoping Study, IndII 2016, for the Committee for Acceleration of Priority Infrastructure Delivery (KPPIP).

1.4 Regional Autonomy in the Sanitation Sector

Gol has committed to a policy of regional autonomy and decentralisation, initially through the passage of regional governance Law no. 22/1999 and fiscal balance law no. 25/1999, subsequently amending and updating it with Law no. 32/2004 and 23/2014. The present law defines the roles and responsibilities of regional governments and the division of responsibility between regional governments and Gol¹¹. Under Gol policy for regional autonomy, the responsibility for regional governments has been defined in progressively clearer terms while providing other regulatory instruments to allow oversight of regional governments' execution of their responsibilities.

Before the regional autonomy initiatives, many of the local functions were provided through central line ministries. MPWH notably had an extensive role in the development of water and sanitation infrastructure at the regional government level. Recognising that a reversal of responsibility from central to regional government is difficult to achieve without a transition, the regional autonomy laws provide entry points for continued central intervention. In the case of water and sanitation infrastructure, these entry points are for projects which are deemed of strategic or national interest, or where the regional government lacks the capacity to deliver the necessary services.

The size of ministry budgets, including that of MPWH, sustains the continuing intervention by central government in regional areas of responsibility. In a parallel policy initiative, GoI has provided progressive increases in regional funding to allow greater scope for delivery of regional functions. Funding increases include higher levels of special allocation grants (DAK)¹², the creation of Village Grants, and notably, the development of the on-granting mechanism. Additional funds for regional governments through these funding initiatives have come largely from the reduction of Ministry budgets for regional responsibilities. The success of the DFAT water and sanitation hibah¹³ has led GoI to provide national funding for continuation of the hibah program. This first started in 2015 and GoI issued a new government regulation specifically to effect this national program¹⁴.

Further commentary on decentralisation reforms and the sanitation situation in Indonesia, and related analyses, are provided in **Annexe 1**.

1.5 Sanitation Sector Stakeholders Institutions and Policies

At the central government level, a Water and Sanitation Interdepartmental Steering Committee (AMPL), coordinates national policy¹⁵. The National Development Planning Agency, Bappenas, chairs the committee. Subordinate to it is a *Pokja*, or Working Group, comprised of Echelon II officers representing each of the ministries on the Steering Committee. This Working Group, chaired jointly by Bappenas and the Ministry of Home Affairs (MoHA), is responsible for setting the broad policy for the sector which informs preparation of the RPJMN. Based on the RPJMN, which is formalised by Presidential Regulation¹⁶, individual ministries prepare their Strategic Plans, which subsequently

¹¹ Regional governments include provincial, district (kabupaten), and city governments. The division of responsibilities was previously contained in Government Regulation PP no. 38/2007 under Law no. 32/2004, but it is now detailed in an attachment to Law no. 23/2014. This law also updates the establishment of regional government public companies, previously under Law no. 5/1962. The updating of regulations for regional public companies is significant because it gives regional governments more scope and flexibility in the legal structure of service delivery organisations they may establish, including the form of water and sanitation organisations.

¹² Dana Alokasi Khusus (DAK), Special Allocation Grants which are earmarked for specific use, eg sanitation infrastructure. Ministry budgets include MPWH and Ministry of Health.

¹³ DFAT's hibah is an output-based aid program that provides grants to Local Governments after they invest in their infrastructure and specified objectives are met.

¹⁴ Ministry of Finance Regulation PMK 124 of 2014 regarding on granting from national budget funds.

¹⁵ Tim Pengarah Air Minum dan Penyehatan Lingkungan (AMPL). Echelon I officers from seven ministries and one agency comprise the Steering Committee: Bappenas (Chair), Public Works and Housing (secretary), Home Affairs, Finance, Environment, Health, Education, and the National Bureau of Statistics. It is established under Deputy Infrastructure Bappenas.

¹⁶ Rencana Pembangunan Jangkah Menegah Nasional RPJMN, Presidential Regulation no. 2/2015.

form the basis for annual budget allocations¹⁷. The Strategic Plans are driven by the ministries' own definition of functions and responsibilities. Amongst the national stakeholders in the sanitation sector, MPWH has the largest annual budget and tends to set the agenda for the sector. Headline policy initiatives from AMPL in the past 15 years have included the rural water supply and sanitation strategy, and the Program for Accelerated Development of Urban Sanitation, PPSP¹⁸.

At the regional level, Local Governments (LGs) have established AMPL comprised of representatives of LG departments (Dinas) responsible for delivering sanitation services; there are more agencies represented in local AMPLs than there are ministries represented in the central government equivalent. This diversity, coupled with the relatively small local budgets for sanitation, results in a large number of small sanitation programs with little overall impact on sanitation outcomes. Therefore, a key policy initiative of the central government is to consolidate local sanitation service delivery into one agency to achieve economies of scale and measurable outcomes from sanitation investments.

1.6 Funding for Sanitation Infrastructure

Gol provides funding for sanitation infrastructure directly to LGs through DAK and ministerial budgets. DAK funding is allocated from the State Budget (APBN) to finance specific investments in sectors that are viewed as national priorities but for which implementation responsibility resides with regional governments. The distribution of DAK funds is determined on the basis of regions' fiscal gaps and sector needs, but nearly all LGs receive some allocation. The funds are transferred to sub-national budgets and must be used for the specific purpose for which they are allocated. Annual DAK allocations are determined by Bappenas in consultation with the technical ministries, with key input from MPWH. In 2016 the total DAK for sanitation was AUD 60 million which, when shared between 508 LGs, was on average AUD 150,000 per LG¹⁹.

LGs also receive annual discretionary General Purpose Funds $(DAU)^{20}$. The size of the DAU is formuladependent and set as a percentage of the national income. In 2016, the DAU was set at 26 percent of the national income. The DAU provided on average AUD 100 million for each LG and is applied mostly to recurrent expenditure such as salaries of LG officials. It is usual for LGs to apply only a small portion of their discretionary DAU funds, or indeed their own-source revenue, towards infrastructure investment, with sanitation being low on the list of priorities. Even allocating 0.5 percent of the DAU to sanitation would be considered a progressive budget for any LG²¹. In practice, most LGs spend only their DAK on sanitation programs.

In contrast, ministry budgets are an order of magnitude greater than the DAK. In 2016, the MPWH sanitation budget, including the proceeds of development loans, was approximately AUD 420 million, some seven times the DAK allocation for sanitation.

1.7 Policy on the Use of Ministry and Regional Sanitation Funds

Despite having an extensive sanitation budget, MPWH has relied on external funding from multilateral development banks and bilateral donors to finance sewerage investment programs. This is largely due to a lack of capacity amongst local consultants for planning and design of sewerage works, whereas donor funded programs are packaged with technical assistance for planning, design,

¹⁷ Rencana Strategis (Renstra) PUPR 2015–2019. PerMen PUPR no. 13.1/PRT/M/2015.

¹⁸ Program Percepatan Pembangunan Sanitasi Perkotaan.

¹⁹ This includes 34 provinces classified as LGs.

²⁰ Dana Alokasi Umum (DAU), General Purpose Funds, used to pay salaries of local civil servants including teachers, and other discretionary expenditures.

²¹ Other own-source funding includes locally derived revenues, Pendapatan Asli Daerah (PAD). Use of discretionary funds for sanitation was a selection criterion for the Australian Government-supported Indonesia Infrastructure Initiative (IndII) Infrastructure Enhancement Grants (IEG) to 22 LGs during Phase 1.

and project implementation support. In the 35-year period 1980–2015, MPWH has implemented just 12 municipal sewerage systems, many of which are relatively small. The preference for using donor funds for large scale investments in the sector means that the pace of development of city-wide sewerage has been dictated by the rate at which external funding (which is infrequent) can be secured and the value of external loans, which is now limited by legislation. In an effort to provide an alternative platform for access to long term loans for municipal infrastructure, the MoF is in the process of developing the Regional Infrastructure Investment Fund (RIDF). Alignment of the RIDF initiative and PCSP is discussed further in section 2.3.4²².

Loan funds that are allocated for city sewerage are recorded in the MPWH budget and the projects are implemented by MPWH for the relevant LGs. Under the present national regulations, loan funds may be on-lent or on-granted to LGs, a decision that is made during project preparation. However, LGs generally do not wish to borrow and MPWH has yet to entertain the option of on-granting part of the loan to LGs, although other ministries have allowed this to occur²³. Ultimately, under this prevailing policy there is little opportunity for LGs to become directly involved in the implementation of city-wide sewerage. They are relegated to the minor responsibility of providing smaller-scale sanitation facilities through their DAK funds.

1.8 Operation of Sanitation Assets and their Sustainability

Another problem in the sector arises because the bulk of LG sanitation assets are provided through the MPWH budget, which means they are the property of MPWH. However, MPWH cannot operate these assets and must transfer them to LGs in a two-step process. First, the assets are handed over to LGs to use and to deliver services. This step is meant to establish that the assets work and that the LG is capable of using them. After a period of three to five years, MPWH should transfer *ownership* of the assets to the LG. This second step is difficult to complete because it requires the agreement of the LG. Many LGs have difficulty in accepting ownership of assets built by central government for reasons of contested valuation, or questionable quality—though they will still continue to use them.

Generally, large sewerage infrastructure has been transferred to the LG and there is evidence that transferred systems are operating satisfactorily. However, this is a very time-consuming process and absence of legal ownership affects the management of the systems within LGs. Nevertheless, seven of the 12 municipal schemes built by MPWH since 1982 have been transferred to LGs and these are operating satisfactorily. Two of these have had the assets transferred to local sanitation companies (Perusahaan Daerah Air Limbah); see Table 1.2.

MPWH makes every effort to ensure that the constructed works are managed properly by LGs, by providing extensive programs of capacity development support. In the end, MPWH continues using this infrastructure delivery modality because it is the most convenient for it in terms of project delivery. Although this modality may be effective in delivering completed works, the lack of ownership by LG means that it is not legally required to maintain and care for the assets, ultimately leading to lower sustainability.

A more direct solution to the problem of asset management and sustainability is for the LG to build and take ownership of the assets from the start. The LG would then be legally obliged to maintain the assets, at least for the expected life of the class of asset.

²² RIDF <u>http://documents.worldbank.org/curated/en/724321468268163279/pdf/PID-Print-P154947-07-13-2015-</u>

<u>1436780371044.pdf</u>

²³ The World Bank Irrigation Improvement loan of AUD 60 million, and AUD 560 million of the JPY 125 billion loan for the Jakarta/s Mass Rapid Transit, were passed on as grants.

City	Year Begun	Funding	Owner	Operator
Balikpapan	2001	World Bank loan/Gol	LG	PDAM ^a
Bandung	1980	ADB loan/Gol	LG	PDAM
Banjarmasin	1998	World Bank loan/Gol	LG	PD PAL ^b
Cirebon	1998	Swiss grant/Gol	MPWH?	PDAM
Denpasar	1994	JICA loan	Province	BLU PAL ^c
Jakarta	1982	World Bank loan	DKI	PD PAL
Medan and Parapat	1991	ADB loan/Gol	Province?	PDAM
Surakarta	1995	World Bank loan/Gol	LG	PDAM
Tangerang		Dutch grant/Gol	?	Dinas Pemda ^d
DI Yogyakarta	1995	JICA grant	Sekber ^e	Dinas Pemda

Table 1.2 : Centralised Wastewater Treatment Plants in Indonesia

(a) PDAM – LG water company

(b) PD PAL – LG sewerage company

(c) BLU PAL – LG sewerage public service agency

(d) Dinas Pemda – LG service department

(e) Sekber – Joint secretariat of service departments from three LGs (Yogyakarta, Bantul, and Sleman).

1.9 Australia's Ongoing Support to the Sanitation Sector

The Australian Government-supported Indonesia Infrastructure Initiative (IndII) provided assistance to GoI during 2010–2011 to prepare sewerage master plans for eight cities. The assistance included criteria for selection of the cities by GoI²⁴. Subsequently, the ADB agreed with GoI on the selection of five cities for the MSMIP loan using the cities with the master plans as the starting point. The cities selected were Palembang, Pekanbaru, Cimahi, and Makassar from the master plan list and Jambi from outside the list. During the preparation of the MSMIP, GoI requested of the Government of Australia (GoA) that the grant pledged under the Australia Indonesia Infrastructure Grants (AIIG) be applied to the Palembang component of the MSMIP. GoA agreed, noting that the city of Palembang has distinct strategic importance to the economy of Sumatera.

Subsequently and in collaboration with the ADB and GoI, DFAT provided detailed engineering designs, environmental and social safeguard studies for three cities, and Capacity Development technical assistance for all participating cities through the Sustainable Infrastructure Assistance Program (SIAP)

The selection of the service area of the Palembang sewerage scheme and the beneficiaries follows the master plan and takes into account economic returns, impacts to the environment and health benefits.

DFAT has supported the engagement and empowerment of up to 40 local governments in the development of sanitation services through the \$40 million output based grant for small scale sewerage infrastructure (sAIIG) which also provides support for the establishment and strengthening of operating institutions.

²⁴The cities selected were Batam, Palembang, Pekanbaru, and Bandar Lampung from Sumatera; Bogor, Cimahi, and Surabaya from Java; and Makassar from Sulawesi.

2 Rationale for Australia's Investment

2.1 Why Are We Supporting City Sewerage with Australian Grant Funds?

We have seen from the sector analysis in Section 1 that Indonesia lags behind its peers in sewerage provision, and that continued rapid urbanisation is exacerbating the need for urban sewerage systems. The Metropolitan Sanitation Management Investment Project (MSMIP) is a GoI initiative supported by a loan from ADB that addresses this shortage of sewerage infrastructure.

The Palembang City Sewerage Project (PCSP) is one sub-project of the MSMIP not funded by ADB but supported by a DFAT grant. The total investment for MSMIP is AUD 420 million. PCSP, including the proposed DFAT grant of AUD 45 million, is AUD 109 million of that total²⁵. In total MSMIP will add 221,500 direct beneficiaries through 44,300 property connections, of which 60,000 beneficiaries and 12,000 connections will come from Palembang²⁶. More detailed description of the project is provided in Section 3 and the annexes. Viewed in country program terms, the Australian contribution large, but in the context of the project and the scale of the investment need, the Australian contribution is small. What then is the case for Australian intervention with grants for sewerage?

2.2 The Case for Grants to Sewerage

As seen from the analysis in Section 1, the Government's preference for investment in sewerage has been to apply MDB loans. This is despite its own substantial sanitation budget, which is currently AUD 350 million annually is projected by DGHS to reach AUD 3.5 billion for the five-year period 2015-2019²⁷. Although MPWH has this extensive sanitation budget, it lacks ready access to expertise in the planning, design, implementation and management of sewerage systems and to date has only invested in projects for which there is MDB or bilateral financing and technical support. While loan-financed projects have included provisions for capacity-building, its effectiveness has generally been limited by Gol's reluctance to include borrowing for related TA services within the project loans. This has typically been further compounded by limited MDB supervision budgets, which have focused supervision mainly on the implementation of civil works.

Australian bilateral support in development of grant programs for water and sanitation has been recognised for providing comprehensive TA support to establish, implement and consolidate the mechanisms for delivery of the programs. Australia also has recognized technical and managerial expertise and capabilities in the sanitation sector, along with a sound understanding of Indonesia's sector policies and institutions.

