KIAT KEMITRAAN INDONESIA AUSTRALIA UNTUK INFRASTRUKTUR

Kementerian PPN/ Bappenas

Australian Government

Final Activity Design Document

Water Hibah - Performance Based Grant Pilot Activity

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Dadang S. Fadilah, Project Coordinator
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About KIAT

Kemitraan Indonesia Australia untuk Infrastructure (KIAT) is a partnership between the Government of Australia and Government of Indonesia (GOI) to support sustainable and inclusive economic growth through improved access to infrastructure for all people In Indonesia. KIAT works with government partners, multilateral development banks (MDBs) and civil society providing technical assistance to improve infrastructure policy, planning and delivery. KIAT also works with sub-national governments to improve the quality of infrastructure spending and planning.

Through its work with central and sub-national governments, KIAT is working towards three End-of-Facility Outcomes (EOFOs):

1. Improved policies and regulations for infrastructure development
2. High quality projects prepared for financing by GOI, MDBs or the private sector
3. High quality infrastructure delivery, management and maintenance by GOI.

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Acronyms

APBN	*Anggaran Pendapatan dan Belanja Negara*
BAPPEDA	*Badan Perencanaan Pembangunan Daerah*
BAPPENAS	*Badan Perencanaan Pembangunan Nasional*
BPKP	*Badan Pengawasan Keuangandan Pembangunan*
BPPSPAM	*Badan Peningkatan Penyelenggaraan Sistem Penyediaan Air Minum*
BUMD	*Badan Usaha Milik Daerah*
CPMU	Central Project Management Unit
DAK	*Dana Alokasi Khusus*
DFAT	Department for Foreign Affairs and Trade, Government of Australia
DJCK	*Direktorat Jenderal Cipta Karya, Kementrian Pekerjaan Umum dan Perumahan Rakyat*
DJPK	*Direktorat Jenderal Perimbangan Keuangan, Kementrian Keuangan*
FCR	Full Cost Recovery
Dit KIP	*Direktorat Keterpaduan lnfrastruktur Permukiman, DJCK; PUPR*
Dit PSPAM	*Direktorat Pengembangan Sistem Penyediaan Air Minum, DJCK, PUPR*
GoA	Government of Australia
GoI	Government of Indonesia
GPOBA	Global Partnership on Output Based Aid
HC	House Connection
IUWASH PLUS	Indonesia Urban Water, Sanitation and Hygiene Penyehatan Lingkungan Untuk Semua
KIAT	*Kemitraan Indonesia Australia untuk Infrastruktur*
KEUDA	Directorate General of Regional Finance, Ministry of Home Affairs *Ditjen Keuangan Daerah, Kementrian Dalam Negeri*
LG	Local Government
M & E	Monitoring and Evaluation
MBR	*Masyarakat Berpenghasilan Rendah*
MoF	Ministry of Finance
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
MPWH	Ministry of Public Works and Housing
NRW	Non-Revenue Water
NUWAS	National Urban Water Supply (NUWAS) Framework
NUWSP	National Urban Water Supply Project

PBG	Performance Based Grant
PDAM	*Perusahaan Daerah Air Minum*
PERDA	*Peraturan Daerah*
PERPAMSI	*Persatuan Perusahaan Air Minum Seluruh Indonesia*
PIC	Program Implementation Consultant
PMM	Project Management Manual
PMPD	*Penyertaan Modal Pemerintah Daerah*
PPH	*Perjanjian Penerusan Hibah*
PTNDP	*Pembiayaan dan Transfer Non Dana Perimbangan*
PUPR	*Kementrian Pekerjaan Umum dan Perumahan Rakyat*
SAK-ETAB	Financial Accounting Standard for Entity without Public Accountability *Standar Akuntansi Keuangan untuk Entitas Tanpa Akuntabilitas Publik*
SDG	Sustainable Development Goals
SIV	System Input Volume (for NRW calculation)
SPAM	*Sistem Penyediaan Air Minum*
SPAM-R	*Sistem Penyediaan Air Minum Regional*
SUPD	*Sinkronisasi Urusan Pemerintah Daerah*
UWSSP	*Urban Water Supply and Sanitation Project*

A. Activity Design Title

A: Water Hibah – Performance Based Grant – Pilot Activity
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B. Executive Summary

This document describes the design of a new grant activity under the Water Hibah program, funded by the Australian Department of Foreign Affairs and Trade (DFAT), utilising approximately AUD15 million remaining under the Water Hibah Direct Funding Arrangement with the Government of Indonesia (GoI). It is expected to run concurrently with the GoI funded output-based Water Hibah which they plan to extend for a further five years, from 2020 to 2024. This new activity aims to provide incentives to Local Government owned water utilities to improve their performance in service delivery, rather than simply to increase service coverage by installing new service connections.

B.1. Background

B.1.1 Water Sector Issues

There are 374 water companies (PDAMs) in Indonesia, each owned by their Local Government, which on average serve 30,000 customers, but which vary in size from less than 1,000 up to 850,000 customers. PDAMs provide piped water supply to about 46 million people, approximately 32% of the total urban population. There are serious weaknesses in the performance and sustainability of many PDAMs, with the good financial performance of larger PDAMs obscuring poor quality of service, inadequate maintenance budgets and poor service coverage.

The GoI classifies 60% of PDAMs as "healthy" masking the fact that many of these PDAMs are performing poorly in terms of their efficiency, quality of service and service coverage. In some cases service coverage is declining as new connections fail to keep up with the growth in urban households. Further, PDAM service coverage is often over-stated by assuming an unrealistic number of people served per connection and by counting only the population in the area where the PDAM already has a distribution network, rather than in the whole of the LG's administrative area.

PDAMs' Non Revenue Water[1] has remained at a steady 33% nationally for the last 5 years, and this is widely known to be an under-estimate. Meanwhile energy costs for many PDAMs account for about 40% of operating costs, after excluding depreciation and staff costs; pumping often accounts for 90% of PDAM energy costs.

B.1.2 Development Problem Analysis

The Indonesian model for the water sector has been for central government to finance and construct almost all public water supply infrastructure. The burden of sustaining these assets has not been addressed by their PDAM operators, or by their LG owners. Despite regulations stating that municipal water supply is a local government responsibility, LGs remain dependent on GoI for the renewal of assets. Less than 0.5% of water sector investment currently comes from LG resources. The sustainability of PDAM operations has become a serious concern with central government funding for the water sector falling from Rp 8.1 trillion in 2014 to Rp 4.2 trillion in 2019, a reduction of 55% in real terms.

With over 75% of the population yet to be connected to a piped water supply, expanding the service the water companies provide will require a significant increase in investment from their LG owners, as well as from other, non-government, sources of funding. However, a GoI program which, from 2009, successfully supported PDAMs in obtaining commercial loans, expired in 2014 and has only recently been reinstated, but expires again in 2022.

[1] Non Revenue Water is defined as water which is treated and distributed by a water company but which is not billed to anyone. The high level of NRW in Indonesia represents a substantial loss of revenue to PDAMs.

B.1.3 DFAT Water Hibah Program Genesis

The DFAT output-based Water Hibah was designed to address two related issues: lack of investment by Local Governments in their PDAMs, and the slow rate of increase in domestic water service coverage. Under the output-based grant the Local Government had to invest equity in their PDAM, which was used to increase service connections in predetermined areas of low-income households. The program took advantage of spare capacity in PDAMs' systems such that the new connections did not cause a reduction in service to existing customers.

The DFAT output-based Water Hibah was implemented in two phases between 2009 and 2016 resulting in 400,000 connections to low income households. GoI began mainstreaming their own water hibah using the DFAT design in 2015. During the period 2015 to 2019 GoI implemented more than 800,000 new service connections to low-income households. GoI plans to continue this program for another five years from 2020 to 2024, allocating approximately AUD 100 million each year from national budget funds. If fully disbursed, this would achieve an additional 2,000,000 low-income household connections. This ambitious target may be difficult to achieve based on the analysis and rationale outlined below.

B.2. Rationale for Investment

The success of the Water Hibah program and the commitment of GoI to the United Nations Sustainable Development Goals has shifted attention to improving water utility performance and to sustaining the proposed rapid increase in service coverage over the next 5 years.

DFAT has agreed to support GoI in developing a Performance Based Grant (PBG) for water utilities which would be implemented by GoI under their National Urban Water Supply (NUWAS) Framework. GoI has secured a World Bank loan for the National Water Supply Program (NUWSP) which includes up to USD 25 million for implementation of the PBG. GoI and DFAT have agreed that the Water Hibah PBG will pilot the concept of a performance-based incentive for water utilities ahead of implementation by GoI on a national scale through NUWSP. DFAT's Water Hibah PBG pilot is expected to start in 2020 and be completed by the end of 2021.

The PBG will complement the continued mainstreaming of the output-based grant by GoI up to 2024. The GoI grant has already yielded 800,000 new connections between 2015 and 2019. With spare production capacity being absorbed by this large increase in connections, the water utilities need to improve their performance and management in order to be able to deliver a further substantial increase in connections by 2024. The performance-based and output-based grants are therefore complementary to each other.

B.2.1 Rationale for moving from output to performance measurement

The GoI commitment to the United Nations' Sustainable Development Goals (SDG) has focused attention on the need for coordinated interventions in the water sector. The positive impact of the output-based water hibah is optimised if it is supported by other programs such as the GoI National Urban Water Supply Framework (NUWAS), and the GoI program for development of Regional Water Supplies. It has become increasingly apparent that, as the easily installed connections are progressively realised, further increases in service coverage will require greater investment of PDAM and Local Government resources in water supply, production and distribution network capacity. A sustained improvement in PDAM performance will be needed to generate their share of the necessary resources.

Developing a Performance Based Grant requires a monitoring framework for performance. Fortunately, GoI has a well-established basic framework for measuring water utility performance through the Water Utility Improvement Agency of MPWH, BPPSPAM, which has been reporting on water utility performance since 2005. This activity has used the performance data of the BPPSPAM to develop the design of the PBG pilot and proposes that the BPPSPAM

data be used in the implementation of the PBG. This will both facilitate the mainstreaming of the PBG by GoI and help to improve the quality and timely reporting of BPPSPAM data. Strengthening the capacity and role of BPPSPAM will provide a sound platform for the implementation of the PBG nationally.

B.2.2 Expected Outcomes

The expected outcomes of the PBG are to demonstrate to LGs that proper oversight and investment in their PDAM can produce measurable, sustainable, improvements in performance, enabling PDAM to provide a better service and encouraging further investment. Improved PDAM performance is expected to translate into greater access to the service for the unserved community, consistent with KIAT's overarching goal of supporting sustainable and inclusive economic growth through improved access to infrastructure for all people, and the GoI's commitment to SDG 6.1.

B.3. The Investment – A Performance Based Grant for Water Supply

The PBG mechanism will recognise sustainability as well as growth in service coverage. DFAT has agreed with GoI to support the pilot PBG as a new activity under the existing Water Hibah grant program. The PBG is aimed at fostering PDAMs which are properly managed, financially sound, operationally efficient and provide a good quality of service to a greater number of customers[2].

Performance Measurement Indicators and sub-indicators

1. **Governance**

PDAM Business Plan

2. **Financial Sustainability**

Operating Ratio

Billing Collection Effectiveness

3. **Operational Efficiency**

Non Revenue Water

Energy Efficiency

4. **Quality of Water Service Delivery**

Continuity of Supply

Water Quality

To access the PBG, LGs will have to commit to an agreed investment in their PDAM before being offered the grant. The PBG is not output-based, so it will not be directly related to the investment the PDAM has to make to improve their performance. The grant payment will vary depending on the performance achieved by the water utility. In addition to the financial incentive of the grant, KIAT will provide comprehensive Technical Assistance (TA) for participating water utilities to support and help them to succeed.

Following discussions between DFAT and GoI stakeholders a set of four high-level performance indicators were selected which provide the basis for the Performance Measurement Framework shown in the text box.

[2] The management of water utilities has been developed and well documented worldwide into generally accepted best practice. The performance indicators chosen in the PBG program have been selected to best reflect the most relevant aspects of best utility practice. The terminology "Proper Management" refers to the measurement of management actions contained in the PDAM's Business Plan and which reflects also the management of the other performance indicators, financial, sustainability, operational efficiency, and quality of service delivery.

The pilot PBG is structured to be consistent with BPPSPAM data to facilitate eventual PBG mainstreaming. While most of the selected sub-indicators are already reported by BPPSPAM, Energy Efficiency is not. The implementation of the PBG will develop this capacity within the BPPSPAM.

Governance - Business Plan

PDAMs are required to have a current Business Plan approved by the Head of Local Government, but the majority do not. Business plans have a 5 year validity and are supposed to be updated annually. By awarding a grant for up-to-date and approved business plans the PBG aims to reinforce the importance of valid and updated planning and investment documentation. A sound Business Plan is a prerequisite for PDAM's seeking commercial finance.

Financial Sustainability - Operating Ratio and Billing Collection Effectiveness

Operating Ratio (OR) is defined by BPPSPAM as expenditure divided by revenue, such that an OR < 1.0 is desirable, with revenue exceeding expenditure. The operating ratio is seen as the single most important indicator of PDAM financial health as it is affected by every change in expenditure and revenue. Billing Collection Effectiveness is important for PDAM cashflow and in the best performing PDAMs exceeds 95%. The grant will reward an improvement in billing collection, after checking that it has been calculated correctly.

Operational Efficiency - Non Revenue Water (NRW) and Energy Efficiency

Over the last 5 years NRW calculated from the total volume of water distributed and sold by all PDAMs in Indonesia, has increased slightly, from 32.6% to 33.2%. However, the measurement of NRW in Indonesia is notoriously inaccurate. PDAMs will select a defined distribution zone in which to reduce NRW in order to earn the grant by reducing the volume of physical losses.

PDAM Energy Efficiency (EE), like NRW, is a priority for GoI, but the required data for monitoring is not collected by BPKP, nor is EE analysed or reported by PDAMs. The aim of the EE grant is to reduce the energy consumption required for a given output, specifically the energy required to deliver a unit volume of water. An Energy Audit will be conducted by the TA consultant to help each PDAM determine where their EE investment will have most impact.

Quality of Water Service Delivery – Continuity of Supply and Water Quality

Maintaining a continuous supply of water, and thereby a permanently pressurised distribution system, is the best way to improve water quality such that there is no significant deterioration as it passes through the distribution system. The Program Implementation Consultant will use specialised equipment to monitor pressures in selected areas of the distribution system.

The PDAMs selected for the pilot PBG are required to make 363 "internal" (by PDAM) and 303 "external" tests per mandatory water quality parameter per year, on average. "External" tests are the responsibility of the LG Health Agency (Dinas Kesehatan), which is funded by the local government, but often has insufficient budget allocated to conduct independent water quality monitoring. The PBG aims to persuade LGs to fully fund their Dinas Kesehatan's water quality testing responsibilities, with the LG rewarded for water quality only if they fulfil their testing obligations and then meet the quality standard.

Sub-indicator Grant Value and Achievement

The average grant allocation for each PDAM per year for each sub-indicator, on the assumption that 15 PDAMs will participate in the pilot PBG, is shown in Table D.3. More detailed information on grant eligibility, recommended value, payment and calculation are included in **Section D.2.7 and Annex 4**.

Selection of LGs / PDAMs

The following Entry Criteria must be met by a LG and their PDAM in order to be considered as a candidate for the Performance Based Grant:

- LG financial statements should have an independent auditor's Unqualified Opinion (WTP)
- LG must state willingness to invest in PDAM
- PDAM should not be classified as "*Sick*" by BPPSPAM
- PDAM financial statements should have an independent auditor's Qualified Opinion (WDP) or better
- PDAM should not be scheduled for support under NUWSP Component 1
- PDAM should not have benefited from IUWASH NRW or Energy Efficiency support
- PDAM should have a Business Plan valid until 2018, at least.

In addition, for the pilot PBG, limits have been placed on the size of PDAM of between 15,000 and 75,000 service connections. Since GoI is prioritising the reduction of NRW there is also a requirement for NRW of at least 25%. A long list of 34 qualifying LGs / PDAMs were invited to join a Workshop in Yogyakarta in October 2019 where DGHS socialised the PBG activity and invited interested LGs to apply to participate in it.

The Performance Based Grant design is described in more detail in **Section D and Annex 4.**

B.4. Timeframe for engagement and resource commitments

B.4.1 Implementation Timeframe

The Water Hibah PBG will be implemented from 2020 until the end of 2021. In 2020, TA will be provided to water utilities for carrying out a water balance, bulk water meter installation, an energy audit, and other measures necessary for baseline establishment. Sub-indicator baselines will be established as soon as possible such that by the end of 2020 the baseline for all sub-indicators has been established.

Performance improvement measures will start to be implemented as soon as the baseline has been established, with the first verification at the end of 2020 and the first grants paid to LGs rewarding improved PDAM performance by April 2021. Further rounds of verification will take place in mid-2021 and end-2021.

B.4.2 Resources

The proposed allocation of funds for the Water Hibah PBG pilot activity is AUD 16.0 million over the period January 2020 to December 2021. This indicates an average grant of Rp 9.5 billion each for 15 PDAMs. The grant allocation will vary according to the size of the PDAM with a basic grant of Rp 8 billion for the smaller utilities and an enhanced grant of Rp 10 billion for the larger ones.

Total grant funds are allocated between Indicators as follows: Governance 20%, Financial Sustainability 15%, Operational Efficiency, 35% and Quality of Service 30%.

DFAT is committed to supporting the Performance Based Grant pilot activity through a comprehensive program of Technical Assistance which will include:

1. Preparation and Baseline
2. Implementation and Oversight Support
3. Verification and CPMU Support
4. Capacity Development for Government and Improvement in PDAM Performance Monitoring
5. Gender Equality and Social Inclusion Support
6. Monitoring and Evaluation

A budget of AUD 7.9 million is estimated for the TA component in addition to the AUD 16 million PBG grant fund.

B.5. The recommended delivery mechanism and key partnerships

In general, the delivery mechanism will follow that of the output-based Water Hibah, except where specific additional procedural steps are required. The budget holder will be MoF, while the executing agency will be DGHS. The project will be implemented by the Local Governments selected to participate.

B.5.1 Delivery Approach

Activity Governance

Bappenas has established a PBG Steering Team whose role is to make policy recommendations and eventually determine the suitability of the PBG for mainstreaming with APBN funds. Membership comprises senior representatives from: Bappenas, MPWH, MoF, MoHA, MoH, and the KIAT Management Committee. The Steering Team is supported by a Technical Team chaired by Bappenas which will meet biannually to provide strategic guidance and review the progress of PBG implementation. The membership may include representatives from the following stakeholders: Bappenas, MPWH, MoF, MoHA, BPKP, and DFAT. Other agencies including World Bank and USAID may be invited to attend on an advisory or consultative basis.

Implementation Management

The Ministry of Public Works, Directorate General for Human Settlements (DGHS) will establish a Grant Central Project Management Unit (CPMU) composed of technical and administrative staff from: The Directorate of Water Supply Development (Dit. PSPAM), together with a representative from the Ministry of Home Affairs' Directorate General of Regional Finance, Directorate of BUMD, BLUD and BMD.

At the provincial level, the Provincial Project Management Unit (PPMU) will provide coordination with other provincial agencies (Dinas), as well as monitoring progress while the Provincial SATKER will provide technical support to the LPIU.

At the Local Government level, Pemda will establish a LPIU which will be responsible for the implementation of PBG activities, including progress monitoring and contract management.

As with the existing output-based hibah the DFAT grant funds will be administered by the Ministry of Finance (MoF) who will sign an On-granting Agreement with each participating LG. The LG will then inject the required equity into their PDAM to fund the implementation of the PBG activities. Once the improvement in performance has been independently verified the grant earned will be transferred from MoF to the LG.

Monitoring, Evaluation and Learning

In order to monitor PBG implementation, the regional field staff of the Program Implementation Consultant will collect and record monthly PDAM performance data for each sub-indicator and record it in a database to support the calculation of grant rewards. This database should provide early warning of issues in the implementation which can then be addressed long before verification. The database will be accessible to KIAT and the Program Implementation Consultant and, as well as informing decision-making on PBG implementation, should eventually generate data that contributes to a broader knowledge base, including evidence-driven policy reform.

A Monitoring and Evaluation (M&E) approach and framework for the PBG has been prepared, which will be further elaborated during the preparation phase of the Activity. The M&E framework is designed to provide reliable information on end-of-activity outcomes and sub-outcomes, using the information generated by the CPMU and partners to measure changes in PDAM performance for the PBG. The M&E framework will assess how the average

PDAM performance is improving over time and will provide higher level, strategic monitoring information related to the defined outcomes in the Activity Logic Model.

The CPMU will provide six monthly progress reports while the Directorate for Fiscal Balance, MoF, will provide six monthly financial reports to DFAT. An independent review will be conducted in early 2021.

B.5.2 Key Partnerships

National Development Planning Agency (Bappenas)

The National Development Planning Agency will coordinate the implementation of the PBG through a Steering Team supported by a Technical Team chaired by their Director for Cities, Housing and Settlements.

Ministry of Public Works and Housing (MPWH)

The Ministry of Public Works' Directorate General of Human Settlements (DGHS) will be the Executing Agency for the PBG with a Central Project Management Unit (CPMU) established in the Directorate of Water Supply System Development (Dit. PSPAM), where the NUWSP CPMU is located. The Agency for Improving the Implementation of Drinking Water Supply Systems (BPPSPAM), as the body which monitors PDAM performance nationally, will be represented in the CPMU.

Ministry of Finance (MoF)

The Ministry of Finances' Directorate General of Fiscal Balance (DJPK), through the Sub Directorate of Grants, Emergency Funds and Incentive Funds, will be the Authorised Budget User for the DFAT PBG. The Directorate General of Treasury (DJPB) will be responsible for administering the Special Account, disbursing the grant in line with payment instructions received from DJPK and accounting for the movement of funds.

Ministry of Home Affairs (MoHA)

The Ministry of Home Affairs' Directorate General of Regional Finance (Keuda), through the Directorate of BUMD, BLUD and BMD, will be invited to be a member of the CPMU. Keuda has a statutory duty to support LGs and their PDAMs in all financial matters, including performance, PMP (investment from LG to PDAM), budgeting, tariff evaluation, and governance.

The State Audit Agency (BPKP)

The State Audit Agency's Directorate for the Supervision of Regionally Owned Businesses collects data and assesses each PDAMs' performance annually. It is anticipated that BPKP would be responsible for verifying a mainstreamed PBG program.

Ministry of Health (MoH)

The Ministry of Health's Directorate General of Public Health (Kesmas), through the Directorate of Environmental Health will monitor water quality testing and reporting.

The implementation arrangements and roles of key partners are described in more detail in **Annex 5.**

B.6. Critical risks and challenges to success

B.6.1 Risks and Risk Management

The DFAT Risk and Safeguards Screening Tool has been completed and the Risk Register and Investment Risk Summary are included in **Annex 8.** This initial Risk Register provides a preliminary assessment of possible PBG risks. The Risk Summary shows that the overall risk rating for PBG design and implementation is High, before any treatments are implemented.

The Risk Management Plan in **Annex 8** takes the preliminary assessment of risks from the Risk Register and proposes treatments informed by the lessons learned from the implementation of the Australia Indonesia Infrastructure Grant program over the past decade. Over AUD 100 million of output-based water and sanitation grants have been disbursed with a very low level of misuse or mis-application of funds; the performance-based grant modality carries an even lower risk.

The pilot PBG uses proven GoI systems for fund channelling, engages mostly with familiar stakeholders, provides high quality TA for recipients, and is assessed as a **Medium / Low risk** investment for DFAT once the proposed treatments are in place.

The highest residual risks in each category after Treatment are:

Operating Environment - **Medium** concerning: a) the risk of natural disaster impacting the investment; and b) the risk that climate change affects raw water availability.

Partner Capacity and Relations - **Medium** concerning the risks that a) the LG is unwilling to take on the risk that their PDAM may fail to improve its performance despite the new investment; and b) that PDAM's lack of technical and management capacity to improve performance cannot be compensated for by the TA provided by KIAT.

Fiduciary and Fraud - **Low** as the project design means that DFAT funds are not subject to this risk. The risks to LG funds are assessed as Medium to ensure that their funds are i) not used for their intended purpose, ii) that they do not achieve value for money, or iii) that there is collusion between bidders.

Political - **Medium** concerning the risk that the local council (DPRD) refuses to sanction the investment into PDAM.

Resources, Management and Planning – **High** that there is insufficient time for PDAM to achieve an improved performance; **Medium** concerning: a) that the LG is late or fails to make the investment for the PBG; b) that the grant values offered are unattractive, or performance targets too demanding, to LGs/PDAMs; c) that the TA staff are insufficiently experienced; and d) that improvements in performance are not sustained.

B.6.2 Environment and Social Safeguards Risks

The GoI environmental safeguards have been reviewed to ascertain whether the type of activity and scale of works envisaged under the PBG would require a full Environmental Impact Analysis. The conclusion was that they would not, but that the Program Implementation Consultant should ensure that the threshold for groundwater abstraction was not breached by any new production facilities, and that new PDAM customers do not pollute watercourses.

The DFAT Risk and Safeguard Screening Tool has been completed and the Safeguards Screening Checklist is included in **Annex 8.** Because the PBG potentially includes the development of new water resources the environmental risk must be assessed. The likelihood is possible but since the scale of abstraction is unlikely to exceed 50 l/s, the consequence is minor and the environmental protection risk before controls is rated as **Medium**. Since there are no identifiable risks to children, of displacement to indigenous people, or to health and safety, the overall safeguard risk rating before controls is **Medium**. The residual risk is **Low** because the implementation TA will ensure that there is no over-abstraction of groundwater and that environmental regulations are not breached.

C. Analysis and Strategic Context

C.1. Country and Sector Issues

C.1.1 Country / Regional Context

With more than half the Indonesian population now living in urban areas, and predictions that it will increase to more than 60% in the next 10 years, the rapid increase in urbanisation is posing a major infrastructure challenge for the country. Recent data shows that piped water service coverage is not keeping up with urban growth. Total PDAM connections are increasing at 5% annually (approximately 550,000 connections/year) while the urban population is increasing at 2.5% (approximately 750,000 households/year). At the same time the average household size has decreased from 6.5 to 4.1 persons over the last twenty years, further adding to the demand for water service connections.

Global climate change is bringing a new challenge with rising sea levels, exacerbated in many populated areas of Indonesia by over-abstraction of groundwater causing the land to sink. Inundation by high tides is going to become a fact of life for millions of Indonesians living in low lying coastal areas. With rainfall patterns becoming shorter and heavier, and longer dry seasons with higher temperatures, natural disasters such as landslides and floods are becoming increasingly common. Climate change is also expected to impact the availability of water resources for public water supply in the dry season, and to increase soil erosion and sediment load in the wet season.

While the United Nations Sustainable Development Goal SDG 6.1 commits countries to achieve universal and equitable access to safe and affordable drinking water for all by 2030, Indonesia has decided to target access to "Air Minum Layak" or Clean Water.

C.1.2 Sector Issues

Local Government-owned Water Enterprises *Perusahaan Daerah Air Minum* (PDAMs) are estimated to provide piped water supplies to approximately 32% of the total urban population. There are serious weaknesses in the performance and sustainability of many PDAMs, with the good financial performance of larger PDAMs obscuring poor quality of service, inadequate maintenance budgets and poor service coverage.

There are 374 PDAMs in Indonesia, each owned by their Local Government, which on average serve 30,000 customers, but which vary in size from less than 1,000 up to 850,000 customers. PDAMs provide piped water supply to about 46 million people, or just 18% of the 260 million total population.

The competence of, and quality of service provided by, PDAMs varies greatly. The government classifies 14% of them as "sick" and another 26% as "unhealthy". The average size of the "sick" PDAMs is 7,200 customers, the "unhealthy" 11,200 and the "healthy" 44,600; suggesting that size is an important factor in this classification. Classifying 60% of PDAMs as "healthy" masks the fact that many of these PDAMs are performing poorly in terms of their efficiency, quality of service and service coverage. In some cases service coverage is declining as new connections fail to keep up with the growth in urban households. Further, PDAM service coverage is often over-stated by assuming an unrealistic number of people served per connection and by counting only the population in the area where the PDAM already has a distribution network, rather than the whole of the LG's administrative area. Only an estimated 61% of the population had access to safe drinking water in 2018.

Nationally, Non Revenue Water has remained at a steady 33% for the last 5 years, and this is widely known to be an under-estimate. Meanwhile energy costs for many PDAMs account for about 40% of operating costs, after excluding

depreciation and staff costs. Pumping often accounts for 90% of PDAM energy costs, so PDAMs with a spring water source and gravity supply, and hence no treatment or pumping costs, have a tremendous advantage.

Refer to Annex 1 "Sector/Problem and Other Relevant Analyses" for more detail.

C.1.3 Gender Equality and Disability Issues

The burden of managing the household's water is borne primarily by women who have overall responsibility for ensuring enough water is available for their domestic tasks such as cooking, bathing children, and washing, and for other family members' needs. In addition, water is used by women for productive and income earning activities, such as the cooking and sale of drinks and food, small scale horticulture, and businesses, such as hair dressing and ice-making. As a result, women stand to benefit disproportionately from any improvements to water service delivery.

Inadequate service provision, such as lack of access to a household connection, poor quality water, low water pressure, or intermittent water supply, create conditions which impact particularly on women as the managers and main users of domestic water. Where there is no connection at the house, women, and sometimes children, spend significant time and energy collecting water each day, particularly when the source is some distance away. Pregnant women, the elderly, frail and disabled, face risks and difficulties in carrying heavy containers of water from sources outside the house. Where there is intermittent piped water supply or inadequate water pressure, the need for water storage adds work for women and creates the possibility of contamination and illness in households where safe storage practices are not followed.

Lack of, or inadequate, piped water service to the household has financial and social implications at individual, household, and community levels. The cost of purchasing water from private vendors is much higher than PDAM charges. A World Bank study found that the monthly cost of purchasing water from water vendors for households across a range of income levels was more than double the monthly bill they would pay for water from the PDAM.

There are health risks in using water from alternative sources when there is no household connection or if services are inadequate. Access to piped water on the premises has been found to be strongly associated with lower diarrhoea incidence among children under five. The costs of medicine and lost work time when family members fall ill due to contaminated water supplies can be a significant burden, especially for poor households. Households with members with disability, or who are old or frail, have health and social needs for good quality water services which deliver reliable water supplies directly into the premises.

Analysis of a selection of 2016 BPKP reports showed that most PDAM supervisory board members and PDAM directors were men. There is considerable variation between individual PDAMs in the proportion of women and men in their total personnel, and in the proportion of women in management positions.

Data provided by a limited number of potential PBG PDAMs surveyed during the PBG Design phase reported having between 18% and 26% women in their overall number of employees, with one reporting only 13% women. The proportion of women to men in management positions, other than directors, roughly corresponded to the proportion of women to men in the organisation, except for one PDAM where no women at all were reported in management.

None of the PDAMs indicated that they thought there would be any benefit from an increase in the proportion of women employees. While average salaries (excluding Directors) were broadly similar for women and men, the range of salaries among men was greater. Excluding the Directors, men had both the highest salaries and the lowest salaries in the three PDAMs examined.

There is very limited understanding of gender or social inclusion issues in PDAMs, and women and marginalised community members frequently lack information about PDAM services. PDAM managers and staff need an increased understanding of gender issues relating to service delivery, communications and customer service, while socialisation strategies need to be made gender responsive.

The proportion of people with a disability which affects their ability to participate in society ranges from 4% to 11% of the population, depending on how disability is defined. Yet no PDAM reported a person with disability amongst their employees. Attention to GESI issues within the PDAM will benefit other aspects of local government service delivery. The PBG program is as much about improving the local government's relationship with the PDAM as it is about improving the performance of the PDAM. The directors of the PDAM have extensive autonomy on management decisions including striking a progressive GESI balance amongst staff. Where this is achieved it will influence other local government departments in how they deliver services across existing GESI barriers.

The PBG GESI consultant's work with PDAMs will be informed by the World Bank's recent initiative on Diversity and Inclusion for Women in Water Utilities[3].Refer to Annex 2 "Gender Equality and Social Inclusion" for more detail on relevant gender and disability issues.

C.2. Development Problem Analysis

The Indonesian model for the water sector has been for central government to finance and construct almost all public water supply infrastructure. However, ownership of these assets is often not transferred to local government; in 2018 Rp 6 trillion worth of water sector assets constructed by central government had yet to be transferred to local government. The burden of sustaining the productive life of these assets has not been addressed satisfactorily by their operators, PDAMs, or by their owner local governments. Despite clear regulations stating that municipal water supply is a local government responsibility, the prevalence of GoI investment through national budgets has made LGs dependent on GoI for the renewal of assets. In fact less than 0.5% of water sector investment comes from LG resources.