While these factors make Australian support for sewerage an attractive and justifiable modality for government to use in their development of the sector, it is not the only reason for offering this assistance. The design of the PCSP has other sector development objectives in addition to the direct project outcomes from the physical scope of the program. These development objectives are directed at demonstrating that alternative financing and implementation modalities can make significant improvements to the delivery of sewerage at the city level. The key defining feature that addresses all these objectives is the provision of the grant to the city government.

²⁵ The MSMIP-ADB loan is USD 120 million. Indonesia's central and regional governments are providing USD 79.19 million for the cities of Makassar, Pekanbaru and Jambi. DFAT is providing grants of AUD 63 million to MSMIP and 45 million for PCSP.

PCSP. ²⁶ Direct beneficiary connections: Makassar 11,000; Pekanbaru 11,000; Jambi 10,300; and Palembang 12,000.

²⁷ Projected national sanitation funding for MPWH In the current 5-year development plan (RPJMN), and reflected in the MPWH Strategic Plan (RENSTRA) for 2015-2019.

2.3 The Case for the Grant to the City

The decision to apply the grant to the city rather than to a central ministry budget was guided by the DFAT water and sanitation hibah, which has shown the transformative power of financing and implementing water and sanitation services at the LG level. As a city-level grant, the PCSP addresses some of the key sectoral issues identified in Section 1. These include the low level of engagement of LGs in wastewater infrastructure, the gap in commitment of resources between central and local governments, and the unsustainability of investments without local ownership of assets.

2.3.1 Addressing the Low level of LG Engagement

The component of the MSMIP that is financed through the ADB loan, and conventionally delivered through central government implementation, has little engagement with the LG. The physical works are tendered and implemented through the MPWH budget delegate within the province. There is little opportunity for LG involvement during implementation. In contrast, the PCSP model gives the LG direct responsibility for implementation of works they will subsequently own and operate. This modality is better aligned with GoI policy for decentralisation and regional autonomy. Therefore, a key point to assess will be the extent to which the PCSP demonstrates quality and timeliness in project delivery equivalent to that of the conventionally implemented components under MSMIP.

2.3.2 Greater Local Government Commitment Through Grants

The structure of the MSMIP is ideally suited to test and demonstrate that engagement and delivery of the project through the LG is a viable alternative to central government implementation modalities. Because the grant funds for Palembang sewerage are transferred directly to the LG, Palembang has in turn committed a greater portion of its own budget to the project. The provincial government has also contributed funding as direct financial assistance to the Palembang government. Together, the city and provincial governments have contributed AUD 31 million of counterpart funding, or 69 percent of the value of the AUD 45 million grant. By comparison, the other MSMIP regional governments contributed funds equivalent to 21 percent of the loan. Ultimately, grant funding in Palembang leverages more than three times the level of regional funding achieved in the MSMIP cities which use the conventional MPWH delivery model (Table 2.1).

						LG Funding as % of:	
	ADB	DFAT	Gol	LG/Prov.	Total	Loan/Grant	Total
Palembang		45	33	31	109	69%	28%
Other MSMIP*	162		98	24	296	21%	12%
All MSMIP	162	45	132	75	415		

Table 2.1 : Cost Sharing for	PCSP and MSMIP Cities
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* All figures in AUD million. The ADB loan of USD 120 and other US costs converted at AUD 1.35 = 1 USD.

2.3.3 LG Asset Ownership and Better Operation

The grant funding mechanism allows Palembang to implement the Australian grant portion of the PCSP as their own project, and thereby retain ownership of the assets. By contrast, those parts of the project funded from the MPWH budget remain assets of GoI pending a lengthy asset transfer process (described in Section 1.8) before the LG gets legal ownership. During this process, the LG has limited options for management and upkeep of the infrastructure.

In the case of Palembang, the grant is used to build the treatment plant and pumping station, so that the LG gets ownership of the core components of the sewer system. Since the city will also implement half the primary network with support from the Provincial Government, they will effectively own 75 percent of the system and will be able to operate the overall system in a

sustainable manner. Furthermore, they will be in a strong position to press for expeditious transfer of the remaining 25 percent owned by MPWH.

Through use of the grant modality, the PCSP should demonstrate the advantages of engaging the LG in the implementation of infrastructure projects and ownership of assets. DFAT will be able to test the effectiveness of the modality through a post-construction impact evaluation against the natural counterfactual provided by the conventional project delivery approach for the other three MSMIP cities.

2.3.4 The Long View on Financing Sewerage Infrastructure

As is noted in chapter 1, GOI is starting to view sewerage as economic infrastructure and in the long run will expect that users will pay for the full costs of the service provided. In particular larger cities will be expected to cover a greater portion of the investment cost with progressively decreasing direct central government support. The grant mechanism is able to provide a level of fine tuning by setting the level of the reimbursement of funds. In the case of PCSP it is 100% but the city and province contribute an additional 75% as direct investment. The level of reimbursement from the grant can be set at any level depending on the financial capacity of the local government.

Empowering Palembang to implement its own investment aligns with MOF's longer term vision of cities preparing, financing and implement their own projects. This is the long term objective of the RIDF mentioned in section (1.7). The use of grants can thus be seen as a means of engagement with local governments in direct implementation of large municipal projects while transitioning to borrowing from RIDF.

2.4 Why Palembang?

In keeping with the approach of working through GoI systems, Palembang's selection was driven in part by GoI. But the selection was validated through the good performance of the city in other DFAT programs, and especially through Palembang's demonstrated leadership in governance reforms.

As described more fully in Section 1.9, The Australian Government-supported Indonesia Infrastructure Initiative (IndII) assisted GoI in 2010–2011 to select and prepare sewerage master plans for eight cities, including Palembang. During the preparation of the MSMIP, GoI requested that the AIIG grant for Palembang be applied to the Palembang component of the MSMIP. GoA agreed based on Palembang's strategic importance to the economy of Sumatera and the likely economic returns, impacts to the environment and health benefits of a Palembang sewerage system (see Section 2.9).

Palembang is the second largest city of Sumatera, with a population of 1.75 million. The economy of the area is based on coal, oil, plantations, and fertiliser production. Palembang is strategically located on the Musi River which enables operation of a deep water port with a container crane within the city. The port facilities are used to export the province's natural resources, and the city has developed as the transportation hub of South Sumatera for domestic and international trade. The Musi is crossed by the Ampera lift bridge in the city centre, which has become an icon for the city.

The central government has identified Palembang as one of its priority cities for infrastructure investment, perceiving the city as having a strong political will and good commitment. Palembang was one of seven cities nominated to receive a loan from the German Development Bank KfW for solid waste. It will also receive financial assistance from Korea for the development of its drainage system.

In the current RPJMN, the central government plans to develop urban railway networks in nine metropolitan cities, and bus rapid transport systems in 29 cities; Palembang has been selected as a beneficiary of both programs. Meanwhile a USD 520 million, 22.5 km light rail transit (LRT) system

connecting the airport to the city centre and the main sports stadium is due for completion in 2017. Together with the PCSP, these initiatives will give Palembang a comprehensive portfolio of infrastructure investment programs supported by donors and central government, reflecting the high regard in which the city government is held. Partly due to these progressive initiatives, Palembang has been selected as co-host, with Jakarta, for the Asian Games in 2018.

A key goal of Palembang City's 2013–18 Medium-Term Development Plan (RPJMD) is the realisation of an international city that is economically independent and attractive for investment. The plan highlights the importance of fair and equitable development which is environmentally sustainable. Improving the quality of sanitation in the city is specifically identified as an infrastructure goal in the plan.

Since 2012, Palembang City has demonstrated its commitment to improving access to water and sanitation for its citizens. It has been the second largest participant in the Water Hibah program, whereby the cost of new house connections is reimbursed through AIIG. Palembang City is also one of the larger participants in the Australia Indonesia Infrastructure Grants for Sanitation (sAIIG) program, which increases sanitation access through the construction of neighbourhood sewerage networks. Palembang City has turned its water utility from being one of the worst performing in Indonesia to one of the best, and after the first phase of the Water Hibah program reinvested the money reimbursed by the program back into its water utility to install more house connections.

Overall, the Palembang City government has demonstrated its commitment and capacity to be the first LG to trial the on-granting approach proposed for the PCSP. This has been demonstrated through the acquisition of the land required for the wastewater treatment plant in 2012/13; the budgeting for other facets of project preparation (including resettlement compensation and land acquisition for pump stations) in 2015; and diligent participation in all relevant meetings (some at short notice and in Jakarta) for the project's detailed engineering design (DED) and preparation.

Palembang is also one of the main beneficiaries (USD 4.5 million) of the ADB's Neighbourhood Upgrading and Shelter Project–Phase 2. This project will have three outputs: (i) institutional capacity for managing pro-poor urban development strengthened; (ii) infrastructure in slum neighbourhoods upgraded; and (iii) new settlements for poor families established.

2.5 Alignment with Australia Strategy for Investment in Economic Infrastructure

Indonesia is responding to a significant backlog in sewerage infrastructure, particularly in the largest metropolitan cities²⁸. In the current 5-year development plan (RPJMN), GoI has signalled that investment in sewerage is a priority. This is reflected in the MPWH Strategic Plan (RENSTRA) for 2015-19. During the RENSTRA period, MPWH plans to provide investment for municipal sewerage in 12 cities, including Palembang and the other three MSMIP cities. The RENSTRA also includes a provision for the initial stage of Jakarta sewerage expansion. The investment for Jakarta sewerage alone is conservatively estimated at USD 2.5 billion by 2022, and USD 7 billion by 2030. DFAT is currently supporting GoI with a review of the Master Plan for Jakarta Sewerage to identify and assess priorities and opportunities for public and private investment in strategic components²⁹.

The Gol priority for investment in sewerage aligns with Australia's strategy for investment in economic infrastructure, the first objective of which is *support for effective economic institutions and infrastructure*³⁰. Australia's strategy for investment also prioritizes large-scale water and sanitation infrastructure with well-defined impacts on economic, environmental and health benefits. This is a

²⁸ This includes Surabaya (population 3 million), Semarang (2 million), Palembang (1.7 million), Bekasi (1.5 million), Makassar (1.3 million), and Pekanbaru (1 million).

²⁹ Jakarta Sewerage Scoping Study, Indll 2016, for KPPIP (Committee for Acceleration of Priority Infrastructure Delivery).

³⁰ Strategy for Australia's Aid Investments in Economic Infrastructure, DFAT July 2015.

sector where Australia has demonstrated capability and expertise in planning, design, and implementation, with Australian firms having a competitive advantage in delivering these services.

2.6 Alignment with Other Development Partner Support

The PCSP demonstrates close alignment with the programs of other development partners and is in keeping with the growing use of grants as an important option to strengthen the role of regional government in development of municipal infrastructure and services.

2.6.1 Partnership with ADB and Others in MSMIP

DFAT has had a close partnership with ADB in the development of the MSMIP. Initial inputs from DFAT provided the master plans for the eight cities which formed the basis of the MSMIP cities and other sewerage programs. ADB subsequently provided the feasibility studies and project preparation for the MSMIP to be implemented as a co-financed project with ADB loan funds and DFAT grant. This allowed DFAT to benefit from the Social Safeguards assessment and the Land Acquisition Resettlement Plan prepared by ADB, as well as the financial and economic justification for the project. Further cooperation was provided through DFAT's Sustainable Infrastructure Assistance Program (SIAP), which funded Capacity Development Technical Assistance (CDTA) for the MSMIP cities in the preparation phase³¹. DFAT also provided engineering designs and environmental impact assessments for Palembang Cimahi and Makassar, which have assisted ADB to prepare to implement MSMIP³². DFAT and ADB will conduct joint supervision missions, since both agencies will use ADB safeguards guidelines and use the Gol national procurement guidelines for implementation.

The influence of the DFAT participation and TA contribution in the planning and preparation of MSMIP has had a significant impact on the commitment of other development partners, as is indicated in Table 2.2.

Cities	Preparation	Engineering Design	Environmental Compliance T/A	Implementation	Social Safeguards	
Jambi ³³	Gol	Col	Col			
Pekanbaru		901	901	Gol with ADB	ADD and Cal	
Cimahi				Loan	ADD and GOI	
Makassar		Indii	Indii			
Palembang	Wastewater	mun	mun	LG Palembang, Gol and DFAT grant	DFAT, ADB and Gol	
Batam	Indu	Korean Bilateral	Korean Bilateral	Korean Bilateral	Korean Bilateral	
Bandar Lampung	mun	Gol or TBN	Gol or TBN	Gol or TBN		
Bogor		Swiss EDC ^a	Swiss EDC	AfD ^b	Gol or TBN	
Surabaya	1	Gol or TBN	Gol or TBN	Gol or TBN		

Table 2.2 : Sewerage Indonesia - Contributing Stakeholders for Project Preparation

(a) Swiss Development Corporation

(b) Agence Française de Développement is the implementing agency for France's bilateral development

³¹ The CDTA is currently on hold and may need extension of time and resources to continue.

³² Cimahi was subsequently dropped from the MSMIP for incomplete land acquisition for the WWTP.

³³ The Jambi Master Plan was prepared by Gol. The IndII Detailed Engineering Design consultant for MSMIP was engaged by ADB to upgrade the Jambi design for acceptance into the MSMIP loan program.

2.6.2 Australian Grant Funding Modality Influencing Gol and Other Donors

Since the adoption of DFAT's output based water and sanitation hibah by GoI for nationwide mainstreaming, the hibah has also influenced other international donors. The World Bank is providing loan funds to GoI for on granting using the water and sanitation hibah model as a key component of their forthcoming National Urban Water and Sanitation program (NUWAS). Under NUWAS, the GoI will on-grant the proceeds of a World Bank loan to LGs participating in the program³⁴. The grants will support performance improvements in service delivery, not major capital investment, however this is a significant development because it signals GoI readiness to channel MDB loans as grants to LGs, a process that will permit LGs to directly access MDB loan funds.

2.6.3 Grants for Municipal Level Infrastructure

Through the PCSP, Australian assistance is taking the output-based grant model to a higher level – municipal level infrastructure. A similar approach is being developed by the World Bank for sector program funding through which GoI will on-grant loan funds to LG for municipal-scale infrastructure in water, sanitation, and transport sectors. The financing will be partly from World Bank loan to GoI which will be on-granted to LGs to implement city-scale projects. The on-granting will follow a modality similar to that for the PCSP project, although some of the details are yet to be finalised. A key part of the facility will be a comprehensive technical assistance package to support LGs with preparation, design, and implementation of projects. Although still in the early stages of development, the concept for the financing has been vetted at ministerial level in MoF. Under this modality, the role of the technical ministry, MPWH, will be similar to that in the PCSP, as will be the role of other key stakeholders. Selection of cities and projects will be primarily by MPWH but with oversight from a GoI review and assessment panel³⁵.

2.7 Comparative Analysis with Conventional Delivery Model

The application of the on-granting modality will allow GoI and other stakeholders to compare the relative merits of the conventional implementation modality versus the new model of direct implementation by local government through grant funding. Part of DFAT's evaluation will be a comparative performance assessment of the two modalities during implementation and operation of the infrastructure assets. This assessment will include comprehensive evaluation of institutional and operational parameters, resulting in an overall assessment of the value-for-money achieved through each modality. Other development partners will be interested to follow the performance of the municipal grant funding model, in particular the World Bank as it proceeds with its Municipal Infrastructure Grant facility.

The lessons learned from applying the local government implementation modality will be relevant to setting the operational details of the RIDF.

2.8 Arguments Against Implementation Through LGs

The most common argument for retaining the status quo model is the lack of LG capacity. While it is correct that LGs often lack planning and design capacity, this is also the case at MPWH. This is why, for example, the planning and design for PCSP was done by consultants engaged under DFAT. Although the principal counterpart during planning and design was MPWH, the LG participated at every stage and provided constructive input to the consultant's work. Because of this, the planning and design could have been done equally well working with the LG directly.

³⁴ Anticipated loan size from World Bank is USD 100 million, while approximately USD 42 million will be transferred as grants to LGs.

³⁵ Information from personal communication with World Bank.

Another argument is that LGs do not have the technical capacity to implement a project of this size and complexity. In fact, under both models of implementation the key to successful delivery is in the selection of qualified contractors and project management consultants. Again, the LG may have less experience, but with the right contractors and project managers it is equally capable of delivering the project. Furthermore, the greater experience of MPWH with larger projects is offset by the greater motivation of the LG in implementing the project as the owner.

2.9 Financial and Economic Justification

As part of the loan preparation process, the ADB carried out a financial and economic analysis for Palembang sewerage and the other three MSMIP cities. The economic feasibility of the subprojects was evaluated, based on an assessment of the following benefits: (i) health impact in terms of health care costs and productivity savings; (ii) economic opportunity loss; (iii) obviated costs of constructing and desludging septic tanks; (iv) willingness to pay for sewerage management services; and (v) increased economic opportunities, employment creation, and poverty reduction as a result of the cities' improved viability and attractiveness to businesses. Under the anticipated best-case scenario, all four subprojects were assessed as economically feasible, with economic internal rates of return (EIRRs) above the minimum 12 percent threshold.

After the scope of the project was adjusted to accommodate increased costs, the total number of direct beneficiaries for Palembang was reduced from 22,000 households to 12,000. The CDTA consultant engaged by ADB under the DFAT SIAP grant revised the economic feasibility using the updated costs, and included the benefits accrued to indirect beneficiaries from the disposal of septic tank sludge to the WWTP. The revised EIRR attained the acceptable threshold of 12 percent if at least 50,000 households were included in the treatment of septic sludge at the WWTP. This should be achievable, since the treatment plant has the capacity to accept septic sludge from more than 50,000 households.

The financial analysis assessed the: (i) financial viability of the proposed subprojects; (ii) affordability of proposed wastewater fees; and (iii) sustainability of the proposed subprojects and availability of a subsidy from the respective city governments where necessary. In all four cities, the tariffs necessary to cover O&M costs were below the households' willingness to pay. For all four cities, the proposed wastewater fees were about 0.15–1.0 percent of average household income, below the 2.0 percent affordability threshold. Subsequent to the project cost increase and reduction in direct connections, the financial analysis for all four cities generated a negative Financial Internal Rate of Return. However, in the case of Palembang, the PDAM, as the proposed operator, generates surplus funds well in excess of the shortfall in revenue from the sewerage fees. Therefore, the LG need only accept a minor reduction of the dividend payment from the PDAM to cover the costs of the sewerage operation.

3 Project Description

3.1 Description of the Palembang Project within the Scope of the MSMIP

The PCSP is based on a master plan prepared by IndII during 2010-11 which defined the staged development of a city-wide sewerage system for Palembang. ADB used this and IndII's sewerage master plans for Makassar, Cimahi, and Pekanbaru to prepare the MSMIP for Gol. Staff of ADB conducted a due diligence assessment and recommendation of the project preparation and based on this, the Board then approved the loan for Makassar, Cimahi Jambi, and Pekanbaru. Australia was and is identified as a collaborative co-financier of the project. Using the results of the ADB project preparation study, IndII then prepared detailed engineering designs, contract documents, and environmental assessments for implementation of the first stage in three cities: Palembang, Makassar, and Cimahi. The PCSP project scope is shown in Figures 3.1 and 3.2 and described below.

3.1.1 Scope of PCSP

The IndII Wastewater Master Plan (WWMP) for Palembang identified priority areas in the inner city close to the Musi River, including the Central Business District (CBD), because they offered potential customers most likely to support the scheme and be willing to pay the tariff. This was considered vital to promote early success and shape community attitudes, and thereby influence the development of subsequent stages of the system.

The designed scope of the PCSP consists of a 220 km network of sewers covering 665 ha of the city centre, divided into five catchments, and serving 21,700 commercial and domestic properties. The PCSP will serve 100,000 people, 5 percent of the city population. Sewage is collected by the sewer network, gravitating to four underground stations that pump it through a 10 km, 1200 mm diameter pressure pipeline to the Waste Water Treatment Plant (WWTP). The sewage treatment process utilises a covered Anaerobic Baffled Reactor (ABR), Biological Trickling Filter (BTF), Clarifier, Chlorinator and sludge drying beds. Odour from the plant is controlled, with gas extracted from the covered ABR units being flared, while foul air extracted from the pre-treatment units, BTF and ancillary works is treated by a biological filter unit. The WWTP will be constructed on 5.9 ha of land that the LG purchased for this purpose in 2012. The level of the site will be raised by at least 2 m with engineering fill which will be allowed to settle and stabilise for at least 12 months before WWTP construction commences. Effluent from the WWTP will flow through a short gravity channel to a shoreline discharge point into the Musi River.

Due to budget constraints, the scope of the project that will be implemented in the first phase includes only the largest of the network catchments, serving 12,000 properties (1,500 commercial and 10,500 residential). This catchment has been divided into four sub-catchments A1, A2, A3, and A4. The service areas cover the eastern part of the Palembang CBD as well as the inner city along the north bank of the Musi River. The properties served are determined by topography and geographical features, which also dictate the catchment area boundaries.

Only one pumping station is needed for this catchment. However, the WWTP and the pressure pipeline will be constructed with sufficient capacity for all 21,700 properties so that it will be a relatively simple matter to implement the full scope of the design in stages, as funding becomes available in the future.

3.1.2 Cost Sharing in PCSP by Implementing Partners

Financing for the PCSP is shared between GoI, the City/Provincial Government, and DFAT as indicated in Table 3.1.

Table 3.1 : PCSP Financing

Agency	PCSP Component	Cost in AUD
Gol (MPWH)	Sub-catchments A2, A4, Pressure main, 1,000 connections	32.8 million
City / Province	Sub-catchments A1, A3, 11,000 connections	31.05 million
DFAT grant	Site earthworks, Pumping station, Treatment plant	45 million

Figure 3.1 : Components of the PCSP





Figure 3.2 : The DFAT Funded Wastewater Treatment Plant

3.2 Delivery Approach

A key feature of the PCSP delivery modality is the transfer of the DFAT grant to the Palembang government using the Ministry of Finance (MoF) on-granting regulations. Under this arrangement the terms for the use of the DFAT grant are detailed in a direct funding agreement (DFA) between DFAT and MoF. This document is equivalent to the loan agreement between ADB and MoF for the other MSMIP cities. The MoF then enters into a binding agreement with the LG for the transfer of the grant and the conditions of its use. This is documented in an on-granting agreement between MoF and the Palembang government, with penalties for non-compliance by the LG.

The basic premise of the on-granting agreement is that it is output-based, meaning that Palembang progressively implements the work and is progressively reimbursed for outputs completed. The benefit to the LG is that they take responsibility and ownership of the works from the outset and are

fully responsible for their subsequent operation and maintenance. By contrast, the ADB loan for the other MSMIP cities is transferred to the MPWH budget and implemented by MPWH on behalf of the cities.

3.2.1 Adopting Output-Based Modality for PCSP

The grant payment modality for the PCSP is a modification of the output-based model for the water and sanitation hibah programs. The Hibah programs paid a grant based on a pre-set price for defined units of output, namely property connections. This methodology cannot be applied to a large scale infrastructure project with many complex components. The methodology adopted retains outputbased features in that the grant is paid for verified outputs and works are pre-financed by the LG.

Under PCSP, Palembang City will pre-finance the grant-funded works and will be reimbursed for 100% of the output, after review and verification of the works. Measurement and verification will be made by the Construction Management Consultant (CMC) as part of their construction supervision responsibilities. The City will pay contractors based on the measured works (input-based) in the traditional way. The City government will then claim reimbursement from the Executing Agency for those Works which are grant-funded. The grant will be paid after joint review of the claim by MoF and DFAT's Facility Managing Contractor (FMC). A detailed explanation of the fund-channelling procedure is provided in **Annexe 6**.

While this modality provides strong governance conditions, it also requires considerably more implementation oversight and obligatory prior review of supporting documentation for all payments. The DFA requires that MoF, in conjunction with the FMC verify the technical aspects of the application of the grant funds associated with each request for payment.

In summary, four key measures have been designed to mitigate the risks to grant funds:

- An independent CMC hired by DFAT will supervise and measure the works, and support the LG in all aspects of project management.
- Payments to the contractor will be based on measured construction outputs.
- The LG is required to pre-finance the DFAT-funded works and then claim reimbursement from grant funds.
- Each claim for grant disbursement must be verified by the FMC, and DGHS who recommend payment to MoF.

These measures are discussed in greater detail in Section 5, Risks Safeguards and Mitigation measures.

3.2.2 Evidence-Driven Policy Reform

The study *Options for Financing and Implementation*, prepared for AusAID in 2013, recommended funding detailed M&E of the PCSP and MSMIP, to make an objective comparison between the two different fund-channelling and project implementation mechanisms. It also recommended that the M&E continue for at least five years after project completion. AusAID accepted these recommendations.

This long term comparison is essential to achieve the project objective of demonstrating to Gol and donor partners the viability of channelling funding for similar projects through LGs. This is covered in the following section (3.3) and further detailed under the Monitoring and Evaluation section (4.4), which includes information on monitoring indicators. The technical assistance for the evaluation of the PCSP model will be designed during implementation and funded under the FMC program.

3.3 Project Goal, Objectives and Expected Outcomes

3.3.1 Project Goal and Objectives

The primary goal of the PCSP is to *help improve the health and productivity of target beneficiaries in Palembang city* – the 22,000 properties (approximately 110,000 residents) that will ultimately receive sewerage connections on completion of the project. However, considering PCSP's nature as a demonstration project, there is an equally important policy goal, namely to *inform Gol (and MDB) policy related to the financing and delivery of large-scale local infrastructure projects,* which is expected to ultimately result in improved health and productivity of beneficiaries in the numerous other locations where such projects will be implemented in the future.

The two main objectives for PCSP follow the "two-track" nature of the project's goals, and are as follows:

1. Develop a sustainable city sewerage system that from the outset is owned, operated, and maintained by the Palembang City government.

This objective is consistent with Indonesia's decentralisation laws and as well as the desire to increase LG participation, investment and responsibility in the sector. Over the longer term, direct implementation and asset ownership by LG should result in sustainable operation and management of the infrastructure, and therefore better environmental, health, and economic outcomes.

2. Demonstrate the viability of an alternative approach to urban sewerage system delivery that better aligns with the principles of regional autonomy.

As described in Section 2 above, the rationale underpinning this objective is that by demonstrating that Palembang City government can successfully build, operate and maintain its own sewerage system, GoI and donors will be motivated to channel future infrastructure funding directly through LGs.

The PCSP's emphasis on local ownership by the Palembang City Government stands in contrast with the approach used for the other cities in the MSMIP, which will receive the proceeds as infrastructure constructed for them by GoI and funded by the ADB loan and from the State budget (APBN). The completed works will then be handed over to the LG to operate. Under this arrangement, the LG manages the use of the infrastructure assets but does not own them.

Besides PCSP, Australia has already achieved significant success with previous infrastructure demonstration projects in Indonesia, leveraging increased GoI and LG funding, and increasing the outreach and quality of infrastructure investments, including:

• Water and Sanitation Hibah

In 2015, GoI channelled Rp 400 billion of its national budget through the hibah grant mechanism to increase access to clean water, while in 2016 GoI channelled Rp 800 billion from the APBN for water and Rp 200 billion for sanitation.

• Eastern Indonesia National Roads Improvement Project (EINRIP)

GoI has adopted higher standards for road construction as a result of successful implementation of EINRIP.

3.3.2 Expected End-Of-Project Outcomes

At the end of the project, all physical works will have been completed and handed over and all DFAT grant payments made. There are three expected end-of-project outcomes which are outlined in Figure 3.3 below and explained in the following sub-sections.

Figure 3.3 : Key Outcomes for the Palembang City Sewerage Project



End-of-Project Outcome 1: The Palembang City Government owns a fully functional city sewerage system. This means that the system has been delivered on time and on budget with full achievement of connection and other targets and full compliance with applicable financial management and environmental and social safeguard requirements

In order to make operation of the new sewerage system sustainable, it is important that the facility is properly constructed with good quality materials and workmanship. This requires contractors with the necessary experience and specialised skills to construct the sewerage system consistent with the design and specifications developed in the Detailed Engineering Design (DED).

Procurement for the main DFAT-funded works will be through international competitive bidding (ICB) using pre-qualification to determine a shortlist of suitable contractors. It is anticipated that the procurement process will elicit a broad and competitive set of quality proposals, leading to the best-value contractor being selected. DFAT will also appoint a CMC to support the procurement process and to supervise construction and commissioning of the works.

The successful achievement of Outcome 1 is dependent upon the achievement of the following intermediate outcomes:

- The LG resettlement of the remaining Affected Households (AH) on the wastewater treatment plant (WWTP) in line with agreed processes.
- Contractors can access materials and equipment needed to build the works.
- The LG grants permits and processes contractor payments in a timely fashion, enabling construction to follow the agreed implementation schedule.
- The LG minimizes social and environmental impacts are minimised through effective traffic management and public awareness campaigns.

- Project supervision bodies at the LG, provincial, and national level effectively identify and report construction defects.
- Contractors are committed to rectifying all defects in construction.
- National and LG procurement processes and anti-corruption measures are implemented effectively.
- The LG allocates sufficient funds to design and install property connections.

End-of-Project Outcome 2: The institutional and management arrangements are in place to enable the ongoing operation and maintenance of financially efficient and environmentally sustainable systems.

The on-granting model makes this project substantially different to a traditional loan-funded project and places responsibility for the funding, procurement, and implementation of the works on Palembang City. Channelling the funds through the city's budget means that, on completion, the sewerage system will become a City-owned asset. The City will then be legally obliged to operate and maintain the asset, thus ensuring the allocation of funds that will be vital in the early years of operation. Therefore, institutional and longer term arrangements must be put in place by the City government. This outcome is critical. Even if the asset is owned by the City government and wellconstructed, it will not be sustainable if the government does not also establish the arrangements required to effectively operate, manage, and maintain the system.

Key requirements for the achievement of Outcome 2 include developing the technical capacity to maintain the sewerage system and WWTP; establishing a suitable tariff structure, with PDAM collecting payment for both drinking water and wastewater; and developing the necessary regulatory framework for operations.

- LG capacity is sufficient to ensure competent management of wastewater services.
- Palembang PDAM develops the necessary knowledge and skillsets to operate and maintain the sewerage system and WWTP (based on training provided by the WWTP contractor).
- Public awareness campaigns result in sufficient residential and commercial property owners willing to connect to the network and pay the tariff.
- Tariffs generate sufficient revenue to cover operation and maintenance costs.
- Legislation establishing the new wastewater service is endorsed by the Local Council of Representatives, *Dewan Perwakilan Rakyat Daerah* (DPRD).

The LG allocates sufficient funds to cover operation and maintenance of the wastewater facilities until the wastewater tariff generates adequate revenues.