Central government funding for the water sector through the national budget (APBN) for DGHS has fallen from Rp 8.1 trillion in 2014 to Rp 4.2 trillion in 2019, a reduction of 55% in real terms. The sustainability of PDAM operations, which are heavily dependent on central government funding for their capital works, is a serious concern. With over 75% of the population yet to be connected to a piped water supply, expanding the service the water companies provide will require a significant increase in investment from their LG owners, as well as from other, non-government, sources of funding. The PerPres 29/2009 program, which successfully supported PDAMs in obtaining commercial loans by providing a guarantee to the bank and subsidising the interest rate, expired in 2014. After 5 years, in July 2019, it was replaced by PerPres 46/2019, however this expires in December 2022 leaving little time for PDAMs to take advantage.

C.3. DFAT Water Hibah Program Genesis

The DFAT output-based Water Hibah was designed to address two related issues: lack of investment by Local Governments in their PDAMs, and the slow rate of increase in domestic water service coverage. Under the output-based grant the Local Government had to invest equity in their PDAM, which was used to increase service connections in predetermined areas of low-income households. The program took advantage of spare capacity in PDAMs' systems such that the new connections did not cause a reduction in service to existing customers.

[3] World Bank. 2019. Women in Water Utilities : Breaking Barriers. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/32319 License: CC BY 3.0 IGO.

The DFAT output-based Water Hibah was implemented in two phases between 2009 and 2016 resulting in 400,000 connections to low income households. GoI began mainstreaming their own water hibah using the DFAT design in 2015. During the period 2015 to 2019 GoI implemented more than 800,000 new service connections to low-income households. GoI plans to continue this program for another five years from 2020 to 2024, allocating approximately AUD 100 million each year from national budget funds. If fully disbursed, this would achieve an additional 2,000,000 low-income household connections. This ambitious target may be difficult to achieve based on the analysis and rationale outlined below.

C.4. Evidence-base / Lessons Learned

C.4.1 Lessons Learned from the Water Hibah Output-based Grant

The original Water Hibah Output-based Grant design was based on the three following lessons learned:

Success will be linked to GoI commitment: The unprecedented speed and commitment of the GoI to put its water initiatives in place reflects very strongly on its commitment and ownership of the reform agenda.

Implementation should be through GoI delivery mechanisms: The water hibah is designed to be implemented through GoI systems and agencies. This will enhance program sustainability and effectiveness. Use of donor procedures will be limited to core technical assistance components for program preparation and management.

Local government program ownership is essential: A key failing of past development has been the lack of engagement and ownership of the water sector by LGs, arising from unsustainable investments by central government in PDAMs.

In 2017 DFAT commissioned an "Independent Evaluation of the Water and Sanitation Hibah"[4]. The Review Team interviewed current KIAT and former IndII staff, and visited LGs and their utilities in: Kota Bandung, Kab. Garut, Kota Banjarmasin, Kab. Kapuas, Kota Surakarta and Kab. Boyolali. Fieldwork was carried out in October 2017 and involved interviews or discussions with more than 200 people, 132 institutional stakeholders and 74 beneficiaries. This Review provided the following key lessons (in blue). The Lessons Learned have influenced the design of the PBG as described under each one.

1. The MoF Hibah mechanism works and is more effective

The Water Hibah's clear design to meet a gap to increase services for low-income households and trial a performance-based financing approach has worked well and resulted in strong participation of local governments and demonstration that the Hibah grant mechanism 'works'. It is now widely viewed as more effective than other intergovernmental transfers for achieving results, and therefore, is being taken up in other sectors by GoI (septic tanks, roads etc.) and for upcoming urban water programming by GoI and World Bank.

The PBG will use the same grant mechanism through the MoF, refer to **Annex 5** for details.

2. Objective of increasing LG investment in water services only partially met

Strategic level monitoring could have been improved and the program objective to increase LG investment in water services was only partially met. The required metrics and methods to judge the latter had not been set and operationalised. This has potentially resulted in a missed opportunity to support learning from the program. There remains continued opportunity to monitor and analyse patterns in local government and PDAM performance and investment to refine the mechanism and identify levers to increase program effectiveness.

[4] Prof. J Willetts, M Howard, J Edwards and N Battacharyya, (Dec 2017) *Independent Review of Water and Sanitation Hibah*, DFAT.

The PBG, like the Output-based Grant, will only be awarded to LGs which are willing to invest in their PDAMs, with a requirement that the investment will be new funding for PDAM. KIAT also intends to use the grant to leverage that investment such that it is 15% higher than the grant offered. Discussions with the candidate LGs will determine whether this is feasible. However, it should be recognised that the PBG is a much higher risk investment for the LGs with their grant dependent on a clear improvement in PDAM performance, which is much harder to achieve than a defined output. LG's willingness to accept this risk will be a clear indication of confidence and trust in their PDAM. LGs are also expected to reinvest the PBG grant funds received into their PDAM. Risks and their proposed treatments are considered further in the Risk Management Plan, Table A.8.6, in **Annex 8.**

The PBG M&E in **Annex 7** includes a table showing the M&E needs of all stakeholders, including DFAT, KIAT and the PDAMs. Strategic level monitoring information/data is a need for both KIAT and the PDAMs.

3. Socialisation processes, attention to gender and social inclusion need improvement

Socialisation processes and attention to gender and inclusion in them could have been improved to ensure that women and other disadvantaged groups are able to access information about the services. However in general the impacts on beneficiaries documented to date are positive. The pro-poor targeting could usefully be refined in the future to align with use of the unified database, as electricity becomes a less appropriate measure to identify poor households.

The PBG design addresses several gender equality and disability issues, partially informed by the Independent Evaluation which found that 'there was significant room for improvement in how women (and other disadvantaged groups) were engaged in socialisation and consultation' by service providers and pointed to the need for greater attention in this area.

The design includes the provision of TA support to PDAM to develop GESI responsive socialisation strategies and Standard Operating Procedures which are designed to reach women, as well as men, and disadvantaged groups, in their service area. The technical support will encourage PDAM to recruit more women and increase their proportion at all levels of management to, at a minimum, reflect the proportion of women in the organisation. It will support thinking about women's needs and the development of women-friendly workplaces, consistent with the understanding that a more gender diverse workplace is better for business, especially where the customer base is as diverse and universal as that served by the water sector.

The technical support has a disability focus which will encourage the recruitment by PDAM of people living with a disability. The TA will give them support, such as mentoring, to assist them to feel comfortable at their work and remain in the job. The assistance will lead to identification of accessibility issues for personnel and customers using PDAM buildings which need to be addressed in future budgets. Annual reviews and planning by managers of progress achieved in addressing GESI issues are part of the Technical Assistance.

4. Improve stakeholder communications and reconsider CPMU placement

Both the DFAT-funded Hibah and APBN Hibah have demonstrated slower than predicted disbursement. Whilst this is partially accounted for by the 'learning curve' of all parties in using the mechanism, there is an on-going need to review and improve the respective roles, timing, communications and mutual expectations of MoF, DGHS, LGs and PDAMs. As part of this, it may important to consider the role and placement of the Central Project Management Unit (CPMU) in DGHS (within technical sectoral areas or outside of them), to ensure appropriate technical input is provided, given minor concerns raised in the technical quality of construction in some locations and that the technical sectoral areas are currently not formally involved in the verification process.

The Central Project Management Unit (CPMU) for DFAT water and sanitation grants has been in DGHS' Directorate of Integrated Settlement Infrastructure *Direktorat Keterpaduan Infrastruktur Permukiman* (Dit KIP) since 2010. KIAT initially considered placing the PBG CPMU in BPPSPAM, as the body responsible for reporting on PDAM performance, but it was concluded that their lack of experience in administering CPMUs posed a risk to the activity.

Changes in Dit. KIP during 2019 have facilitated establishment of the PBG CPMU within the Directorate of Development of Drinking Water Supply Systems (Dit. PSPAM), who are better placed to provide appropriate technical input and are very experienced in administering CPMUs. The NUWSP CPMU is also located in Dit. PSPAM.

In order to improve communications between the stakeholders a PBG Technical Team has been established under BAPPENAS which includes representatives of MoF, MPWH, MoHA, BPKP, Perpamsi, World Bank and DFAT.

5. Complementary APBD investment helped; improvements in governance and service delivery

The investment in PDAMs (through local government equity investment) to use idle capacity and increase tertiary network (household connections) was complementary to APBD investment in public works managed capital works and network extensions. It also improved linkages and communication between PDAMs, LGs and parliament as regards the need for, and improvements in, water services. It also has achieved improvements in governance and capacity in water service delivery at local level.

At this stage it is not known whether the selected PDAMs will also have complementary APBD financed works, and that is not an entry requirement for the PBG.

6. Features which made the grant mechanism highly replicable

The high replicability of the mechanism was achieved through several factors. These include: full use of GoI public finance mechanisms; demonstrated success at sufficient scale across diverse geographical locations; clear technical guidelines; alignment to a national (and global) policy mandate 100-0-100; visibility of the outputs, including for political purposes at local level; and available technical capacity (within PDAMs, CPMU and MoF) for implementation

The PBG will continue to use the GoI grant mechanism for the transfer funds to Local Governments, originally defined in PMK 168/169 of 2008, and currently under PMK 224/2017. The LGs' investment into their PDAMs will also continue to use the proven equity injection method *Penyertaan Modal Pemerintah Daerah* (PMPD). The PMPD method requires approval from the DPRD, which is cumbersome but transparent.

The technical guidelines for the PBG are provided in the Project Management Manual, which is based on the previous Water Hibah PMM. The previous United Nations MDGs have been superseded by the SDGs, as discussed in section C.1, while the national water sector policy for the next 5 years is presently being formulated.

7. Verification process too complex and costly

There were mixed views about the appropriateness of the verification process established by DFAT and replicated in the APBN Hibah in terms of its complexity and cost-effectiveness. It will be important to review this verification process (suggested for 2018-19) and consider alternatives that could simplify the process whilst maintaining the required rigour and transparency

The Water Hibah Output-based Grant required inspection of each individual property, both before (baseline) and after installation (verification) of the connection. Locating properties and ensuring that it was the one which had been baselined, then relating the baseline and verification databases, often compiled by different consultants, was very time-consuming. This process was carried out for 320,000 connections.

Under the PBG the verification for most sub-indicators will be much more straightforward. The only one which might be expected to require inspection of individual properties is the Continuity of Supply, for which the grant allocation is enough for a maximum of 36,000 connections. Verification for this will instead be achieved by installing pressure data loggers at key locations, making individual property inspections unnecessary.

C.4.2 Lessons Learned which Informed NUWSP Design

The key lessons learned from previous water supply initiatives in Indonesia which informed the World Bank's design of NUWSP were:

a) *The lack of coordination between central and local governments, and inadequate prioritisation of investments has led to relatively small increases in the number of house connections, while idle capacity has also significantly increased.* The MPWH has increased investments in a significant number of infrastructure development projects. However, follow-up investment by LGs/PDAMs in distribution networks and connections does not always occur. The Water Supply and Sanitation Public Expenditure review, WSS-PER suggests that tackling this issue will involve taking steps to improve the financial health of PDAMs to better enable them to invest in improved services and for LGs to prioritise.
b) *The varying financial and implementation capacities, and creditworthiness of LGs and PDAMs will require different levels and forms of financing and technical support.* The Urban Water Supply and Sanitation Project, UWSSP showed that physical investments may be more suitable for LGs and PDAMs with relatively strong capacity. The amount of investment should be adjusted depending on the management capacities of the LG and PDAM.
c) *Under the decentralised environment wherein Local Governments have more responsibilities in the provision of water supply services, the central government continues to play a role in initiating sector reforms, incentivising and regulating the performance of local governments.* There is a need to develop a financing framework for the water supply and sanitation sector that enables the central government to map and categorise LGs and PDAMs capacity and provide the financing/ investment mechanisms accordingly.
d) *Output-based financing for water supply has proven to be effective, not only in increasing coverage of piped water supply, but also in leveraging substantial financial contribution from local governments.* The Global Partnership on Output Based Aid, GPOBA introduced output-based financing to water projects in Jakarta and Surabaya. DFAT through IndII designed the current National Water Hibah Program which was implemented from 2010-16[5]. Since 2016, the Water Hibah Program has been fully funded by the Indonesian Government budget.

C.5. GoI Water Sector Policy

C.5.1 Regional Water Supply

In order to achieve the UN's SDG 6.1 target of universal access to clean water many PDAMs will need to develop new water sources. With the limited water resources available in most urban areas of Indonesia insufficient to meet the demand from a rapidly growing urban population, regional bulk water supply schemes (SPAM-R) are being promoted by the Ministry of Public Works and Housing (MPWH).

The Ministry's strategic plan (RENSTRA) focuses on developing these systems through its Directorate General of Water Resources (DGWR) and Directorate General of Human Settlements (DGHS). About 80 schemes are planned around the country, of which about 10 have started functioning. These schemes are being developed at provincial level by Public Works, and have to date been funded by central government. Key features of SPAM-R are that they must supply at least two LGs' PDAMs, and that they will be operated by provincially-owned water companies.

C.5.2 National Urban Water Supply Framework

The Indonesian National Urban Water Supply Framework (NUWAS) has been developed by GoI, with support from the World Bank and various DFAT trust funds, as a framework for implementation of the national urban water supply platform. This framework is designed to address the need for more integrated support, appropriate to the capacity and performance of individual PDAMs. The Framework provides for a range of technical assistance, capacity building

[5] The program included US$ 10 million funding from USAID during the second phase.

and investment financing support which varies according to each PDAM's circumstances, but is available to all 380 PDAMs.

Each support package is designed to integrate central and local government financing to leverage non-public sources of financing, with the aim of gradually improving each PDAM's performance until it becomes eligible for the next support package.

C.5.3 National Urban Water Supply Project

The National Urban Water Supply Project (NUWSP), which is partially World Bank-financed, is designed to support GoI in improving PDAM performance and encouraging PDAMs to access non-government sources of finance.

GoI expects total investment of USD 600 million in urban water supply development during the life of the NUWSP project with USD 185 million from national and local government budgets; USD 100 million from a World Bank loan; and USD 317 million from other Government programs, commercial borrowing, the private sector, other donors, and water service connection fees.

The NUWAS Framework provides for three types of grants for PDAMs: (i) Seed Grant - used to provide a stimulus to the PDAM to improve capacity, system optimisation; (ii) Matching Grant - used to encourage the PDAM to seek non-public sources of finance – NUWSP will match finance sourced from Banks, PPP or business-to-business; (iii) Performance Based Grant – grant will be awarded after PDAM has achieved certain performance improvements. A Self-Assessment Tool is used to determine the type of grant for which each PDAM is eligible. NUWSP is expected to commence implementation in 2020 with funding initially committed to seed grants and matching grants. Up to USD 25 million will be made available for the NUWSP PBG.

DFAT has made a general agreement to support a pilot PBG activity under the Water Hibah program. However, the NUWSP PBG is restricted to Non-Revenue Water and Energy Efficiency only, whereas DFAT envisages a more general and widely applicable PBG aimed at fostering a sustainable water supply service.

C.6. Cooperation with other Development Partners

KIAT and the PBG Design Team have worked closely with the World Bank NUWSP team on the design of this activity, as NUWSP will subsequently mainstream a sub-set of the DFAT PBG performance indicators. The USAID-funded IUWASH PLUS program is expected to support NUWSP by providing capacity building support to PDAMs for reducing NRW and improving Energy Efficiency.

C.6.1 USAID Funded IUWASH PLUS

The Indonesia Urban Water Sanitation and Hygiene PLUS program (IUWASH) is an ongoing 5-year program funded by USAID which is designed to assist GoI in increasing access to water supply and sanitation services as well as improving key hygiene behaviours among urban poor and vulnerable populations.

The IUWASH Plus Program components are:

1. Improvement of services in water, sanitation and hygiene behaviour at the household level
2. Strengthening the performance of institutions managing water, sanitation and hygiene behaviour at the city / district level
3. Strengthening aspects of financing water, sanitation and hygiene behaviour
4. Promoting advocacy, coordination and communication in water, sanitation and hygiene behaviour

In addition, a Local Sustainability and Innovation Component (LSIC) is designed to stimulate innovations that strengthen community, private sector and government WASH service provision.

The IUWASH Plus program is now focused on capacity building rather than physical works, and interacts with PDAMs in two specific areas: NRW reduction and Energy Efficiency. The capacity building program has so far been provided to five PDAMS of which three are focusing on Energy Efficiency (PDAM Sukoharjo, PDAM Sidoarjo, PDAM Ternate) and the other two (PDAM Surakarta, PDAM Magelang) are focusing on NRW reduction. The selection was based on the needs of each PDAM after an initial assessment with IUWASH.

C.7. Innovation and Private Sector Engagement

In some countries, specialist contractors will offer to reduce water losses on a performance basis, such that if they fail there is no cost to the water company. However, the high risks involved in such a contract in Indonesia have made it uneconomical, and we are not aware of any that have yet been successfully implemented.

The PBG could provide an opportunity for the private sector to trial water loss reduction on a performance basis because it could be attractive to PDAM to have a contractor take on the risk of failure to reduce NRW. Even if PDAM had to pay more than the NRW grant (Rp 3,000 / m^3) to a successful contractor it would still receive the benefit from the sale of the water saved. On this basis every cubic metre of water saved could be worth over Rp 6,000 /m^3 to the PDAM.

Energy efficiency would appear to offer a less risky opportunity for the private sector. There is scope for contractors to carry out an Energy Audit, recommend efficiencies, finance, and implement the measures on a performance basis. However, one potential problem is that PLN often has a minimum consumption requirement, such that reducing electricity consumption does not always lead to a lower electricity bill. Energy efficiency measures might need to be carefully selected, to use the increased efficiency to pump and sell more water rather than reduce power consumption.

D. Investment Description

D.1. Logic and Expected Outcomes

The Government of Indonesia (GoI) recognises that much more investment is needed in the water sector and is seeking a mechanism whereby central government funds can be used to reward sustainability as well as growth. GoI, through Bappenas, has requested support from KIAT to pilot a variation of the Water Hibah Output-based Grant, namely a Performance Based Grant which rewards outcomes rather than outputs.

This Activity will therefore pilot a new approach to funding for the water sector; the goal of the Activity is that the **Government of Indonesia mainstreams Performance Based Grants for water supply with funding from the national budget (APBN).**

This Activity goal is consistent with KIAT's End of Facility Outcome #3: GOI delivers, manages, and maintains high quality infrastructure through the adoption of specific improved mechanisms for delivery, management, and maintenance.

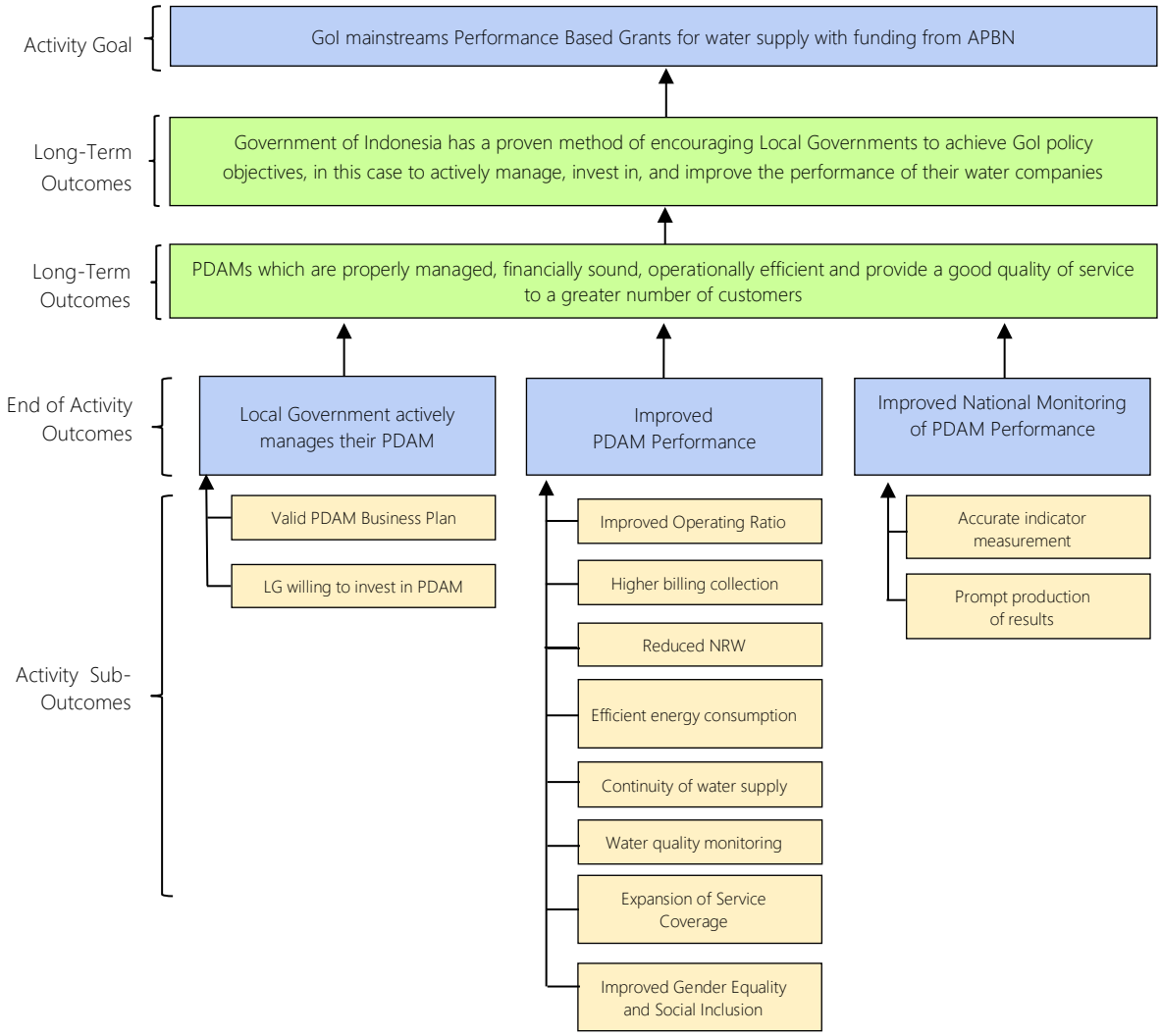

Figure 1 Key Activity Outcomes for PBG

The "theory" underpinning the Activity goal is to demonstrate[6] that when LGs have a stake in their PDAM's performance they become more actively engaged in their PDAM oversight duties. In turn this should lead to a better understanding of the investment needed not only to improve the quality of PDAMs' service but also to enable PDAMs to extend their service coverage in line with Indonesia's commitment to United Nations' SDG 6.1.

The expected long term outcomes for the Water Hibah PBG are:

(i) Government of Indonesia has a proven method of encouraging Local Governments to achieve GoI policy objectives, in this case to actively manage, invest in, and improve the performance of their water companies.

(ii) PDAMs are properly managed, financially sound, operationally efficient and provide a good quality of service to a greater number of customers.

There are three primary end-of-activity outcomes for the Water Hibah PBG:

(i) Participating PDAMs improve their performance;

(ii) Participating Local Governments are actively managing their PDAMs;

(iii) National monitoring of PDAM performance improves.

These outcomes are consistent with KIAT's overarching goal of supporting **Sustainable and inclusive economic growth through improved access to infrastructure for all people.**

Activity Outcome 1: Improved PDAM Performance

Key PDAM performance sub-outcomes, which will be measured and eligible for grant rewards, are:

1. Improved Operating Ratio
2. Higher billing collection effectiveness
3. Reduced Non Revenue Water
4. Improved Energy Efficiency
5. Continuity of water supply
6. Independent Water Quality Monitoring

The first four sub-indicators all contribute to improving PDAM financial sustainability, while the remaining two relate to the quality of PDAM service. Improvements in these sub-indicators will each be rewarded with grant payments, but the total grant earned will not exceed the LG's initial equity investment in PDAM. The largest grant allocations are for Operational Efficiency and Quality of Service, reflecting the significant investment required to improve them. The grant earned will be based solely on the improvement in performance, not related to the investment required to achieve that improvement.

Expansion of Service Coverage

Although it is not proposed to award a grant for any increase in service coverage, it will be monitored and reported. An increase in service coverage is expected to be a sub-outcome of the PBG because:

(i) The water saved through reducing NRW must be sold by PDAM, not used to reduce production;

(ii) Some PDAMs may use the grant for Continuity of Supply to provide a continuous supply for new customers;

(iii) Improved financial performance of PDAMs may encourage them to expand their service coverage.

[6] This is a demonstration project. Australia has achieved significant success in previous demonstration projects including the:

- Water Hibah Output Based Grant: mainstreamed by GoI in 2015 with a budget allocation of over AUD 250 million in four years, it is now due to continue for a further 5 years, using the hibah mechanism to increase water supply coverage; and
- Eastern Indonesia National Roads Improvement Project – EINRIP:GoI has adopted higher standards for road construction and the World Bank is planning to implement the technical audit component employed in EINRIP.

Not only will increased service coverage support the GoI commitment to SDG 6.1, but is also important for DFAT as it will contribute to Outcome No. 5 (access to water and sanitation) under DFAT's Performance Assessment Framework (rev.3.1) for Indonesia.

Improved Gender Equality and Social Inclusion

Results from a small KIAT survey confirm that women are under-represented in management positions in some PDAMs in comparison with their representation in the PDAM as a whole, and that none of the PDAMs employ any people with a disability. Although it is not proposed to award a grant for any improvement in gender equality or social inclusion in the PBG PDAMs, it will be monitored and reported. The gender performance assessment will focus on the gender ratio of middle and senior PDAM management. In addition KIAT will provide a GESI consultant to promote a culture of gender equality and social inclusion in PDAMs. KIAT's GESIT program will also provide capacity building grants to CSOs for advocacy of more inclusive service delivery and effective community engagement, consistent with GOI legislation.

Activity Outcome 2: Local Government Actively Engaged with their PDAM

The key Local Government engagement sub-outcome, which will be measured and eligible for grant reward, is:

Valid and Approved Business Plan

MoHA regulations require PDAMs to have a current Business Plan approved by the Head of Local Government, but despite this 57% of PDAMs do not have one. By awarding a grant to PDAM for having a current Business Plan, approved by the Head of the LG, the PBG aims to reinforce to both LG and PDAM the importance of PDAM Business Plans.

LG willingness to invest in their PDAM

It is not proposed to award any grant for a LG's willingness to invest in their PDAM, which is a condition for entry to the PBG. Nevertheless, it is an important sub-outcome, indicating a LG's confidence in their PDAM, that they are willing to invest knowing that the grant reward is dependent on an improvement in PDAM's performance, and that the grant value will be less than their investment.

Activity Outcome 3: Improved National Monitoring of PDAM Performance

Key national monitoring of PDAM Performance sub-outcomes are:

1. Accurate indicator measurement
2. Prompt production of results

There is no grant provided for improvement in the national monitoring of PDAM Performance.

The State Audit Agency (BPKP) collects data and assesses each PDAMs' performance annually based on the requirements of both MoHA and the Ministry of Public Works' BPPSPAM; although only the latter compiles and publishes the results. Various shortcomings in the existing national system have been identified, refer to **Annex 4**.

One of the major deficiencies is that while PDAM finances are independently audited their technical performance data is mainly self-reported. BPKP does not audit most of the technical data received from PDAM. Another serious issue is the length of time taken to compile that data; it takes nearly a year from the end of the year being reported for BPPSPAM to publish their report on PDAM Performance.

KIAT proposes to address these shortcomings through the Program Implementation Consultant (PIC) who will develop central government capacity in readiness for mainstreaming the PBG and for improving PDAM performance monitoring. Support will be provided for DGHS (user), BPPSPAM (reporter), and BPKP (auditor) and the participating

PDAMs. In an era when private sector and commercial funding for PDAMs will become increasingly important, a trusted national system for rating PDAM performance will be valuable for all parties.

D.2. Features of the Performance Based Grant

The design of the Performance Based Grant is described in **Annex 4** "Detailed Description of Investment Activities" and the main features of the grant summarised below.

D.2.1 Input and Output-based Grants for the Water Sector

The Indonesian Government (GoI) understands that more investment is required in the water sector. One option used by central government for channelling funds to LGs is the Special Allocation Fund (DAK), an input based mechanism. Under the DAK the LG receives the grant before implementation and is required to report on the output. However, failure to properly account for the funds does not usually affect future DAK allocations and the DAK is widely recognised as unsatisfactory because of this lack of accountability.

Following a pilot output-based aid project by the World Bank in Jakarta and Surabaya in 2007, the Australian funded Water Hibah program developed the concept of output-based grants for the Indonesian water sector in 2009. Local Governments were paid for each new water supply connection installed for a low income household. The aim was to induce PDAMs to use their surplus production capacity to extend their service and supply more domestic customers, and by 2016 400,000 new connections had been installed. GoI began mainstreaming these output-based grants in 2015 using central government funds, with approximately 800,000 connections installed by 2019.

However, through its success, the output-based Water Hibah is reaching the limits of what can be achieved, with many PDAMs' production capacity now fully utilised and increasing investment required by PDAMs to achieve any further increase in service coverage. Other issues with the output-based grant have been the difficulty of ensuring that quality of service to existing customers was maintained, while the inclusion of poverty targeting required comprehensive baseline and verification surveys. The Lessons Learned from the output-based Water Hibah, and effect on the PBG design, are discussed in section C.3.1.

D.2.2 Pilot Performance Based Grant

GoI is seeking a different mechanism that will reward sustainability as well as growth, and has requested the design and piloting of a Performance Based Grant (PBG) which might have wider application, better outcomes, and simpler implementation than the DAK. Ultimately PBGs are expected to be mainstreamed using central government funding (APBN), to complement, and eventually replace, the APBN funded, output-based, Water Hibah.

DFAT has made a general agreement to support a pilot PBG through the existing Water Hibah program. DFAT envisages a PBG aimed at fostering PDAMs which are properly managed, financially sound, operationally efficient and provide a good quality of service to a greater number of customers.

LGs will have to commit to an agreed amount of investment before being offered the PBG, with KIAT seeking to use the grant to leverage the LG's equity injection into PDAM by up to 15%. Because this grant is not output-based, it will not be directly related to the investment PDAM has to make to improve their performance. The grant earned may be significantly less than the LG's investment if PDAM's performance fails to improve.

Where possible, the grant value for each performance sub-indicator has been set as a percentage of the cost or benefit to PDAM. PDAM will directly receive the full benefit from saving NRW through increased water sales, or from improving Energy Efficiency by lower energy costs. The pilot PBG provides an additional financial incentive, as well as high quality Technical Assistance which KIAT will provide to participating PDAMs to help them succeed.

D.2.3 NUWSP Performance Based Grant

The Indonesian National Urban Water Supply (NUWAS) Framework was developed as a framework for implementation of the national urban water supply platform. The associated National Urban Water Supply Project (NUWSP), which is partially World Bank-financed, is designed to support GoI in improving PDAM performance and encouraging PDAMs to access non-government sources of finance.

The NUWAS Framework provides for three types of grants for PDAMs: seed grants, matching grants and performance-based grants. A Self-Assessment Tool is used to determine which type of grant each PDAM is eligible for. NUWSP is expected to commence implementation in 2020 with funding initially committed to seed grants and matching grants. Up to USD 25 million may subsequently be made available for a NUWSP PBG which is presently expected to focus on Non Revenue Water and Energy Efficiency only.

D.2.4 PDAM Performance Assessment

Ministry of Home Affairs Regulation No. 47/1999 introduced a system for categorising PDAM performance based on 3 Indicators (Financial, Operational, Administration) each consisting of 10 sub-indicators. Every PDAM in Indonesia is audited annually by the State Audit Agency (BPKP), which collects the data and assesses each PDAMs' performance based on the requirements of both MoHA and the Ministry of Public Works' BPPSPAM.

BPPSPAM produces an annual report on PDAM Performance in which they compile data from the BPKP reports on individual PDAMs so that they can compare them. BPPSPAM uses four weighted Performance Indicators: Financial (25%), Service (25%), Operational (35%) and Human Resources (15%), which are comprised of 18 sub-indicators.

BPPSPAM provides a simple result of their assessment, assigning each PDAM to one of three categories: **Sick** (<2.2), **Unhealthy** (between 2.2 and 2.8) and **Healthy** (>2.8). Out of 374 PDAMs in 2017, 14% were rated as Sick, 26% as Unhealthy and 60% as Healthy. The twenty best PDAMs achieved scores between 3.81 and 4.39, while the worst were below 2. For each PDAM BPPSPAM shows their scores over the last 3 years, allowing an easy assessment of progress.

Several shortcomings in the national system for monitoring PDAM performance have been identified in **Annex 4**. KIAT proposes to address these shortcomings through the Program Implementation Consultant who will develop central government capacity in readiness for mainstreaming the PBG and for improving PDAM performance monitoring. Support will be provided for DGHS (user), BPPSPAM (reporter), and BPKP (auditor).

PBG Indicators and sub-indicators

1. Governance

PDAM Business Plan

2. Financial Sustainability

Operating Ratio
Billing Collection Effectiveness

3. Operational Efficiency

Non Revenue Water
Energy Efficiency

4. Quality of Water Service Delivery

Continuity of Supply
Water Quality

D.2.5 PBG Performance Measurement Framework

Following extensive discussions between KIAT and GoI stakeholders the following set of high-level performance indicators were determined as the most relevant and provide the basis for the Performance Measurement Framework: Governance, Financial Sustainability, Operational Efficiency and Quality of Water Service Delivery.

The PBG Design Consultant has had discussions with stakeholders about which of a wide range of potential sub-indicators were the most relevant and should be used to measure the performance under each high-level indicator. Their views have been considered in the selection of the final batch of sub-indicators.

The philosophy developed during the PBG design, reflecting the views of stakeholders, was that the number of sub-indicators should be kept to a minimum. BPPSPAM's performance measurement involves 18 sub-indicators while MoHA's has 30, in contrast the PBG proposes to use 7 sub-indicators for calculating the grant.

- Selection of Sub-Indicators for calculating the PBG

Stakeholders have made clear that the performance assessment for the PBG should not be subjective. There is a concern about having to satisfy auditors that the grant payments have been properly earned, that the grant values are related to real costs or benefits, and that the improvement in performance is measurable and verifiable.

While most of the selected sub-indicators are already reported by BPKP and BPPSPAM, Energy Efficiency is not, with only the energy cost per m^3 reported. It is expected that BPPSPAM will revise the requirements under BPPSPAM No. 002/KPTS/K-6/4/2010 to include Energy Efficiency in future BPKP audits, since it is a stated priority for DGHS. Most of the selected sub-indicators also require improvement in the quality of the data used to calculate them and/or the method of calculation.

- Source of data for calculating the PBG

Discussions with stakeholders about performance data focused on the future NUWSP PBG and, after the Water Hibah PBG, the expected mainstreaming of PBGs using central government funding. The pilot PBG is therefore structured to be consistent with BPKP and BPPSPAM data to facilitate eventual PBG mainstreaming.

It is expected that BPKP would be responsible for verifying a mainstreamed Performance Based Grant as it has already been given responsibility for verification for the mainstreamed Output-based Hibah. The BPKP individual PDAM Performance Evaluation report is recommended as the source of data for evaluating performance when there is no Baseline & Verification Consultant available, or for indicators which the consultant cannot measure.

D.2.6 PBG Performance Sub-indicators

Governance - PDAM Business Plan

PDAMs are required to have a current Business Plan approved by the Head of Local Government, but despite the regulations 57% of PDAMs do not have one. PDAM Business Plans are usually drafted in consultation with Bappeda about the level of investment planned, advice from the Supervisory Board, and public consultation. They then must be approved by the Head of the LG and have a 5 year validity. During their annual audit BPKP checks whether PDAM is following their Business Plan, but as with the service quality requirement, there is no sanction for PDAMs which fail to comply. By awarding a grant to PDAM for having a current, approved, Business Plan the PBG aims to reinforce to both LG and PDAM the importance of PDAM Business Plans, which are a prerequisite for PDAMs seeking commercial financing.

Governance - Gender Equality and Social Inclusion in PDAM

KIAT has conducted a small PDAM gender baseline survey and initial results confirm that women are under-represented in management positions in some, but not all, PDAMs in comparison with their representation in the PDAM. KIAT will provide a GESI consultant for the participating PDAMs and the M&E will include a gender performance assessment which will focus on the gender ratio of middle and senior PDAM management, the employment of people with disability, and improved accessibility in PDAM offices. Workplace culture and attitudes to gender and disability diversity will be measured through attitudinal baseline surveys and workplace policies and strategies developed to address workplace discrimination.

Financial Sustainability - Operating Ratio

Operating Ratio (OR) is defined by BPPSPAM as expenditure divided by revenue, such that an OR < 1.0 is desirable, with revenue exceeding expenditure. The Operating Ratio is seen as the single most important indicator of PDAM financial health as it is affected by every change in expenditure and revenue. The OR may be improved by reducing expenditure or increasing revenue, so that reducing NRW (increasing water sales) and improving Energy Efficiency (reducing energy cost) should both improve it. While an increase in tariff will immediately improve the OR it is often difficult for PDAM to get agreement for an increase.

Financial Sustainability - Billing Collection Effectiveness

Billing Collection Effectiveness is important for PDAM cashflow and in the best PDAMs is high, in some cases exceeding 95%. PDAMs participating in the PBG pilot will be rewarded for improving their Billing Collection Effectiveness Index (CEI). The methodology for reporting Billing Collection Effectiveness is defined in MoHA regulations but often not followed by PDAMs, who will be shown by the TA consultant how to calculate it correctly.

Operational Efficiency - Non Revenue Water

Over the last 5 years NRW calculated from the total volume of water distributed and sold by all PDAMs in Indonesia, has increased slightly, from 32.6% to 33.2%. However, the measurement of NRW in Indonesia is notoriously inaccurate.

Because of the limitations on time and investment for the PBG pilot it is anticipated that PDAMs would select a defined distribution zone in which to reduce NRW in order to have a chance of earning the average grant allocation for NRW by reducing physical losses. The volume of NRW saved would be calculated from the data for this zone, not from data for the whole distribution network.

Commercial, or non-physical, water losses are substantial in most PDAMs and are sometimes perceived as being easier to reduce. Because commercial losses represent water that is used, not lost, the interventions to reduce commercial losses are different and do not necessarily lead to more water being available for PDAM customers, although reducing commercial losses must increase the volume of water sold by PDAM.

Operational Efficiency - Energy Efficiency

PDAM Energy Efficiency (EE), like NRW, is a priority for GoI, but despite the importance attached to improving EE the required data for monitoring it is not collected or reported by BPKP. Nor is EE analysed or reported by PDAMs, indeed many do not even monitor their own electricity consumption.

The aim of the EE grant is to **reduce the energy consumption required for a given output**, specifically the energy required to deliver a unit volume of water. An Energy Audit will be provided through the Program Implementation Consultant to help each PDAM determine how and where the investment available for improving EE will have most

impact. The Energy Audit will also establish a baseline Energy Efficiency Index. Improvements in energy efficiency can typically be made in: Lighting Systems, Air Conditioners, Pumps, and Air Compressors. The payback period on many energy efficiency measures is less than two years, so PDAMs should need little incentive to make such improvements.

Quality of Water Service Delivery – Continuity of Supply

PP No.122 of 2015 on Drinking Water Supply Systems Article 4: (5) states "Continuity of flow of drinking water as referred to in paragraph (2), guarantees flow for 24 hours per day." Despite this legal requirement, very few PDAMs manage to provide a continuous supply of water to all customers. This is largely the consequence of a national failure to provide adequate storage in water distribution systems, often coupled with under-sized distribution mains, and insufficient production. No credible data on the continuity of water supply is collected; BPPSPAM reports a figure for "Service Operating Hours", but this is pump operating hours, it does not reflect what proportion of customers receive a continuous supply of water.

Maintaining a continuous supply of water, and thereby a permanently pressurised distribution system, is seen as the best way to improve water quality. There should then be no significant deterioration in the quality of water from that produced at the Water Treatment Plant as it passes though the distribution system and is delivered to the customer.

The Program Implementation Consultant will procure specialised equipment which will continuously monitor water pressure at selected locations in the distribution system.

Quality of Water Service Delivery – Water Quality

Ministry of Health Regulation PerMenKes 736/2010 on "Monitoring Management of Drinking Water Quality" specifies the: responsibilities, frequency and location of sampling, and reporting of results. In addition PerMenKes 492/2010 on "Drinking Water Quality Requirements" specifies the mandatory microbiological, physical and chemical parameters which must be tested.

PerMenKes 736/2010 requires, on average for 15 PDAMs suitable for the pilot PBG, 666 tests per mandatory parameter per year. These comprise 363 "internal" (by PDAM) and 303 "external" tests. "External" tests are the responsibility of the LG Health Agency (Dinas Kesehatan), which is funded by the Local Government, but often has insufficient budget allocated for discharging its duty to conduct independent water quality monitoring.

The PBG aims to persuade LGs to fully fund their Dinas Kesehatan's water quality testing responsibilities, with the LG rewarded according to both PDAM and the Dinas' performance. The grant will only be paid where there is full compliance with the requirements of PerMenKes 736/2010 on the frequency and location of "internal" and "external" sampling, and reporting of results. Monitoring compliance will be rewarded with 30% of the grant, while the remaining 70% will be paid for compliance with the water quality requirements, as measured by 17 mandatory parameters, of PerMenKes 492/2010.

D.2.7 Sub-indicator Grant Value and Achievement

Grant Definitions

1. Grant Award

The offer of a Grant Agreement (PPH) to a Local Government OR the total value of the grant offered

2. Grant Agreement (PPH)

The contract between MoF and LG setting out the terms and conditions attached to the grant

3. Grant Allocation

The percentage or amount of grant funds attached to each indicator / sub-indicator

4. Grant Value

The sum of money which is multiplied by the measured performance to calculate the amount of grant earned

GoI has expressed their concern about awarding Performance Based Grants which are unrelated to a justifiable valuation of the cost incurred, or benefit arising, from the verified improvement in PDAM performance.

The recommended value of the grant for each sub-indicator is shown in Table D.1; the detailed calculations were made in the PBG Design Report Annexure. A considerable time was spent on determining the grant value for Non Revenue Water using different approaches to reach consensus with Dit PSPAM and the NUWSP CPMU. A grant value of Rp 3,000/ m^3 was finally agreed with them.

More detailed information on grant eligibility, recommended value, payment and calculation are included in **Annex 4**.

No.	Sub-indicator	Grant value	Basic Grant Allocation / PDAM	Minimum Achievement	Minimum payment
1.1	Business Plan	Rp 1600 million/ document	Rp 1,600 million	30%	Rp 480 million
2.1	Operating Ratio	Rp 300 million/ year	Rp 600 million	30%	Rp 90 million
2.2	Billing Effectiveness	Rp 300 million/ year	Rp 600 million	30%	Rp 90 million
3.1	Non Revenue Water	Rp 3,000/ m^3	Rp 1,600 million	50,000 m^3	Rp 150 million
3.2	Energy Efficiency	Rp 500/ kWh	Rp 1,200 million	200,000 kWh	Rp 100 million
4.1	Continuity of Supply	Rp 600 million/ year	Rp 1,200 million		
4.2	Water Quality	Rp 600 million/year	Rp 1,200 million	30%	Rp 360 million

Table 1 Sub-Indicator Grant Value and Achievement

Table D.1 shows the average grant allocation for each PDAM per year for each sub-indicator, on the assumption that 15 PDAMs will participate in the pilot PBG. The minimum achievement is that which the average PDAM must achieve

in order to be able to claim any grant payment for each sub-indicator. The maximum achievement is that which the average PDAM must achieve in order to be able to claim the maximum grant available for each sub-indicator.

D.2.8 Selection of LGs / PDAMs

The following Entry Criteria must be met by a LG and their PDAM in order to be considered as a candidate for the pilot Performance Based Grant:

- LG financial statements should have an independent auditor's Unqualified opinion (WTP);
- LG must state willingness to invest in PDAM;
- PDAM should not be classified as Sick "*Sakit*" by BPPSPAM;
- PDAM financial statements should have an independent auditor's Qualified opinion (WDP) or better;
- PDAM should not be scheduled for support under NUWSP Component 1
- PDAM should not have benefited from IUWASH NRW or Energy Efficiency support;
- PDAM should have a Business Plan valid until 2018, at least.

These Entry Criteria should be maintained throughout the program, but are not included in the Performance Measurement.

In addition to the Entry Criteria, for the pilot PBG the following existing performance limits are desirable for PDAMs wishing to participate in the grant program:

- Finance - Operating Ratio > 0.85;
- Finance - Billing Effectiveness < 90%;
- Operational Efficiency - Non-Revenue Water (NRW) > 25%;
- Operational Efficiency - Energy Efficiency > 15% of operating costs and / or with energy costs> Rp.300 / m^3;
- Quality of Service - Continuity of Supply < 24 hours a day service;
- Quality of Service - Water Quality < 100% compliance.

This performance data was taken from BPPSPAM's "PDAM Performance Evaluation Report".

Finally, in view of the limited amount of grant funds available, PDAM size will be restricted as follows:

(i) Basic Grant: 15,000 > Service Connections< 45,000

(ii) Enhanced Grant: 45,000 > Service Connections< 75,000

The Enhanced grant values are 25% higher than the Basic grant values.

A long list of 34 LGs / PDAMs satisfying the Entry Criteria and most of the performance limits was compiled (refer to Table D.2). These LGs and PDAMs were invited to join a Workshop in Yogyakarta from 29 to 31 October 2019 at which DGHS socialised the PBG activity and invited interested LGs to apply to participate in it. It is anticipated that, out of the applications received, 15 PDAMs will be selected to participate in the pilot PBG.

No.	BPS Code	PDAM Kabupaten/Kota	Number of Customer Connections (SR)	BPPSPAM Performance Category	Business Plan	NRW	Energy Cost (Rp/m3)	Operating Ratio	Billing Collection Effectiveness
1	1108	Kab. Aceh Besar	27,110	Healthy	2015-2019	25.3%	393	0.86	91.3%
2	1302	Kab. Pesisir Selatan	21,350	Unhealthy	2017-2021	30.2%	11	0.97	73.9%
3	1303	Kab. Solok	15,039	Unhealthy	2017-2021	40.5%	22	1.04	52.4%
4	1305	Kab. Tanah Datar	17,691	Healthy	2013-2018	38.0%	205	0.99	83.2%
5	1571	Kota Jambi	72,965	Healthy	2017-2020	44.8%	509	1.01	84.0%
6	1871	Kota Bandar Lampung	42,470	Unhealthy	2017-2024	45.0%	558	1.01	88.6%
7	3204	Kab. Bandung	91,368	Healthy	2015-2019	28.0%	116	0.91	98.4%
8	3207	Kab. Ciamis	27,098	Healthy	2017-2021	29.2%	412	0.99	97.6%
9	3214	Kab. Purwakarta	26,339	Healthy	2015-2020	26.4%	257	0.95	94.9%
10	3216	Kab. Bekasi	220,196	Healthy	2014-2018	27.6%	477	0.90	97.3%
11	3274	Kota Cirebon	58,819	Healthy	2017-2021	28.6%	7	0.91	94.7%
12	3302	Kab. Banyumas	70,382	Healthy	2014-2018	37.9%	298	0.87	95.1%
13	3305	Kab. Kebumen	25,562	Healthy	2015-2019	28.4%	564	0.90	98.5%
14	3306	Kab. Purworejo	21,151	Healthy	2015-2019	29.6%	318	0.87	95.0%
15	3307	Kab. Wonosobo	87,596	Healthy	2015-2019	27.0%	14	0.94	99.1%
16	3313	Kab. Karanganyar	53,588	Healthy	2014-2018	27.4%	142	0.88	96.4%
17	3315	Kab. Grobogan	30,487	Healthy	2015-2019	32.5%	411	1.04	95.0%
18	3321	Kab. Demak	46,760	Healthy	2013-2018	29.8%	571	0.94	96.6%
19	3322	Kab. Semarang	45,132	Healthy	2014-2018	27.8%	195	0.93	94.6%
20	3328	Kab. Tegal	40,619	Healthy	2016-2020	27.3%	17	0.84	86.9%
21	3402	Kab. Bantul	28,737	Healthy	2014-2018	26.9%	796	0.96	98.0%
22	3510	Kab. Banyuwangi	51,582	Healthy	2015-2019	25.9%	147	0.75	97.7%
23	3520	Kab. Magetan	68,531	Healthy	2016-2020	34.3%	88	0.93	99.5%
24	3602	Kab. Lebak	31,350	Healthy	2014-2018	31.5%	919	1.00	88.2%
25	3672	Kota Cilegon	16,197	Healthy	2016-2020	25.8%	310	0.79	92.7%
26	5105	Kab. Klungkung	30,068	Healthy	2014-2018	25.3%	667	1.06	98.0%
27	5203	Kab. Lombok Timur	19,502	Healthy	2015-2019	28.5%	121	0.90	73.4%
28	6271	Kota Palangkaraya	16,984	Unhealthy	2014-2018	30.4%	550	1.08	41.6%
29	6308	Kab. Hulu Sungai Utara	24,117	Healthy	2015-2019	42.1%	407	1.10	97.4%
30	6309	Kab. Tabalong	19,245	Healthy	2015-2020	27.8%	713	1.34	92.4%
31	6311	Kab. Balangan	18,636	Healthy	2014-2018	32.8%	497	1.69	98.5%
32	6401	Kab. Paser	20,380	Healthy	2015-2019	34.7%	783	1.11	97.2%
33	7202	Kab. Banggai	17,429	Unhealthy	2017-2020	26.2%	92	1.04	83.0%
34	7308	Kab. Maros	15,763	Healthy	2016-2020	41.6%	538	0.98	87.3%

Source: BPPSPAM Kinerja PDAM 2018 – data 2017

Table 2 PBG pilot - candidate PDAMs

D.3. Delivery Approach

D.3.1 Fund Channelling

In November 2008 the GoI Ministry of Finance enacted regulation PMK 168/169 2008[7] on fund channelling to Local Governments (LG), which allowed both national and international funds to be transferred to LGs as grants. In 2009 the Australian funded Water Hibah program was designed to take advantage of this new mechanism.

The Water Hibah PBG delivery modality continues to follow the Ministry of Finance (MoF) on-granting regulation, now updated with PMK 224 / 2017, to disburse grants directly to Local Governments (LGs). These channels provide accountability and have been applied successfully for the Water Hibah Output-based Grants and other DFAT funded grant programs. The flow of funds is described and shown in more detail in **Annex 5**.

Under this arrangement the terms for the use of the DFAT grant are detailed in a Direct Funding Arrangement (DFA) between DFAT and MoF, the equivalent of a loan agreement between World Bank or ADB and GoI. 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 (PPH) between MoF and the Local Government, with penalties for non-compliance by the LG. In the case of the PBG the existing Water Hibah DFA will be amended to include the PBG.

The basic premise of the PBG On-granting Agreement (PPH) is that it is performance-based, such that the LGs will only receive the grant reward for a verifiable improvement in their PDAM's performance, not for the investment required to achieve the improvement.

D.3.2 Adopting Performance-Based Modality for the PBG

The grant payment modality of the PBG marks a significant departure from the previous output-based model of the Water and Sanitation Hibah programs. The Water Hibah Output-based Grant program paid a grant based on a pre-set price for a defined unit of output, a new property connection. This methodology worked very well but does not suit GoI's new requirement for a Performance Based Grant (PBG) that will reward sustainability as well as growth. The methodology proposed for the PBG does retain certain features of the Output-based Grant, namely that the grant payment is based on independent verification and that the grant requires implementation to be pre-financed by the LG through new investment in their PDAM.

Under the PBG PDAMs will be provided with Technical Assistance through the PIC to help them identify the best approaches to improving their performance in ways that will be reflected in each of the performance sub-indicators. A performance baseline will be established, and after implementation the new level of performance will be verified, by the independent Baseline and Verification consultant. The consultant will calculate the improvement in performance and the amount of grant earned for each sub-indicator, and the LG will then claim the grant earned through the CPMU. The CPMU will authorise the payment and the grant will be paid after review of the claim by MoF. A detailed explanation of the fund-channelling procedure is provided in **Annex 5**. While this modality provides strong governance conditions, it requires less implementation oversight and simpler verification than the previous Output-based grant.

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

- The LGs are required to pre-finance the works needed to improve performance, and will only be able to claim the grant as a reward once PDAM performance has improved;

[7] Superseded in 2012 by PMK 188/2012, and in 2017 by PMK 224/2017

- An independent Baseline and Verification consultant hired by DFAT will measure PDAM performance in accordance with the seven defined sub-indicators;
- Claims for grant disbursement will be verified by the PBG CPMU who will then recommend payment to the MoF.

D.3.3 Working with Partner Systems

In addition to utilising the Ministry of Finance (MoF) on-granting regulation as the grant delivery mechanism to Local Government, the Water Hibah PBG pilot is structured to be consistent with BPKP and BPPSPAM data to facilitate eventual PBG mainstreaming. The BPKP individual PDAM Performance Evaluation reports, official GoI reports from the State Audit Agency, are recommended as the source of data for evaluating performance when there is no B&V Consultant available, or for indicators which the consultant cannot measure. It is expected that BPKP would be responsible for verifying a mainstreamed PBG program as it has already been given verification responsibility for the mainstreamed Output-based Grant.

PDAM performance is already monitored nationally by BPKP and BPPSPAM. The PBG, through the Capacity Development for Government TA, will work with BPPSPAM and BPKP to improve the quality of this monitoring and make it fit for use with a future mainstreamed PBG.

D.3.4 Evidence-Driven Policy Reform

The pilot PBG seeks to demonstrate to GoI a new way in which Local Governments can be encouraged to stimulate an improvement in PDAM performance. The PBG Monitoring and Evaluation, described in **Annex 7**, will have an important role in producing the evidence to support this. At the same time the PBG, through the Capacity Development for Government TA, will seek to improve the quality of central government monitoring of PDAM performance with an assessment of the relevance and reliability of the data behind the BPPSPAM performance indicators, and how it can be improved to establish a firm monitoring basis before the PBG is mainstreamed.

The Monitoring and Evaluation expert suggests that a Most Significant Change (MSC) exercise could be appropriate to assess the broader changes in PDAM performance which may not be captured by the basic indicator information used for calculating the grant reward. Governance is one area where the GoI insistence on having an objective measurement of performance will neither really capture the strength of Local Government engagement, nor the effectiveness of the Supervisory Board.

Research work, necessary to support implementation, learning and sustainability, will need to be identified by KIAT in dialogue with water sector partners. One area could be case studies of PDAMs which are successful without having the benefit of: i) free spring water sources with gravity supply; ii) large commercial / industrial customers; or iii) unusable groundwater. Another research area might be the use of alternative energy sources for PDAMs with very high energy cost, for example PDAM Kab. Gunung Kidul, which spends Rp 1,900 / m^3 (equivalent to 40% of average tariff) on energy; this could identify another path towards long term sustainability for many other PDAMs.

D.4. Resources

D.4.1 Investment Budget

The proposed allocation of funds for the Water Hibah PBG pilot activity is AUD 16.0 million, of which AUD 1.0 million will be used for procurement of water meters, data loggers and other specialised equipment. The remaining AUD 15.0 million indicates an average grant of Rp 9.5 billion each for 15 PDAMs. If LGs can be persuaded to leverage this by

15% the average LG investment should be Rp 10.9 billion over 3 years. The grant value, and therefore the LG investment, will be adjusted according to the size of PDAM. The Basic Grant will be awarded to smaller PDAMs with less than 45,000 service connections, while Enhanced Grants, which are 25% higher, will be awarded to the larger PDAMs.

The Basic Grant offered will be Rp 8 billion for the smaller PDAMs (< 45,000 connections), equivalent to an average of about Rp 245,000 per connection. The Enhanced Grant offered will be Rp 10 billion for the larger PDAMs, equivalent to an average of about Rp 170,000 per connection.

In 2020 Technical Assistance will be provided to PDAMs for a Pre-Feasibility Study, including a water balance, and bulk water meter installation to improve NRW measurement. An energy audit will also be made to identify where efficiencies can be achieved, with any necessary alterations to electricity supply and metering. Other measures needed for baseline establishment will also be implemented, such that by the end of 2020 the baseline for all sub-indicators will be established for each PDAM. As soon as the baseline has been established PDAM can begin implementing the various performance improvement measures. Verification will take place in early 2021, mid 2021 and at the end of the year.

In common with the previous output-based grant the DFAT grant funds will be administered by the Ministry of Finance (MoF) who will sign an On-granting Agreement with each participating LG. The LG will then inject the required equity into their PDAM to fund the implementation of the PBG activities. Once the improvement in performance has been independently verified the grant earned will be transferred from the MoF to the LG.

Indicators	Allocation	Total Grant Funds (AUD 15 Mullion)	Basic Grant Allocation with 15 PDAM (in IDR million/PDAM)	Enhanced Grant Allocation with 15 PDAM (in IDR million/PDAM)
1. Governance	20%	IDR 142,500,000,000		
1.1 Business Plan	20%	IDR 28,500,000,000	1,600	2,000
2. Financial Sustainability	15%	IDR 28,500,000,000		
2.1 Operating Ratio	7.5%	IDR 21,375,000,000	600	750
2.2 Collection Efficiency	7.5%	IDR 10,688,000,000	600	750
3. Operational Efficiency	35%	IDR 10,688,000,000	1,600	
3.1 Non Revenue Water	20%	IDR 49,875,000,000	1,600	2,000
3.2 Energy Efficiency	15%	IDR 28,500,000,000	1,200	1,500
4. Quality of Service	30%	IDR 21,375,000,000		
4.1 Continuity of Supply	15%	IDR 42,750,000,000	1,200	1,500
4.2 Water Quality	15%	IDR 21,375,000,000	1,200	1,500
			8,000	10,000

Table 3 Grant Allocation for Performance Indicators

The allocation of grant funds between the various indicators and sub-indicators is shown in Table D.3 based on the assumption that 15 PDAMs will participate.

The PBG procurement arrangements are discussed in detail in Section E.3. The LPIUs will be responsible for project implementation, including procurement of contractors, and will follow the national e-Procurement system established by the Public Procurement Agency, in compliance with the GoI policies and procedures for the procurement of goods and services by government.

D.4.2 Additional Resources

DFAT is committed to supporting the Water Hibah Performance Based Grant pilot activity through a comprehensive program of Technical Assistance provided by the Program Implementation Consultant:

1. Preparation and Baseline
2. Implementation and Oversight Support
3. Verification and CPMU Support
4. Capacity Development for Government and Improvement in PDAM Performance Monitoring
5. Gender Equality and Social Inclusion Support
6. Monitoring and Evaluation

KIAT has already allocated a budget of AUD 7.9 million for the TA, in addition to the AUD 16 million budget for the PBG. The TA will provide support to both central and local governments, and PDAMs, in implementing the PBG, and in promoting a culture of gender equality and social inclusion in PDAMs for both staff and customers. The detailed "Scope of Services" for this TA has been prepared and KIAT expects to invite consultants to bid in December 2019.

GoI will have to provide part-time staffing resources for the CPMU, but the CPMU support TA, financed by DFAT, will provide key support, minimising the resources needed from GoI.

The Program Implementation Consultant will be responsible for the procurement of bulk water meters, data loggers and other specialised equipment for use in monitoring NRW and continuity of supply. The equipment required has not yet been determined or the cost estimated but a Provisional Sum will be included in the contract.

The budget, cost estimates and grant calculations are described in **Annex 6**.

E. Implementation Arrangements

E.1. Management and Governance Arrangements and Structure

Activity Governance

Bappenas has established a PBG Steering Team whose role is to make policy recommendations for the PBG, provide guidance in relation to GoI policy, and determine the suitability of performance-based grants for mainstreaming with APBN funds. It is anticipated that the PBG Steering Team, chaired by Bappenas, will meet biannually to provide strategic guidance and review the progress of PBG implementation. Steering Team membership comprises senior representatives from the following stakeholders: Bappenas, MPWH, MoF, MoHA, MoH, and the KIAT Management Committee.

The PBG Steering Team is supported by a Technical Team whose role is to monitor project design, coordinate planning and budgeting, and monitor and evaluate PBG implementation. The Technical Team will also provide technical guidance to Pokja at the local level in managing the PBG, including raising awareness and building the capacity of stakeholders. Technical Team membership comprises 35 representatives from the following stakeholders: Bappenas, MPWH, MoF, MoHA, BPKP, Perpamsi, World Bank, DFAT, KIAT, and IUWASH. The PBG's management team and Program Implementation Consultant' staff may be invited to attend on an advisory basis. DFAT, KIAT and Bappenas will agree on the appropriate arrangements.

The KIAT Management Committee will be responsible to DFAT for coordination and oversight of the Water Hibah Performance Based Grant. The PBG will be managed through the KIAT facility, by the Deputy Director for Water and Sanitation. The resources and budget to manage the PBG are already included in KIAT's contract with DFAT and discussions about the design and implementation of the PBG have been held with GoI and other stakeholders over the last two years.

Agreement for implementation of the Water Hibah Performance Based Grant will be made through an amendment of the Water Hibah Direct Funding Arrangement between DFAT and the Ministry of Finance under the existing Subsidiary Arrangement between GoA and GoI.

Central Government

The Ministry of Public Works, Directorate General for Human Settlements (DGHS) will establish a PBG Central Project Management Unit (CPMU) composed of technical and administrative staff from: the Directorate of Water Supply Development (Dit. PSPAM), together with a representative from the Ministry of Home Affairs' Directorate General of Regional Finance, Directorate of BUMD, BLUD and BMD.

The CPMU will be responsible for monitoring and reporting on physical and financial progress, and recommending to MoF the value of each grant payment to Local Government; the CPMU will be supported by Provincial Project Management Units (PPMU). The PIC consultant procured by KIAT will also support the CPMU and PPMUs, providing technical assistance in: oversight, baseline surveys, and independent verification and monitoring.

The Ministry of Finance Directorate General of Fiscal Balance (DGFB) is the authorised budget user for the DFAT Water Hibah, and is therefore the Executing Agency for the Australian funds. These funds are held in a Special Account at Bank Indonesia which is administered by the Directorate General of Treasury.

Provincial Government

At the provincial level, Provincial Project Management Units (PPMU) will provide coordination with other provincial agencies (Dinas), as well as monitoring progress, while the Provincial Satker will provide technical support to the LPIU.

Local Government

Local Project Implementation Units (LPIU), together with Local Task Forces (SKPD), will be established by decree of the Mayor or Bupati of each participating Local Government. The LPIUs will be responsible for project implementation and will have a wide range of responsibilities, including: LG annual work and budget plans, reporting physical and financial progress, preparing documentation requesting verification, and for grant payment applications.

PDAMs, working closely with the LPIU, will be responsible for project preparation, detailed designs and bidding documents, procurement of contractors, construction supervision and management, enforcing construction quality requirements, and reporting physical and financial progress.

The Program Implementation Consultant procured by KIAT will support the LPIU and PDAM in discharging these duties. The Technical Assistance provided will include:

- Pre-Feasibility Study for NRW Reduction and Continuity of Supply (each PDAM)
- Electrical Energy Audit (each PDAM)
- Support with Project Preparation and Planning (each PDAM)
- Appraisal of Detailed Engineering Design (each PDAM)
- Governance Development
- Construction Oversight
- Reporting.

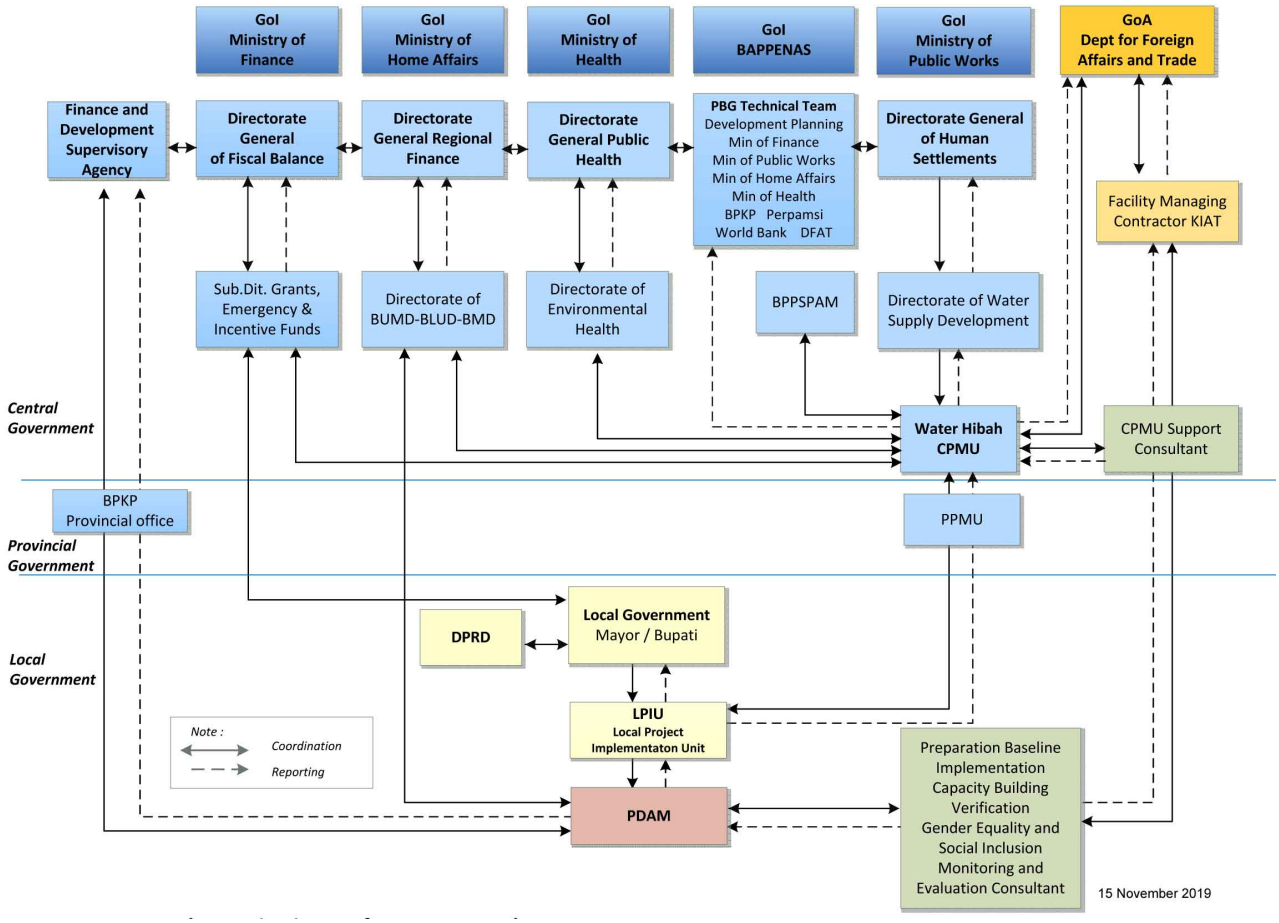

Figure 2 Performance Based Grant – Structure and Organisation

The organisation and structure of the Water Hibah PBG is shown in Figure E.1, and described in detail in **Annex 5**.