End-of-Project Outcome 3: The Gol and development partners are equipped with relevant evidence about the effectiveness of a model for larger cities to finance and deliver large scale infrastructure projects.

In line with its objective as a demonstration project, in order to effectively inform policy, the PCSP will need to serve as the basis for policy evidence and on-going engagement about the alternate financing and delivery model that is being tested, which is highly relevant to the GOI's vision of having large and financially strong cities borrow for their major urban infrastructure investments. Gol policy-makers (including from MoF, Bappenas, MPW, and MoHA) and relevant parties within the development partners (including the World Bank and ADB) should have ready access to information about the comparative effectiveness of the PCSP on-granting model compared to the "traditional" model used under MSMIP, where the central government builds and retains ownership of the asset while only transferring responsibility for operation to the LG. Where relevant, this should also

include evidence about the comparative health, economic, and/or environmental impacts on target populations.

The achievement of this outcome is dependent upon:

- Interest from and ongoing engagement with relevant policy-makers within the Gol
- Interest from and ongoing engagement with MDBs
- The successful production and communication of credible, policy-relevant information comparing the PCSP on-granting model with the "traditional" model used under MSMIP.

As discussed further in Section 4 below, DFAT (through the FMC) will be responsible for the implementation of the evaluation and policy engagement efforts needed to achieve End-of-Project Outcome 3.

The achievement of the three End-of-Project Outcomes, and indeed the attractiveness of the model as a whole, are dependent upon the on-granting mechanism itself functioning properly for the project. Successful implementation of the on-granting model includes the following:

- Audits conducted by the National Audit Body (BPK) reveal no discrepancies in the procurement, funds channelling and payment systems.
- Funding transfers using the on-granting mechanism are made efficiently and do not delay payments to the contractor.
- All Government stakeholders fulfil their roles under the on-granting mechanism.
- Palembang City allocates sufficient funds to pre-finance the DFAT-funded works, as well as to finance their own sections of the works.

3.4 Women's Empowerment and Inclusive Development

The PCSP initially will serve approximately 12,000 households, located in a densely populated area near the city centre. The beneficiaries will include vulnerable households, such as those which are female-headed, poor, disabled and/or elderly. These households will benefit directly from an improvement in environmental quality. Further details on this are provided in **Annexe 11**.

3.4.1 Overarching Policy Issues

The PCSP is aligned with GoA and GoI policies and goals to address poverty, gender, disability, indigenous peoples and child protection with regards to infrastructure and water and sanitation issues, including:

- GoA's 2-14 aid policy, Australian Aid: promoting prosperity, reducing poverty, enhancing stability
- Gol's National Medium-Term Development Plan 2015-2019
- DFAT's Gender Equality and Women's Empowerment Strategy (February 2016)
- DFAT's Development for All 2015–2020: Strategy for Strengthening Disability-Inclusive Development in Australia's Aid Program
- DFAT's Indigenous Peoples Strategy 2015-2019: A framework for action
- DFAT's Child Protection Policy.

The PCSP consideration of and alignment with these policies is detailed in Annexe 11.

3.4.2 Gender Action Plan, Communication, Consultation and Employment

The MSMIP Social and Poverty Analysis and the Summary Poverty Reduction and Social Strategy (SPRSS) identified the need to prepare a Gender Action Plan (GAP), a Stakeholder Communication

Strategy, a Consultation and Participation Plan, and measures to address identified social issues, including health risks and employment concerns.

<u>Gender Action Plan</u> - The GAP will assist in guiding the PCSP to provide inclusive infrastructure that improves access to sewerage services as well as enhances sanitation awareness for women and other vulnerable groups. The GAP will strengthen management and operational capacity of the PCSP through facilitating women's participation, enhancing their decision-making opportunities and benefits from the project. This will be achieved through:

- Female quotas for consultations, training and subsidised monthly sewerage fees for the poor and other identified vulnerable groups
- Emphasis on women's inclusion in hygiene sanitation campaign delivery
- Focus on women in key decision-making roles and in working groups on community supervision of sanitation, land acquisition and resettlement as well as operation and management structures
- Female quotas in staffing, and focus on increasing females in management positions
- Equal pay for equal work in civil works construction and sanitation management jobs
- Gender-specific baseline data and reporting.

The GAP is integrated into the project implementation arrangements. CMC's Social Safeguards and Impact Analysis Specialist will support the central and local Project Management Units (PMUs) and the Service Delivery Organisation (SDO) to ensure that the GAP and social strategy agreed between the GoI and DFAT is fully implemented and that it is updated as necessary. The GAP will also be in accordance with DFAT's Gender Equality and Women's Empowerment Strategy. More detailed information about the GAP is provided in **Annexe 11**.

Communication, Consultation and Employment - A Stakeholder Communication Strategy (refer to **Annexe 14**) guides the project in engaging with the public. Actions and messages are identified to ensure a regular flow of project information, to establish information sharing and consultative mechanisms and to facilitate stakeholder behavioural change for improved hygiene and sanitation. It also identifies vulnerable groups for benefit distribution.

The communication and participation plan will be further developed by the CMC's Social Safeguards and Impact Analysis Specialist, and by the Community Mobilisation Team from the CDTA Consultant. This plan is supported by a budget for hygiene and sanitation awareness.

The PCSP will generate employment in civil works and sanitation management. The Local Project Implementation Unit (LPIU) will ensure compliance with core labour standards on protection of minors, equal pay for equal work by men and women, and the right to join labour organisations. Potential health and sanitation concerns of workers and work camp communities will be addressed through a requirement for contractors to provide safe and adequate water and sanitation facilities at any construction camps. However, it is expected that most of the workforce will be recruited locally and that work camps will not be required.

Due to the incidence of sexually transmitted diseases and HIV/AIDS cases and the added risk of these among migrant workers, education on HIV/AIDS will be provided by the Local Project Management Unit (LPMU) in coordination with the City Health Agency and the contractors. The LPIU will ensure that contractor's Social and Environmental Management Plans include proposed mitigation measures to support the exercise of good health practices, including sexual health, of their workers.

3.5 Estimated Project Cost and Implementation Schedule

The completion of the DED in May 2015 resulted in better information on the scope of works, which led to significant price increases. Following discussions with Gol, the scope of the project has subsequently been reduced, resulting in a reduction in the capital cost to an estimated AUD 102 million (at May 2015 prices). An additional AUD 7 million is estimated for house connections. These increases have been accommodated by sharing of costs between stakeholders and a reduction in the initial number of catchments to be served. The other MSMIP cities have also reduced scope and are the process of restructuring of the loan agreement for ADB Board approval. Further details about the reduction in project scope and the associated cost estimates are included in **Annexe 4**.

	Estimated Baseline Cost (AUD)			
Description	DFAT Grant	Central Government	Local Government	
Sewer Network				
South portion (sub-catchments A2 and A4)		19,200,000		
North portion (sub-catchments A1 and A3)			24,200,000	
Sub-total		19,200,000	24,200,000	
Wastewater Transfer System				
Wastewater Pumping Station A	1,000,000			
Pressure main A (WWPS A to WWTP)		13,000,000		
Sub-total	1,000,000	13,000,000		
Wastewater Treatment Plant and Effluent Disposal				
Stage 1 site preparation and earthworks	2,500,000			
Stage 2 site preparation and earthworks, construction, commissioning, O&M training and 12 month operation	37,000,000			
O&M equipment and critical spare parts			450,000	
Sub-total	39,500,000		450,000	
Contingencies				
Physical and price contingencies	4,500,000			
Property Works (12,000 connections)				
Pilot (1,000 connections)		600,000		
Balance of Catchment A (11,000 connections)			6,400,000	
Sub-total		600,000	6,400,000	
Total	45,000,000	32,800,000	31,050,000	
Total Estimated Cost (including property connections)		108,850,000		

Table 3.2 : Estimated Cost and Proposed Funding Arrangements for PCSP

The Project Implementation Plan has been developed taking into account the following requirements and constraints as advised by DFAT, GoI and LG representatives:

- The earliest commencement date for DFAT-funded works is early 2017.
- The earliest commencement date for central Government-funded works is mid 2017.
- The earliest commencement date for the procurement of LG-funded works is January 2019.
- Multi-year contracts funded by DFAT and LG are to coincide with the term of the local election in 2018.
- From January to September 2018 inclusive, no construction activities are permitted within urban areas of Palembang (to avoid disruption or conflict with preparation activities for the Asian Games).
- Property connections are to commence by early 2020.

The key activities and timescale for implementing the PCSP are included in Annexe 7.

4 **Project Implementation Arrangements**

4.1 Management and Governance Arrangements

This section describes the implementation arrangements for the PCSP in the context of being a subproject of the GoI MSMIP. These implementation arrangements have been discussed with GoI and regional stakeholders and are covered in greater detail in the Project Administration Manual (PAM) for the PCSP. The implementation arrangements for the ADB loan funded sub-projects are incorporated in a separate PAM which is consistent with the PCSP PAM except for differences related to grant versus loan funding. GoI agreement to the arrangements described in the PCSP PAM is a precondition for GoI and GoA signature of the Direct Funding Agreement (DFA) for the PCSP.

4.1.1 MSMIP Implementation

At Central Government level <u>Bappenas</u> will establish a MSMIP Steering Committee, as defined in the DFA. Chaired by Bappenas, members will include the Ministry of Public Works, the Ministry of Finance, the Ministry of Home Affairs, the Ministry of Health, and the Local Governments. The role of the Steering Committee is to monitor compliance with the provisions of the DFAT Direct Funding Agreement and the ADB Loan Agreement, monitor project implementation, and provide guidance in relation to Gol policy.

The MSMIP sub-projects in Makassar, Pekanbaru and Jambi will be funded from three different sources:

- ADB US\$ 120 million loan;
- APBD City/Provincial government funding of US\$ 55.6 million; and
- APBN Central government funding of US\$ 98.1 million.

DGHS will be the budget holder, and therefore the Executing Agency, for both the ADB and APBN funded works (80% of the total) and the project will be managed by the MSMIP CPMU in the Directorate of Environmental Sanitation (PPLP). Procurement and implementation will be conducted by the respective PPLP provincial Satkers. Construction management of all 3 sub-projects will be conducted by the Project Implementation Support Consultant (PISC), funded by ADB and recruited by the CPMU, who will also provide support services to the CPMU.

All of the MSMIP sub-projects have been affected by substantial increases in estimated costs between the PPTA and the DED, and the Cimahi sub-project is recommended for cancellation due to a proposed change in WWTP site. This has necessitated submission, in December 2016, of a "Major Change in Project" request for approval by the ADB Board of Directors. Meanwhile the contract for the PISC, which was bid in April 2016, has not yet been awarded. The Capacity Development Technical Assistance Consultant (CDTA), funded by DFAT and recruited by ADB, began work in September 2014 but has been suspended since April 2015.

4.1.2 PCSP Implementation Organisation

The Palembang sub-project will also be implemented with three different sources of project funding;

- Australian grant funding for the treatment plant, site earthworks and pumping station;
- APBD City/Provincial government funding for half the network and 11,000 connections; and
- APBN Central government funding for half the network, pumping main and 1,000 connections.

Each source will have its own implementation arrangements broadly consistent with those applied across the MSMIP. The main differences between Palembang and the other MSMIP cities will be the arrangements for the use of the DFAT grant compared to the use of the ADB loan. In all other respects including the key aspects of Social Safeguards, and procurement actions the PCSP arrangements will essentially be the same as the other MSMIP components. A summary of PCSP implementation components and responsibilities is given in Table 4.1.

Components and	Source of Funds					
Responsibilities	DFAT LG/Province		DGHS			
Components of the PCSP	WWTP, Pump station, site earthworks	Network and 11,000 property connections	Network, pumping main, 1,000 property connections			
Executing Agency	MoF DGFB*	Palembang PWD	DGHS			
Gol Project Management	CPMU					
Procurement of Works	PWD Palembang	PWD Palembang	DGHS (budget delegate)			
Implementation of Works	PWD Palembang	PWD Palembang	DGHS (budget delegate)			
Construction Management	CMC (funded by DFAT)					

 Table 4.1 : PCSP Components and Implementation Responsibilities

Central Government The <u>Ministry of Public Works</u>, Directorate General for Human Settlements (DGHS) is the Executing Agency (EA) for the overall MSMIP. DGHS has established a Central Project Management Unit (CPMU) within the Directorate of Environmental Sanitation (PPLP) which will monitor and report on physical and financial progress, recommend grant reimbursements to the City government, as well as conduct periodic monitoring and evaluation. The CPMU will appoint an Environment Officer to oversee the implementation and monitoring of environmental safeguards requirements under ADB's Safeguards Policy Statement (SPS) 2009. Details of the activities related to social and environmental Safeguards where the CPMU shall be responsible are presented in Chapter 5. An Environmental Officer will also be designated in the LPMU to effectively manage the environmental aspects at the Project level.

The <u>Ministry of Finance</u> Directorate General of Fiscal Balance (DGFB) will be the authorised budget user for the DFAT grant to Palembang, and is therefore the Executing Agency for the Australian funds. These funds will be held in a Special Account at Bank Indonesia which will be administered by the Directorate General of Treasury.

Provincial Government At the Provincial Government level a Provincial Project Management Unit (PPMU) will be established with responsibility for coordinating Provincial Government agencies regarding PCSP implementation.

Palembang City Government At the Local Government level a PCSP Development Committee will be established with overall oversight of the Project and will act as the Local Project Management Unit (LPMU). The LPMU will be chaired by the Head of BAPPEDA who has been actively involved in the planning of PCSP from the beginning.

The LPMU will report directly to the Mayor and will include representatives of the city's Finance, Development and Legal Departments together with city Public Works Spatial Planning, Human Settlements, and Environment Agencies and the city water utility PDAM Tirta Musi.

The LPMU will be responsible for ensuring the PCSP is implemented in accordance with the Ongranting Agreement (PPH). The LPMU will monitor implementation of the PCSP, determine the need for support from the city government and ensure that the necessary resources are provided.

The Public Works Spatial Planning office of the city government will establish a Local Project Implementation Unit (LPIU) which will be responsible for the implementation of the DFAT and LG-

funded contracts. The head of the LPIU will be the authorised budget delegate who will be responsible for implementation of the works, and responsible for checking the contractor's statements, approving the contractor's payment applications and preparing the grant reimbursement applications.

The Palembang city water utility, PDAM, will be the operator of the wastewater system once it has been built. Its involvement in the construction of the system will be through the LPMU and the LPIU. Additionally the PDAM will appoint specific staff to be trained by the contractor in the operation of the sewerage system facilities and the wastewater treatment plant.

The organisation and structure of the Palembang City Sewerage Project for the DFAT-funded works is shown in more detail in Figure 4.1, [see also **Annexe 5**].

4.1.3 Implementation Support Consultants

In addition to the government organisations a number of consulting firms will be appointed to undertake various tasks involved with the implementation of the main Project works:

- Construction Management Consultant (CMC) for PCSP funded by DFAT and procured by the FMC (commenced October 2016);
- Capacity Development Technical Assistance (CDTA) consultant funded by DFAT grant through ADB, and procured by ADB for Palembang, Makassar, Cimahi, Jambi and Pekanbaru (commenced September 2014);
- CPMU Support Consultant (CPMUSC) APBN funding has not been secured for the CPMUSC and it is likely that the responsibilities will be transferred to the MSMIP Project Implementation Support Consultant (PISC);
- DED Consultants for sewer connections to domestic and commercial properties, including sewers within private residential and commercial developments funded and procured by the City government.