E.2. Implementation Plan

The Water Hibah PBG has to be implemented over a short timescale, with implementation completed by the end of 2021. Essentially 2020 will be used for planning and preparation, while the performance improvement activities will start as soon as baselines have been established, with Verification at the end of 2020, mid 2021 and end 2021. The main implementation activities for the PBG are shown in Figure E.2 and described as follows:

Activity - PBG Design and Preparation

Finalise PBG Design and Activity Design Document (to 30 November 2019)

The PBG Design Report has been completed and this ADD will be finalised by 30 November.

Schedule for roll out of PBG (November 2019)

This schedule is under discussion with DGHS.

ToR for PBG Technical Assistance (mid-November 2019)

The Terms of Reference for the PBG Program Implementation Consultant TA have been completed.

DFAT approval of PBG Design (December 2019)

This PBG Activity Design Document was submitted in draft for DFAT review in March 2019. The final ADD will require DFAT approval before the PBG activity can proceed.

Support DGHS with PMM (September - December 2019)

The Project Management Manual has been drafted, based on that used for the Water Hibah Output-based Grant, by DGHS with support from the PBG Design Team.

LGs pre-selection and Workshop (October - November 2019)

In consultation with DGHS, 34 candidate PDAMs which satisfy the entry and selection criteria were selected, including all eligible candidates proposed by BPPSPAM. The candidates attended a Workshop in Yogyakarta (29 - 31 October) where DGHS socialised the PBG activity and invited interested LGs to apply to participate in it.

LGs Confirmation (November 2019 - January 2020)

Prospective LG participants apply to join the activity with the Head of each LG providing written confirmation of their willingness to make the required investment in their PDAM. Applications will be reviewed and the final selection of 15 LGs made.

Preparation and signing of PPH (January - February 2020)

Following confirmation by the LG the MoF will draw up an on-granting agreement *Perjanjian Penerusan Hibah* (PPH) for signature by the MoF and LG.

Amendment of the DFA (November 2019 - January 2020)

The existing Direct Funding Arrangement for the Water Hibah between DFAT and the MoF requires revision.

Program Implementation Consultant Recruitment (December 2019 - February 2020)

In December 2019 KIAT will invite consultants to bid for the Program Implementation Consultancy (PIC) covering: PBG Preparation, Baseline, Implementation, Oversight, Verification, Monitoring and Evaluation, Gender Equality and Social Inclusion, and Government Capacity Development.

Procurement of Bulk Meters and Equipment (March - May 2020)

The PIC will procure bulk water meters, data loggers and other specialised equipment for use in monitoring NRW and continuity of supply.

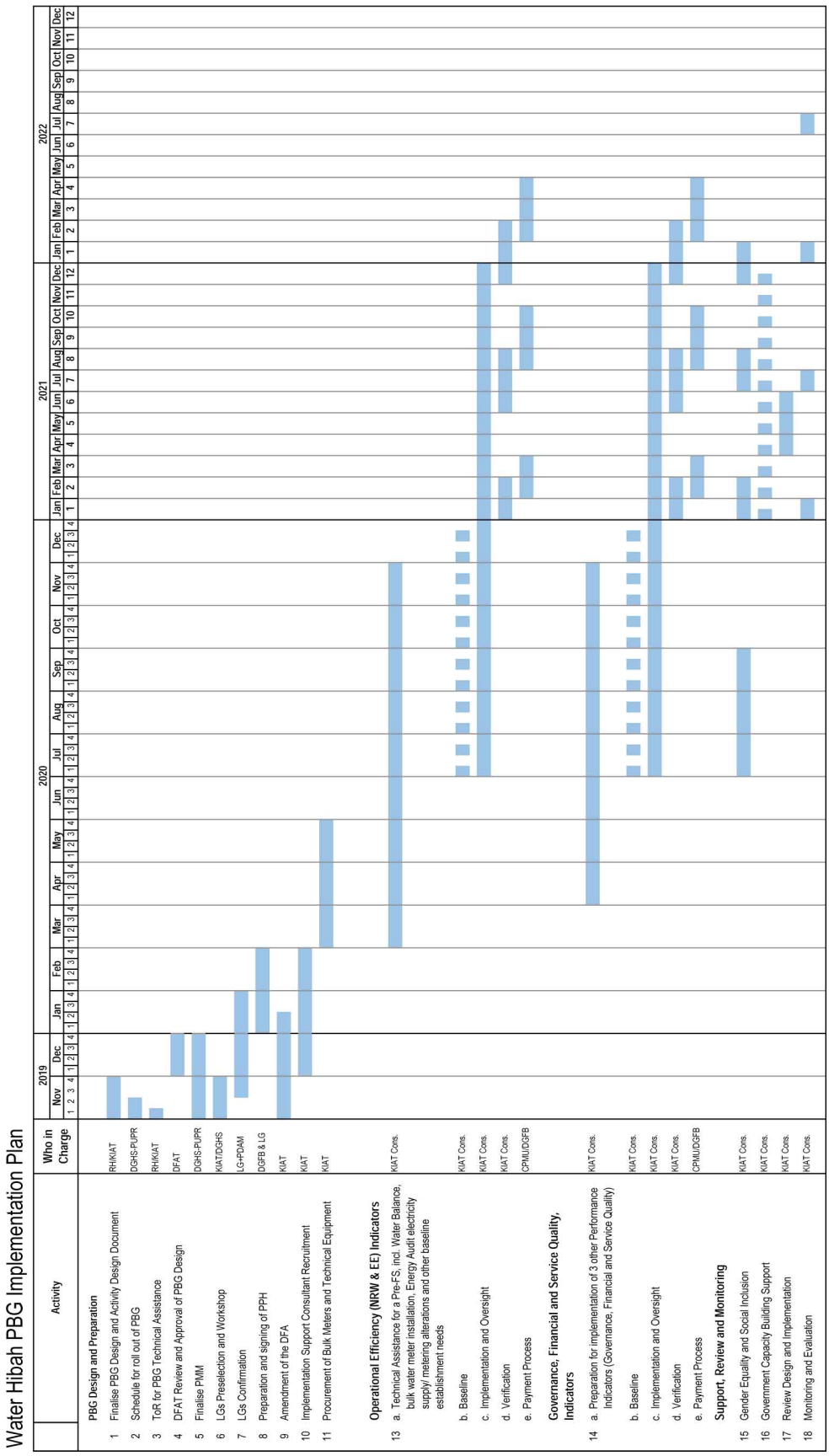

Figure 3 Performance Based Grant – Implementation Plan

Activity - Operational Efficiency (NRW & EE) Indicators

a. The PIC will provide Technical Assistance for a Pre-Feasibility Study, including Water Balance, bulk water meter installation, Energy Audit, electrical supply/ metering alterations, and other baseline establishment needs.
b. The PIC Consultant will establish the baseline NRW and energy efficiency.
c. The PIC Consultant will provide oversight of PDAM activities as they work to improve their performance, supporting PDAM to try and achieve the best performance improvement possible, while also overseeing any construction works to ensure safeguards compliance and quality of construction.
d. At the end of 2020, in mid-2021 and end-2021 the PIC consultant will verify the data needed to calculate performance under each sub-indicator, and calculate the grant earned.
e. The PBG CPMU will then review the calculations, authorise the grant payment, and request MoF to pay the Local Government.

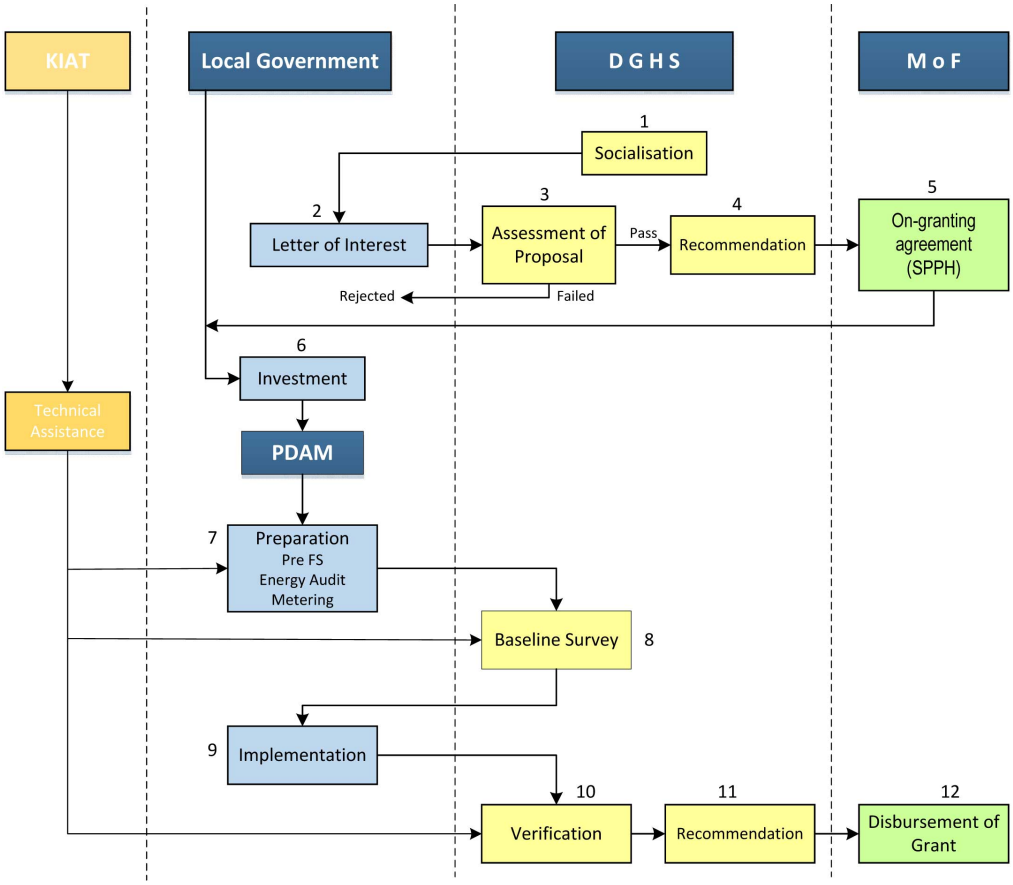

Figure 4 Performance Based Grant – Implementation Process

Activity - Governance, Financial and Service Quality Indicators

a. The PIC consultant will support PDAM in preparation for implementation of the remaining Performance Indicators (Governance, Financial and Quality) and their baseline establishment needs.
b. The PIC consultant will establish the baseline for the relevant sub-indicators.
c. The PIC consultant will provide oversight of PDAM activities as they work to improve their performance, supporting PDAM to try and achieve the best performance improvement possible, while also overseeing any construction works to ensure safeguards compliance and quality of construction.

d. At the end of 2020, in mid-2021 and end-2021 the PIC consultant will verify the data needed to calculate performance under each sub-indicator, and calculate the grant earned.
e. The PBG CPMU will then review the calculations, authorise the grant payment, and request MoF to pay the Local Government.

Activity - Support, Review and Monitoring and Evaluation

Gender Equality and Social Inclusion Support (June 2020 – Dec 2021)

The Gender Equality and Social Inclusion support consultant will work with all participating PDAMs.

Government Capacity Building Support (January – December 2021)

The Capacity Building support consultant will work with central government on improving PDAM performance monitoring and preparations for mainstreaming the PBG.

Review Design and Implementation (April – June 2021)

There will be an independent Mid-term Review of the PBG design and implementation.

Monitoring and Evaluation (January 2021 – July 2022)

The Monitoring and Evaluation consultant will work with several parties, including GoI (CPMU, PPMU, PIU) to monitor and evaluate PBG performance.

E.3. Procurement Arrangements

The Water Hibah program follows the provisions of PerPres 54/2010 (as amended – see footnote 3) and uses GoI on-granting regulation PMK 224 of 2017 to disburse grants directly to LGs, through MoF. These channels provide accountability and have been applied successfully for the Water Hibah Output-based Grants and other DFAT funded programs. The flow of funds is described and shown in more detail in **Annex 5**.

The GoI legislation mandates that the Implementing Agency DGHS take responsibility for the oversight of the application of the grant funds. Technical Assistance from KIAT for the Performance Based Grant will include provision of TA Consultants for implementation and verification to assist DGHS with their oversight duties and support the PDAMs. The TA will include the support required to verify compliance with the grant agreements and the technical standards of the Implementing Agency (DGHS). TA Consultant services will be procured by KIAT through select tender from qualified and experienced consulting firms.

The Water Hibah PBG is a performance-based activity which participating LGs are required to finance through an equity injection into their PDAMs. The PDAMs are free to determine whatever works or other measures they should undertake in order to improve their performance. PDAM 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 six Presidential Regulations[8].

Because the grant award will be based solely on improvements in PDAM performance, independently monitored by the Verification consultant, DFAT will be insulated from the cost of any malpractice in the tender process. DFAT will support the PDAMs through the Program Implementation Consultant who will advise them on how to invest the LG funds in works which will improve their performance.

Australian funds will be used for the procurement of bulk water meters, data loggers and other specialised equipment for use in monitoring NRW and continuity of supply. KIAT, through the TA Consultant, will determine

[8]PerPres 54/2010 President Regulation on Government Procurement of Goods and Services including five subsequent revisions; Perpres 35/2011; Perpres 70/2012; Perpres 172/2014; Perpres 04/2015, and Perpres 16/2018.

the equipment required and conduct the procurement using a Provisional Sum which will be included in the TA Consultant's contract. The bulk water meters will be given to the participating PDAMs.

E.4. Monitoring, Evaluation and Learning

E.4.1 Approach and Responsibilities

The main objective of the PBG Monitoring and Evaluation (M&E) framework is to ensure consistent, timely and reliable performance assessment throughout the Activity lifespan with the aim of:

- Informing decision-making on PBG implementation at strategic and operational levels;
- Generating information that contributes to a broader knowledge base, including evidence-driven policy reform.

The PBG M&E framework (presented in further detail in **Annex 7**) will be translated into an operational M&E plan during the Activity preparation phase, in collaboration with all stakeholders including the KIAT M&E team.

The framework is designed to provide reliable information on end-of-activity outcomes and sub-outcomes, using the information generated by the CPMU and partners to measure changes in PDAM performance for the PBG. It is important to highlight that this PBG M&E framework will not monitor and evaluate PDAM performance with respect to earning the Performance-Based Grant; that will be implemented through a separate process described in **Annex 4** "Detailed Description of Investment Activities" and managed by the Central Project Management Unit (CPMU) during the PBG implementation.

The PBG M&E framework is aligned to the 'nested' M&E approach adopted by the KIAT Facility. The Facility M&E is based on a logic of hierarchical objectives (goals, end-of-facility outcomes, possible nearer-term outcomes) and M&E at the facility level depends on receiving M&E inputs from the activities implemented. The KIAT facility logic (presented in the KIAT monitoring and evaluation framework of January 2019) provides the overall M&E framework and is meant to facilitate the linkages of all activities to a defined set of end-of-facility outcomes (EOFOs) and possible nearer-term outcomes. The PBG M&E results table (see Appendix A7-2 to Annex 7) including the goal (long-term expected result), the end-of-activity outcomes (EOAOs), sub-outcomes and related outputs establishes the basis for measuring how the activity contributes to the KIAT EOFOs and the broader KIAT goal **'sustainable and inclusive economic growth through improved access to infrastructure for all people'.** It also highlights links to relevant DFAT PAF indicators.

The PBG M&E results table establishes the basis for activity *performance monitoring* and *evaluation*. While the PBG Baseline and Verification consultant will develop the information and database systems for calculating grant payments, this framework will assess how the average PDAM performance (of the 15 PDAMs selected) is (or is not) improving over time. This assessment will provide higher level, strategic monitoring information related to the defined PBG outcomes in **Annex 3** "Activity Logic Model". To ensure clear strategic reporting on progress, a series of key monitoring and evaluation questions (KEQs) have been developed for each outcome and sub-outcome area, as well as in relation to gender equality and social inclusion.

To summarise, PBG performance monitoring includes the following:

- Goal and longer-term outcome progress monitoring, upon activity completion;
- End-of-activity outcome progress monitoring, mid-term and upon activity completion;
- Sub-outcome progress monitoring, annually;
- Annual monitoring of compliance with environmental / gender and social inclusion themes, anti-corruption measures, and any other relevant standards /measures applied.

Since the PBG is a pilot activity, a careful evaluation[9] of the PBG and its relevance for mainstreaming will be of importance. Evaluation activities (to be further developed as part of the detailed M&E plan during activity implementation and in consultation with the KIAT Facility) will take place at specific points during project implementation. Under the PBG, evaluation could include:

- Joint assessments (bi-annually, mid-term, end-of-activity) of the effectiveness of the PBG financing and delivery model in achieving targeted outcomes;
- An assessment of the effectiveness of the PBG team in developing evidence for mainstreaming, including lessons learned from its application, its replicability and sustainability, including likelihood of policy-level influence;
- Other KIAT relevant evaluation procedures.

The Monitoring and Evaluation consultant will be responsible for the further development of the PBG M&E framework, including development of the detailed M&E Plan.

E.4.2 Key Activity-level Monitoring and Evaluation Questions

Key evaluation questions

A total of seven key evaluation questions are proposed at the PBG activity level. These have been developed based on the PBG 'theory of change' underpinning the main PBG goal[10]and focus on the evaluation criteria of sustainability and effectiveness.

Firstly there is one question about the sustainability of the PBG in terms of the likelihood of adoption and continuity.

KEQ 1 related to the activity goal: Is there evidence that the Government of Indonesia has or will be providing funds for Performance Based Grants through the state budget by the end of the activity or before?

Secondly there are several questions related to the PBG effectiveness in achieving its desired results.

KEQ 2 related to long-term outcome 1: Is there concrete and reliable evidence from the pilot PBG implementation that a PBG is an effective instrument for helping the local governments to achieve GoI policy goals with respect to PDAMs (i.e.: to 'actively manage, invest in and improve the performance of their water companies')?

KEQ 3 related to long-term outcome 2: How effective has the PBG activity been in ensuring well managed, financially sound and operationally efficient PDAMs?

KEQ 4 related to end-of-activity outcome 1: How effective has the PBG been in encouraging the LGs to better engage with PDAMs?

KEQ 5 related to end-of-activity outcome 2: How effective has the PBG been in helping improve PDAM performance?

KEQ 6 related to end-of-activity outcome 3: What are the most critical actions needed to improve national level PDAM monitoring if the PBG is to be mainstreamed?

[9] The aim of evaluation is to provide a systematic and objective assessment of an on-going or completed project (or programme or policy), including its design, implementation and results, with the aim of determining its relevance, efficiency, effectiveness, impact and sustainability.

[10] The theory of change is 'when the local governments have a stake in their PDAM's performance, they will become more actively engaged in the PDAM oversight duties and this in turn will lead to a better understanding of the investment needed not only to improve PDAM service quality but also to enable PDAMs to extend their service coverage in line with SDG 6.1

KEQ 7 related to gender equality and social inclusion: To what extent has the PBG activity implementation strengthened the realisation of gender equality and social inclusion.

Key monitoring questions

To provide information to answer the key evaluation questions, several indicative key monitoring questions have been developed. The monitoring questions are categorised into general questions on the physical progress of the PBG and its work with the partners and the PDAMs and specific questions related to the KEQs in the preceding section.

Reporting on this progress will be primarily the responsibility of the PBG TA and CPMU support consultants. It should be noted that KEQ 1 and KEQ 2 will require more in-depth evaluations and are therefore not included here. During the activity preparation phase, further relevant monitoring questions will be developed.

Some of the information needed to answer these monitoring questions will come from the Key Performance Indicators (KPIs) developed to measure the progress of the sub-outcomes (13 in total) under each of the three end-of-activity outcomes (refer to Appendix A7-2, M&E Results Table). The data required to measure these KPIs will come primarily from the PBG CPMU PDAM database that will be established to assess and allocate the performance-based grant funding to the PDAMs. To the extent possible, and where feasible, sex disaggregated data will be collected.

General monitoring questions (MQs) related to physical progress of PBG activities

MQ 1: What is the status of the physical implementation of PBG activities as compared to the approved work plan?

MQ 2: What is the status of the PBG CPMU PDAM database development? (Has a database been developed that can display the information in a simple and user-friendly format, is the required data accessible and reasonably accurate, and is it being collected in a timely fashion?)

MQ 3: Is the PBG CPMU PDAM database able to provide the information needed to accurately report on the 13 sub-outcome indicators developed to measure progress of the EOAOs (in addition to determining the grant allocation)?

MQ 4: Have the planned capacity development activities for PDAMs been implemented in line with expectations? Are there mechanisms for assessing the impact of the capacity development? (such as before and after surveys, post-training questionnaires, etc)

MQs related to effectiveness of the PBG activity in ensuring well managed, financially sound and operationally efficient PDAMs (KEQ 3)

MQ 5: Over the course of the PBG, how many PDAMs are exhibiting improved indicators relating to financial management, operational efficiency, service quality and customer base? (to be collected from PBG CPMU PDAM database, BPKP audit reports and interviews with PDAMs)

MQs related to effectiveness of the PBG in encouraging LGs to better engage with PDAMs (KEQ 4)

MQ 6: How many LGs have increased their investment in PDAMs over the course of the PBG activity?

MQ 7: How many PDAMs have been encouraged to establish public websites that provide useful and up-to-date information on their status, services, etc?

MQ 8: How many PDAMs have active supervisory boards that are effectively implementing their assigned tasks?

MQs related to effectiveness of the PBG in helping improve PDAM performance (KEQ 5)

MQ 9: Where has the PBG been most successful in encouraging PDAMs to improve? (this refers to the eight sub-outcomes under EOAO 2 in the Activity Logic Model)

MQ 10: What are the main lessons of relevance for future mainstreaming of the PBG?

MQs related to improvements to national level PDAM monitoring (KEQ 6)

MQ 11: Is the technical support provided for PDAM monitoring improvement having an impact? Is the accuracy and availability of government (BPKP and BPPSPAM) PDAM indicator data improving over time and are reports available in a timely manner?

MQs related to gender equality and social inclusion:

MQ 12: To what extent are PDAM addressing gender equality in the workplace, including the gender balance of employees and gender balance at each level of management, as a result of PBG project support?

MQ 13: To what extent are PDAM ensuring that their workplaces are women-friendly as a result of PBG project support?

MQ 14: To what extent are PDAM increasing the GESI responsiveness of their operations and services, including socialisation activities, as a result of PBG project support?

MQ 15: To what extent are PDAM employing people with disability as a result of PBG project support?

MQ 16: To what extent are PDAM increasing accessibility for employees and customers as a result of PBG project support?

MQ 17: To what extent are PDAM systematically reviewing and planning future GESI improvements in their workplaces and operations as a result of the PBG project support?

E.4.3 DFAT Performance Assessment Framework (PAF)

The PBG M&E framework is designed to provide needed information to both the KIAT EOFOs (and in particular EOFO # 3 'GoI delivers, manages and maintains high quality infrastructure') and the DFAT PAF. Specifically, it contributes to KIAT EOFO # 3 and outcomes 5 and 7 of the DFAT PAF. KEQ 1 is directly linked to the first DFAT high-level policy indicator 'Amount of additional financing co-invested in development'.

E.4.4 Stakeholder Communication Strategy

As part of the PBG M&E strategy, the Monitoring and Evaluation Consultant will develop a communication strategy to ensure that the performance monitoring and evaluation results are communicated to all relevant stakeholders in a simple and user-friendly format.

E.5. Sustainability

The Water Hibah Output-based Grant was based on the idea of using existing, unutilised, PDAM water production capacity to supply new, mainly poor, customers. The DFAT funded Output-based Water Hibah ran from 2009 until 2016, achieving 450,000 new connections to low income households. In 2015 GoI, through the DGHS, began mainstreaming these output-based grants using central government funds through the MBR Water Hibah. By 2019 they had achieved more than 800,000 new connections and DGHS now plans to continue this program until 2024.

However, through its success, the Output-based Water Hibah is reaching the limits of what can be achieved, with many PDAMs' production capacity now fully utilised, such that they are unable to satisfy the demand from existing customers. This Performance Based Grant is aimed at ensuring the sustainability of the Water Hibah investments with some of the PDAMs selected for the PBG pilot having participated in the Output-based Water Hibah.

The PBG aims to improve the performance of the selected PDAMs in ways that should not only improve their financial strength, and thereby the overall sustainability of PDAM's service, but also the quality of the service they provide.

Following the model of the previous Water Hibah, Local Governments will be required to invest in their PDAMs first, with the PDAMs then having to achieve a verified improvement in performance, before the grant is paid to the LG. A primary objective of the Water Hibah is to mobilise local government capital investment in, and oversight of, their PDAMs. Applied correctly, these funds should result in improved operational efficiency as well as a better quality of service, at least for some PDAM customers.

The Performance Based Water Hibah, like the previous Output-based Water Hibah, is designed to use existing government systems, procedures and institutions such that it will be sustainable and can be easily mainstreamed by GoI. The MoF on-granting mechanism has been successfully used for transferring Australian funds to Indonesian Local Governments for nearly a decade, while most of the Indicators which will be used for monitoring PDAM performance are already reported by the State Audit Agency (BPKP) in their annual report on each PDAM. The PBG Activity will also provide technical support to the national institutions charged with monitoring PDAMs to help them improve their systems, namely BPKP, Dit. PSPAM and BPPSPAM.

E.6. Gender Equality

The PBG activity aims to increase the proportion of women to men employed in PDAMs, especially in management positions. The PBG Technical Assistance Consultant will provide GESI support to participating PDAMs which will increase understanding of gender equality issues relevant to the PDAM workplace and operations. It aims to raise awareness of the benefits of diversity in the workforce and the value of increasing the percentage of women employed. It intends to increase the proportion of women employed, especially in PDAM management positions. It will also aim to increase awareness of, and improve workplaces with consideration of parental needs and efforts to address sexual harassment. The Baseline and Verification consultant will establish the baseline for the proportion of women compared with men at the various management levels and will monitor changes annually.

PDAM will be assisted to develop gender and socially inclusive socialisation strategies and Standard Operating Procedures so that information about PDAM operations and the services provided can be easily accessed by women. In developing the strategies and SOPs, the barriers for women's access will be identified and addressed (for example, the channels for socialisation, time and place of any meetings, child care needs, whether women would prefer separate meetings to men and the language that women are comfortable with). This will enable women to be better informed in decision-making about water supply services which have such a significant bearing on their lives.

PDAMs will be supported to develop requirements and clear procedures so that both women and men staff equitably participate and share active and leading roles in PDAM socialisation activities and the development planning discussions (Musrenbang) about water supply at local level. This will enable women staff to be seen by women and men in the community as leaders in facilitating discussions alongside men. It will enable women staff to develop skills and confidence, as well as providing less confident women in the community with a more familiar person to approach about the issues they face.

Improved PDAM performance and service to households will bring practical benefits for women by reducing the time burden of collecting and managing water, potentially increasing their discretionary and productive time, and reducing their expenditure on water from vendors.

Annex 2 – "Gender Equality and Social Inclusion" includes more detail on gender policy frameworks and an analysis of the initial gender data from a few of the selected PDAMs.

E.7. Disability Inclusiveness

A Technical Assistance activity for GESI support for participating PDAMs will focus on identifying strategies to increase the number of people with disability who are employed in the organisations in order to reach, at a minimum, what was required under previous GoI legislation (1 in 100 employees). This will include increasing understanding by PDAM staff of the national and local regulations concerning quotas for employment of people with disability and of universal access requirements (e.g. to buildings). PDAM will be supported to establish a committee to consult with any local disability organisations about the needs of people with disability, identify how the number of people with disability employed in the organisation can be increased and how to encourage them to apply when there is recruitment, and to identify accessibility issues which need to be addressed.

The Baseline and Verification consultant will establish a baseline of employment of people with disability in each PDAM and the number employed will be monitored annually by the Consultant.

The design, through the GESI TA, will support PDAM to identify accessibility issues in PDAM infrastructure for staff and community members (e.g. entrance stairs, toilets, hand rails) and produce a prioritised plan of what is necessary to improve accessibility for all, and ensure that the following year's budget application has an appropriate amount allocated to commence accessibility improvements in PDAM buildings. There will also be support for PDAM to advocate with DPRD and other decision makers to approve budget allocations for the improvement of accessibility in line with Ministry of Public Works Regulation No. 30/PRT/M/2006 on Technical Guidance of Facilities and Accessibility for Buildings and Environment, and any other relevant local regulations.

Through the GESI TA support will be provided to develop socialisation strategies and SOPs which enable people with disability to access information about PDAM services. This will include identification of who the socialisation strategy needs to reach; why they should be engaged and how constraints to the involvement of people with disability can be addressed (for example, whether meeting locations are accessible and the range of communication channels which are necessary for people with different disabilities, such as being deaf or blind). This will enable people with disability to have more understanding of PDAM services and be able to make better informed decisions.

Improved water service and delivery is also very relevant to improving the lives of those with disability and those who are frail. It will increase their independence and bring health benefits. Health problems for all household members, such as diarrhoeal and skin infections, should reduce by having greater access to clean water.

E.8. Private Sector

Private sector involvement in PBG activities will most likely be in the form of contractors to undertake rehabilitation of leaking house connections, installation of bulk water meters, replacement of troublesome or under-sized distribution mains, installation of energy efficiency measures, and construction of reservoirs and, possibly, new production facilities.

In some countries specialist contractors will offer to reduce water losses on a performance basis, such that if they fail there is no cost to the water company. However, the high risks involved in such a contract in Indonesia have made it uneconomical, and we are not aware of any that have yet been successfully implemented.

The PBG could provide an opportunity for the private sector to trial water loss reduction on a performance basis because it could be attractive to PDAM to have a contractor take on the risk of failure to reduce NRW. Even if PDAM had to pay more than the NRW grant (Rp 3,000 / m^3) to a successful contractor it would still receive the benefit from the sale of the water saved. On this basis every cubic metre of water saved could be worth over Rp 6,000 /m^3 to PDAM.

E.9. Risk Management Plan

E.9.1 Risk and Safeguards Screening

The DFAT Risk and Safeguards Screening Tool has been completed with the Safeguards Screening Checklist, Risk Register and Investment Risk Summary included in **Annex 8.**

This initial PBG Risk Register and Safeguards Assessment provides a preliminary assessment of possible risks. The Risk Summary shows that the overall risk rating for PBG design and implementation is High, before any treatments are implemented. During the preparation phase the Implementation TA Consultant will use this initial Risk Register as the basis for developing a more comprehensive Risk Management Plan that fully satisfies DFAT and KIAT risk and safeguards requirements.

Detailed risk identification, management and treatments are provided in the Risk Register and the Risk Management Plan. The Register groups the risks into five categories; some of the highest risks in each category, and their proposed treatments, are summarised in section E.9.3 below.

E.9.2 Risk Management Plan

The pilot Performance Based Grant builds on previous infrastructure grant programs in Indonesia, it uses proven GoI systems for fund channelling, engages mostly with familiar stakeholders, and provides high quality Technical Assistance for the recipients.

The pilot Performance Based Grant is assessed as a **Medium / Low risk** investment for DFAT once the proposed treatments are in place.