The <u>Construction Management Consultant</u> (CMC) will provide technical assistance including: finalisation of bid documents for all contract packages; preparation of topographical survey and DED for sewers not designed under the DED; review of contractor's technical submissions; baseline surveys; construction supervision for all contracts; ensuring social and environmental safeguards compliance, PCSP communications, and monitoring of grievances through the Grievance Redress Mechanism; verification of completed works for all contracts; and capacity building to support Palembang City in all aspects of PCSP implementation.

The CMC will support the budget delegates for all PCSP contracts in discharging their duties. The budget delegate will act as The Engineer under the contract and the CMC will have specific responsibility and authority to advise the budget delegate on the acceptance of works, correctness of contractor's invoices, and recommendations for payment under the works contracts.

The <u>Capacity Development Technical Assistance Consultant</u> (CDTA) will focus on institutional development. Palembang City's water company, PDAM Tirta Musi, will be the Service Delivery Organisation for the new sewerage system. Technical assistance provided by the CDTA consultant will include: organisation and staffing, operational strategy, management and business strategies with Local Institutional Development Action Plan (LIDAP) and Financial and Organisational Performance Improvement Plan (FOPIP), social marketing and customer management, management information system, organisational development and training.

The <u>CPMU Support Consultant</u> (CPMUSC) was expected to provide administrative support to the CPMU with respect to the Palembang sub-project in: (i) project management and coordination, (ii) project performance monitoring, (iii) reporting, and (iv) social development and safeguards compliance. These tasks will be performed by the MSMIP Project Implementation Support

Consultant (PISC) for the Makassar, Pekanbaru and Jambi sub-projects and it is expected that, in the absence of a CPMUSC, their responsibility will be extended to include Palembang.

4.2 Fund Channelling

The Australian grant funds will be allocated in the National Budget (APBN) with the MoF's Directorate General of Fiscal Balance as the authorised budget user and Executing Agency. The terms and conditions for the use of the grant funds will be set out in a Direct Funding Agreement between DFAT and the Directorate General of Debt and Risk Management, Ministry of Finance. The funds will be channelled by the Ministry of Finance (MoF) through an On-granting Agreement between the Directorate General of Fiscal Balance and Palembang City Government. The On-granting Agreement will comply with prevailing MoF grant regulations, the terms of the DFA and the PCSP Project Administration Manual. Payments from the grant will be made by the MoF, through Bank Indonesia, into the City's General Treasury Account to reimburse the City for payments made to the contractors on the DFAT funded contracts.

Prior to authorising each grant payment the MoF will require a Grant Disbursement Request issued by the CPMU, which will be based on a recommendation from the PCSP Development Committee and a Statement of Absolute Responsibility from the Mayor of Palembang, together with other supporting documents. The supporting documents must include a recommendation from the CMC on the acceptability of the works and the contractors invoice for the works.

The DGFB will receive the Requests for Grant Disbursement and will then issue Special Account Payment Orders to the Directorate General of Treasury, the administrator for the Special Account. Treasury will instruct Bank Indonesia to make payments, disbursing the grant in line with payment instructions received from DGFB, and will account for the movement of funds. The Treasury office will record all transactions on the Special Account and advise DFAT when replenishment is needed.

The Provincial Government of South Sumatra will transfer their funds to Palembang City as budget financial assistance which will be used by the City Government to implement the agreed Works. Further commentary on fund channelling is included in **Annexe 6**.

4.3 Auditing

The Supreme Audit Agency (BPK) has sole authority for auditing and financial reporting on government agencies at all levels, other state institutions, and all State-Owned and LG-Owned Enterprises. The Public Financial Management performance of all LGs is assessed by the BPK annually and their reports are made available to the public. The PFM performance of Palembang City has, for five of the past six years, been given "Wajar Tanpa Pengecualian" an unqualified opinion, the highest available category, by BPK. In 2013 it was "Wajar Tanpa Pengecualian Dengan Penjelasan Paragraf" an unqualified opinion with explanatory paragraph, the second category.

After the Direct Funding Agreement has been signed the MoF will issue a grant notification (SPPH) naming Palembang City as the recipient and specifying the designated amount of funds. This letter will then be used by the LG and DJPK to allocate the funds in their annual budgets, APBD and APBN respectively, which will subsequently be subject to audit by the BPK, amongst others.

DGHS, as the MSMIP Executing Agency, will commission independent external auditors to audit annual MSMIP Financial Reports in accordance with the International Standards on Auditing. The auditor and the audit ToR are required to be acceptable to both ADB and DFAT. A copy of the audited financial statements for the DFAT-funded contracts, in English, will be submitted to DFAT.

All procurement is subject to internal audits every 6 months from the City Inspectorate, while the Provincial Inspectorate audits annually. In addition the BPK undertakes further audits on a sample

basis, prioritised according to the value of the procurement. Since the PCSP contracts will be the largest ever awarded by the city it is anticipated that the BPK will wish to audit them.



Figure 4.1: PCSP Organisation and Structure for DFAT-funded contracts

4.4 Procurement

4.4.1 PCSP Procurement Plan

The initial PCSP Procurement Plan has been prepared by the FMC during project preparation and is shown in Table 4.2. This list is indicative of all the procurement required for the PCSP, including all sources of finance for the Project.

Description	Source of Funds	Estimated number of Contracts	Total Value (A\$ million)	Procurement Agent and Method	Financial Year			
GOODS AND WORKS								
Pressure Main A	APBN		13.00		2017			
Sewer Network Sub-catchments A2 and A4	APBN	3	19.20	PPLP NCB	2018			
Property Connections (1,000)	APBN		0.6		2020			
Sewer Network Sub-catchments A1 and A3	APBD	2	24.20	ULP/LPSE NCB	2019			
Stage 1 earthworks at WWTP site	DFAT	1	2.50	ULP/LPSE NCB	2017			
Wastewater Pump Station A Wastewater Treatment Plant and Effluent Outlet	DFAT	1	38.00	ULP/LPSE ICB	2019			
O&M equipment, laboratory equipment, mobile generators and critical spare parts	APBD	4	0.45	ULP/LPSE NCB	2020			
Property Connections (11,000)	APBD	6	6.40	ULP/LPSE NCB	2021			
Private sewers	Owners	1	ТВС	ULP/LPSE QBS	2022			

4.4.2 PCSP Procurement Organisation

Responsibility for procurement in Palembang City lies with the head of the LG Procurement Unit (ULP). Since 2011 Palembang has used the national e-Procurement system for all competitively tendered contracts. The ULP is institutionally located under the Assistant for Economy and Development attached to the Mayor's Office. The ULP is answerable nationally to the Public Procurement Agency (LKPP) which sets policies and standards for the tendering aspects of procurement at all levels of the Indonesian government.

The ULP is supported by an Electronic Procurement Services Unit (LPSE) responsible for providing the system on which the ULP relies for e-Procurement; the e-Proc software is provided by the LKPP which also provides close support to the LPSE.

The Mayor will establish a PCSP Procurement Committee, comprised of LG staff who are LKPP certified procurement experts, for all DFAT and Provincial/Local Government funded contracts. The procurement committee, supported by the CMC, will be responsible for advertising the procurement, answering bidders' queries and evaluating the bids. The Procurement Committee's Evaluation Report and recommendation will be passed to the head of the ULP, who will check that the regulations have been

complied with and that there has been no mis-procurement. In the case of DFAT-funded contracts the Evaluation Report will also be passed to DFAT for their No Objection.

The Procuring Entity will be the LG Work Unit (SKPD) represented by the Commitment Officer (PPK) who will enter into a contract on behalf of the LG with the contractor recommended in the Evaluation Report and will execute the contract on behalf of local government.

4.4.3 Procurement Regulations and Procedures

All PCSP procurement will follow the national e-Procurement system established by the Public Procurement Agency and will comply with the GoI policies and procedures for the procurement of goods and services by government, as defined in four Presidential Regulations³⁶. These regulations allow foreign companies to participate in the bidding for goods or services, subject to the following thresholds:

- Construction works >Rp 100 billion (A\$ 10 million);
- Consultant services >Rp 10 billion (A\$ 1 million).

In order to participate in bidding conducted through the national e-Procurement system, a foreign company will need to establish an Indonesian subsidiary or be partnered with an Indonesian company.

Bidders for the main works funded by DFAT (comprising the Transfer Pump Station and WWTP) will be subject to pre-qualification, with prior review of the proposed short-list by DFAT. The pre-qualification process will assess the capacity of firms to deliver the project. This assessment will include specific criteria covering evidence of past successful delivery of sewerage projects of equal or greater complexity and value. Only firms that meet the pre-qualification criteria will be invited to bid. Works financed by either APBN or APBD funds which are valued at more than Rp. 100 billion will also require prequalification of bidders but these will not require prior review by DFAT.

No preference of any kind will be given to domestic bidders or for domestically manufactured goods. Regulations issued by MPWH, provincial regulations and local regulations that restrict national competitive bidding procedures to a class of contractors or a class of suppliers, will not be allowed. The Procurement Committee will neither reject all bids for the DFAT funded works, nor solicit new bids, without DFAT's prior approval.

4.4.4 MSMIP Procurement

Responsibility for procurement under the loan-financed MSMIP sub-projects varies according to the source of funds, as it does for Palembang. DGHS will be the Executing Agency for both the ADB and APBN funded works (80% of the total) with procurement conducted by the PPLP provincial Satkers in South Sulawesi (Makassar), Riau (Pekanbaru) and Jambi respectively. The remaining works, financed from APBD, will be procured by the respective LGs.

ADB is applying a threshold of US\$ 25 million for International Competitive Bidding for Works, three times higher than the Indonesian threshold. The only contract expected to exceed that threshold is the Makassar WWTP, sewerage and transfer system, estimated at US\$ 40.6 million; all other contracts for the three sub-projects will use National Competitive Bidding, as shown in Table 4.3.

³⁶PerPres 54/2010 President Regulation on Government Procurement of Goods and Services including four subsequent revisions; Perpres 35/2011; Perpres 70/2012; Perpres 172/2014; and Perpres 04/2015.

Sub-project	Palembang		Makassar		Pekanbaru		Jambi	
Component	Funds	Method	Funds	Method	Funds	Method	Funds	Method
Transfer Main and Sewer Network A	APBN	NCB	ADB	ICB*	AIF	NCB	AIF	NCB
Sewer Network B	APBD	NCB	APBN	NCB	APBN	NCB	APBN	NCB
Earthworks at WWTP	DFAT	NCB						
Wastewater Treatment Plant	DFAT	ICB	ADB	ICB*	AIF	NCB	ADB	NCB
Property Connections	APBN/ APBD	NCB	APBN/ APBD	NCB	APBN/ APBD	NCB	APBN/ APBD	NCB

Table 4.3 : MSMIP Source of Funds and Procurement Method by Sub-project

Notes: DFAT = Australian Grant, APBN = Central Government funds, APBD = Provincial/Local Government funds, ADB = ADB loan, AIF = ASEAN Infrastructure Fund loan, ICB* = single ICB contract

MSMIP bid documents will be prepared based on ADB's Small Works standard bidding document, and will be subject to prior review by ADB; unlike PCSP, there will be no pre-qualification for any package under these 3 sub-projects. All ADB/AIF funded procurement will follow the Single-Stage One-Envelope bidding procedure - bidders submit bids in one envelope containing both their Price and Technical Proposals.

In contrast, the DFAT funded Palembang WWTP contract will use the FIDIC MDB harmonised contract documents, which are available from MPWH in Bahasa Indonesia, and bidders will be pre-qualified. PCSP NCB contracts will use LKPP standard bidding documents.

ADB states that all NCB shall follow Indonesian procurement regulations, PerPres 54/2010 and amendments. Additional requirements cover eligibility, foreign bidders and domestic preference, all of which are included in the PCSP PAM as well. The minimum time allowed for pre-qualification or bidding for large contracts is 28 days. ADB does not allow the rejection of bids based on a comparison with the budget ceiling, nor the rejection of all bids and re-bidding, without their prior concurrence, which is also included in the PCSP PAM.

The national e-Procurement system will be used for all MSMIP contracts irrespective of source of funding, however some of the ADB requirements stated in the MSMIP PAM cannot be accommodated by the system. In particular, foreign companies cannot register to use the e-procurement system, as noted in the previous Section. The e-procurement system itself is in Bahasa Indonesia only, although bid documents can be in English.

ADB requires NCB contract documents to include clauses as follows: (i) ADB may inspect contractor's accounts and documents related to bidding and contract performance, and have them audited; (ii) ADB may reject a proposal for contract award if it determines that there have been any corrupt, collusive or coercive practices during the bidding; and (iii) ADB may declare any firm or individual ineligible for award of an ADB-financed contract if it determines that they have engaged in any corrupt, collusive or coercive practices during bidding or executing an ADB-financed contract.

The WWTP and the large network contracts in Palembang will be multi-year contracts; ADB does not indicate which of their contracts are multi-year.

4.5 Monitoring and Evaluation

The Performance Monitoring and Evaluation Framework is outlined in **Annexe 13**. It describes the main features of the proposed M&E system, including initial performance indicators, responsibilities and reporting schedules. During the first three months of project implementation, with support and coordination from the FMC, the Monitoring and Evaluation Framework will be finalized together with project stakeholders, and will be translated into an operational Monitoring and Evaluation Plan.

4.5.1 Overall Approach and Responsibilities

The M&E approach features ongoing performance monitoring (technical, compliance, environment and social safeguards, gender and social inclusion), scheduled reviews – including following project completion - and regular reporting.

Stakeholders with M&E obligations include GoI, Provincial government, Palembang city government, donors (DFAT and ADB) and consultants. Performance assessment of the PCSP therefore needs to reflect the approach used by the MSMIP (adhering to the principle of harmonisation with partner systems) whilst ensuring DFAT's M&E expectations are met. Additional M&E above and beyond the MSMIP approach will be coordinated through the CMC and FMC.

Overall oversight of project performance will be the responsibility of the Central Project Management Unit (CPMU) together with the Provincial Project Management Unit (PPMU) and Palembang City Government's Local Project Management Unit (LPMU) and Local Project Implementation Unit (LPIU). Ongoing monitoring of the project will be undertaken by the Facility Managing Contractor (FMC), the CPMU Support Consultant, and LPIU consultants.

DFAT (with support from the FMC) and the Asian Development Bank will carry out periodic supervision including oversight of social and environmental safeguards. The CPMU, DFAT and ADB will jointly assess project implementation twice a year. Following project completion, monitoring/review missions (once a year for 5 years – longer if needed and funds permit) will be conducted jointly by DFAT and ADB.

Evaluation efforts to compare the PCSP on-granting model with the traditional model for financing and delivery used for the other MSMIP cities will be coordinated and funded through the FMC.

4.5.2 Key Evaluation Questions (KEQs)

A number of KEQs have been identified, along with sub-questions as relevant. These can be refined and others may emerge during project implementation. These evaluation questions serve as a frame for performance information covering developmental, technical, gender & social inclusion, and environmental outcomes. They will provide the focus of scheduled reviews and evaluation studies.

Evaluation Criteria	Key Evaluation Question	Assessment Timeline
Impact	1. To what extent are there health/economic/environmental	 Up to 5 years
	impacts that can be reasonably attributed to the PCSP?	following project
	Sub-questions	completion
	 To what extent have the identified 	
	health/economic/environmental impacts affected men	
	and women differently?	
	Have there been any negative impacts or unintended	
	outcomes as a result of the project?	