The Risk Management Plan in **Annex 8** takes the preliminary assessment of risks from the Risk Register and proposes corresponding potential treatments, based on lessons from the Water Hibah Output-based Grant, other DFAT infrastructure grants to Indonesia, and the PBG design team's understanding of the context in which the Performance Based Grant will be delivered.

The Risk Management Plan will be reviewed at least quarterly by KIAT, as required by DFAT, as well as after any major risk incident, and will guide implementation, ensuring early identification and management of potential risks. Risk

monitoring and management is a responsibility of both the TA Consultant and the Facility Managing Contractor, KIAT, on behalf of DFAT.

The Risk Management Plan made for this ADD, and the planned risk treatments, have been informed by the lessons learned from the implementation of the Australia Indonesia Infrastructure Grant program over the past decade. Over AUD 100 million of water and sanitation grants have been disbursed with a very low level of misuse or mis-application of funds. Because those programs were output-based, the grant was not paid for works which were unacceptable. The performance-based grant modality carries an even lower risk, by providing a reward for achieving a verified improvement in performance, unrelated to the investment required from PDAM to achieve it.

E.9.3 Highest Residual Risks

Operating Environment Risks

The highest residual risks are **Medium** and concern: a) the risk of natural disaster impacting the investment; and b) the risk that climate change affects raw water availability. There is no mitigation for natural disasters which are a regular occurrence in Indonesia. Climate change risk is reduced from High to Medium by the TA Consultant taking it into consideration wherever new water resources are to be developed.

Partner Capacity and Relations

The highest residual risks are **Medium** and concern the risks that a) the LG is unwilling to take on the risk that their PDAM may fail to improve its performance despite the new investment; and b) that PDAM's lack of technical and management capacity to improve performance cannot be compensated for by the TA provided by KIAT.

Fiduciary and Fraud Risks

The key current fiduciary risks (to LG, rather than to DFAT, funds) are assessed as:

- A Medium risk to LGs that their funds are not used for their intended purpose, primarily as a result of the strongly decentralised powers of LG over decision-making, yet low institutional capacity and superficial accountability mechanisms;
- A Medium risk to LGs that their funds do not achieve value for money, primarily as a result of a lack of objective planning and poor quality management, exacerbated by low capacity, weakly applied accountability mechanisms and attendant corruption risks;
- A Medium risk to LGs of collusion between bidders.

The highest residual risks are **Low** because the project design means that DFAT funds are never at risk. The grant is paid to the LG as a reward for improved PDAM performance, so that the risks that the investment is not used for its intended purpose, does not achieve value for money, or that there is collusion between bidders are all borne by the LG.

Another mitigating measure designed into the PBG is the selection of well-managed Local Governments, with an Unqualified independent audit opinion on their latest financial statements, as recipients of the grant.

Political Risks

The highest residual risk is **Medium** and concerns the risk that the local council (DPRD) refuses to sanction new investment by the LG into their PDAM.

Resources, Management and Planning Risks

It must be highlighted that the proposed treatment for the risk "that there is insufficient time for PDAM to achieve an improved performance" was that the possibility of adding a third year of implementation would be considered. Since the draft of this ADD was written the time available for the pilot PBG preparation and implementation has reduced by 9 months, to a maximum of 18 months. The chances of funding being available for an additional year of implementation have also receded and this risk must be regarded as remaining **High**.

The other residual risks in this category are **Medium** and concern: a) that the LG is late or fails to make the investment for the PBG; b) that the grant values offered are unattractive, or performance targets too demanding, to LGs/PDAMs; c) that the TA staff are insufficiently experienced; and d) that improvements in performance are not sustained.

The risk that the grant values offered are unattractive, or performance targets too demanding, will be considered by the Mid-term Review. If feedback from the LGs/PDAMs is negative then the grant values and targets will be reconsidered and, if necessary, revised in consultation with DGHS.

Environment and Social Safeguards Risks

The highest residual risks are **Low** because the Implementation TA will: a) consider the risk of over-abstraction and ensure the environmental regulations are not breached; b) ensure that new PDAM customers under the PBG do not pollute watercourses.

E.10. Environmental and Social Safeguards

The DFAT Risk and Safeguard Screening Tool has been completed and the Safeguards Screening Checklist is included in **Annex 8.** Because the PBG potentially includes the development of new water resources the environmental risk has to be assessed. The likelihood is possible but since the scale of abstraction is unlikely to exceed 50 l/s, the consequence is minor and the environmental protection risk before controls is rated as **Medium**. Since there are no identifiable risks to children, of displacement, to indigenous people or to health and safety the overall safeguard risk rating before controls is **Medium**. The residual risk is **Low** because the TA Consultant will ensure that there is no over-abstraction of groundwater and that environmental regulations are not breached.

DFAT's Environmental and Social Safeguard Policy for the Aid Program outlines a consolidated approach to managing safeguard risks in the Australian aid program. The policy applies to all DFAT Official Development Assistance funded aid investments regardless of value or funding mechanism, including the Direct Aid Program.

The policy provides guidance on DFAT's safeguard responsibilities in aid investments and how to meet them, and sets out requirements for five key safeguards:

I. Environmental protection;

II. Children, vulnerable and disadvantage groups;

III. Displacement and resettlement;

IV. Indigenous peoples;

V. Health and safety.

The two safeguards which are most relevant to the Water Hibah Performance Based Grant are Environmental and Social / Displacement and resettlement.

E.10.1 Environmental safeguards

DFAT's Environmental and Social Safeguard Policy for the Aid Program (February 2019 ver. 1.3), and any subsequent updates, may apply to some PBG activities. The Australian Aid Program and its activities are obliged, under the Environment Protection and Biodiversity Conservation Act (EPBC Act) 1999, to consider whether aid-funded work undertaken will cause, or is likely to cause, a significant impact on the environment, and take steps to avoid and/or mitigate any negative impacts. Under the provisions of the Act, potential significant impacts on the environment from the implementation of the Australian aid program must be diligently assessed and managed.

Policy principles for environmental protection include the following:

- Principle 1: Do no harm
- Principle 2: Identify, assess and manage environmental and social impacts
- Principle 3: Engage effectively with stakeholders
- Principle 4: Work effectively with partners
- Principle 5: Promote improved environmental and social outcomes

DFAT requires all investments to be designed and implemented in accordance with the five safeguard principles listed above. Principle 4 requires compliance with partner country safeguard laws and policies.

There are no environmental risks associated with the Governance and Financial Indicators, while works under Operational Efficiency (Non Revenue Water and Energy Efficiency) constitute maintenance of existing assets. The only element of the PBG which has the potential to pose an environmental risk are new works under the Continuity of Supply sub-indicator, where PDAMs might decide to build new storage reservoirs, develop new or existing water sources, build Water Treatment facilities or develop extensions of their distribution system.

PDAM would implement these works and they are obliged to follow prevailing GoI environmental safeguards. The type of activity and scale of projects that require a full Environmental Impact Analysis (AMDAL) are defined in **Minister of Environment Regulation No. 05 of 2012**. In the fields of Multi-sector and Public Works water supply projects, the following activities do require an AMDAL:

A. Multi-sector

1. Distribution area ≥ 500 ha;
2. Groundwater (shallow or deep) ≥ 50 l/s in an area < 5 ha;

B. Public Works

3. Transmission pipeline development ≥ 10 km;
4. Intake ≥ 250 litres/sec.

The maximum grant available for Continuity of Supply for the largest PBG PDAMs (70,000 connections) would be Rp 6,222 million. The extent of works which this would fund for each of the four potential AMDAL triggers is considered in the following paragraphs.

Distribution Area

If all these funds were used to develop or extend a water distribution system, the maximum area which could be supplied would be 62 ha, which at a density of 20 connections/ha would provide 1,235 new connections. The grant earned, if they all received a continuous water supply, would only cover about 30% of the cost of such a development. At the other end of the scale, a development with 70 connections/ha would provide 2,348 connections, but cover only 34 ha, and attract a grant of 57% of the cost. The threshold of 500 ha required to trigger an AMDAL is therefore not threatened.

Groundwater Abstraction

Were PDAM to use the maximum funds instead to develop new groundwater sources, and if the full grant were applied only for that purpose, the funds would be enough for more than 40 boreholes, producing in excess of 200 l/s. The TA Consultant will be tasked to ensure that the AMDAL threshold of abstraction ≥ 50 l/s in an area < 5 ha is not breached.

Transmission Pipeline

Transmission pipeline length would depend on the relative location of the source, treatment plant and distribution area, and so it is difficult to estimate the length; transmission and distribution pipelines are normally laid in, or beside, roads. The TA consultant will be tasked to ensure that the AMDAL threshold of 10 km total length is not breached.

Surface water Intake

The Rp 6,222 million maximum grant funds available would be enough to develop a new Water Treatment Plant with a capacity of 46 l/sec, requiring an intake of 50 l/sec, far short of the 250 l/sec which would trigger an AMDAL.

In summary, while any new project works are expected to be much smaller than the limits at which an AMDAL would be required, the TA Consultant will need to ensure that the AMDAL thresholds for groundwater abstraction and transmission pipeline length are not breached by any new production facilities.

The Consultant will also need to be aware of PP No. 122 of 2012 which deals with the prevention of water pollution and requires wastewater management to be implemented in conjunction with new water supply systems. The Program Implementation Consultant will therefore be required to ensure that where new customers are supplied by PDAM there is provision for their wastewater such that it does not pollute watercourses or aquifers.

E.10.2 Social / Displacement and Resettlement safeguards

The greatest social issues in development arise from land acquisition and the subsequent displacement and involuntary resettlement of the people living on the site.

No land acquisition is anticipated in connection with the PBG, although if a PDAM decided to use grant funds for construction of a new Water Treatment Plant that could change. The Program Implementation Consultant will be required to inspect any sites proposed to be acquired for new: water abstraction/intakes, reservoirs, Water Treatment Plants and pumping stations and confirm that they are uninhabited.

F. Annexes

Annex 1 – Sector/Problem and Other Relevant Analyses

Annex 2 – Gender Equality and Social Inclusion

Annex 3 – Project Logic Model

Annex 4 – Detailed Description of Investment Interventions/Activities

Annex 5 – Program Management and Implementation Arrangements

Annex 6 – Detailed Budget/Cost Estimates

Annex 7 – Monitoring Evaluation and Reporting Framework

Annex 8 – Risk and Safeguards Screening Tool

Annex 9 – Stakeholder Meetings and People Met

Annex 1 – Sector/Problem and Other Relevant Analyses

A1.1. Country / Regional Context

With more than half the Indonesian population now living in urban areas, and predictions that it will increase to more than 60% in the next 10 years, the rapid increase in urbanisation is posing a major infrastructure challenge for the country. Recent data shows that piped water service coverage is not keeping up with urban growth. Total PDAM connections are increasing at 5% annually (approximately 550,000 connections/year) while the urban population is increasing at 2.5% (approximately 750,000 households/year). At the same time the average household size has decreased from 6.5 to 4.1 persons over the last twenty years, further adding to the demand for water service connections.

Global climate change is bringing a new challenge with rising sea levels, exacerbated in many populated areas of Indonesia by over-abstraction of groundwater causing the land to sink. Inundation by high tides is going to become a fact of life for millions of Indonesians living in low lying coastal areas. With rainfall patterns becoming shorter and heavier, and longer dry seasons with higher temperatures, natural disasters such as landslides and floods are becoming increasingly common. Climate change is also expected to impact the availability of water resources for public water supply in the dry season, and to increase soil erosion and sediment load in the wet season.

A1.2. Sustainable Development Goals

In 2016 the United Nations established 17 Sustainable Development Goals.

SDG #6: Clean Water and Sanitation

The importance of this goal is to ensure availability and sustainable management of water and sanitation for all. This is one of the most pressing of the SDGs; it includes emphasis to end open defecation and to aid women, girls, and those with disabilities in vulnerable situations. It also challenges nations to:

- Reduce pollution
- Eliminate dumping
- Minimize release of hazardous chemicals and materials
- Halve the proportion of untreated wastewater
- Increase recycling and safe reuse globally

It stresses ensuring sustainable withdrawals without imposing damage on water-related ecosystems such as mountains, forests, wetlands, rivers, aquifers, and lakes. Finally, it calls for international support, cooperation, and capacity building for developing countries regarding water related activities such as harvesting, desalinization, and waste-water treatment. While this may be an investment initially, it will strengthen the participation of local communities improving their water quality and sanitation management for the future.

Targets included in this goal:

6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all

6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations

6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally

6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity

6.5 By 2030, implement integrated water resources management at all levels, including through trans boundary cooperation as appropriate

6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

6.a By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programmes, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies

6.b Support and strengthen the participation of local communities in improving water and sanitation management

SDGs for Indonesia

While the United Nations Sustainable Development Goal SDG 6.1 commits countries to achieve universal and equitable access to safe and affordable drinking water for all by 2030, Indonesia has decided to target access to "Air Minum Layak" or Clean Water.

A1.3. Water Sector Issues

Local Government-owned Water Enterprises *Perusahaan Daerah Air Minum* (PDAMs) are estimated to provide piped water supplies to approximately 32% of the total urban population. However, there are serious weaknesses in the performance and sustainability of many PDAMs with good financial performance of larger PDAMs obscuring poor quality of service, inadequate maintenance budgets and poor service coverage.

There are 374 PDAMs in Indonesia, each owned by their Local Government, which on average serve 30,000 customers, but which vary in size from less than 1,000 up to 850,000 customers. PDAMs provide piped water supply to about 46 million people, or just 18% of the 260 million total population.

The competence of, and quality of service provided by, PDAMs varies greatly. The government classifies 14% of them as "sick" and another 26% as "unhealthy". The average size of the "sick" PDAMs is 7,200 customers, the "unhealthy" 11,200 and the "healthy" 44,600, suggesting that size is an important factor in this classification. Classifying 60% of PDAMs as "healthy" masks the fact that many of these PDAMs are performing poorly in terms of their efficiency, quality of service and service coverage. In some cases service coverage is declining as new connections fail to keep up with the growth in urban households. Further, PDAM service coverage is often over-stated by assuming an unrealistic number of people served per connection and by counting only the population in the area where the PDAM already has a distribution network, rather than the whole of the LG's administrative area. Only an estimated 61% of the population had access to safe drinking water in 2018.

Nationally, Non Revenue Water has remained at a steady 33% for the last 5 years, and this is widely known to be an under-estimate. Meanwhile energy costs for many PDAMs account for about 40% of operating costs, after excluding depreciation and staff costs. Pumping often accounts for 90% of PDAM energy costs, so PDAMs with a spring water source and gravity supply, and hence no treatment or pumping costs, have a tremendous advantage.

A1.4. Development Problem Analysis

The sustainability of PDAM operations is a serious concern. In the past the Government of Indonesia (GoI) model for the water sector has been for Central Government to provide the capital investment and construct the Works. However, ownership of these assets is often not transferred to Local Government; in 2018 Rp 6 trillion worth of water sector assets constructed by Central Government had yet to be transferred to Local Government. The burden of sustaining the productive life of these assets has not been addressed satisfactorily by their operators, PDAMs, or by their owners, Local Governments. Despite clear regulations that municipal water supply is a Local Government responsibility, the prevalence of GoI investment through national budgets has made LGs dependent on GoI for the renewal of assets. In fact less than 0.5% of water sector investment comes from LG resources.

Central Government funding for the water sector through the national budget (APBN) for DGHS has fallen from Rp 8.1 trillion in 2014 to Rp 4.2 trillion in 2019, a reduction of 55% in real terms. The sustainability of PDAM operations, which are so dependent on central government funding for their capital works, is a serious concern. With over 75% of the population yet to be connected to a piped water supply, expanding the service the water companies provide will require a significant increase in investment from their LG owners, as well as from other, non-government, sources of funding.

A1.5. Relevant GoI and Multilateral Water Sector Programs

The Central Government Output-based Water Hibah Following a pilot output-based aid project by the World Bank in Jakarta and Surabaya in 2007, the Australian funded Water Hibah program developed the concept of output-based grants for the Indonesian water sector in 2009. Local Governments were paid for each new water supply connection installed for a low income household. The aim was to induce PDAMs to use their surplus production capacity to extend their service and supply more, poor, domestic customers, and by 2016 450,000 new connections had been installed. GoI began mainstreaming these output-based grants in 2015 using central government funds, with approximately 800,000 connections installed by 2019. The program is planned to continue until 2024.

Regional Water Supply Schemes In order to achieve the UN's SDG 6.1 target of universal access to clean water many PDAMs will need to develop new water sources. With the limited water resources available in most urban areas of Indonesia insufficient to meet the demand from a rapidly growing urban population, regional bulk water supply schemes (SPAM-R) are being promoted by the Ministry of Public Works and Housing (MPWH).

The Ministry's strategic plan (RENSTRA) focuses on developing these systems through its Directorate General of Water Resources (DGWR) and Directorate General of Human Settlements (DGHS). About 80 schemes are planned around the country, of which about 10 have started functioning. These schemes are being developed at provincial level by Public Works, and have to date been funded by central government. Key features of SPAM-R are that they must supply at least two LGs' PDAMs, and that they will be operated by provincially-owned water companies.

ADB finance is being used to develop 4 regional schemes in Eastern Indonesia and 3 schemes in Western Indonesia.

The National Urban Water Supply Framework (NUWAS) has been developed by GoI, with support from the World Bank and various DFAT trust funds, as a framework for implementation of the national urban water supply platform. This framework is designed to address the need for more integrated support, appropriate to the capacity and performance of individual PDAMs. The Framework provides for a range of technical assistance, capacity building and investment financing support which varies according to each PDAM's circumstances, but is available to all 380 PDAMs.

Each support package is designed to integrate central and local government financing to leverage non-public sources of financing, with the aim of gradually improving each PDAM's performance until it becomes eligible for the next support package.

The National Urban Water Supply Project (NUWSP), which is partially World Bank-financed, is designed to support GoI in improving PDAM performance and encouraging PDAMs to access non-government sources of finance. GoI expects total investment of USD 600 million in urban water supply development during the life of the NUWSP project with USD 185 million from national and local government budgets; USD 100 million from a World Bank loan; and USD 317 million from other Government programs, commercial borrowing, the private sector, other donors, and water service connection fees.

The NUWAS Framework provides for three types of grants for PDAMs: (i) Seed Grant - used to provide a stimulus to the PDAM to improve capacity, system optimisation; (ii) Matching Grant - used to encourage the PDAM to seek non-public sources of finance – NUWSP will match finance sourced from Banks, PPP or business-to-business; (iii) Performance Based Grant – grant will be awarded after PDAM has achieved certain performance improvements. A Self-Assessment Tool is used to determine the type of grant for which each PDAM is eligible. NUWSP is expected to commence implementation in 2020 with funding initially committed to seed grants and matching grants. Up to USD 25 million will be made available for the NUWSP PBG.

DFAT has made a general agreement to support a pilot PBG activity under the Water Hibah program. However, the NUWSP PBG is restricted to Non-Revenue Water and Energy Efficiency only, whereas DFAT envisages a more general and widely applicable PBG aimed at fostering a sustainable water supply service.

Public Private Partnership (PPP) developed by PT Sarana Multi Infrastruktur (PT SMI),a state-owned infrastructure financing company whose portfolio includes power stations, hospitals, toll roads and water supply projects. Other state-owned companies supporting PPP projects are PT Indonesia Infrastructure Finance (IIF), and the Indonesia Infrastructure Guarantee Fund (IIGF), which provides subsidies known as Viability Gap Funding.

Business-to-Business (B2B) is a popular means of securing private sector investment in water supply and is commonly used in Indonesia for construction of small Water Treatment Plants which are operated for, say, 25 years and then handed over to the Local Government.

The PerPres 29 program, which ran from 2009 until it expired in December 2014, offered PDAMs access to central government guarantees and interest rate subsidies for commercial bank loans. In order to enter PerPres 29 PDAMs had to have a current Business Plan. The previous DFAT infrastructure facility helped more than 20 PDAMs prepare business plans with the aim of gaining access to these loans. After 5 years, in July 2019, it was replaced by PerPres 46/2019, however this expires in December 2022 leaving little time for PDAMs to take advantage.

The DAK for Water Supply is the GoI's input-based grant mechanism which has proved unaccountable and subject to corruption. Despite this these grants are still being used for water supply infrastructure.

PAMSIMAS is the largest community-based water and sanitation activity in the world, and by 2017 had served 20 million people.

The Indonesia Urban Water Sanitation and Hygiene PLUS program (IUWASH) is an ongoing 5-year program funded by USAID which is designed to assist GoI in increasing access to water supply and sanitation services as well as improving key hygiene behaviours among urban poor and vulnerable populations.

The IUWASH Plus Program components are:

1. Improvement of services in water, sanitation and hygiene behaviour at the household level
2. Strengthening the performance of institutions managing water, sanitation and hygiene behaviour at the city / district level
3. Strengthening aspects of financing water, sanitation and hygiene behaviour
4. Promoting advocacy, coordination and communication in water, sanitation and hygiene behaviour

In addition, a Local Sustainability and Innovation Component (LSIC) is designed to stimulate innovations that strengthen community, private sector and government WASH service provision.

The IUWASH Plus program is now focused on capacity building rather than physical works, and interacts with PDAMs in two specific areas: NRW reduction and Energy Efficiency. The capacity building program has so far been provided to five PDAMS of which three are focusing on Energy Efficiency (PDAM Sukoharjo, PDAM Sidoarjo, PDAM Ternate) and the other two (PDAM Surakarta, PDAM Magelang) are focusing on NRW reduction. The selection was based on the needs of each PDAM after an initial assessment with IUWASH.

A1.6. National Medium-Term Development Plan (RPJMN IV 2020-2024)

In 2019 a new National Medium-Term Development Plan Rencana Pembangunan Jangka Menengah Nasional (RPJMN) for the period 2020-2024 was developed by Bappenas, supported by a World Bank commissioned Road Map for Water Supply.

Challenges identified from the supply side were:

- Piped water service is provided to only 20% of the population;
- Only 60% of PDAMs are "healthy";
- High level of PDAM water losses (NRW) at 33%;
- Idle production capacity of 57 m3 / sec;
- Low water tariffs with many PDAMs unable to set a Full Cost Recovery (FCR) tariff.

Challenges identified from the demand side were:

- Lack of public awareness about safe drinking water;
- Lack of willingness to pay for water;
- Wasteful behaviour with average water usage almost 150 l/person/day.

The RPJMN identifies several challenges for the sustainable management of groundwater and raw water, including: the uneven distribution of raw water availability between regions; high population growth with a concentration of 60 percent of the population on the island of Java; the dominant water allocation for irrigation; high groundwater exploitation; high water pollution in 65 percent of river areas; and the development of 10 areas of urban agglomeration. Rapid urban growth causes water stress because the demand for raw water is very high compared to the development of new capacity for the supply raw water.

Strategic issues in the provision of raw water identified in the 2020-2024 RPJMN include several things, namely meeting the deficit of raw water supply, controlling groundwater extraction, increasing investment in drinking water supply through the participation of the private sector / business, and increasing the efficiency of water resource management through the use of technology.

Target KP 2 -. Provision of Access to Improved Drinking Water

- Achieving 75% access to improved drinking water, including 30% access to piped water supply;
- All PDAMs to achieve "healthy" performance.

Two Major Projects are planned by Bappenas for the water sector in the period 2020-2024:

- Installation of 10 million domestic service connections (Rp 244.57 trillion);
- Expansion of water distribution systems throughout the administrative areas (Rp 42.8 trillion).

Annex 2 – Gender Equality and Social Inclusion

A2.1. Context

Perusahaan Daerah Air Minum (PDAM - Local Government-owned Water Enterprises) are estimated to provide piped water to approximately 32% of the total urban population. However, available data suggests that, although many PDAMs are expanding their coverage, they are not keeping up with the growth in the number of urban households. Furthermore, there are serious weaknesses in the performance and sustainability of many PDAMs.

The burden of managing the household's water is borne primarily by women who have overall responsibility for ensuring sufficient water is available for their domestic tasks such as cooking, bathing children, and washing, and for other family members' needs. In addition, water is used by women for productive and income earning activities, such as the cooking and sale of drinks and food, small scale horticulture, and businesses, such as hair dressing and ice-making.

Inadequate service provision, such as lack of access to a household connection, poor quality water, low water pressure, or intermittent water supply, create conditions which impact particularly on women as the managers and main users of domestic water. Where there is no house connection or where supplies are inadequate, women, and sometimes children, spend significant time and energy collecting water each day, particularly when the source is some distance away. Pregnant women, the elderly, frail and disabled, face particular risks and difficulties in carrying heavy containers of water from sources outside the house.

Lack of, or inadequate, piped water service to the household has financial and social implications at individual, household, and community levels. The cost of purchasing water from private vendors is much higher than PDAM charges. A World Bank study found that the monthly cost of purchasing water from water vendors for households across a range of income levels was more than double the monthly bill they would pay for water from the PDAM.[11]

Where there is intermittent piped water supply or insufficient water pressure, the need for water storage adds work for women and creates the possibility of contamination and illness in households where safe storage practices are not followed. There are also health risks in using water from alternative sources when there is no household connection or if household services are inadequate. Access to piped water on the premises has been found to be strongly associated with lower diarrhoea incidence among children under five.[12]The costs of medicine and lost work time when family members fall ill due to contaminated water supplies can be a significant burden, especially for poor households. Households with members with disability, or who are old or frail, have particular health and social needs for good quality water services which deliver reliable 24 hour water supplies directly to the premises.

The objective of the PBG activity is to pilot a new approach by which GoI can encourage their local governments to actively manage and invest in their water companies, improving their performance and sustainability. Performance indicators have been identified during the design, with a range of sub-indicators sitting within the four main indicators of: governance, financial stability, operational efficiency and quality of water service delivery. The provision of grants at local government level based on the achievement of these indicators and sub indicators is expected to improve the effectiveness of PDAM operations and the quality of service provided to PDAM customers.

[11]World Bank Infrastructure Dept East Asia and Pacific Region (2006)Indonesia: Enabling Water Utilities to Serve the Urban Poor Table 4 p12.
[12]Komarulzaman, Ahmad, Jeroen Smits, Eelke de Jong (2014)Clean Water, Sanitation and Diarrhoea in Indonesia: Effects of household and community factors. Working Paper 14-105. Nijmegen Centre for Economics (NiCE), Institute for Management Research, Radboud University, Nijmegen p9. http://www.ru.nl/nice/working papers. Accessed 28/10/18

A2.2. Policy Frameworks

A.2.2.1. Gender and Women's Empowerment

GoA and GoI are both committed to gender equality in development. Gender equality and women's empowerment is one of six priority areas for investment in Australia's aid policy *Australian aid: promoting prosperity, reducing poverty, enhancing stability*. GoA's commitment is included also within DFAT's *Strategic Framework 2015-2019* and its performance framework, *Making Performance Count: enhancing the accountability and effectiveness of Australian aid*. DFAT's *Gender Equality and Women's Empowerment Strategy (February 2016)* details GoA's approach to integrating gender equality efforts more effectively across the aid program. Identified priority areas are 'enhancing women's voice in decision making, leadership and peace building, promoting women's economic empowerment and ending violence against women and girls'.

The GoI Presidential Instruction (INPRES) No.9/2000 and Medium Term National Development Plan 2015-2019 require that gender is mainstreamed in development to give women more equal opportunities. The Ministry of Home Affairs Regulation No.67/2011 concerns the implementation of gender mainstreaming by Local Governments, including the need for gender analysis.

A.2.2.2. Development for All

GoA is committed to disability-inclusive development. Its strategy is outlined in *Development for All 2015–2020: Strategy for Strengthening Disability-Inclusive Development in Australia's Aid Program*. This states that Australia's development work will 'improve the quality of life of people with disabilities in developing countries through enhancing participation and empowerment of people with disabilities, as contributors, leaders and decision makers in community, government and the private sector; reducing poverty among people with disabilities and improving equality for people with disabilities in all areas of public life, including service provision, education and employment'. The four focus areas are: supporting governance for equality; enabling infrastructure and accessible water, sanitation and hygiene; inclusive education and skills; building resilience.

GoI is also committed to improved disability inclusion. Laws include Law No.19/2011 on the ratification of the UN Convention on the Rights of Persons with Disabilities and Law No.8/2016 on Persons with Disabilities. Rights include the right to live independently in the community free of stigma and discrimination, have fair and proportional opportunities for employment with equal pay for the same work and responsibilities as other employees, and have access to infrastructure and services. Some local governments require that at least 1 and sometimes 2out of 100 employees, depending on the size of an organisation, should be persons with disabilities (e.g. Jakarta Capital City Regional Regulation No.10/2011 1 person in 100 employees; Yogyakarta Special Region Regulation No.4/2012 1 person; Central Sulawesi Provincial Regulation No.18/2014 1 person; South Kalimantan Provincial Regulation No.17/2013 1 person; South Sulawesi Provincial Regulation No.5/2016 2 persons in 100 government employees and 1 person in 100 private company employees; Bangka Belitung Islands Province Regional Regulation No.10/2010 2 or 1 person with disabilities in 100 employees depending on the employer's circumstances).[13]Amongst a number of regulations regarding universal access, Regulation of the Minister for Public Works and Public Housing No.14/2017 concerns the construction of buildings for use by the public and their accessibility requirements.

[13]See Hauschild, A., Edwards J, Fatimah S and Ruhanawati S (2018) Compilation – Policies related to gender, disability, child protection and community participation. KIAT. Unpub. (at http://www.ombudsman.go.id/produk?c=44) for a comprehensive collection of regulations and policy.

A.2.2.3. Civil Society Engagement

DFAT's NGO engagement framework[14] discusses the values of working with NGO partners and the principles of engagement. The objectives of engaging with NGOs are to: improve economic opportunities and livelihoods; engage communities in development and promote public diplomacy; promote gender equality and empower women and girls; foster collaboration, partnership and multi-stakeholder approaches; support humanitarian advocacy and build resilience; foster innovation; and build coalitions for reform, accountability and inclusive decision making.

GoI also highlights the need for, and value of, community participation at different levels. GoI Law No.25/2004 concerns community participation in the National Development Planning System. Regulation No.45/2017 concerns Community Participation in Local Government Implementation.

A.2.2.4. Poverty

GoA's(2014) policy, *Australian Aid: promoting prosperity, reducing poverty, enhancing stability*, states that Australia's aid program is committed to 'reducing poverty and lifting living standards through sustainable economic growth' with attention to the Indo-Pacific region. Particularly relevant for the Water Hibah PBG activity is the focus on investment in infrastructure, such as water, that enables human development, and support to partner governments, including for improved governance.

GoI's *National Medium-Term Development Plan* (RPJMN) 2015-2019 emphasises the need for poverty reduction as well as addressing water and environmental issues. Presidential Decree No.15/2010 concerning the Acceleration of Poverty Reduction, emphasises engaging with poor and vulnerable groups, improving the quality and quantity of policy alternatives for poverty reduction, and enhancing the effectiveness of poverty reduction measures.

A.2.2.5. Social Safeguards

DFAT's 2018 *Environmental and Social Safeguard Policy for the Aid Program* sets out the approach to assess and manage environmental and social impacts during planning stages and the management of risks through the life of investments. It includes safeguarding for children and vulnerable and disadvantaged groups, including indigenous peoples.

DFAT has a zero tolerance of child exploitation and abuse and has a risk-based approach to the management of child protection in DFAT business activities. It has a *Child Protection Policy* (2018) as well as an infrastructure-specific *Child Protection Guidance Note in Infrastructure Activities* (2017). GoI is also concerned with child protection and its policy is explained in Law No.23/2002.

DFAT's *Indigenous Peoples' Strategy (2015-2019)* recognises that social, economic and political power imbalances and spoken language may restrict indigenous people's equitable participation in and access to benefits from aid investments.

A.2.2.6. KIAT's GESI & CSE Strategy (2018-2021)

KIAT's Gender Equality, Social Inclusion (GESI) and Civil Society Engagement (CSE) 2018 – 2021 strategy incorporates relevant GoA and GoI policies and goals to address gender and women's empowerment, disability, civil society

[14] DFAT (2015)DFAT and NGOs: Effective development partners

engagement, and the inclusion of those who otherwise would be excluded. It recognises the intersectionality[15] of disadvantage. It lays out the framework for all projects under the KIAT program.

The strategy is based on two foundational areas 1) Research, knowledge and learning, and 2) Civil society engagement. There are three themes: inclusive leadership; inclusive economic empowerment; inclusive investments. Following DFAT policy, the KIAT strategy follows a twin track approach of 1) targeted action to address areas where there have been difficulties in reducing inequalities; and 2) mainstreaming action across all points in planning, design, delivery and monitoring and evaluation to deliver maximum benefit for all.

A2.3. Perusahaan Daerah Air Minum (PDAM) and GESI

A.2.3.1. PDAM Personnel: Gender Balance

There is no regulation about the proportion of women who should be employed in government organisations, however, there is a tacit understanding that the aim should be to have 20% - 30% women employees.[16] From the PBG Design project survey data there is considerable variation between PDAM in the proportion of women and men in their personnel overall and in the proportion of women in management.

Four of the five PDAMs surveyed in the PBG Design activity reported having between 18% and 26% women in their total number of employees. Demak reported the highest proportion at 26%. Sukabumi reported only 13% women (see Table 1).

Management levels are defined as:

- Top management: Director
- Mid level management: Kepala Bagian/Division (Division head), Kepala Cabang (Branch head), Kepala Unit (Unit head), Kepala Departemen (Department head/manager);
- Low level management: Kepala Seksi (Section head), Kepala Sub Bagian (Sub Division head), Pengawas/Supervisor (Supervisor).

While there are some exceptions, top management positions are dominated by men. 2016 BPKP data shows that the majority of PDAM supervisory board (*Badan Pengawas*) members, and PDAM directors are men.[17]Directors are extremely highly paid in comparison with individuals in other positions.

There is limited data available from the PBG Design project survey but of 7 directors across 5 PDAMs, only one (14%) was a woman. She was a temporary appointment as Director of Administration and Finance in PDAM Jambi until a new Board of Directors was selected.

The proportion of women to men in management positions, other than directors, roughly corresponds to the proportion of women to men in each PDAM, except for PDAM Pekalongan, where no women at all are reported in management. Although the proportion of women to men in management positions in PDAM Sukabumi overall was 16% compared with their representation in the organisation of 13%, all these women were in lower management positions (see Table A2.1).

[15]As described in Edwards J (2018), intersectionality enables an understanding that people are members of more than one social group; that attributes, such as poverty, ethnicity, disability, intersect across groups; and that disadvantage is experienced differently, depending on those intersections. For example, a poor elderly woman will experience disadvantage differently to a poor younger woman; a woman with disability will experience a disadvantage differently than a man with disability.
[16]Personal communication, Ir Ineke Indrarini, Gender Mainstreaming Secretariat, MPWH, 19/01/2019
[17]PBG Design project analysis of data extracted from BPKP reports 2016.

PDAM	No of employees (n)	% men to women across all employees		% men to women in management overall (ex Directors)		% men to women in middle management		% men to women in lower management		% men to women in staff positions	
		Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Kudus	135	81	19	82	18	79	21	89	11	75	25
Demak	168	74	26	77	23	75	25	78	22	73	27
Jambi	344	82	18	84	16	82	18	85	15	82	18
Sukabumi	149	87	13	84	16	100	0	82	18	88	12
Pekalongan	98	80	20	100	0	100	0	100	0	76	24

Table 4 Proportion of women to men as employees and in management(%)

Looking at all male personnel in each PDAM, the percentage of men who are in management positions (excluding directors) ranges from 33% (Sukabumi) to 15% (Jambi). The percentage of all female personnel in management positions ranges from 40%(Sukabumi) to 0% (Pekalongan). The percentage of male employees who are in management compared with the percentage of women in management does not vary greatly in Kudus (28% of men compared with 27% of women), Demak (18% of men compared with 16% of women) and Jambi (15% of men compared with 13% of women). The exceptions are Pekalongan which reported having no women in management (18% of men compared with 0% of women) and, on the other hand, Sukabumi which reported 33% of men compared with 40% of women employees in management (see Table 2).

If middle and lower management positions are examined separately, the percentage of men in middle management is similar to that of women, except for Pekalongan and Sukabumi, both of which had 0% of their women personnel in middle management. The percentage of female personnel in lower management positions in Kudus, Demak and Jambi is slightly less than the percentage of male personnel, possibly due to more men being in field supervisor positions. There is a significantly higher proportion of women personnel in lower management in Sukabumi compared with the proportion of men (see Table 2).

PDAM	Number of men	% in management positions overall (excluding Directors)	% in middle management	% in lower management
Kudus	109	28	20	8
Demak	124	18	7	11
Jambi	282	15	5	10
Sukabumi	129	33	5	28
Pekalongan	78	18	4	14

Table 5 Percentage of male personnel in management positions

PDAM	Number of women	% in management positions overall (excluding Directors)	% in middle management	% in lower management
Kudus	26	27	23	4
Demak	44	16	7	9
Jambi	62	13	5	8
Sukabumi	20	40	0	40
Pekalongan	20	0	0	0

Table 6 Percentage of female personnel in management positions

A.2.3.2. Attitude to Increasing the Proportion of Women Employees

No PDAM surveyed reported that they thought there should be an increase in the proportion of women employees. The general opinion was that there was no need to increase the number of office workers, which was where women usually worked, and that women did not have sufficient physical strength and could not be available 24 hours a day to work in field positions where there might be more of a demand for employment.

It was felt that there were no obstacles to women becoming managers in the PDAM if they fitted the requirements for the position. However, women's need to consider their domestic responsibilities and women's mobility issues were said to hinder their promotion. An occasional comment alluded to different management and conceptual styles of women compared with men. Men were sometimes considered to be firmer and more effective managers compared with women. Men were also described as being more practical while women thought about ideas and concepts.

A.2.3.3. Comparison of Men's and Women's Salaries

The average monthly salaries (excluding Directors) for women was higher than for men in two of the three PDAM where salary data was provided and only slightly lower than men in the third. However, the range of salaries for men was greater than for women. Men (excluding Directors) had both the highest salaries and the lowest salaries in the three PDAMs (see Table 3).

PDAM	Number of men	Average monthly salary	Highest salary	Lowest salary
Kudus	109	2,822,815	6,000,000	1,633,280
Demak	124	2,582,946	3,994,000	1,483,590
Jambi	282	4,511,314	9,353,900	2,365,900
Sukabumi	129	NA	NA	NA
Pekalongan	78	NA	NA	NA

Table 7 Monthly salaries for male staff (excluding Directors)

PDAM	Number of women	Average monthly salary	Highest salary	Lowest salary
Kudus	26	3,153,433	4,412,700	1,950,000
Demak	44	2,541,120	3,872,000	1,518,000
Jambi	62	5,133,929	8,853,900	2,573,600
Sukabumi	20	NA	NA	NA
Pekalongan	20	NA	NA	NA

Table 8 Monthly salaries for female staff (excluding Directors)

A.2.3.4. Breastfeeding and Childcare

Women usually returned to work in the PDAM after their maternity leave. No PDAM reported having a room allocated specifically for breastfeeding or having childcare facilities. Women went home to breastfeed or expressed their milk which was left in the refrigerator at home. Babies and children were reported to be cared for by relatives and babysitters in the home. This is despite Law No.28/2002 concerning the provision of nursery rooms in buildings.

A.2.3.5. Employment of Persons with Disabilities and Accessibility

As noted above, the proportion of people with disabilities that affect their ability to participate in society ranges from 4% to 11% of the population, depending on how disability is defined and the data collection methods. Nevertheless, no PDAM reported persons with disabilities amongst their employees, despite Law UU no 8/2016 requiring public

sector organisations to employ people with disabilities as 2% of their staff and private sector organisations to employ people with disabilities as 1% of their staff.

Accessibility issues need to be addressed in order to support the GOI in meeting its commitments under Law UU No. 8/2016, as well as Law no 28/2002 which requires accessibility for people with disabilities.

Apart from accessibility, other barriers to effective service delivery and engagement of people with disabilities include a lack of policies and action plans mainstreaming disability; lack of accessibility standards, guidelines and specifications; and limited awareness of existing guidance and documents and manuals. There are gaps in coordination and partnership between government bodies that oversee water resources and delivery, and those that focus on the implementation of laws, policies, and regulations related to disability inclusion.

A.2.3.6. Consultation and Socialisation

There is very limited understanding of gender or social inclusion issues in PDAM organisations. Consultation and socialisation strategies are not gender responsive nor socially inclusive and women and marginalised community members frequently lack information about PDAM services. Information about services and obtaining a connection is most often delivered by PDAM personnel to the hamlet (RW) and neighbourhood (RT) heads who are usually men. The information is then provided to the heads of household, who are also usually men. This means that women, the household's main managers and users of water, may be excluded from direct access to information and potentially from being fully aware and involved in decision making.[18] There is an essential need for increasing the understanding of PDAM managers and staff about gender and social inclusion issues relating to service delivery, communications and customer service, and for socialisation strategies and SOPs to be GESI responsive. This was confirmed by the PBG Design consultant in discussion with the Ministry of Public Works and Public Housing Gender Mainstreaming Secretariat.[19]

A2.4. GESI and Social Safeguards Interventions in the PBG Design

Terms of Reference for a Technical Assistance (TA) for GESI support to PDAM have been provided as part of the PBG Design process. The TA is designed to improve PDAM understanding, capacity and commitment to improve gender equality and social inclusion in the workplace and in their services, and to support relevant actions.

The ToR for the TA for PDAM GESI support has four target areas:

- Improve understanding of gender issues relevant to the PDAM; support actions to enhance the gender responsiveness and women friendliness of the workplace; and increase the proportion of women recruited and in management positions in the PDAM;
- Take action to increase the number of persons with disabilities who are employed in PDAM; increase understanding of accessibility needs and issues in each PDAM, including the need to consult with persons with disabilities and local disability organisations; and improve accessibility to PDAM buildings for personnel and customers in line with regulations;
- Support each PDAM to develop GESI responsive socialisation strategies and SOPs to ensure women, as well as men in the community, and people with disabilities and other vulnerable groups are able to access information about PDAM services;

[18]Willetts J, Howard M, Edwards J and Battacharyya N (2017) Independent Review Water and Sanitation Hibah. DFAT.
[19]See Minutes of Meeting 30/10/2018.

- Develop routine planning procedures by PDAM management to identify and address gender equality and social inclusion issues in operations and in the workplace.

In addition to the GESI Support TA, the ToR for the Baseline and Verification consultant specifies that the consultant will establish a baseline for women in various management levels in the participating PDAM and will monitor yearly changes. The Baseline and Verification consultant will also establish a baseline for the employment of persons with disabilities in the participating PDAM, set targets in line with national and local regulations, and will monitor change.

The risk of child abuse is rated as low. However, a child protection code of conduct will be in place which all contractors and sub-contractors implementing the PBG, and potentially having contact with children, will need to agree to and sign. In line with DFAT requirements, contracts will detail the need to take care to avoid actions with children that may constitute poor practice or potentially abusive behaviour. These include avoiding being alone with children; avoiding inappropriate physical and verbal contact; being aware of situations that may present risks and managing them; not acting in ways that shame humiliate, belittle or degrade children or which favour a particular child; not possessing child pornography; not hiring children for work which is inappropriate; not taking photos or recording stories of children without informing the child of the use of the material and gaining the consent of the parent; not taking children's photographs or personal details home or providing them to unauthorised persons; and ensuring that any children and adults who are photographed are adequately clothed and not in sexually suggestive poses. Any reports of child abuse by an employee or contractor will result in instant dismissal and the incident will immediately be reported to the authorities.

A2.5. Expected Impacts of Improved PDAM Performance Under the Performance Based Grant

KIAT's GESI and CSE conceptual analysis framework is based on practical and strategic gender needs.[20] Both are addressed by the PBG Design project. While all household members will benefit from improved coverage, financial management, water quality, and efficiencies within the system, women and the vulnerable, such as people with disability, the frail, aged and young children, will especially benefit. Improved PDAM performance and service to customers will reduce the time burden for women of collecting and managing water, potentially increasing their discretionary and productive time, and will decrease their expenditure on water from vendors. Improved PDAM water service to households is also very relevant to improving the lives of those with disability and who are frail. It will increase their independence and bring health benefits. Health problems for all household members, such as diarrhoeal and skin infections, should reduce by having greater access to water supply.

The project, in particular its TA for GESI support, will help PDAMs to be more aware of, and respond to, gender equality and social inclusion issues in their organisations and will establish routine planning processes to maintain attention to GESI issues. The benefits of increasing the proportion of women in the organisation, especially in decision making roles, will be emphasised, targeted and monitored to support the longer-term outcome of increasing the proportion of women personnel, especially in decision-making roles in participating PDAMs. This addresses women's strategic needs, both for the women concerned personally, but also by bringing women's perspectives and experiences into the workplace and decision-making about its operations and service to customers. Similarly, through the TA for GESI support, awareness of opportunities to employ persons with disabilities will be raised, commitment will be increased and a strategy will be developed to improve the number of employees with disabilities. Problems in

[20]Edwards J (2018) KIAT GESI and CSE Strategy 2018-2021. Annex 9. Unpub.

accessibility for personnel and for customers will be identified under the TA and improved universal access to PDAM office buildings will be planned, designed and budgeted over the longer-term.

Developing and implementing gender responsive and socially inclusive socialisation strategies and SOPs will enable women and marginalised groups, including persons with disabilities, to gain strategic benefits by having more information about the PDAM and its services available to them which will enable them to make better-informed decisions.

The PBG Design has neither a specific poverty focus nor incentives to improve service to poor households in particular. KIAT's overarching goal is to support "Sustainable and inclusive economic growth through improved access to infrastructure for all people". Inevitably, poor households are included in the areas serviced by PDAM and are expected to benefit from improved performance. One of the four PBG main indicators is Governance which will support PDAM to be more transparent and accountable in their service provision for all households.

Annex 3 – Activity Logic Model

A3.1 Performance Based Grant Logic

A key advantage of Performance Based Grants is that the objective of the grant can be better targeted toward achieving a policy objective rather than a simple physical output.

This Activity will therefore pilot a new approach to funding for the water sector; the goal of the Activity is that the **Government of Indonesia mainstreams Performance Based Grants for water supply with funding from the national budget (APBN).**

This goal is consistent with Indonesia's decentralisation laws and will increase local government participation, investment and responsibility in the water sector, leading eventually to the sustainable management of these public utilities. It also satisfies KIAT's End of Facility Outcome #3: GOI delivers, manages, and maintains high quality infrastructure through the adoption of specific improved mechanisms for delivery, management, and maintenance.

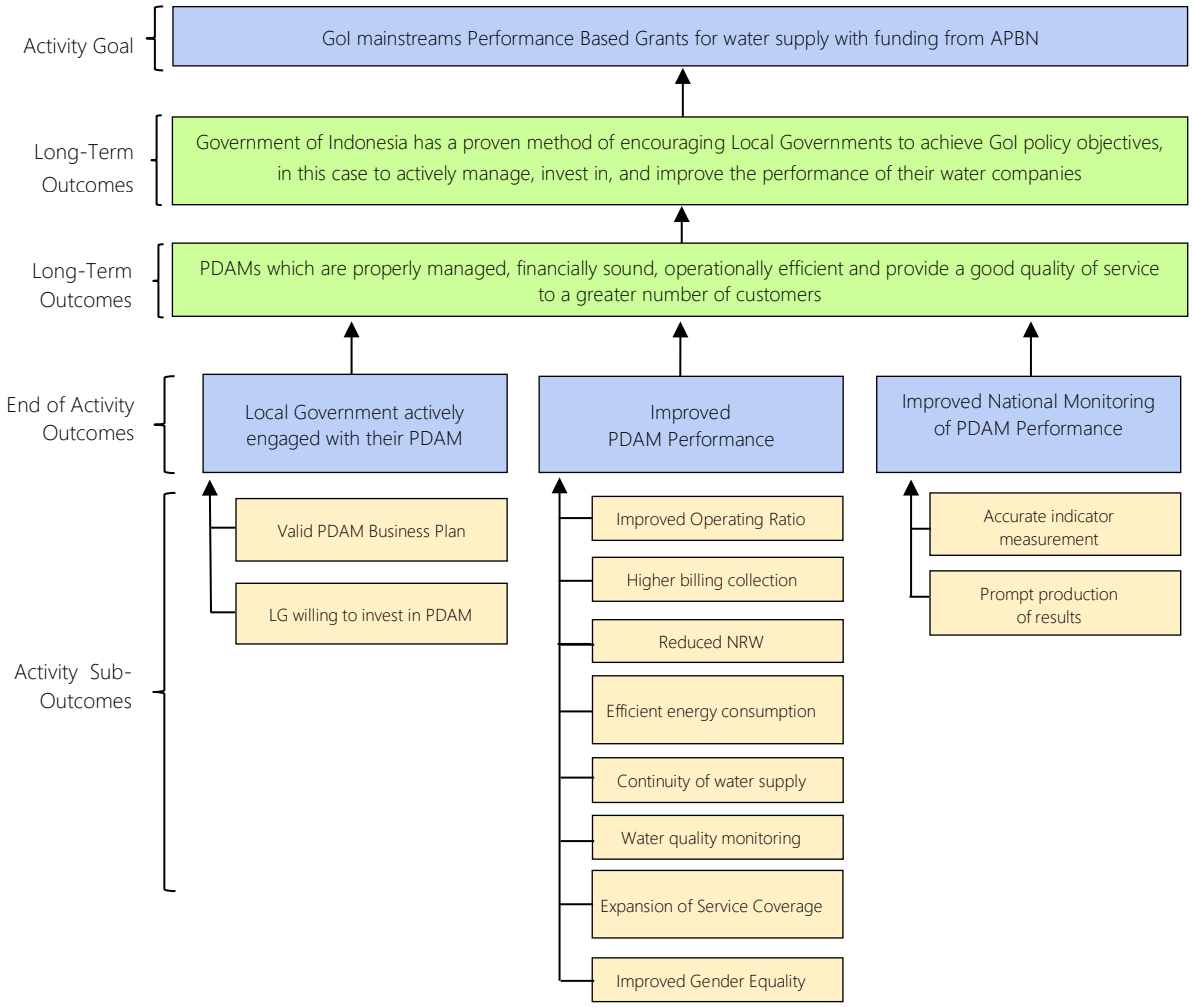

Figure 5 Key Activity Outcomes for PBG

The "theory" underpinning the Activity goal is to demonstrate[21] that when LGs have a stake in their PDAM's performance they become more actively engaged in their PDAM oversight duties. In turn this should lead to a better understanding of the investment needed not only to improve the quality of PDAMs' service but also to enable PDAMs to extend their service coverage in line with Indonesia's commitment to United Nations' SDG 6.1.

Not only will increased service coverage support the GoI commitment to SDG 6.1, but is also important for DFAT as it will contribute to Outcome No. 5 (access to water and sanitation) under DFAT's Performance Assessment Framework (rev.3.1) for Indonesia.

The expected long term outcomes for the Water Hibah PBG are:

(i) Government of Indonesia has a proven method of encouraging Local Governments to achieve GoI policy objectives, in this case to actively manage, invest in, and improve the performance of their water companies.
(ii) PDAMs which are properly managed, financially sound, operationally efficient and provide a good quality of service to a greater number of customers.

There are three primary end-of-activity outcomes for the Water Hibah PBG:

(i) PDAMs which have improved their performance;
(ii) Local Governments which are actively engaged with their PDAMs;
(iii) Improved national monitoring of PDAM performance.

Achievement of these end-of-activity outcomes will be determined by the success of the sub-outcomes explained further below.

Activity Outcome 1: Improved PDAM Performance

While the government reports 60% of all PDAMs as being "healthy" this covers a very wide range of performance and gives a misleading impression. Those selected for the PBG pilot are all "healthy" yet they make no profit, with an average Operating Ratio of 1.0. On average they only provide a service coverage of 20% compared to the government's target of 100%. Selected for the PBG pilot based on their high level of NRW, they have an average NRW of 41%, with a third of them reporting NRW of between 45% and 50%, while the true level of NRW is expected to be even higher.

There is clearly scope for a significant improvement in the performance of these 15 PDAMs and the PBG will reward such improvement by focusing PDAMs on being more publicly accountable, improving their finances, reducing water losses and increasing water sales, saving energy, and improving the quality of their service.

Key PDAM performance sub-outcomes, which will be measured and eligible for grant rewards, are:

1. **Improved Operating Ratio**
2. **Higher billing collection effectiveness**
3. **Reduced NRW**
4. **Efficient energy consumption**
5. **Continuity of water supply**
6. **Independent water quality monitoring**

[21] This is a demonstration project. Australia has achieved significant success in previous demonstration projects including the:
- Water Hibah Output Based Grant: mainstreamed by GoI in 2015 with a budget allocation of over AUD 250 million in four years, it is now due to continue for a further 5 years, using the hibah mechanism to increase water supply coverage; and
- Eastern Indonesia National Roads Improvement Project – EINRIP:GoI has adopted higher standards for road construction and the World Bank is planning to implement the technical audit component employed in EINRIP.

The first four sub-indicators all contribute to improving PDAM financial sustainability, while the remaining two relate to the quality of PDAM service. Improvements in these sub-indicators will each be rewarded with grant payments, but the total grant earned will not exceed the LG's initial equity investment in PDAM. The largest grant allocations are for Operational Efficiency and Quality of Service, reflecting the significant investment required to improve them. The grant earned will be based solely on the improvement in performance, not related to the investment required to achieve that improvement.

Expansion of Service Coverage

Although the pilot PBG is not specifically aimed at improving service coverage it is anticipated that this will be a sub-outcome. The water saved through reducing NRW must be sold by PDAM, not used to reduce production. While PDAMs which have unsatisfied demand from existing customers (Magetan, Kerinci, Lebak) are more likely to use the water saved to satisfy them, others (Banda Aceh, Cirebon) will need to sell it to new customers. It is also possible that some PDAMs will use the grant for Continuity of Supply not to improve the service for existing customers but to provide a continuous supply for new customers. The improved financial performance of PDAMs may also encourage them to expand their service coverage.

Improved Gender Equality and Social Inclusion in PDAM

Results from a small KIAT gender survey confirm that women are under-represented in management positions in some PDAMs in comparison with their representation in the PDAM as a whole, and that none of the PDAMs employs any people with disability. Although it is not proposed to award a grant for any improvement in gender equality in the PBG PDAMs, it will be monitored and reported. The gender performance assessment will focus on the gender ratio of middle and senior PDAM management. In addition KIAT will provide Technical Assistance to promote a culture of gender equality and social inclusion in PDAMs.

Achievement of Activity Outcome 1 will only make Performance Based Grants interesting to GoI if the performance indicators are clear and objective, and can be measured by BPKP. Successful implementation of the pilot PBG assumes the following:

- **Grant values offered as a reward are attractive to the LG/PDAM;**
- **High quality Technical Assistance is provided to help the PDAMs make the right choices about how to improve their operational efficiency and achieve continuity of supply;**
- **PDAMs have the technical ability and management motivation to improve performance.**

Activity Outcome 2: Local Government Actively Engaged with their PDAM

The key Local Government engagement sub-outcome, which will be measured and eligible for grant reward, is:

Valid and Approved Business Plan

MoHA regulations require PDAMs to have a current Business Plan approved by the Head of Local Government, but despite this 57% of PDAMs do not have one. By awarding a grant to PDAM for having a current Business Plan, approved by the Head of the LG, the PBG aims to reinforce to both LG and PDAM the importance of PDAM Business Plans.

LG willingness to invest in their PDAM

It is not proposed to award any grant for a LG's willingness to invest in their PDAM, which is a condition for entry to the PBG. Nevertheless, it is an important sub-outcome, indicating a LG's confidence in their PDAM, that they are willing to invest knowing that the grant reward is dependent on an improvement in PDAM's performance, and that the grant value will be less than their investment.

Financing for public water supply in Indonesia is changing. In the past central government financed the development of the main elements of local water supply infrastructure and then "gave" the assets to local government whose PDAM took on responsibility for the operation and maintenance. Some of the shortcomings of this approach were:

Ownership was often never transferred to local government;

Poor quality construction led to high maintenance costs and short asset life;

Operating manuals and construction drawings were often not handed over to the operator;

A mentality developed at local level that central government would always provide, eventually.

Central government (APBN) funding for the water sector is now falling far short of the level which the sector needs and PDAMs have to be encouraged to seek alternative sources of finance. Some finance should be available from Local Governments, usually through equity injection *Penyertaan Modal Pemerintah* (PMP), as is required for the Performance Based Grant, but non-government sources of finance are also becoming essential.

Local Governments will also have to start implementing MoHA regulations, specifically on authorising a Full Cost Recovery tariff, or providing a subsidy to PDAM if they do not, and on subsidising the base tariff for the poorest customers.

More immediately, the PBG will encourage LGs to improve their oversight of PDAMs and to provide the funds not only for PDAMs to invest in their infrastructure, but also for their local Health Agencies to carry out their statutory duty to routinely check on the quality of the water distributed by PDAM.

Success of this outcome assumes the following:

- **LGs are willing to accept the risk of not receiving the grant reward if their PDAM's performance fails to improve;**
- **Heads of Local Governments can persuade their local councilors (DPRD) to agree to the equity injection for PDAM;**
- **LGs are able to inject the equity into PDAM in a timely manner.**

Activity Outcome 3: Improved National Monitoring of PDAM Performance

Key national monitoring of PDAM Performance sub-outcomes are:

1. **Accurate indicator measurement**
2. **Prompt production of results**

There is no grant provided for improvement in the national monitoring of PDAM Performance.

A number of shortcomings in the present national system for monitoring PDAM performance have been identified in Annex 4 and these are summarised as follows:

- The BPKP Technical Evaluation is based on largely un-audited technical data from PDAM;
- The data reported by BPKP for water quality, continuity of supply and water pressure is unsatisfactory;
- No information on electricity consumption is reported, despite energy efficiency being a government priority;
- The BPPSPAM report is published nearly 12 months after the end of the year being reported, such that the data is on average 18 months old;
- The calculation and scoring cannot be checked from the data presented in the BPPSPAM report;
- Obvious errors are sometimes found in the report;
- Essential information such as the annual volumes of water produced, distributed, and sold are not reported and can only be inferred.

KIAT proposes to address these shortcomings through the Program Implementation Consultant who will develop central government capacity in readiness for mainstreaming the PBG and for improving PDAM performance monitoring. Support will be provided for DGHS (user), BPPSPAM (reporter), and BPKP (auditor).

The Activity will also use the PBG Verification team to check PDAM's calculation of the financial and operational indicators and ensure that these are being made correctly, in compliance with MoHA regulations.

Success of this sub-outcome is based on the following assumptions:

- **That the stakeholders understand the importance of credible PDAM performance monitoring;**
- **That central government stakeholders are receptive to the idea that PDAM performance monitoring needs to improve.**

Annex 4 – Detailed Description of Investment Interventions/Activities

A.4.1. Input and Output-based Grants for the Water Sector

The Indonesian Government (GoI) understands that more investment is required in the water sector, not only to increase service coverage, but to improve the quality of service. One option for channelling funds to LGs is the Special Allocation Fund *Dana Alokasi Khusus* (DAK), an input based mechanism. Under the DAK the LG receives the grant before implementation and is required to report on the output. However, failure to properly account for the funds does not usually affect future DAK allocations and the DAK is widely recognised as unsatisfactory because of this lack of accountability.

Following a pilot output-based aid project by the World Bank in Jakarta and Surabaya in 2007, the Australian funded Water Hibah program developed the concept of output-based grants for the Indonesian water sector in 2009. Local Governments were paid for each new water supply connection installed for a low income household. The aim was to induce PDAMs to use their surplus production capacity to extend their service and supply more domestic customers, and by 2016 450,000 new connections had been installed. GoI began mainstreaming these output-based grants in 2015 using central government funds, with approximately 800,000 connections installed by 2019.

However, through its success, the output-based Water Hibah is reaching the limits of what can be achieved, with many PDAMs' production capacity now fully utilised and increasing investment required by PDAMs to achieve any further increase in service coverage. Other issues with the output-based grant have been the difficulty of ensuring that quality of service to existing customers was maintained, while the inclusion of poverty targeting required comprehensive baseline and verification surveys.

GoI is seeking a different mechanism that will reward sustainability as well as growth, and has requested the design and piloting of a Performance Based Grant (PBG) which might have wider application, better outcomes, and simpler implementation than the DAK. Ultimately PBGs are expected to be mainstreamed using central government funding (APBN), to complement, and eventually replace, the APBN funded, output-based, Water Hibah.

A.4.2. NUWSP Performance Based Grant

The Indonesian National Urban Water Supply (NUWAS) Framework was developed as a framework for implementation of the national urban water supply platform. The associated National Urban Water Supply Project (NUWSP), which is partially World Bank-financed, is designed to support GoI in improving PDAM performance and encouraging PDAMs to access non-government sources of finance.

The NUWAS Framework provides for three types of grants for PDAMs: seed grants, matching grants and performance-based grants. A Self Assessment Tool is used to determine which type of grant each PDAM is eligible for. NUWSP is expected to commence implementation in 2020 with funding initially committed to seed grants and matching grants. Up to USD 25 million may subsequently be made available for a NUWSP PBG which is presently expected to focus on Non Revenue Water and Energy Efficiency only.

A.4.3. Water Hibah Performance Based Grant

DFAT has made a general agreement to support a pilot PBG through the existing Water Hibah program. However, the NUWSP PBG is presently planned to focus on Non Revenue Water and Energy Efficiency only, whereas DFAT

envisages a more general and widely applicable PBG aimed at fostering a sustainable water supply service. The Water Hibah Performance Based Grant (PBG) is intended as a reward for a verified improvement in PDAM performance in: governance, financial sustainability, operational efficiency and service to customers.

LGs will have to commit to an agreed amount of investment before being offered the PBG, with KIAT seeking to use the grant to leverage the LG's equity injection into PDAM by up to 15%. Because this grant is not output-based, it will not be directly related to the investment PDAM has to make to improve their performance. The grant earned may be significantly less than the LG's investment if PDAM's performance fails to improve.

The grant value for each performance sub-indicator has been set as a percentage of the cost or benefit to PDAM, wherever possible. PDAM will directly receive the full benefits from saving NRW through increased water sales, or from improving Energy Efficiency by reduced energy costs. The PBG Activity provides an additional financial incentive, as well as the high quality Technical Assistance that KIAT will provide to participating PDAMs.

The Water Hibah PBG pilot activity aims to encourage a verifiable improvement in the level of service provided by PDAMs to their customers and to promote sustainable operations through improved LG and utility governance. A key objective of the PBG is the engagement of the LG, as owner of the PDAM, in the active management of their PDAM.

A.4.4. PDAM Performance Assessment

Ministry of Home Affairs Regulation No. 47/1999 introduced a system for categorising PDAM performance based on 3 Indicators (Financial, Operational, Administration) each consisting of 10 sub-indicators. Every PDAM in Indonesia is audited annually by the State Audit Agency (BPKP), which collects the data and assesses each PDAMs' performance based on the requirements of both MoHA and the Ministry of Public Works' BPPSPAM, although only the latter compiles and publishes the results.

PDAM financial statements are first audited by an independent public accounting firm (KAP) before BPKP makes their own Financial Evaluation. The Technical Evaluation is supposed to be in the form of a "self-assessment" by PDAM; there is no requirement to have an independent technical audit. To assess PDAM performance BPKP calculates various ratios and percentages so that they can score and rate each PDAM.

BPPSPAM produces an annual report on PDAM Performance in which they compile data from the BPKP reports on individual PDAMs so that they can compare them. BPPSPAM uses four weighted Performance Indicators: Financial (25%), Service (25%), Operational (35%) and Human Resources (15%), which are comprised of 18 sub-indicators.

BPPSPAM provides a simple result of their assessment, assigning each PDAM to one of three categories: Sick (<2.2), Unhealthy (between 2.2 and 2.8) and Healthy (>2.8). Out of 374 PDAMs in 2017, 14% were rated as Sick, 26% as Unhealthy and 60% as Healthy. The twenty best PDAMs achieved scores between 3.81 and 4.39, while the worst were below 2. For each PDAM BPPSPAM shows their scores over the last 3 years, allowing an easy assessment of progress.

A number of shortcomings in the national system for monitoring PDAM performance have been identified and these are summarised as follows:

- The BPKP Technical Evaluation is based on largely un-audited technical data from PDAM;
- The data reported by BPKP for water quality, continuity of supply and water pressure is unsatisfactory;
- No information on electricity consumption is reported, despite energy efficiency being a government priority;
- The BPPSPAM report is published nearly 12 months after the end of the year being reported, such that the data is on average 18 months old;

- The calculation and scoring cannot be checked from the data presented in the BPPSPAM report;
- Obvious errors are sometimes found in the report;
- Essential information such as the annual volumes of water produced, distributed, and sold are not reported and can only be inferred.

KIAT proposes to address these shortcomings through the Program Implementation Consultant who will develop central government capacity in readiness for mainstreaming the PBG and for improving PDAM performance monitoring. Support will be provided for DGHS (user), BPPSPAM (reporter), and BPKP (auditor).

A.4.5. PBG Performance Measurement Framework

PBG Indicators and sub-indicators

1. Governance

PDAM Business Plan

2. Financial Sustainability

Operating Ratio

Billing Collection Effectiveness

3. Operational Efficiency

Non Revenue Water

Energy Efficiency

4. Quality of Water Service Delivery

Continuity of Supply

Water Quality

Following extensive discussions between KIAT and GoI stakeholders the following set of high-level performance indicators were determined as the most relevant and provide the basis for the Performance Measurement Framework:

1. Governance
2. Financial Sustainability
3. Operational Efficiency
4. Quality of Water Service Delivery.

The PBG Design Consultant has had discussions with stakeholders about which of a wide range of potential sub-indicators were the most relevant and should be used to measure the performance under each high-level indicator. Their views have been taken into account in the selection of the final batch of sub-indicators.