Evaluation Criteria	Key Evaluation Question	Assessment Timeline
Effectiveness	2. To what extent has the PCSP resulted in a working sewerage	During project
(EOPO 1 & 2)	system that is owned and effectively operated and maintained	implementation
	by the Palembang City Government?	 At project
	Note: this question will cover two separate dimensions of	completion
	effectiveness:	
	• the quality and completeness of physical construction	
	(whether construction was according to specifications,	
	whether the system is functioning properly, the total	
	capacity of the system, and the total number of	
	• the quality & completeness of institutional &	
	management arrangements.	
Sustainability	3. How likely is it that the Palembang City Government will	At project
	continue to effectively operate and maintain the sewerage	completion
	system in the future?	 For up to 5 years
		following project
		completion.
Appropriateness	4. To what extent has PCSP implementation adhered to the	 During project
	agreed-upon principles & standards for the project?	implementation
	Sub-questions	
	 To what extent is PCSP adhering to the Gender Action 	
	Plan / appropriately addressing issues of gender equality	
	and women's economic empowerment?	
	 To what extent is PSCP monitoring and complying with 	
	safeguards?	
	 To what extent has PSCP complied with the approved 	
	Land Acquisition and Resettlement Plan?	
	 Have living standards of AHs been restored? 	
	 To what extent is PCSP complying with agreed upon 	
	procurement principles and other measures to prevent	
	corruption?	
	 To what extent is PCSP appropriately working through 	
	Government of Indonesia systems?	
Model	5. How effective has the PCSP model been in (a) achieving	 During project
	targeted outcomes and (b) delivering value for money in	implementation
	comparison with the "conventional" centralized infrastructure	At project
	financing and delivery model used by MSMIP and on other Gol	up to 5 years after
	sewerage projects?	project completion.
Effectiveness	6. How effectively has the PCSP equipped the GoI and	• During project
(EOPO 3)	development partners (MDBs, DFAT, and other bilateral	implementation, at
	donors) with evidence about an alternative model for financing	project completion,
	and implementing large-scale local infrastructure projects?	and for up to 5
		completion.

4.5.3 DFAT Performance Assessment Framework (PAF) Indicators

The PCSP performance indicators (indicative list in **Annexe 13**) will include relevant indicators from the DFAT Performance Assessment Framework (with the understanding that the PAF may change substantially over the life of PCSP).

The following indicators from the proposed PAF 2.0^{37} have been identified as potentially relevant for PCSP:

PAF Indicator #1 (Leverage): Amount of additional funding directed towards more effective infrastructure and economic development

PAF Indicator #6 (Significant Policy Change): Number of Improvements to Public Revenue And Expenditure Management

PAF Indicator #7 (Improved Access to Water & Sanitation Services): Number of women and men with improved access to safe water and basic sanitation

PAF Indicator #9 (Application of Training): Number of women and men who apply improved technical skills to deliver better quality services

PAF Indicator #12 (District Service Improvements): Number of districts that made improvements in service delivery practices and policies

4.5.4 Stakeholder Communication Strategy

The MSMIP Stakeholder Communication Strategy (**Annexe 14**) guides the project in engaging its public in a way that is timely, inclusive, transparent and participatory. It helps ensure a regular flow of reliable project information and allows for a two-way exchange between the project implementers and stakeholders. It will also seek to facilitate behaviour change for improved hygiene and sanitation.

The Stakeholder Analysis undertaken during the MSMIP PPTA identified key participants that are important in achieving project objectives, expanding benefits and lessening project risks:

- Government agencies responsible for the design, management and implementation of the project which include the Ministry of Public Works; Sanitation POKJA and SATKER, and PDAM as service delivery organisation;
- Village governments and community organizations responsible for community- level environmental improvements and household sanitation;
- Target communities with recognition of special needs of women and vulnerable groups;
- Institutions and businesses in the Central Business District and private sector service providers who share an interest in the outcomes and/or impacts of the project.

Key project stakeholders and their interests are defined in the Stakeholder Communication Strategy which also identifies key messages, means of communication, and timeline of delivery during the project cycle. It identifies vulnerable groups for benefit distribution to ensure that their needs are also prioritized during project planning and implementation.

The Plan will cover media, community planning, sanitation promotion and other stakeholder communication activities for timely disclosure of information. Outreach and joint planning activities will

³⁷ As of 26 Jan 2017, the PAF 2.0 (to be applied for 2017) was still in draft form and subject to comment and finalization.

actively involve stakeholders (sanitation agencies, village officials, community organizations, affected persons and non-government organizations) in improving project outcomes and overall impacts.

4.6 Sustainability

4.6.1 Commitments made by Palembang City

The PPTA concluded that Palembang was institutionally ready in 2012 having committed to the action plans necessary to allow the SDO to be autonomous and sustainable. The following commitments were given by Palembang City officials to the PPTA consultant:

- Issuance of the Mayor's Decrees for the creation and staffing/ functions of the Wastewater Department in PDAM and appointment of a Director for Wastewater.
- Commitment to the promotion and regulation of sanitation and other action plans in the LIDAP and FOPIP.
- Commitment to charge fees that will fully recover O&M cost (including depreciation) and make the wastewater operations sustainable.

Other commitments given to the PPTA, which have already been honoured, include financing the acquisition of the land for the Sei Selayur WWTP at a cost of A\$ 3.5 million which, after approval from the DPRD, was completed in 2013. An additional sum of A\$ 0.2 million has been allocated as compensation for the involuntary resettlement of affected households.

Palembang City and the Provincial Government have committed to provide finance of A\$ 31 million towards the capital cost of the new sewerage system.

4.6.2 Reform of GoI Infrastructure Investment Policy

Detailed, long term, M&E of the PCSP and MSMIP will provide an objective comparison between the two different fund-channelling and project implementation mechanisms. Such comparison is needed to provide the hard evidence demonstrating that Palembang City government has successfully built, operated and maintained its own sewerage system. It is expected that this evidence, endorsed by MoF and Bappenas, will motivate GoI and donors to channel more infrastructure funding directly through LGs using the mechanism developed for the PCSP.

4.6.3 Service Delivery Organisation

During the preparation of this PDD it has been confirmed that the Service Delivery Organisation (SDO) for Palembang sewerage will be a newly formed division within PDAM Tirta Musi. This is the preferred model, used in six of the thirteen existing systems in Indonesia, with another two (Jakarta and Denpasar) planning to change to PDAM operation.

PDAM Tirta Musi has established a reputation as one of the best water utilities in Indonesia, with a comprehensive Geographic Information System and database of utilities and customers. The PDAM has been closely involved during all stages of project preparation from master plan preparation, through the ADB Project Preparation Technical Assistance, and later during the detailed design.

The MSMIP CDTA consultant will provide capacity building which will focus on developing an autonomous and accountable SDO within the new PDAM Wastewater Division. During the implementation phase the CMC will be located within the PDAM main office so that it will have close contact with PDAM staff assigned to the Wastewater Division and the operation and maintenance of the sewerage system. A complementary package of technical assistance will be designed with the

Palembang City Government to address the ongoing institutional and financial sustainability of the asset. Assistance will be delivered through the KIAT Facility.

4.6.4 Legal Basis for Sewerage Service

In contrast to the provision of piped water services, there is an absence of central government guidance on local regulations for providing a sewerage service, including the basis for tariff-setting. A generic local bylaw *peraturan daerah* (PERDA) for wastewater services is being developed under DFAT's sAIIG program. sAIIG has already provided support to the DPRDs of Medan and Gresik in drafting their wastewater PERDAs. This generic PERDA will be presented and discussed in a Workshop at DGHS during February 2017; Palembang is one of 10 LGs invited to the Workshop at which PDAM Bandung will also share their experience.

Palembang may choose to use this generic PERDA as the basis for drafting their own, but in any case it will be reviewed and revised by a special committee of the Palembang DPRD. While the PERDA will give the LG authority to charge for the wastewater service, details of the tariff would normally be included in a separate PERDA covering all charges levied by the LG.

Other PERDAs governing connections to the sewer system and requiring new buildings to connect will also be necessary. Bandung has passed six PERDA and issued three PerWali in respect of sewage over the last 30 years.

PDAM and the legal division of Setda Palembang, attached to the Office of the City Mayor, are expected to oversee the finalisation of the organisational restructuring of PDAM Tirta Musi, and the appointment of the Director for Wastewater Operations.

4.6.5 Sewerage Service Charge

It is expected that PDAM will levy sewer service charges as a percentage surcharge of the water bill for properties connected to the sewer. This approach has been successfully applied in Bandung, Surakarta, and Banjarmasin. PDAM Bandung goes further, billing all water customers for the wastewater service, including those which are not connected to it, on the promise that PDAM will de-sludge their septic tank free of charge every 3 years.

A recent regulation from the Ministry of Home Affairs makes it mandatory for local governments to reimburse their PDAMs for provision of water services below the full cost recovery tariff as a means of providing essential services to the public. PDAM Tirta Musi has a substantial net annual surplus, part of which it distributes to the city government in the form of a dividend³⁸. During the initial years of operation the revenue from the wastewater service will be much less than the operating costs. PDAM should be permitted to compensate for this loss through a minor reduction (about 10%) in the dividend to the city.

4.6.6 Septage Service

The Sei Selayur WWTP will have the capacity to treat septage from 60,000 households / year by 2022. The septage disposal facility at the WWTP will also reduce haulage distances from septage collection within non-sewered areas in central and south east Palembang, improving the productivity of septage tankers. However, this is not expected to generate any revenue directly as the current practice in Palembang is not to charge tankers discharging septage at the existing treatment plant.

³⁸ In 2015 the Net surplus of the Palembang PDAM was \$7.4 million ranking it third highest of 330 PDAM in Indonesia.

4.7 DFAT Management Resources

The DFAT Infrastructure team in Jakarta will be primarily responsible for the oversight and monitoring of the PCSP investment. The staffing profile is likely to include:

- 25% time of one First Secretary Infrastructure and Economic Governance
- 10% time of one Senior Adviser / Second Secretary
- 65% time of one LE-7 Unit Manager Infrastructure

5 Risks, Safeguards and Mitigating Measures

5.1 Risk Assessments and Management Strategies

5.1.1 Investment Concept Risk Assessment

Risks associated with the PCSP were first assessed in the Investment Concept Template, prepared in 2014. Attachment C of that document provided a detailed Risk Assessment, as summarised in Table 5.1.

Risk	Likelihood	Consequence	Rating
Operating Environment	Likely	Minor	Moderate
Investment Results	Possible	Minor	Moderate
Safeguards	Possible	Moderate	High
Fraud / Fiduciary	Possible	Major	High
Reputation	Possible	Moderate	High
Partner Relations	Unlikely	Minor	Low
Other	Possible	Minor	Moderate
Overall Risk Rating			High

Table 5.1 : Investment Concept Risk Assessment

The assessment considered a number of key risks, weighted by likelihood and consequence, which were then aggregated to provide an overall risk rating. The highest rated individual risks were associated with safeguards, fraud and reputational issues:

- The main concern under *Safeguards* was the involuntary resettlement of households from the WWTP site which might result in homelessness, child protection issues and loss of livelihood. These risks would be managed through the Land Acquisition and Resettlement Plan (LARP).
- Potential *fraud* issues stem from the inputs-based nature of the project, with the risk that funds might not be used for their intended purpose. Such risks would be mitigated through use of a Technical and Financial Audit Consultant and an Anti-Corruption Action Plan.

• Safeguards and Fraud risks also combine to generate high *reputational* risks; a co-financing arrangement with the ADB and a supervision consultant were originally expected to mitigate these risks. Subsequently, during project preparation, the planned Partial Project Administration arrangement with ADB has been dropped, with DFAT Jakarta assuming a higher level of involvement in project oversight. The independent, international Construction Management Consultant (CMC) will play a key role in day-to-day supervision of the implementation of the safeguards plans for resettlement and gender action, as well as the anti-corruption action plan.

The main concern under Partner Relations was the damage that might be caused were Australia to decide not to proceed with the PCSP, given the high expectations of GoI partners.

Relevant risks identified in the Investment Concept have been included in the risk assessment for this PDD and re-assessed.

5.1.2 Working In Partner Systems Risk Assessment

In 2015, a WIPS (Working in Partner Systems) assessment was undertaken of the risk to Australia Indonesia Infrastructure Grant (AIIG) facility funds as a result of PCSP working through GoI systems. The WIPS concluded that the mitigation of Public Financial Management (PFM) and Procurement risks is an inherent feature of the PCSP design, such that AIIG funds should not realistically be at risk even where there are shortcomings in GoI systems.

In terms of Public Financial Management, the associated risks to AIIG funds of using Gol Systems in the manner proposed for the PCSP were considered to be **LOW.** In terms of Procurement, it was recommended that the state e-procurement system, established by the LKPP, be used by Palembang City for the PCSP bidding process. A summary of the WIPS report is provided in **Annexe 9**.

5.1.3 Risk Assessment and Management

The risk assessment made for this PDD, and the planned risk mitigation measures, have been informed by the lessons learned from the implementation of the AIIG program over the past seven years. Over AUD 100 million of water and sanitation grants have been disbursed with a very low level of misuse or mis-application of funds. The main risks identified concerned the quality and technical competence of the constructed works. Because the programs were output-based, the grant was simply not paid for works which were unacceptable. The input-based nature of the PCSP requires a different approach, which will involve DFAT's prior review and oversight at key stages, and continuous supervision by the CMC. Inadequate engineering design, found in some grant programs, was addressed by employing reputable international consultants to make the detailed design for the PCSP.

The CMC recruited by the FMC will play a key role in the mitigation of the identified risks and will be closely involved in all stages of the procurement process, from preparing the bid documents though to bid evaluation. The CMC is responsible not only for supporting implementation of the LARP and ensuring LG compliance with social and environmental safeguards, but also for the supervision of all construction contracts, verification of the completed works, and certifying claims for payment.

DFAT will also play a significant role in mitigating risks through the requirement to obtain their "No Objection" at key stages in the procurement process and through their oversight of the finalisation and implementation of the LARP. DFAT will also receive regular reports on the physical and financial progress of the project, including project accounts from DGHS, and a record of grant payments made from the Special Account prepared by the Directorate General of Treasury.

Detailed risk identification, management and mitigation strategies are provided in the Risk Management Matrix in **Annexe 9**. The matrix groups the risks into five categories; some of the highest risks in each

category, and their mitigations, are summarised in the following paragraphs. The independent international Construction Management Consultant (CMC) recruited by the FMC will play a key role in the mitigation of most of the identified risks.

Public Financial Management Risks

The highest residual risks are **Moderate** and concern: a) value for money; b) bureaucratic delays in grant payment; c) risk that audit findings are not followed up; and d) risk that LG finance staff are inadequate in terms of skills and number.

DGHS, as the MSMIP Executing Agency, will commission independent external auditors to audit each annual MSMIP Financial Report in accordance with the International Standards on Auditing. The auditor and the audit ToR are required to be acceptable to both ADB and DFAT. A copy of the audited financial statements for the DFAT-funded contracts, in English, will be submitted to DFAT, along with the management letters issued by the auditors, if any, within six months of the end of each fiscal year. DFAT reserves the right to verify the Project's financial accounts to confirm that the share of DFAT's financing is used in accordance with DFAT's policies and procedures.

DFAT will also receive monthly reports on the physical and financial progress of the project, including project accounts from DGHS, and a record of grant payments made from the Special Account prepared by DJPB.