The philosophy developed during the PBG design, reflecting the views of stakeholders, was that the number of sub-indicators should be kept to a minimum. BPPSPAM's performance measurement involves 18 sub-indicators while MoHA's has 30, in contrast the PBG proposes to use 7 sub-indicators for calculating the grant.

As far as possible, no specific aspect of PDAM performance should be measured by, or reflected in, more than one of the chosen sub-indicators. However, it is not possible to isolate the effect of improved NRW or energy efficiency,

for example, from improving PDAM financial performance. Conversely, improving service quality must be expected to increase costs, also impacting financial performance.

Selection of Sub-Indicators for calculating the PBG

Stakeholders have made clear that the performance assessment for the PBG should not be subjective. There is a particular concern about having to satisfy auditors that the grant payments have been properly earned, that the grant values are related to real costs or benefits, and that the improvement in performance is measurable and verifiable.

While most of the selected sub-indicators are already reported by BPKP and BPPSPAM, Energy Efficiency is not, with only the energy cost per m^3 reported. It is expected that BPPSPAM will revise the requirements under BPPSPAM No. 002/KPTS/K-6/4/2010 to include Energy Efficiency in future BPKP audits, since it is a stated priority for DGHS. Most of the selected sub-indicators also require improvement in the quality of the data used to calculate them and/or the method of calculation.

Source of data for calculating the PBG

Discussions with stakeholders about performance data focused on the future NUWSP PBG and, after the Water Hibah PBG, the expected mainstreaming of PBGs using central government funding. The pilot PBG is therefore structured to be consistent with BPKP and BPPSPAM data to facilitate eventual PBG mainstreaming.

The Water Hibah PBG will have a Baseline and Verification (B&V) team visiting PDAMs to establish a baseline and subsequently measure and check performance data, avoiding the 12, or more, months delay which BPPSPAM reporting currently suffers from. The B&V team will also verify PDAM data and calculations, avoiding a major shortcoming with the data produced by BPKP for BPPSPAM.

The BPKP individual PDAM Performance Evaluation report is recommended as the source of data for evaluating performance where there is no B&V Consultant available, or for indicators which the consultant cannot measure. The BPKP reports are:

- Official GoI reports from the State Audit Agency;
- Provide 60 to 90 pages of comprehensive information and data about each individual PDAM;
- Available 6 months earlier than the BPPSPAM report.

It is expected that BPKP would be responsible for verifying a mainstreamed PBG program as it has already been given responsibility for verification for the mainstreamed Water Hibah.

A.4.6. PBG Performance Sub-indicators

Governance - PDAM Business Plan

PDAMs are required to have a Business Plan by MoHA, now stipulated in PerMenDagri No.118 of 2018. Despite the regulation, 57% of PDAMs do not have a current business plan. During the 5 years 2012 to 2016 an average of 46.4 Business Plans were made by PDAMs each year, in 2017-18 this fell to 6.5 per year.

The PerPres 29 program, which ran from 2009 until it expired in December 2014, offered PDAMs access to central government guarantees and interest rate subsidies for commercial bank loans. In order to enter PerPres 29 PDAMs had to have a current Business Plan. The previous DFAT infrastructure facility helped more than 20 PDAMs prepare business plans with the aim of gaining access to these loans. After 5 years, in July 2019, it was replaced by PerPres 46/2019, however this expires in December 2022 leaving little time for PDAMs to take advantage.

PDAM Business Plans are usually drafted in consultation with Bappeda about the level of investment planned, advice from the Supervisory Board, and public consultation. They then have to be approved by the Head of the LG and have a 5 year validity.

During their annual audit BPKP checks whether PDAM is following their Business Plan, but as with the 3Ks service quality requirement (Water Quality, Quantity, and Continuity of Supply), there is no sanction for PDAMs which fail to comply. By awarding a grant to PDAM for having a current, approved, Business Plan the PBG aims to reinforce to both LG and PDAM the importance of PDAM Business Plans, which are a prerequisite for PDAMs seeking commercial financing.

Governance - Gender Equality and Social Inclusion in PDAM

KIAT has conducted a small PDAM gender baseline survey and initial results confirm that women are under-represented in management positions in some, but not all, PDAMs in comparison with their representation in the PDAM. KIAT will provide a GESI TA for the participating PDAMs and the M&E will include a gender performance assessment which will focus on the gender ratio of middle and senior PDAM management, the employment of people with disability, and improved accessibility in PDAM offices. Workplace culture and attitudes to gender and disability diversity will be measured through attitudinal baseline surveys and workplace policies and strategies developed to address workplace discrimination.

Financial Sustainability - Operating Ratio

Operating Ratio (OR) is defined by BPPSPAM as expenditure divided by revenue, such that an OR < 1.0 is desirable, with revenue exceeding expenditure. The Operating Ratio is seen as the single most important indicator of PDAM financial health as it is affected by every change in expenditure and revenue. The OR may be improved by reducing expenditure or increasing revenue, so that reducing NRW (increasing water sales) and improving Energy Efficiency (reducing energy cost) should both improve it. While an increase in tariff will immediately improve the OR this is often difficult for PDAM to achieve. There is an upper limit to the Operating Ratio because PDAMs find that they are unable to get approval for a tariff increase if they are perceived as already making a healthy profit. This is supported by an analysis of 40 "good" PDAMs which found that their average OR improvement over 3 years was 0.000.

Financial Sustainability - Billing Collection Effectiveness

Billing Collection Effectiveness is important for PDAM cashflow and in the best PDAMs is very high, in some cases exceeding 95%. PDAMs participating in the PBG pilot will be rewarded for improving their Billing Collection Effectiveness Index (CEI). The methodology for reporting Billing Collection Effectiveness is defined in MoHA regulations but often not followed by PDAMs, who will be shown by the TA consultant how to calculate it correctly.

Operational Efficiency - Non Revenue Water

Historically NRW was measured as the difference between the volume of water distributed and the volume of water billed, divided by the volume distributed, expressed as a percentage. Also known as the percentage of system input volume (% SIV), this is still the method used in Indonesia.

Over the last 5 years NRW calculated from the total volume of water distributed and sold by all PDAMs in Indonesia, has increased slightly, from 32.6% to 33.2%. However, the measurement of NRW in Indonesia is notoriously inaccurate. In selecting PDAMs for the pilot PBG the Consultant has adopted a minimum reported NRW of 25% SIV.

Because of the limitations on time and investment for the PBG pilot it is anticipated that PDAMs would select a defined distribution zone in which to reduce NRW. The size of the zone might need to be between 5,000 and 10,000 connections, depending on the existing level of NRW, in order for PDAM to be able to have a chance of earning the

average grant allocation for NRW by reducing physical losses. The volume of NRW saved would be calculated from the data for this zone, not from data for the whole distribution network.

Commercial, or non-physical, water losses are substantial in most PDAMs and are sometimes perceived as being easier to reduce. Because commercial losses represent water that is used, not lost, the interventions to reduce commercial losses are different and do not necessarily lead to more water being available for PDAM customers, although reducing commercial losses must increase the volume of water sold by PDAM.

Operational Efficiency - Energy Efficiency

PDAM Energy Efficiency (EE), like NRW, is a priority for GoI, but despite the importance attached to improving EE the required data for monitoring it is not collected or reported by BPKP. Nor is EE analysed or reported by PDAMs, indeed many do not even monitor their own electricity consumption.

BPPSPAM reports a figure for "Energy Cost" (Rp/m^3) which shows the annual cost PDAMs incur for all forms of energy in terms of the volume of water produced, averaging about 450 Rp/m^3. A limit has been set of a minimum energy cost of Rp 300 /m3 for a PDAM to be eligible for the PBG Energy Efficiency grant, although this is not one of the Entry Criteria for the PBG pilot.

Reactive Energy

Reactive power is the power which magnetic equipment (transformers, motors, relays) uses to produce the magnetising flux. Reactive power consumption can be eliminated by installing capacitor banks.

Reactive power under PLN Industrial Tariff I3 is charged at Rp 1114.74 kVARH

The aim of the EE grant is to **reduce the energy consumption required for a given output**, specifically the energy required to deliver a unit volume of water. This includes Reactive Energy consumption which many PDAMs have not yet addressed.

An Energy Audit will be provided through the TA consultant to help each PDAM determine how and where the investment available for improving EE will have most impact. The Energy Audit will also establish a baseline Energy Efficiency Index. Improvements in energy efficiency can typically be made in: Lighting Systems, Air Conditioners, Raw Water Pumps, Air Compressors, Filter Backwash Pumps, Treated Water Pumps. The payback period on many energy efficiency measures is between one and two years, so PDAMs should need little incentive to make such improvements.

Quality of Water Service Delivery – Regulations

The 3Ks (Water Quality, Quantity, and Continuity of Supply) are important service indicators and PDAMs are supposed to comply with the following regulations:

- PerMenKes No.492 / 2010 which establishes the requirements for Drinking Water Quality;
- PerMenDagri No.71 / 2017 covers the calculation of Drinking Water Quantity Article 1:10 "Standard of Basic Drinking Water Needs is 10 m3 / family head / month or 60 litres / person / day".

- PP No.122 of 2015 on Drinking Water Supply Systems Article 4: (5) "Continuity of flow of drinking water as referred to in paragraph (2), guarantees flow for 24 hours per day."

Quality of Water Service Delivery – Continuity of Supply

Despite the legal requirement in reality very few PDAMs manage to provide a continuous supply of water to all customers. This is largely the consequence of a national failure to provide adequate storage in water distribution systems, often coupled with under-sized distribution mains, and insufficient production. No credible data on the continuity of water supply is collected; BPPSPAM reports a figure for "Service Operating Hours", but this is pump operating hours, it does not reflect what proportion of customers receive a continuous supply of water.

Maintaining a continuous supply of water, and thereby a permanently pressurised distribution system, is seen as the best way to improve water quality. There should then be no significant deterioration in the quality of water from that supplied by the Water Treatment Plant to that delivered to the customer. In addition to improving customer service, a continuous supply should lead to an increase in water sales.

The Program Implementation Consultant will procure specialised equipment which will continuously monitor water pressure at selected locations in the distribution system.

Quality of Water Service Delivery – Water Quality

Ministry of Health Regulation PerMenKes 736/2010 on "Monitoring Management of Drinking Water Quality" specifies the: responsibilities, frequency and location of sampling, and reporting of results. In addition PerMenKes 492/2010 on "Drinking Water Quality Requirements" specifies the mandatory microbiological, physical and chemical parameters which must be tested.

PerMenKes 736/2010 requires, on average for 15 PDAMs suitable for the pilot PBG, 666 tests per mandatory parameter per year. These comprise 363 "internal" (by PDAM) and 303 "external" tests. "External" tests are the responsibility of Dinas Kesehatan (LG Health Agency) and the analysis must be made by an accredited laboratory. Dinas Kesehatan, which is funded by the Local Government, often has insufficient budget allocated for discharging its duty to conduct "external" testing, required to protect public health through independent water quality monitoring.

The PBG aims to persuade LGs to fully fund their Dinas Kesehatan's water quality testing responsibilities, with the LG rewarded according to both PDAM and the Dinas' performance. Dinas Kesehatan will be permitted to use their own laboratory for testing, provided that it is properly accredited. If it is not accredited, they will be obliged to submit samples for testing to an independent accredited laboratory. The grant will only be paid where there is full compliance with the requirements of PerMenKes 736/2010 on the frequency and location of "internal" and "external" sampling, and reporting of results. Monitoring compliance will be rewarded with 30% of the grant, while the remaining 70% will be paid for compliance with the water quality requirements, as measured by 17 mandatory parameters, of PerMenKes 492/2010.

A.4.7. PBG Entry Criteria

Entry Criteria – Audit Opinions and PDAM health

The financial management of all LGs in Indonesia is assessed by independent, certified public accountants annually and their audit produces one of five opinions:

1. Unqualified (WTP);
2. Unqualified with explanation (WTP DPP);

3. Qualified (WDP);
4. Adverse (TW);
5. Disclaimer (TMP).

PDAMs are likewise subject to an annual independent financial audit, which is usually conducted by an independent public accounting firm.

The first entry criteria are that the LG should have received an Unqualified opinion (WTP) from the independent auditor, and that their PDAM should have, as a minimum, received a Qualified opinion (WDP). In fact 346 out of 509 LGs (68%) achieved a WTP opinion in 2016. While the audit results for LGs are readily available, those for PDAMs are not compiled by central government and have to be taken from the individual BPKP reports. PDAMs which received an audit opinion worse than WDP, and those which did not have their accounts audited, will be excluded from the pilot PBG.

PDAMs classified as "sick" by BPPSPAM are also excluded from the pilot PBG because these PDAMs are unlikely to be able to prioritise implementation of the type of measures required to improve their performance. The number of "sick" PDAMs has been remarkably constant over the last 5 years, and in 2016 only 16% of PDAMs were classified as "sick".

Entry Criteria – Exclusion for previous NRW and Energy Efficiency Support

The IUWASH program has been providing substantial support to selected PDAMs for improving NRW and Energy Efficiency for several years and it has been agreed that those PDAMs should not be eligible for the Water Hibah PBG, which DGHS wishes to also prioritise NRW and Energy Efficiency.

Entry Criteria – PDAM Business Plan and LG Willingness to Invest

The availability of an adequate, current (valid until 2018 at least) and approved PDAM Business Plan is an important entry condition for the pilot PBG. The BPKP report provides basic information about the Business Plan such as its availability, whether it has been agreed between PDAM and the Head of the Local Government, and the progress PDAM has made in implementing it.

The LG must state their willingness to invest in PDAM for the PBG, in addition to any existing investment in PDAM already planned for 2020 to 2021. It is anticipated that this will be in the form of an equity injection (*PMP*) which will require a *Perda* approved by the local *DPRD*. The *Perda* should commit the LG to the full investment required to implement the PBG.

PDAM Support from other Programs

PDAMs which are scheduled for support under NUWSP Component 1 are not eligible for the PBG pilot.

The Water Hibah Output-Based Grant program, which ended in 2017, involved working with over 70 PDAMs, most of whom performed well. These LGs and PDAMs understand how the Water Hibah works and are eligible to receive support under the PBG pilot.

Additional Criteria for Participation in the pilot PBG

The initial grant simulation showed that, with 15 PDAMs participating in the pilot activity, the grant would be Rp. 10 billion each, and that for:

- a large PDAM (Semarang, with 165,000 connections) the grant would amount to Rp 23,500 / connection;
- a small PDAM (Kab. Tanah Laut, with 4,300 connections) the grant would amount to Rp 709,000 / connection.

PDAM size

Consultations with stakeholders suggested that the pilot PBG should focus on PDAMs with a minimum of 30,000 connections and maximum of 50,000 connections. However, the long list obtained using these criteria was insufficient. It is therefore proposed that the following limits be placed on the size of PDAM eligible for the PG pilot activity:
15,000 > Service Connections< 75,000

PDAM NRW

Since GoI is prioritising the reduction of NRW, it was initially proposed that another criteria should be that PDAM is reporting above average NRW (34.2%). However, coupled with the limits on the number of service connections this did not yield enough PDAMs for the long list and the requirement was lowered to be at least 30%.

Performance Limits

Description	Operating ratio	Cash Ratio	Billing Collection Effectiveness	Service Coverage	Domestic Water Consumption	NRW	Staff per 1000 customers
Average of 15 "best" PDAMS	0.81	16.30	94.7%	70.4%	19.41	24.3%	3.42
Average of 15 "average" PDAMS	1.28	14.15	82.8%	45.3%	14.66	27.0%	7.61
Average of 15 PBG suitable PDAMS	1.00	23.50	91.0%	20.4%	16.12	42.0%	5.87

Description	Average Tariff (Rp/m3)	Profit margin	Energy cost (Rp/m3)	Real Production Capacity (Rp/m3)	Total Customers	Customers/l/sec production
Average of 15 "best" PDAMS	4,426	15.7%	348	1,769	113,052	64
Average of 15 "average" PDAMS	4,121	-27.8%	449	122	13,956	115
Average of 15 PBG suitable PDAMS	3,969	0.9%	333	519	39,197	75

Table 9 PDAM Performance Comparison

In addition to the Entry Criteria, for the pilot PBG the following existing performance limits are desirable for PDAMs wishing to participate in the grant program:

- Finance - Operating Ratio > 0.85;
- Finance - Billing Effectiveness < 90%;
- Operational Efficiency - Non-Revenue Water (NRW) > 25%;
- Operational Efficiency - Energy Efficiency > 15% of operating costs and / or with energy costs> Rp.300 / m^3;

- Quality of Service - Continuity of Supply < 24 hours a day service;
- Quality of Service - Water Quality < 100% compliance.

PDAM Performance Expectations

Data from the 15 PDAMs ranked highest by BPPSPAM over 3 years (2014 to 2016) was analysed and compared with that from 15 average performers. Some of the findings were as follows:

The "best" PDAMs are bigger

- The "best" PDAMs tend to be those serving a large number of customers, such that they have a staffing ratio half that of the "average" group and pay more than twice as much in salary;
- The "best" PDAMs have an average 113,000 customers, while the "average" group have an average 13,950 customers;
- Even excluding Surabaya (555,000 customers) the "best" have an average 81,442 customers, nearly 6 times as many as the "average" group;

The "best" PDAMs have greater production capacity

- Domestic water consumption is 30% higher in the "best" PDAMs, indicating unsatisfied demand in the "average" and reflecting inadequate production capacity;
- The "best" PDAMs have an average production capacity per customer 80% higher than the "average" group;
- Considering DGHS's standard of 80 connections per 1 l/s production capacity, the "best" PDAMs have 64 connections per l/s while the "average" have 115 connections per l/s.

The "best" PDAMs produce a better financial performance with the same levels of tariff and NRW

- The average tariff and NRW were similar between the two groups;
- The "best" PDAMs have an average Operating Ratio of 0.81 with only two achieving better than 0.7, proving that BPPSPAM's 0.5 target is unrealistic;
- The collection efficiency was significantly better in the "best" PDAMs averaging almost 95% compared with almost 83% for the "average". However, this was distorted by CE of 29% for Palu and 56% for Dairi - excluding these the CE for "average" PDAMs was 89% or 6% worse than for the "best";
- An improvement of 1% in Collection Effectiveness for the "best" PDAMs increases profit by 0.9 to 1.0%, while in the "average" ones those making a loss seem to benefit by a 2% reduction in loss.

Average data from 15 PDAMs suitable for the PBG pilot over the 3 years (2014 to 2016) was then analysed and compared with the “best” and “average” PDAMs, as shown in Table A.4.1. This has helped to inform the setting of reasonable performance targets for the Financial Sub-indicators.

A.4.8. Selection of candidate LGs / PDAMs

The methodology used for selecting Local Governments and PDAMs to invite to join the PBG pilot program involved screening for LGs which had received an Unqualified opinion (WTP) for their financial audit. It was found that 346 out of 509 LGs (68%) had achieved a WTP opinion in 2016.

It was established during the initial simulation of the scoring system that it was necessary to restrict the size range of PDAMs included in the PBG because the funds available were insufficient to make an impact in the larger PDAMs. In discussion with PERPAMSI the PBG was recommended to focus on PDAMs with 30,000 to 50,000 connections, but in order not to exclude too many a range of 20,000 to 70,000 connections was adopted.

Because of the importance placed by GoI on NRW those PDAMs with above average NRW were then identified. In 2016 the average NRW across all PDAMs in Indonesia was 34.2%, which yielded a long list of only 22 PDAMs. However, with three of this list being IUWASH beneficiaries, and two classed as *Sakit*, it was considered that 17 was too small a pool of candidates. By reducing the requirement to 30% NRW the long list increased to 30 PDAMs, of which four were IUWASH beneficiaries and two were *Sakit*.

The PBG grant is not considered appropriate for PDAMs classed as "*Sakit*" by BPPSPAM because their problems are usually more profound than can be addressed by the PBG program. This eliminated two PDAMs from the PBG Long List, Kab. Aceh Utara and Kab. Banyuasin. However, two other PDAMs classed as "*kurang sehat*" by BPPSPAM were retained, Kab. Muara Enim and Kab. Grobogan.

Both BPPSPAM and the World Bank made the point that those PDAMs which have previously received support through the IUWASH program should not be eligible for DFAT funded Performance Based Grants. Accordingly five PDAMs which have received IUWASH support were excluded: Kota Depok, Kab. Magelang, Kota Magelang, Kota Surakarta, and Kab Jayapura, reducing the Long List to 23 LGs/PDAMs.

The next consideration was those LGs included on the "Long List of Local Governments to Participate in NUWSP" Annex 2 Attachment 3 of the NUWSP PAD. This list was selected because they were included in various GoI Strategic Development Areas (economic special zones, tourism, connectivity development) and expected to have a high rate of urbanisation. Twelve from the NUWSP Long List were included on the PBG Long List and all of these were carried through to the PBG shortlist, except for Kab. Aceh Besar and Kab. Banyumas both of which have relatively low NRW.

No.	BPS Code	Kabupaten/Kota	Tingkat Kehilangan Air (NRW)-%	Jumlah Pelanggan (Number of Customer Connections)	Kategori Kinerja	Biaya Energi (Rp/m3)	NUWSP Comp. 1	NUWSP Long List	Water Hibah
1	1171	PDAM Kota Banda Aceh	43%	43,445	Sehat	363	v	v	v
2	1501	PDAM Kabupaten Kerinci	50%	41,379	Sehat	141		v	
3	1571	PDAM Kota Jambi	47%	69,375	Sehat	484		v	v
4	1871	PDAM Kota Bandar Lampung	49%	40,914	Sehat	543		v	v
5	3272	PDAM Kota Sukabumi	46%	21,317	Sehat	91	v	v	v
6	3274	PDAM Kota Cirebon	35%	59,193	Sehat	7		v	v
7	3321	PDAM Kabupaten Demak	36%	43,885	Sehat	552			v
8	3375	PDAM Kota Pekalongan	37%	26,569	Sehat	522	v	v	v
9	3471	PDAM Kota Yogyakarta	35%	33,387	Sehat	239		v	
10	3520	PDAM Kabupaten Magetan	36%	65,150	Sehat	98			v
11	3521	PDAM Kabupaten Ngawi	44%	33,894	Sehat	233		v	
12	3602	PDAM Kabupaten Lebak	36%	24,732	Sehat	864		v	v
13	5104	PDAM Kabupaten Gianyar	47%	55,532	Sehat	494	v	v	v
14	6308	PDAM Kabupaten Hulu Sungai Utara	43%	20,360	Sehat	425		v	v
15	7373	PDAM Kota Palopo	36%	29,675	Sehat	74		v	v

In addition to selecting these 10 LGs from the NUWSP Long List three of those with the highest NRW were retained: Kab. Gianyar, Kab. Hulu Sungai Utara and Kota Palopo. The first short list of LGs / PDAMs candidates to join the PBG program, comprised the following 15 candidates.

Source: BPPSPAM Kinerja PDAM 2017 – data 2016

Subsequently a new long list of 34 LGs / PDAMs satisfying the Entry Criteria and most of the performance limits was compiled by Dit.PSPAM (refer to Table A.4.2 below). These LGs and PDAMs were invited to join a Workshop in Yogyakarta from 29 to 31 October 2019 at which Dit.PSPAM socialised the PBG activity and invited interested LGs to apply to participate in it. It is anticipated that, out of the applications received, 15 PDAMs will be selected to participate in the pilot PBG.

No.	BPS Code	PDAM Kabupaten/Kota	Number of Customer Connections (SR)	BPPSPAM Performance Category	Business Plan	NRW	Energy Cost (Rp/m3)	Operating Ratio	Billing Collection Effectiveness
1	1108	Kab. Aceh Besar	27,110	Healthy	2015-2019	25.3%	393	0.86	91.3%
2	1302	Kab. Pesisir Selatan	21,350	Unhealthy	2017-2021	30.2%	11	0.97	73.9%
3	1303	Kab. Solok	15,039	Unhealthy	2017-2021	40.5%	22	1.04	52.4%
4	1305	Kab. Tanah Datar	17,691	Healthy	2013-2018	38.0%	205	0.99	83.2%
5	1571	Kota Jambi	72,965	Healthy	2017-2020	44.8%	509	1.01	84.0%
6	1871	Kota Bandar Lampung	42,470	Unhealthy	2017-2024	45.0%	558	1.01	88.6%
7	3204	Kab. Bandung	91,368	Healthy	2015-2019	28.0%	116	0.91	98.4%
8	3207	Kab. Ciamis	27,098	Healthy	2017-2021	29.2%	412	0.99	97.6%
9	3214	Kab. Purwakarta	26,339	Healthy	2015-2020	26.4%	257	0.95	94.9%
10	3216	Kab. Bekasi	220,196	Healthy	2014-2018	27.6%	477	0.90	97.3%
11	3274	Kota Cirebon	58,819	Healthy	2017-2021	28.6%	7	0.91	94.7%
12	3302	Kab. Banyumas	70,382	Healthy	2014-2018	37.9%	298	0.87	95.1%
13	3305	Kab. Kebumen	25,562	Healthy	2015-2019	28.4%	564	0.90	98.5%
14	3306	Kab. Purworejo	21,151	Healthy	2015-2019	29.6%	318	0.87	95.0%
15	3307	Kab. Wonosobo	87,596	Healthy	2015-2019	27.0%	14	0.94	99.1%
16	3313	Kab. Karanganyar	53,588	Healthy	2014-2018	27.4%	142	0.88	96.4%
17	3315	Kab. Grobogan	30,487	Healthy	2015-2019	32.5%	411	1.04	95.0%
18	3321	Kab. Demak	46,760	Healthy	2013-2018	29.8%	571	0.94	96.6%
19	3322	Kab. Semarang	45,132	Healthy	2014-2018	27.8%	195	0.93	94.6%
20	3328	Kab. Tegal	40,619	Healthy	2016-2020	27.3%	17	0.84	86.9%
21	3402	Kab. Bantul	28,737	Healthy	2014-2018	26.9%	796	0.96	98.0%
22	3510	Kab. Banyuwangi	51,582	Healthy	2015-2019	25.9%	147	0.75	97.7%
23	3520	Kab. Magetan	68,531	Healthy	2016-2020	34.3%	88	0.93	99.5%
24	3602	Kab. Lebak	31,350	Healthy	2014-2018	31.5%	919	1.00	88.2%
25	3672	Kota Cilegon	16,197	Healthy	2016-2020	25.8%	310	0.79	92.7%
26	5105	Kab. Klungkung	30,068	Healthy	2014-2018	25.3%	667	1.06	98.0%
27	5203	Kab. Lombok Timur	19,502	Healthy	2015-2019	28.5%	121	0.90	73.4%
28	6271	Kota Palangkaraya	16,984	Unhealthy	2014-2018	30.4%	550	1.08	41.6%
29	6308	Kab. Hulu Sungai Utara	24,117	Healthy	2015-2019	42.1%	407	1.10	97.4%
30	6309	Kab. Tabalong	19,245	Healthy	2015-2020	27.8%	713	1.34	92.4%
31	6311	Kab. Balangan	18,636	Healthy	2014-2018	32.8%	497	1.69	98.5%
32	6401	Kab. Paser	20,380	Healthy	2015-2019	34.7%	783	1.11	97.2%
33	7202	Kab. Banggai	17,429	Unhealthy	2017-2020	26.2%	92	1.04	83.0%
34	7308	Kab. Maros	15,763	Healthy	2016-2020	41.6%	538	0.98	87.3%

Source: BPPSPAM Kinerja PDAM 2018 – data 2017

Table 10 PBG pilot - candidate PDAMs

Annex 5 – Program Management and Implementation Arrangements

A5.1 Project Implementation Organisation

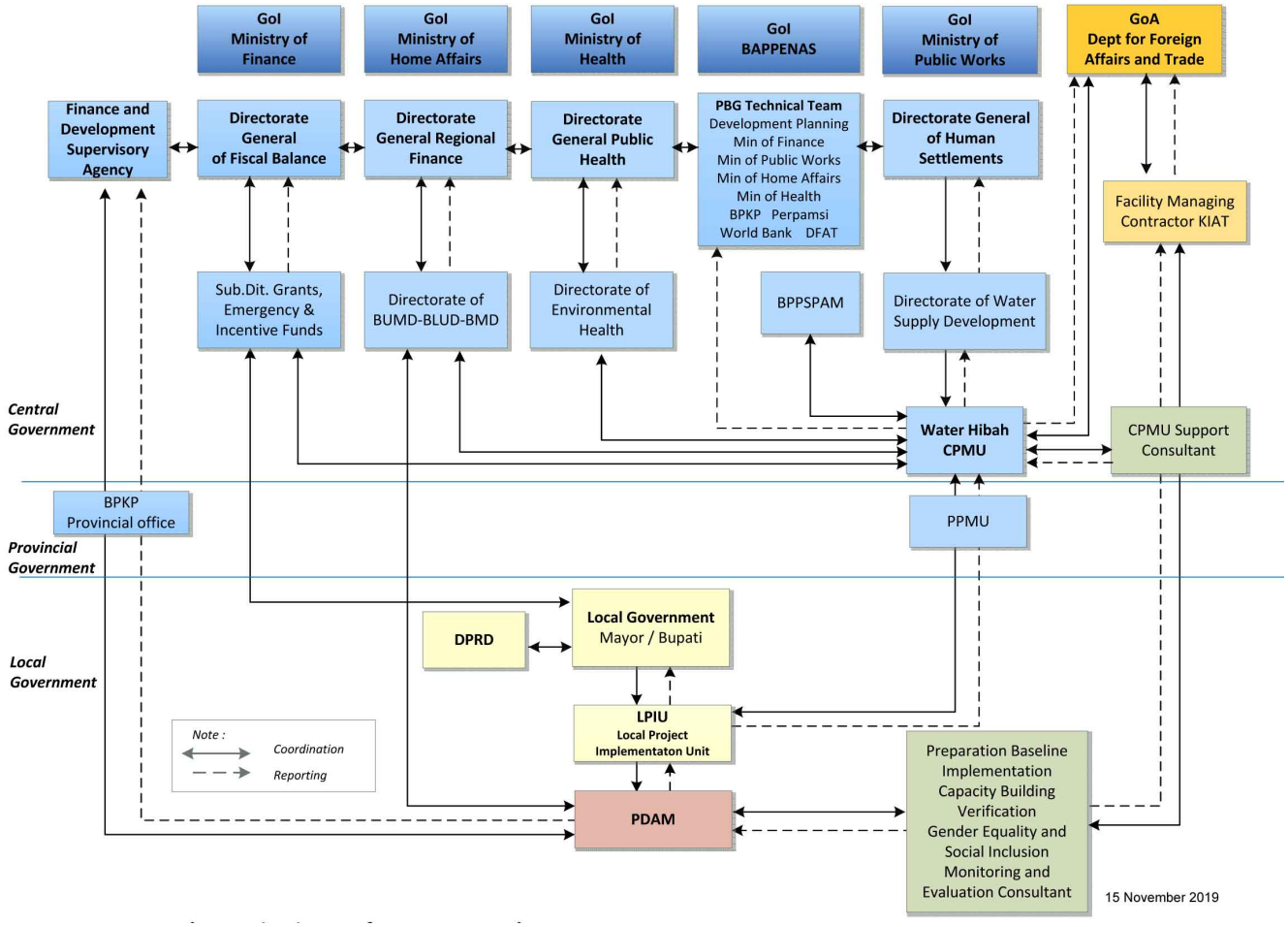

Figure 6 Structure and Organisation for Performance Based Grant

The KIAT Management Committee will be responsible for coordination and oversight of the Water Hibah Performance Based Grant (PBG). The PBG will be managed through the KIAT facility, by the Deputy Director for Water and Sanitation. The resources and budget to manage the PBG are already included in KIAT's contract with DFAT and discussions about the design and implementation of the PBG have been held with GoI and other stakeholders over the last two years. The structure and organisation of the principal organisations involved in the implementation of the PBG are shown in Figure A.5.1.

The Ministry of Public Works, Directorate General for Human Settlements (DGHS) will establish a PBG Central Project Management Unit (CPMU) composed of technical and administrative staff from: the Directorate of Water Supply Development (Dit. PSPAM), together with a representative from the Ministry of Home Affairs' Directorate General of Regional Finance, Directorate of BUMD, BLUD and BMD.

At the provincial level, the Provincial Project Management Unit (PPMU) will provide coordination with other provincial agencies (Dinas), as well as monitoring progress while the Provincial SATKER will provide technical support to the LPIU.