In Palembang, the front line mitigation for the PFM risks will be provided the CMC which will be responsible for the supervision of all construction contracts, verification of the completed works and certifying claims for payment. The CMC will also support LG staff and provide them with any necessary capacity building.

Procurement Risks

The highest residual risks are **Moderate** and concern: a) prequalification shortlist which includes poor quality contractors; b) bidding process subject to improper influence; c) collusion between bidders; d) bid evaluation subject to improper influence; e) contract awarded differs from that which was bid.

The main mitigation for the procurement risks, which would otherwise all be high, is the CMC which will be closely involved in all stages of the procurement process, from preparing the bid documents though to bid evaluation. DFAT will also have a significant role through the requirement to obtain their "No Objection" at key stages in the procurement process: i) the prequalification shortlist and ii) the contract prior to award.

Political / Project Risks

The highest residual risks are **High** and concern: a) risk that the Mayor elected in 2019 is not fully committed to city sanitation and the PCSP; and b) risk that the DPRD refuses to legislate for mandatory connection, or an appropriate tariff, for the wastewater service.

It is not possible to mitigate for the risks associated with local politics, which is why these risks remain high.

Management Risks

The highest residual risks are **Moderate** and concern: a) insufficient routine health data available; b) LG staff lacking experience, capacity or availability to implement the project; c) CPMU lacking the resources for project oversight; d) DFAT lacking the resources for project oversight.

The CPMU will engage a support consultant, while the proposed DFAT staffing requirements for oversight and monitoring are identified in Section 4.7 of this PDD.

Safeguards and Reputational Risks

The highest residual risk is **High** for community rejection of the project, which has been experienced on some GoI sewerage schemes. The main mitigations for this are the Communications Strategy and the Environmental Management plans.

The other residual risks in this category are all **Moderate** and concern: (a) reputational damage from corruption; (b) reputational damage from resettlement of the 9 households which remain on the WWTP site, including a decline in their standard of living; (c) environmental impacts during construction; (d) reputational damage from contractors employing child labour; (e) major environmental pollution caused by flooding of the WWTP; (f) reputational damage from poor quality construction leading to very high O&M costs.

The main mitigations for the safeguards and reputational risks include the implementation of: the Anti Corruption Action Plan, the Land Acquisition and Resettlement Plan (LARP), the Environmental Management plans, the Gender Action Plan, and the Communications Strategy. The CMC will be responsible for supporting implementation of these plans and ensuring LG compliance with all social and environmental safeguards. DFAT will have oversight responsibility for these measures to mitigate the risks to the reputation of the Australian Government.

Additional monitoring and oversight will be facilitated by a publicly accessible PCSP website, maintained by the CMC, providing information about the project, including the procurement plan and the award of contracts. Such websites have served as effective tools for improving governance in recent projects in Indonesia. The PCSP website will not only provide information about the project but also provide a means for the public, civil society groups, or aggrieved parties to request information and/or lodge complaints. A dedicated number will also be provided for the public to lodge complaints by SMS or WhatsApp, as these methods are more widely accessible.

Adequate safeguards are in place to detect the misuse of grant funds and allow DFAT to intervene. Meanwhile, DFAT has established a risk register for the PCSP in which the resettlement risk has been escalated to Minister Counsellor level and mitigation measures have been put in place.

DGHS, as the MSMIP Executing Agency, will commission independent external auditors to audit each annual MSMIP Financial Report in accordance with the International Standards on Auditing. The auditor and the audit ToR are required to be acceptable to both ADB and DFAT. A copy of the audited financial statements for the DFAT-funded contracts, in English, will be submitted to DFAT, along with the management letters issued by the auditors, if any, within six months of the end of each fiscal year. DFAT reserves the right to verify the Project's financial accounts to confirm that the share of DFAT's financing is used in accordance with DFAT's policies and procedures.

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Adequate safeguards are in place to detect the misuse of grant funds and allow DFAT to intervene. Meanwhile, DFAT Jakarta has established a risk register for the PCSP in which resettlement risk has been escalated to Minister Counsellor level and mitigation measures are in place.

5.2 Displacement and Involuntary Resettlement

When the WWTP site was purchased by Palembang City in 2012, it was already occupied by 20 households living in 16 wooden structures (average value AUD 6,000) with the permission of the previous landowners. These Affected Households (AH) need to be resettled before construction can begin and are entitled to compensation for their losses. Twelve households are classed as vulnerable, with 9 below the poverty line, 13 elderly and 7 female-headed, all of whom will receive additional assistance as well as compensation and an offer of employment. Palembang City Government has shown their willingness to follow the ADB policy and has commissioned an independent valuation of the structures, calculated the compensation due in accordance with Indonesian legislation, and will provide additional sums to satisfy ADB requirements.

5.2.1 Safeguards Overview

The first LARP for the Palembang scheme was prepared under ADB's MSMIP in 2012, along with similar plans for the proposed sewerage schemes in Makassar, Cimahi, Pekanbaru and Jambi. Public consultation, loss inventory, socio-economic survey, and cut-off followed the LARP during 2012–13, all conducted in accordance with ADB's Safeguards Policy Statement (SPS) 2009. DFAT has therefore agreed to continue following the SPS.

Following the initial activities, a letter from the Australian Counsellor for Infrastructure and Economic Governance to the Mayor of Palembang on 19 November 2013 requested the LG to undertake further public consultations to ensure that affected households were: fully aware of their resettlement options; informed about how much they would be compensated; aware of how to access a grievance resolution mechanism; and had information about government assistance programs. The Mayor was advised that satisfactory implementation of social safeguards would be critical to DFAT's final decision on the provision of funding for the PCSP.

DFAT's policy on Displacement and Resettlement³⁹ confirms that the 'responsibility for managing displacement and resettlement rests with the government of the country where the project is undertaken'. The Policy states that plans and activities which meet ADB's policy objectives will satisfy DFAT's requirements and do not require the parallel application of DFAT policies. In such cases, DFAT retains the role of monitoring the displacement and resettlement activities of the project to determine whether all required actions have been fully implemented, and in evaluating implementation effectiveness in achieving appropriate outcomes.

The Palembang City Sewerage Project is categorised as Involuntary Resettlement Category B under ADB's SPS because there are less than 200 Affected Persons on the WWTP site. All existing structures within the WWTP site boundary will be demolished as part of the site preparation works, which will also include substantially increasing the existing ground level. At the request of the City Government, implementation of the LARP will follow, rather than precede, the award of the site preparation contract for the Stage 1 Earthworks at the WWTP site in mid-2017.

³⁹GoA DFAT - Displacement and Resettlement of People in Development Activities - The Policy (2015)

DFAT will be invited to participate in all community consultations and, in compliance with ADB's SPS, the LARP will not be implemented without DFAT's prior concurrence. DFAT will also conduct safeguards monitoring missions at regular intervals throughout the project. DFAT was invited to attend an ADB mission on the application of ADB safeguards in Indonesia that visited Palembang in January 2017, discussed further in the next section.

Palembang City has no experience of implementing resettlement under ADB or any other donor's safeguards policy. A layered approach in the administration and management of involuntary resettlement is therefore being adopted, consistent with the institutional arrangements under the Project. Palembang City, through the LPMU, will be responsible for implementation and management of the resettlement under the PCSP, in accordance with the SPS. The CMC's international and local Social Safeguards and Impact Analysis Specialists will support the LPMU in their consultations with AHs and in the implementation of the LARP. Subsequently, Palembang City Government will be required to seek DFAT's "No Objection" to the award of the DFAT-funded WWTP construction contract, which will only be issued after satisfactory compliance with the provisions of the LARP.

5.2.2 Identified Impacts and Mitigation Measures

As previously described, DGHS originally prepared the LARP for the Palembang WWTP site in 2012. On 2 October 2012, Palembang City's BAPPEDA conducted the initial Public Consultation and Information Disclosure with the stakeholders covering social safeguards and environmental issues. The Inventory of Losses⁴⁰ and Socio-Economic Survey on the WWTP site was conducted between 14 and 17 November 2012 and identified 24 AHs living on the site, one owner of five rental properties, and three landowners.

Consultation continued in 2013. The Project Information Booklet (in Bahasa Indonesia), information about compensation policy and the Grievance Redress Mechanism (GRM), and advance notice of the displacement were disseminated in February 2013.

A public consultation meeting was held at the WWTP site on 13 November 2013, attended by DFAT, Palembang City, the AHs and a Safeguards consultant. The purpose of the meeting was to clarify the site boundaries and to discuss the compensation and other allowances for the AHs. On 27 November 2013, a further meeting, initiated by the AHs, took place at which it was agreed that the list of AHs produced by the Lurah, which showed 17 AHs living within the revised site boundaries, correctly recorded the situation. As a result, the cut-off date (the date of completion of the census of AHs, which establishes eligibility for compensation and resettlement assistance with the aim of preventing new households moving onto the site just to claim compensation) had to be revised, from 17 November 2012 to 27 November 2013.

The 17 households that will be affected by the development of the 5.9 ha site for the WWTP comprised of 76 persons and included two small businesses at the cut-off date. However, in late 2016 the site was re-measured and a fence erected marking the boundary between land owned by the LG and that owned by the Province. During this process one structure previously included was found to be outside the WWTP site, thus reducing the number of AHs to 16. In February 2017 demographic data was updated and it was found that another 11 sub-households (relatives of the main householder) were living within these 16 structures, giving a total of 27 AHs comprising 98 Affected Persons. The LG has agreed to compensate the additional 22 people who have arrived since the cut-off date.

⁴⁰Inventory of Losses - an inventory, with valuation at replacement cost, of all affected assets located within the project site, including land (residential, commercial, and agricultural) and other immovable property (buildings, fences, sheds, irrigation canals, wells, and other structures) where measurements and quantities are clearly determined.

The AHs occupy the land with the permission of the previous land owners. At present only nine houses remain occupied, although none of the households has yet been compensated. Five of the 16 structures have also been abandoned or dismantled. Nevertheless, those AHs that have moved or whose abandoned structures have since been dismantled will receive compensation and treatment consistent with ADB's operational guidelines. In addition, the Inventory of Losses identified 201 trees, and a timber mill adjacent to the site which had constructed kilns within the site boundary before the cut-off date, encroaching on an area of 0.4 ha.

Palembang City used an independent Public Appraisal Service, *Kantor Jasa Penilai Publik* (KJPP), licensed by MoF for the purpose of valuing assets, to establish fair value for the structures on the WWTP site. This valuation, and the resulting compensation, has been calculated based on the Indonesian Society of Appraisers *Masyarakat Profesi Penilai Indonesia Standar Penilaian Indonesia* (MAPPI SPI), following the 2015 Technical Guidance (Juknis). Five structures identified in the Inventory of Losses no longer exist and were valued based on information collected at the cut-off date.

Palembang City has followed the MAPPI SPI in determining all elements of the compensation due to AHs. ADB Safeguards staff were already familiar with this approach and advised the FMC on details of the calculations, while DFAT are also aware that it has been adopted. The overall amount of compensation to be paid was monitored by DFAT to ensure that it at least equalled the amount calculated in the first LARP entitlement matrix. Final calculations indicate that the total amount of compensation due is about 10 percent higher than that presented in the LARP. Palembang City Government provided an allocation to cover compensation for the AHs under their 2017 budget (APBD), and will provide an additional amount in the revised 2017 budget, sufficient to cover the increase in compensation calculated.

Palembang City has accepted the need to go beyond the requirements of the Indonesian legislation in order to fully comply with the provisions of the SPS on Involuntary Resettlement. Table 5.2 compares the compensation provided under the Indonesian regulations, including the enhancements proposed by Palembang, and the ADB Safeguards.

Category	Updated LARP (based on MAPPI SPI)	Original LARP (based on ADB SPS)
Structures	Compensated at market value Depreciation compensated in full	Value with no deduction for depreciation
Solatium	Allowance of up to 30% of the market value of the structure (and land if owned)	N.A.
Trees and crops	Compensated at value	Compensated at value
Transport/ Relocation	Allowance of Rp 600,000/household	Allowance of Rp 600,000/household
Business loss	Allowance of 3 month's income	Allowance of 1 month's income
Waiting period	3 months at bank interest rate	N.A.
Subsistence allowance	N.A. – will be covered under 'extras'	Allowance of Rp 80,000/month for each household member for 3 months
Vulnerable Households	N.A. – will be covered under 'extras'	Additional allowance of Rp 80,000/month/ household member for 3 months

 Table 5.2 : Compensation under Indonesian Regulations and ADB Safeguards

The MAPPI SPI does not mention depreciation in the value of structures, but the KJPP has estimated the market value of each structure and then calculated the depreciation, which will be compensated in full.

Solatium is defined as compensation for emotional loss and ranges from 5 to 30 percent of the market value of the structure, and the value of the land if that is also owned by the AH, according to the length of time the structure/land has been occupied by the household. Many of the AHs in Palembang have lived on the WWTP site long enough to qualify for the 30 percent solatium payment. The average value of the structure of the Affected Households is Rp 64,000,000, and they will on average receive a solatium payment of Rp 7,100,000/household.

Compensation for fruit trees has been based on the age, productivity and type, or at cost if not productive. Compensation for crops has been based on the volume of harvest multiplied by the prevailing unit price, in accordance with Pergub Sumsel no.19/2014.

The SPI provides for a transport allowance for household relocation of 2 percent of the value of the structure, but in order to ensure that no one is worse off than under the SPS, a flat rate compensation of Rp 600,000/household has been applied.

Two households operated small *warung* (shops) on the site at the cut-off date and will be compensated for their loss of business income with a sum equivalent to three month's income.

The SPI includes compensation for the time taken to process the compensation payment equivalent to 3 months' interest at a rate of 7% per annum.

Neither the subsistence allowance nor the additional allowance for vulnerable households provided by the SPS are available under the SPI. However, it has been agreed with the LG that these can be included under the SPI category 'extra compensation requested by the client'. The value of these two allowances which are given in the LARP amounts to Rp 160,000/month for each household member for a period of three months. With an average AH size of 3.6 people, the total amount of these two allowances is worth Rp 1,736,000/household.

The timber mill that has encroached onto the site has agreed to remove its structures in return for compensation amounting to the un-depreciated value of the structures. The LARP included Business Compensation for two household shops in the form of support from the LG to identify new locations for their businesses. By the time of the Public Consultation in February 2017 both shopkeepers had already moved their businesses, but they are still entitled to compensation equivalent to 3 months income and to join the income restoration programme.

Twelve vulnerable households have been identified on the basis of: (i) lack of income, (ii) elderly, or (iii) female headed. Taking into account the sub-households, these 12 properties house a total of 23 vulnerable households. Additional assistance provided for the 23 vulnerable households will include: (i) vulnerable allowance of Rp 80,000/person/month for 3 months, (ii) an Income Restoration Programme, and (iii) a request by the CPMU that the LG provides them with additional subsidies for fuel and health care.

In addition to the monetary compensation the AHs will be provided with: (i) timely information about the expected start of site preparation, (ii) support for those who have not found somewhere to move to by the time compensation is paid, and (iii) physical assistance in moving, including transport and labour to move household belongings and salvaged building materials. The LG will also provide an Income Restoration programme for the vulnerable households comprising: (i) an obligation on the PCSP contractors to offer adult members of these households employment, (ii) consideration for employment in permanent jobs operating and maintaining the new sewerage system, and (iii) free participation in a livelihood development program run by the City Business Agency – refer to **Annexe 10** for information on the courses provided.

The living standards of the AHs will be monitored by the CMC Safeguards team during the implementation of the project to ensure that they are at least restored to their standard at the cut-off date. AH socio-economic data will be updated at the time compensation is paid. Thereafter the frequency of monitoring will vary with more frequent monitoring for any AH whose living standard has not been fully restored.

DFAT, the FMC and CMC joined the ADB mission that visited Palembang on 23-24 January 2017, where useful guidance was provided on updating the LARP and finalising AH compensation. The Compensation Matrix was subsequently revised to include the subsistence and vulnerable households allowances.

The LARP document was updated in February 2017, with input from the mission, by the CMC's Social Safeguards Specialists, who will also monitor implementation of the Plan. Comments on the updated LARP were received from both ADB and DFAT during March and a revised update submitted in April. Following further comments and revisions in May the LARP was formally submitted by DGHS on 26 May. Formal approval of the updated LARP was issued by ADB on 16 June 2017.

With ADB's agreement, Palembang City held a Public Consultation with the AHs on 14 February 2017, attended by representatives of the LG, KJPP, DFAT, IndII and DGHS. Most of the AHs who have already moved remain in the vicinity of the WWTP site and representatives of all AHs attended the Public Consultation.

An updated Public Information Booklet was distributed, and the LG and KJPP explained the basis of their valuation of the structures and calculation of the compensation due to each AH. During the meeting the CMC, in cooperation with the Kelurahan, updated the number of adults and children currently residing in each household and the subsistence and vulnerable households allowances were adjusted accordingly. Eleven households who do not own any structure are living with relatives on the site. Previously counted as separate households within the same structure, it has now been established that they are not officially separate families. However, they will still receive the subsistence and, where applicable, vulnerable households allowances under the SPS as these are calculated on a per-person basis.

Following the Public Consultation on 14 February 2017 each AH, including the timber mill, individually accepted the compensation offered and agreed to the resettlement. The final version of the compensation matrix is included in **Annexe 10**. However, payment of the compensation has subsequently been delayed for 6 months awaiting signature of the DFA, PAM, and SPPH which are required before the WWTP earthworks contract, which has been tendered, can be signed. This delay is causing difficulties for some AHs who have made arrangements to move but cannot afford to do so without the compensation.

5.2.3 Grievance Redress Mechanism

The SPS requires the LG to establish a mechanism for receiving and resolving Affected Persons' concerns and grievances about involuntary resettlement and other project impacts. The GRM is required to address Affected Persons' concerns and complaints promptly, using an understandable and transparent process that is gender responsive, culturally appropriate, and readily accessible to the Affected Persons free of charge. The mechanism should not impede their access to judicial or administrative remedies. An Affected Person (AP) refers to any person or household who is adversely affected by the Project; the LG is required to inform all potentially Affected Persons about the GRM.

The MSMIP CPMU, through the PPIU in South Sumatra Province and the LPMU in Palembang City, will ensure that all grievances and complaints on any aspect of involuntary resettlement and compensation, or any other project impact, are addressed in a timely and satisfactory manner. An Affected Person (AP)

will be able to pursue their grievance through several stages if they are dissatisfied with the resolution proposed, and the project will bear the costs of this process.

In the first stage, the LPIU and the Lurah will try to resolve the issue, failing which the AP may bring their grievance to the Mayor of Palembang. The third stage is to take the grievance to the Governor of South Sumatera, and if the AP is still dissatisfied the final stage is to go to court.

The GRM was initially socialised in the Public Information Booklet distributed to AHs in 2013. The CMC will disclose updated details of the GRM procedures to the stakeholders and AHs during the updating of the LARP.

5.3 Environmental Management

5.3.1 Safeguards Overview

The PCSP is categorised as Environmental Category B in accordance with ADB's SPS 2009. An Initial Environmental Examination (IEE) was conducted as part of ADB's PPTA in 2013 and confirmed that the Project was not a new incursion into an ecologically untouched area. The IEE identified the following statutory and regulatory requirements:

- Environmental Permit and AMDAL report prior to starting the procurement process
- Effluent discharge permit once the WWTP commences operation.

Based on the screening for potential environmental impacts and risks, the IEE concluded that the PCSP could be implemented in an environmentally acceptable manner with the corresponding Environment Management Plans (EMP). The PCSP EMP presents appropriate mitigation measures and a monitoring plan, the details of which are included in **Annexe 10**.

During implementation, a designated Environment Officer in the LPMU (with assistance from the Social Safeguards and Impact Analysis Specialists of the CMC team) will be responsible for the following activities related to environmental safeguards: (i) confirm that the IEEs are updated in accordance with ADB's SPS 2009 based on detailed designs, and submit to DFAT for review and approval prior to contract award; (ii) confirm that the required Analisa Mengenai Dampak Lingkungan (AMDAL), a Government of Indonesia (GoI) Environment Impact Assessment (EIA) requirement, has been prepared and approved by the respective environment agency, the Badan Lingkungan Hidup (BLH); (iii) confirm that the updated EMP is included in the bidding documents and civil works contracts; (iv) ensure that Contractor's EMPs (CEMPs) are prepared prior to actual construction; (v) establish a system to monitor environmental safeguards of the subprojects including monitoring the indicators set out in the monitoring plan of the updated EMP; (vi) supervise the implementation of environmental mitigating measures required for the construction activities; (vii) review, monitor and evaluate the effectiveness of the implemented CEMPs, and recommend necessary corrective actions; (viii) prepare monthly and guarterly environmental monitoring reports and submit bi-annual environmental monitoring report to DFAT; (ix) ensure timely disclosure of final IEE and updated EMP in locations and form accessible to the public, and (x) address, record, and report on any grievances brought about through the GRM.

In compliance with GoI requirements on environmental assessment, set out in the Environmental Protection and Management Law of 2009, a separate AMDAL or EIA report has been prepared by the DFAT-funded EIA consultant during the DED phase. The Palembang EIA did not identify any particular requirements which significantly affected the DED design.

Formal public consultation regarding environmental management matters took place in October 2014 in all areas affected by the PCSP with 285 people attending, following which the EIA Terms of Reference were revised. Approval of the EIA ToR was given by the Mayor of Palembang in May 2015. The AMDAL and the Environmental Management Plans were approved in April 2016, while the Environmental Permits were issued in May 2016 by the Mayor.

Implementation of the PCSP contracts will be fully compliant with ADB's SPS 2009 requirements on grievance redress mechanism. The City Government's proposed mechanism has been presented during initial public consultations and will be further presented at area meetings prior to and during the construction phase. Complaints about the environmental performance of the project during the construction phase may be submitted to either the CPMU in Jakarta or the FMC in Jakarta or Palembang and will be handled by the LPIU. An enhanced complaint handling procedure is detailed in the Anti-Corruption Action Plan in **Annexe 15**. Complaints during the operation phase can be brought to the attention of the local Environmental Agency.

5.3.2 Identified Impacts and Mitigation Measures

Screening for environmental impacts was made through a review of the parameters associated with the PCSP against the components of the Project's proposed wastewater collection, transfer and treatment facilities. An important consideration in analysing the environmental impacts of the Project is that the PCSP will create infrastructure which will improve the environment and reduce the risk to public health caused by the uncontrolled disposal of untreated, or partially treated, wastewater.

Adverse environmental impacts during construction of the sewerage system are deemed temporary, less than significant, and can easily be mitigated. There will be no large-scale project construction activities that can damage the environment. All open trenches will be adequately shored and braced to provide a safe working environment. The contractors will utilise a range of techniques to support trenches during pipe-laying operations. It is anticipated that excavated material will be backfilled into the trench after pipe-laying and testing; surplus and unsuitable material will have to be hauled away to an acceptable disposal site.

Trenchless construction techniques (pipe jacking) will be used for all the larger diameter gravity sewers, in both APBN and APBD funded contracts, although the high groundwater level will make this challenging. In order to minimise the environmental impact, the pressure main will be installed by directional drilling through crowded areas and at canal crossings. Trenchless construction will also lead to a reduction in the volume of excess material and in the associated haulage and offsite disposal impacts. Construction activities for the pump station and WWTP will be confined to the sites owned by the City Government. Haulage and off-site disposal of the excavated material will be managed in the same way as the excess material from trenching activities.

Typical construction issues are considered to be manageable with the implementation of a contractor's environmental management plan for: (i) erosion and sediment runoff; (ii) nuisance to the public; (iii) noise and dust; (iv) vehicular traffic; (v) construction wastes; (vi) oil and fuel spillages; (vii) construction camps; (viii) occupational health and safety; (ix) public safety and convenience; (x) proper closure of construction sites; and (xi) potential damage to any archaeological and cultural assets. Potential nuisances and disruptions to the public during construction have been identified and mitigated during the DED and will be addressed by inclusion in the tender documents of specific provisions addressing these issues.

In addition to the environmental impacts described above, during the installation of the sewers and pressure main within roadways there will inevitably be some temporary access restrictions to roadside

properties. The contractors will be required to maintain pedestrian access and to provide manpower to help affected businesses load or unload goods. The LPIU, with the assistance of the CMC, will make every effort to manage the civil works to avoid, or minimise, adverse impacts, including loss of business income.

Environmental impacts relating to the operation of the WWTP and the pump station have been addressed in the DED and will be further mitigated through the adoption of appropriate operating procedures. The WWTP contractor will be required to undertake Operation and Maintenance of the new plant for 12 months following commissioning, and to train the O&M staff assigned by PDAM. The contractor will ensure that Wastewater Treatment Plant operators are properly trained in operating the facility and in recognising the conditions that lead to poor quality effluent. Public health risks will be further addressed through the provision of security fencing to prevent public access to the facility. A Health and Safety manual will be prepared for the WWTP operators by the Health and Safety coordinator in Palembang City Government, in collaboration with the WWTP contractor and the CMC.

Climate change adaptation⁴¹has been considered in the design of the WWTP, which is situated in a lowlying area close to the Musi River. Changes in the intensity of extreme weather events, as well as gradual changes in climate parameters such as precipitation, could be damaging to the WWTP. Inadequate attention to this impact could increase the long-term costs of sewerage investments for the city and increase the likelihood that such investments fail to deliver the expected benefits. Flooding could affect the structural integrity of the WWTP, or prevent the plant from operating, either by reducing the available hydraulic head⁴² across it, or by submerging electrical plant and components. In such situations, untreated, or only partially treated, wastewater may be released into the environment, endangering public health. A thorough hydrology and flooding assessment was therefore conducted during the detailed design of the WWTP to ensure that the risk of flooding is minimised by incorporating appropriate measures into the design.

Climate change mitigation was also considered in the design of the WWTP and measures taken to avoid the uncontrolled release of the methane generated in the anaerobic reactors; these units will be covered and the methane conveyed to a gas flare.

Further information about environmental safeguards is provided in **Annexe 10**.

5.4 Indigenous People

The PCSP is categorised as a Category C project under the ADB SPS with 'minimal or no adverse environmental impacts'⁴³on indigenous peoples expected. There are no identified risks and impacts on any indigenous group, and the land acquisition activities under the PCSP will not cover any ancestral domains. This includes both land already acquired and that which will be acquired later for implementation of the full scheme designed under the DED.

The objective of DFAT's *Indigenous Peoples Strategy 2015-2019- A framework for action* is to provide opportunities to indigenous peoples to overcome social and economic disadvantages⁴⁴. Should any indigenous groups be identified during community consultation or awareness raising acitvities, the PCSP will comply with this strategy.

⁴³https://www.adb.org/site/safeguards/safeguard-categories

⁴¹ Adaptation refers to dealing with the impacts of climate change. Mitigation means dealing with the causes of climate change by reducing emissions. <u>https://www.environment.gov.au/climate-change/adaptation</u>

⁴² Hydraulic Head - A combined measure of the elevation and water pressure at a point, it represents the total energy of the water; water moves in the direction of lower hydraulic head.

⁴⁴Commonwealth of Australia, DFAT Indigenous Peoples Strategy 2015-2019- A framework for action, 2015

5.5 Child Protection

The goal of DFAT's child protection policy is to 'to protect children from exploitation and abuse of all kinds in the delivery of Australia's overseas aid program' and its objective is 'to create and maintain protective environments for children in the delivery of Australia's overseas aid program'. This policy applies to all DFAT staff and all contractors, civil society organizations and multilaterals funded by DFAT⁴⁵. DFAT is committed to working with partners to prevent and respond to child exploitation and abuse.

During the implementation of the PCSP the CMC will ensure that bid and contract documentation, and works supervision procedures, expressly prohibit the employment of children and ensure that other safeguards are in place to prevent interaction between children and the construction workforce on the project. The CMC will impose a contractual requirement that all labour must be in possession of an Indonesian Identity Card (KTP) that will facilitate spot-checks. Work-sites will be protected to ensure the safety of children, pedestrians and traffic, with specific protection measures required in the vicinity of schools and medical facilities.

DFAT's child protection policy also sets specific requirements in relation to involuntary resettlement affecting access to schools and medical facilities. The original LARP did indicate that this was an issue that needed addressing however the LARP is currently being updated and will reassess if there is any change to these conditions.

5.6 Anti-Corruption Action Plan

The Anti-Corruption Action Plan for the PCSP is included in **Annexe 15**.

DFAT has a zero tolerance approach to all fraud and corruption which applies to all external parties that receive Australian Government funds, including all aid program funds. Accordingly, the policy applies to contractors, third party service providers, multilateral organisations, NGOs, partner governments and other recipients of DFAT funds and to all contracts awarded under the PCSP, irrespective of the source of funds.

In practice, 'zero tolerance' means DFAT will:

- investigate all alleged instances or reports of fraud and corruption to determine the nature and extent of the fraud
- apply appropriate administrative or contractual sanctions, including termination of engagement
- seek prosecution of offenders and the application of appropriate penalties, including through referral to local law enforcement authorities overseas and/or the Australian Federal Police, and
- seek the recovery of misappropriated funds or assets.

All delivery partners and contractors are required to report within five days all cases of suspected or detected fraud or corruption in accordance with DFAT policy and contractual funding agreement requirements.

During the design of the PCSP, an Anti-Corruption Action Plan (ACAP), described in **Annexe 15**, was developed for the project. This ACAP incorporates most of the twelve international standards set out in

⁴⁵Government of Australia Child Protection Policy for the Australian Governments Aid Program, released 2013, reprinted 2014. Policy guidelines launched in Jan 2017, available via this link: <u>http://dfat.gov.au/about-us/publications/Pages/child-protection-policy.aspx</u>

the Project Anti-Corruption System (PACS) and related tools developed by the Global Infrastructure Anti-Corruption Centre. In addition, some features of previous ACAPs have been developed, including comprehensive procurement safeguards, greater transparency and enhanced complaints handling procedures.

The PCSP M&E framework includes monitoring of the effectiveness of the ACAP so that, if necessary, it can be modified as the project proceeds.

DFAT reserves the right to investigate, directly or through its agents, any violations of the Anti-Corruption arrangements relating to the PCSP. The contracts funded by the DFAT grant will include provisions specifying the right of DFAT (or its agents) to examine the records and accounts of the Executing Agency and all Project contractors, suppliers, consultants and other service providers. Individuals/entities on ADB's anti-corruption debar list are ineligible to participate in any DFAT-funded activity and may not be awarded contracts under the Project. To support these arrangements, relevant provisions are, or will be, included in the grant agreement/regulations and the bidding documents for the Project.