At the Local Government level, the LG will establish a LPIU which will work with the Satuan Kerja Perangkat Daerah (SKPD) in the implementation of the PBG activities, including progress monitoring and contract management.

A5.2 Project Implementation Roles and Responsibilities

The roles and responsibilities of the various organisations involved in the implementation of the Water Hibah PBG are summarised in Table A.5.1 and described in the following sub-sections.

Project Implementation Organisation
National Development Planning Agency
Ministry of Public Works Directorate General for Human Settlements (DGHS) Directorate of Water Supply Development (PSPAM)
Ministry of Finance Directorate General of Treasury Services Office(KPPN) Directorate of Treasury Management (DPKN)
Ministry of Finance Directorate General Fiscal Balance Directorate Finance & Non-Balance Fund Transfer –(DPTNDP)
Ministry of Health Directorate General of Public Health (KESMAS) Directorate of Environmental Health
Government of Australia Department of Foreign Affairs and Trade (DFAT) or its delegate
Provincial Governments
Local Government Satuan Kerja Perangkat Daerah (SKPD)

Table 11 Project Implementation Organizations

Project Management Roles and Responsibilities
PBG Technical Development Team Chair – National Development Planning Agency *Badan Perencanaan Pembangunan Nasional* (BAPPENAS) Members – Ministry of Public Works, Ministry of Finance, Ministry of Home Affairs, Financial and Development Supervisory Agency, Perpamsi, World Bank and KIAT. Coordination among stakeholders for planning and implementation of Performance Based Grant.
PBG Central Project Management Unit (CPMU) Responsible for Project Performance monitoring and providing technical guidance. Checking and recommending grant disbursement applications submitted by LGs, including retention of all supporting documents. Supported by the Baseline and Verification Consultant.

KPPN receives Special Account Payment Orders and issues Disbursement Instructions to Bank Indonesia. DPKN administers grant funds in the Special Account, including currency exchange, and accounts to DFAT for the funds.
Authorised Budget User Prepares On-granting Agreement (PPH) for signature by the Minister of Finance and the Head of the LG. Receives Requests for Grant Disbursement and issues Special Account Payment Orders. Monitors compliance with the provisions of the Direct Funding Arrangement.
Monitors water quality testing and reporting
Activity oversight. Selection, contracting, supervision: Program Implementation TA. Oversight of Social, Environmental and Gender Safeguards Procurement of bulk water meters and specialised equipment. Mid-term Review.
Provincial Project Management Unit (PPMU) Coordinates with the PIUs in their province. Monitors the progress of the activity at provincial level. Prepares quarterly progress reports on the PBG at provincial level.
Local Project Implementation Unit (LPIU) Members – PDAM, BAPPEDA, Public Works – Human Settlements Division, Public Works – Spatial Planning Division, Health Agency Monitors compliance with the On-granting Agreement (PPH). Coordinates with LG and PDAM in the implementation of the Activity. Monitors implementation and prepares Progress Reports. Responsible for works contracted in support of the Activity, including: procurement, supervision, management, accounting, and reporting. Signs off grant payment applications, after verification from **the Baseline and Verification Team** Ensures gender and social inclusion requirements are implemented.

Table 12 Project Management Roles and Responsibilities

In addition to these organisations a consulting firm, funded by DFAT and procured by KIAT, will be appointed to provide Technical Assistance and implementation support to the PBG, as follows:

- Preparation and Baseline
- Implementation and Oversight Support
- Verification and CPMU Support
- Capacity Development for Government and Improvement in PDAM Performance Monitoring
- Gender Equality and Social Inclusion Support
- Monitoring and Evaluation

A5.2.1 Role of Ministry of Public Works

The Ministry of Public Works' Directorate General of Human Settlements (DGHS) will be the Executing Agency for the PBG with a Central Project Management Unit (CPMU) established in the Directorate of Water Supply System Development (Dit. PSPAM), where the NUWSP CPMU is located.

The CPMU will be responsible for monitoring and reporting on physical and financial progress, and recommending to MoF the value of each grant payment to Local Government; the CPMU will be supported by Provincial Project Management Units (PPMU). The Program Implementation Consultant procured by KIAT will also support the CPMU

and PPMUs, providing technical assistance in: oversight, baseline surveys, and independent verification and monitoring.

A5.2.2 Role of Ministry of Finance

Directorate General of Fiscal Balance (DJPK)

The Ministry of Finances' Directorate General of Fiscal Balance (DJPK), through the Sub Directorate of Grants, Emergency Funds and Incentive Funds, will be the Authorised Budget User *Kuasa Pengguna Anggaran* (KPA) for the DFAT Performance Based Grant. In the case of foreign grants and loans there is also an Assistant Budget User *Pembantu Pengunna Angarran* which is the Directorate General of Debt and Risk Management.

DJPK's Directorate of Finance and Non Balance Fund Transfer *Direktorat Pembiayaan dan Transfer Non Dana Perimbangan* (DPTNDP) will receive Requests for Grant Disbursement and will issue Special Account Payment Orders to the Directorate General of Treasury's KPPN.

Directorate General of Treasury (DJPb)

The Ministry of Finances' Directorate General of Treasury (DJPb) will be responsible for administering the Special Account, disbursing the grant in line with payment instructions received from DPTNDP and accounting for the movement of funds.

DJPb's Treasury Services Office *Kantor Pelayanan Perbendaharaan Negara* (KPPN) will receive Special Account Payment Orders and issue Disbursement Instructions to Bank Indonesia.

DJPb's Directorate of Treasury Management *Direktorat Pengelolaan Kas Negara* (DPKN) will record all transactions on the Special Account and advise DFAT of the balance.

A5.2.3 Role of Ministry of Home Affairs

Directorate General of Regional Finance (Keuda)

The Ministry of Home Affairs' Directorate General of Regional Finance (Keuda), through the Directorate of BUMD, BLUD and BMD, will be invited to be a member of the CPMU. Keuda has a statutory duty to support LGs and their PDAMs in all financial matters, including: performance, PMP (investment from Pemda to PDAM), budgeting, tariff evaluation, and governance. The Directorate of BUMD, BLUD and BMD is very knowledgable about PDAMs' issues and is expected to provide an important contribution towards the success of the PBG.

A5.2.4 Role of Ministry of Health

Directorate General of Public Health (Kesmas)

The Ministry of Health's Directorate General of Public Health (Kesmas), through the Directorate of Environmental Health will monitor water quality testing and reporting.

A5.2.5 Role of Province

At Provincial Government level a Provincial Project Management Unit (PPMU) will be established with responsibility for coordinating with Provincial Government Agencies about the PBG implementation and monitoring progress, while the Provincial Satker will provide technical support to the LPIU.

A5.3 Stakeholder Duties and Responsibilities

The Central Project Management Unit (CPMU)

The Directorate General of Human Settlements *Cipta Karya* (DGHS) in the Ministry of Public Works will be the Implementing Agency for the Water Hibah PBG through a Central Project Management Unit (CPMU). The CPMU, supported by Local Project Implementation Units (LPIUs) in each participating Local Government, will be responsible for:

- Co-ordinating with relevant government agencies;
- Providing guidance to, and co-ordination with, the LPIUs;
- Monitoring the physical and financial progress of the PBG Activity;
- Preparing quarterly progress reports on the PBG;
- Checking the requests for grant payment received from LGs, the verification by the Baseline and Verification Consultant, and prepare the documentation requesting MoF to make the grant payment;
- Carrying out Monitoring & Evaluation of the PBG Activity;
- Preparing the Activity completion report.

The Provincial Project Management Unit (PPMU)

PPMU is determined based on the Decree of the Director General of Cipta Karya and is tasked with:

- Coordinating with PIUs in each LG area in managing drinking water grant programs, including preparing annual activity plans, budgeting, and auditing;
- Monitoring the progress of the physical and financial implementation of the Water Hibah Grant Activity in the LG areas in its province;
- Preparing reports on the implementation progress of the Performance Based Grant Activity for the CPMU.

The Local Project Implementation Unit (LPIU)

Implementation will be carried out by Project Implementation Units located in each of the Local Governments participating in the PBG. The PIU will comprise representatives from PDAM and various LG departments and report to the Head of the LG. The PIUs, supported by the Program Implementation Consultant, and Local Task Force (SKPD) will:

- Facilitate the Program Implementation Consultant and provide any information requested;
- Based on the Pre-Feasibility Study and Energy Audit, and other recommendations of the Program Implementation Consultant, and in agreement with PDAM, prepare a program of Works to improve PDAM performance, as measured by the sub-indicators;
- Prepare Bidding documents for the Works in accordance with GoI regulations;
- Conduct a competitive, fair and transparent bidding process for the Works;
- Supervise and manage construction of the Works ensuring that the Technical Specifications and detailed designs are adhered to;
- Prepare Progress Reports detailing physical and financial progress;
- Facilitate the Baseline and Verification team and provide any information requested;
- Following verification by the Baseline and Verification team, prepare all documentation required by the CPMU to process the grant payment;
- Facilitate the Gender Equality and Social Inclusion consultant and implement their recommendations.

A5.4 Oversight Arrangements

The implementation of the PBG will be overseen by KIAT, acting on behalf of DFAT, through its management of the Program Implementation Consultant.

To ensure synergy with other DFAT funded water and sanitation activities being managed by KIAT, while also serving to minimise overhead costs, KIAT will be responsible for ensuring that the PBG is implemented in compliance with the Direct Funding Arrangement, the Grant Agreements and DFAT requirements.

DFAT will provide support to the CPMU and the LPIUs through the Program Implementation Consultant. Funds are included for the engagement of this Consultant to work with KIAT and the GoI to ensure that the grant funds are properly applied.

Bi-annual DFAT Missions will form part of the monitoring and evaluation process and will help to ensure that the funds are used effectively and that the Activity works are sustainable.

A5.5 Project Management Manual

A Project Management Manual (PMM) for the Performance Based Grant has been drafted based on the previous Project Management Manual for the Water Hibah Output-based grant, although further consultation with DGHS is still needed. The PMM will guide the CPMU, PPMU and LPIU and includes detailed descriptions of the following:

- Activity scope and objectives;
- Criteria for the Performance Based Grant recipient LGs;
- Amount and allocation of grant funds;
- Local Government equity injection to PDAM;
- Activity management organisation;
- PBG Implementation Mechanism;
- Preparation and Assistance activities;
- Baseline survey and Verification activities;
- Performance Based Grant disbursement;
- Reporting, monitoring and evaluation.

The PMM will be referenced in the Direct Funding Arrangement between DFAT and GoI and in the on-granting agreements made between MoF's DJPK and the Local Governments.

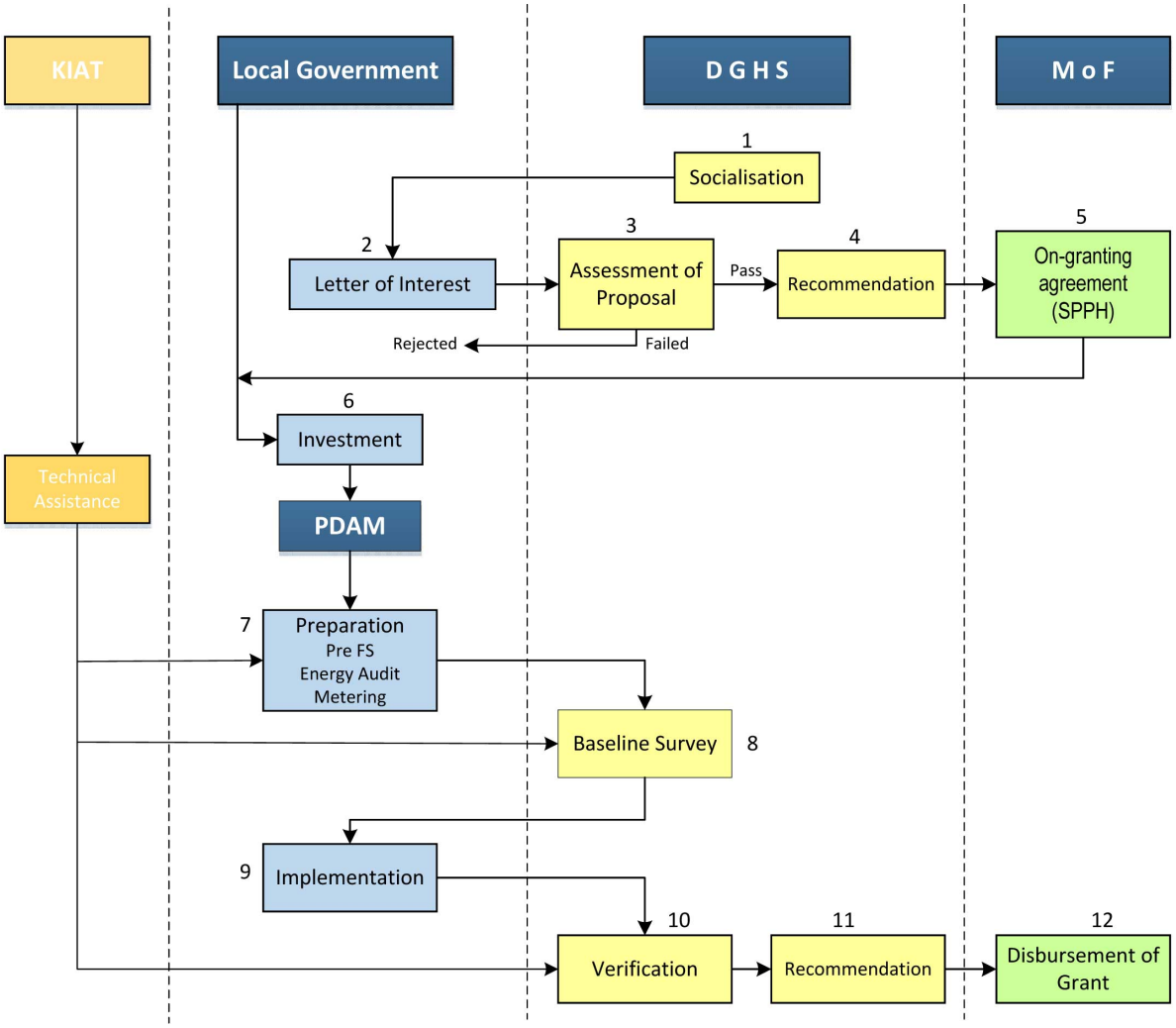

Figure 7 Performance Based Grant Implementation Process

A5.6 Fund Channelling

In November 2008 the GoI Ministry of Finance enacted regulation PMK 168/169 2008 on fund channelling to Local Governments (LG), which allowed both national and international funds to be transferred to LGs as grants. In 2009 the Australian funded Water Hibah program was designed to take advantage of this new mechanism.

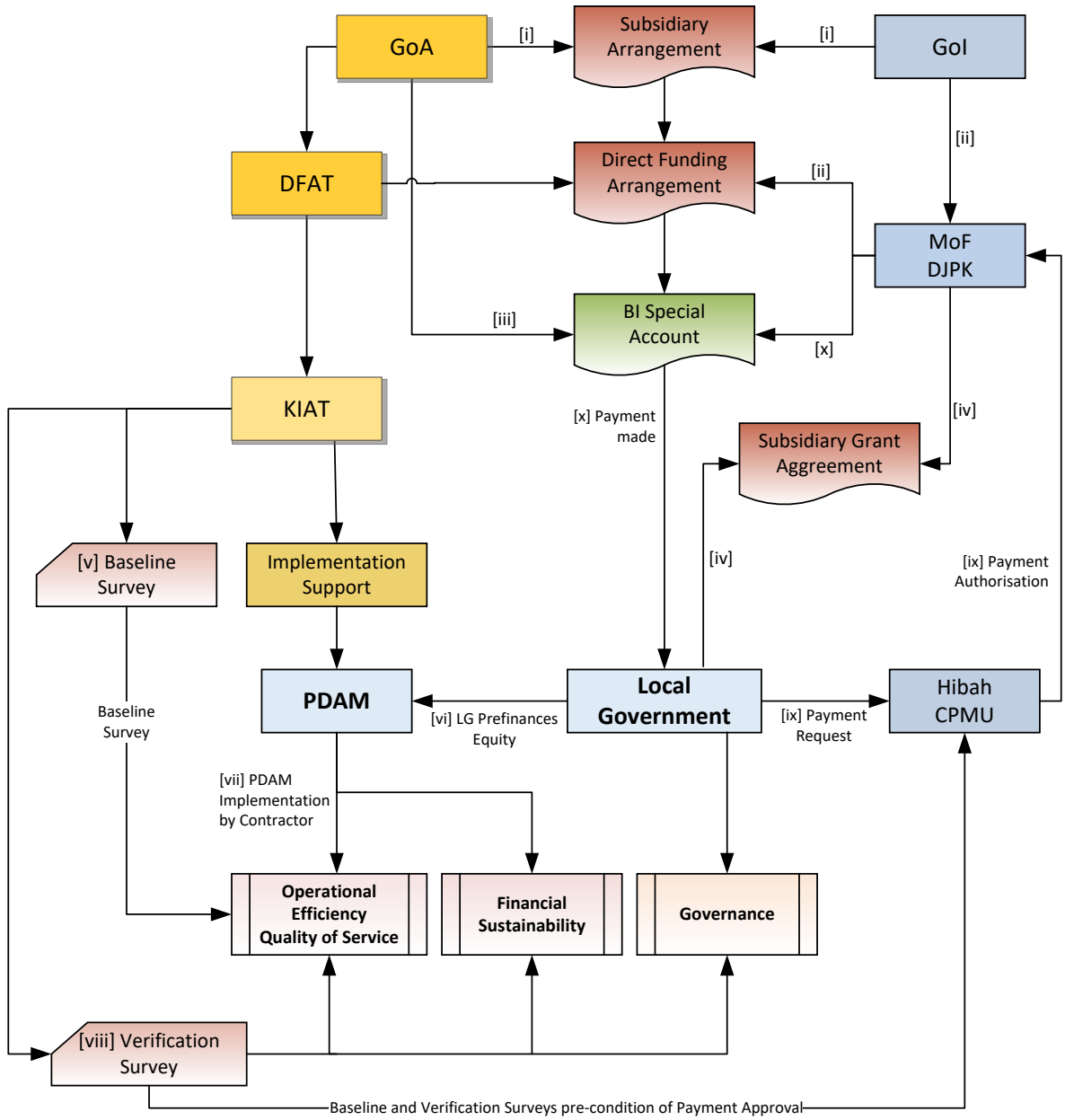

Figure 8 Flow of Funds

The Water Hibah PBG delivery modality continues to follow the Ministry of Finance (MoF) on-granting regulation, now updated with PMK 224 / 2017, to disburse grants directly to Local Governments (LGs). These channels provide accountability and have been applied successfully for the Water Hibah Output-based Grants and other DFAT funded grant programs. The Water Hibah PBG will follow the same procedure, which is described in detail in the Project Management Manual.

The main features of the process are:

a) The GoA and GoI will formalise agreement to implement the Water Hibah Performance Based Grant under an amendment to the Direct Funding Arrangement (DFA) for the Water Hibah, to be agreed between DFAT and MoF.

b) The MoF has previously established a Special Account for the Water Hibah in Bank Indonesia which holds the remaining balance of approximately AUD 16 million.
c) The funds allocated to the Water Hibah are on-budget, on the MoF budget ancillary account.
d) Following socialisation to LGs and PDAMs about the concept of a Performance Based Grant, PDAM performance issues, PDAM governance, sustainability, and gender equality and social inclusion issues, the MoF will sign on-granting agreements with selected local governments that specify the amount of the equity injection which the LG will invest in their PDAM, the maximum grant allocation for each sub-indicator and any other relevant implementation conditions.
e) Once Local Governments have signed their on-granting agreement with MoF, KIAT will provide Technical Assistance to prepare a Pre Feasibility Study, Energy Audit and support to PDAM, and will conduct a baseline survey.
f) The Local Government will take measures to improve PDAM Governance and pre-finance the works required to improve the Operational Efficiency and Quality of Service for the program.
g) The PDAM will implement the planned works, mainly through private contractors.
h) In the first and third quarters of 2021 and first quarter of 2022 KIAT will conduct a verification survey. The surveyor will gather the data needed to verify the improvement in performance under each sub-indicator, which will then provide the basis for calculating the grant payment.
i) The Local Government will submit a request for payment to the PBG CPMU in DGHS. The CPMU will cross-check the payment request with the verification survey. DGHS will submit a payment authorisation to MoF supported by the results of the verification survey and will copy the authorisation to KIAT.
j) The MoF signatory to the Special Account will make the payment and copy the payment details to KIAT. KIAT verifies that expenditure has met the conditions of the Direct Funding Arrangement and the rules of the Special Account.

A5.7 The Special Account

The Special Account for the Water Hibah was established in Bank Indonesia under the Director General's regulations which define the operating rules for the account. The grant funds are held in the Special Account in AUD. Provided that the expenditure is included in the DIPA, where it is denominated in Rupiah, MoF makes payments in Rupiah and subsequently charges them back to the Special Account using the Bank Indonesia exchange rate.

A5.8 Authorised Budget User

PMK No. 188/2012 Section 6 - states that *"the authorised/proxy budget user (KPA) for grants is DJPK"*.

The Ministry of Finances' Directorate General of Fiscal Balance (DJPK) is therefore the Authorised Budget User **Kuasa Pengguna Anggaran** (**KPA**) for the DFAT Water Hibah. DJPK's responsibilities are exercised by the Directorate of Finance and Non Balance Fund Transfer *Direktorat Pembiayaan dan Transfer Non Dana Perimbangan* (DPTNDP) which receives Requests for Grant Disbursement and issues Special Account Payment Orders.

In the case of foreign grants and loans there is also an Assistant Budget User *Pembantu Pengunna Angarran* which is the Directorate General of Debt and Risk Management.

Annex 6 – Detailed Budget/Cost Estimates

A.6.1. PBG Grant Award and Disbursement

The proposed allocation of funds for the Water Hibah PBG pilot activity is AUD 16.0 million, of which AUD 1.0 million will be used for procurement of water meters, data loggers and other specialised equipment. The remaining AUD 15.0 million indicates an average grant of Rp 9.5 billion each for 15 PDAMs. If LGs can be persuaded to leverage this by 15% the average LG investment should be Rp 10.9 billion over 3 years. The grant value, and therefore the LG investment, will be adjusted according to the size of PDAM. The Basic Grant will be awarded to smaller PDAMs with less than 45,000 service connections, while Enhanced Grants, 25% higher, will be awarded to the larger PDAMs.

The Basic Grant offered will be Rp 8 billion for the smaller PDAMs (< 45,000 connections), equivalent to an average of about Rp 245,000 per connection.. The Enhanced Grant offered will be Rp 10 billion for the larger PDAMs, equivalent to an average of about Rp 170,000 per connection.

In 2020 Technical Assistance will be provided to PDAMs for a Pre-Feasibility Study, including a water balance, and bulk water meter installation to improve NRW measurement. An energy audit will also be made to identify where efficiencies can be achieved, with any necessary alterations to electricity supply and metering. Other measures needed for baseline establishment will also be implemented, such that by the end of 2020 the baseline for all sub-indicators will be established for each PDAM. As soon as the baseline has been established PDAM can begin implementing the various performance improvement measures. Verification will take place in early 2021, mid 2021 and at the end of the year.

In common with the previous output-based grant the DFAT grant funds will be administered by the Ministry of Finance (MoF) who will sign an On-granting Agreement with each participating LG. The LG will then inject the required equity into their PDAM to fund the implementation of the PBG activities. Once the improvement in performance has been independently verified the grant earned will be transferred from the MoF to the LG.

A.6.2. PBG Grant Allocation to Indicators

Indicators	Allocation	Total Grant Funds (AUD 15 Mullion)	Basic Grant Allocation with 15 PDAM (in IDR million/PDAM)	Enhanced Grant Allocation with 15 PDAM (in IDR million/PDAM)
1. Governance	20%	IDR 142,500,000,000		
1.1 Business Plan	20%	IDR 28,500,000,000	1,600	2,000
2. Financial Sustainability	15%	IDR 28,500,000,000		
2.1 Operating Ratio	7.5%	IDR 21,375,000,000	600	750
2.2 Collection Efficiency	7.5%	IDR 10,688,000,000	600	750
3. Operational Efficiency	35%	IDR 10,688,000,000	1,600	
3.1 Non Revenue Water	20%	IDR 49,875,000,000	1,600	2,000
3.2 Energy Efficiency	15%	IDR 28,500,000,000	1,200	1,500
4. Quality of Service	30%	IDR 21,375,000,000		
4.1 Continuity of Supply	15%	IDR 42,750,000,000	1,200	1,500
4.2 Water Quality	15%	IDR 21,375,000,000	1,200	1,500
			8,000	10,000

Table 13 Grant Allocation for Performance Indicators

The allocation of grant funds between the various indicators and sub-indicators is shown in Table A.6.1 based on the assumption that 15 PDAMs will participate.

A.6.3. General Terms and Conditions of the Grant

A Grant Agreement will be made between MoF and each LG participating in the Water Hibah PBG which will include the following terms and conditions:

- Each LG's PDAM will be required to implement a program to improve their performance under all sub-indicators, except for Energy Efficiency if their energy cost is below Rp 300/m^3.
- The PBG program will be funded by LGs through equity injection into their PDAM, and they must commit to provide the agreed amount in a timely manner.
- The LG funding for the PBG must be in addition to any funding already planned for their PDAM, and it shall not be reimbursable by PDAM nor classed as a PDAM debt.
- The LG must acknowledge that PBG grants will be awarded based on their PDAM's verified performance, and will be less than the funds provided by the LG to PDAM for the activity.
- The maximum grant award for any LG will be Rp 8,000 million for those with less than 45,000 service connections and Rp 10,000 million for larger PDAMs.
- The maximum value of grant payable for each sub-indicator will be stated in the Grant Agreement, and will follow the percentages used in Table A.6.1.

However, it is recommended that some flexibility is allowed under sub-indicator 3.1 NRW, sub-indicator 3.2 Energy Efficiency and sub-indicator 4.1 Continuity of Supply. PDAMs with an energy cost below Rp 300/m^3 should be allowed to transfer the grant allocation for Energy Efficiency to either NRW or Supply Continuity.

A.6.4. Sub Indicator Valuation and Grant Calculation

The Water Hibah Output-Based Grant of Rp 3 million per new connection was established by calculating the total cost of providing a new water supply, from the Water Treatment Plant to the customer's water meter. GoI has expressed their concern about awarding Performance Based Grants which are unrelated to a justifiable valuation of the cost incurred, or benefit arising, from the verified improvement in PDAM performance.

In this section the value of the grant for each sub-indicator is shown; detailed calculations are provided in the Project Management Manual. A considerable time has been spent on valuing Non Revenue Water using different approaches in an attempt to reach consensus both internally, and externally with Dit PSPAM and the NUWSP CPMU.

Details on the amount of the grant allocation and the payment calculation are also included in this Section.

No.	Sub-indicator	Grant value	Basic Grant Allocation / PDAM	Minimum Achievement	Minimum payment
1.1	Business Plan	Rp 1600 million/ document	Rp 1,600 million	30%	Rp 480 million
2.1	Operating Ratio	Rp 300 million/ year	Rp 600 million	30%	Rp 90 million
2.2	Billing Effectiveness	Rp 300 million/ year	Rp 600 million	30%	Rp 90 million
3.1	Non Revenue Water	Rp 3,000/ m^3	Rp 1,600 million	50,000 m^3	Rp 150 million
3.2	Energy Efficiency	Rp 500/ kWh	Rp 1,200 million	200,000 kWh	Rp 100 million
4.1	Continuity of Supply	Rp 600 million/ year	Rp 1,200 million		

4.2	Water Quality	Rp 600 million/year	Rp 1,200 million	30%	Rp 360 million

Table 14 Grant Value and Minimum Achievement

A.6.4.1. Governance - PDAM Business Plan

Grant Eligibility

The activities required are to maintain an up to date, valid, PDAM Business Plan, which includes the PBG activities and budget. At the start of the PBG PDAM should have a current Business Plan, although it does not need to have been approved by the Head of the LG at that time.

Grant Value

There are no specific additional costs to the Business Plan, which PDAM is required to produce, and the benefits cannot be measured in financial terms.

Grant Payment

The PBG grant allocation of 20% for Governance – PDAM Business Plan is equivalent to a Basic Grant of Rp 1,600 million per PDAM (assuming 15 PDAMs participate).

The first part of the grant for the Business Plan will be available as soon as PDAM is ready to claim it.

Grant Calculation

The grant calculation shall use the following criteria:

First stage: Business Plan includes the PBG activities and work plan, implementation team, and financing plan supported by an Annual Work Plan and Budget (RKA);

Second stage: Business Plan is updated to include the PBG implementation results, and is agreed by the Supervisory Board and approved by the Head of LG.

First stage grant payment: 30% grant earned = 30% x Rp 1,600 million = Rp 480 million
Second stage grant payment: 70% grant earned = 70% x Rp 1,600 million = Rp 1,120 million

The minimum payment request shall be for 30% (Rp 480 million).

A.6.4.2. Financial Sustainability - Operating Ratio

Grant Eligibility

There are no specific activities associated with improving Operating Ratio, anything which has an effect on PDAM expenditure or income will affect the OR.

Grant Value

There is no specific identifiable cost to improving the Operating Ratio but the benefit of improving Operating Ratio has been estimated by analysing 40 PDAMs in the range of 20,000 to 70,000 connections and a simulation made during the PBG Design. A target improvement of 0.05 appeared possible.

Grant Payment

The PBG grant allocation of 15% for Financial Sustainability is equivalent to a Basic Grant of Rp 1,200 million per PDAM (assuming 15 PDAMs participate) of which 50% is allocated for Operating Ratio, Rp 300 million / year.

Category 1: A reduction in the Operating Ratio of up to 0.05 - grant earned is 30% of the annual allocation

Category 2: A reduction in the Operating Ratio between 0.05 and 0.075 - grant earned is 70% of the annual allocation

Category 3: A reduction in the Operating Ratio of more than 0.075 - grant earned is 100% of the annual allocation

Grant Calculation

The Basic Grant value is Rp 300 million / year for OR
If Baseline OR = 1.05
If after one year OR =1.03
Achievement is (1.05-1.03) = 0.02 = Category 1 (less than 0.05)
Grant award = 30% x 300 = Rp 90 million

The minimum payment request shall be for Rp 90 million.

A.6.4.3. Financial Sustainability - Billing Collection Effectiveness

Grant Eligibility

There are various activities associated with improving Billing Collection, but these should be part of PDAM's routine activities.

Grant Value

Although there may be additional costs associated with improving the Billing Collection Effectiveness these will vary between different PDAMs and have not been considered.

The benefit of improving Billing Collection Effectiveness has been estimated from 15 possible candidate PDAMs whose total billing in 2016 was Rp 567 billion, and a simulation was made during the PBG Design. With an average 40,600 connections per PDAM the average benefit for each PDAM was Rp 365 million per 1% improvement in BE.

Grant Payment

The PBG grant allocation of 15% for Financial Sustainability is equivalent to a Basic Grant of Rp 1,200 million per PDAM (assuming 15 PDAMs participate) of which 50% is allocated for Billing Collection Effectiveness, Rp 300 million / year.

Category 1: An increase in the Billing Collection Effectiveness of up to 2% - grant earned is 30% of the annual allocation

Category 2: An increase in the Billing Collection Effectiveness of between 2% and 5% - grant earned is 70% of the annual allocation

Category 3: An increase in the Billing Collection Effectiveness of more than 5% - grant earned is 100% of the annual allocation

Grant Calculation

The Basic Grant value is Rp 300 million / year for BE
If Baseline BE = 74%
If after one year BE = 84%
Achievement is (84%-74%) = 10% = Category 3 (more than 5%)
Grant award = 100% x 300 = Rp 300 million

The minimum payment request shall be for Rp 90 million.

A.6.4.4. Operational Efficiency - Non Revenue Water

Grant Eligibility

PDAMs with NRW below 25% (from BPPSPAM data) do not meet the PBG entry criteria. However, should NRW be reduced to less than 25% during the PBG pilot program any further reduction will continue to be eligible for grant.

The Pre-FS is expected to guide PDAM on which distribution zones to focus their NRW reduction activities in and where new bulk water meters are required.

NRW will be measured in m^3 per year and the grant will be paid for each m^3 of NRW saved per year.

The reduction in NRW must be accompanied by an increase in water sales for PDAM to be eligible for the grant. The water saved through NRW activities may be used for increased consumption by existing customers or to supply new customers, or both.

Grant Value

A Summary Report on the valuation of NRW for grant purposes was prepared during the PBG Design. The grant value does not need to be related to the cost of NRW reduction measures, although these have been estimated in one of the early approaches to valuing NRW. The Report recommended that for grant purposes the value of treated water saved through NRW activities be set at Rp 3,000 per m^3. This valuation has subsequently been agreed with DGHS.

Grant Payment

The grant allocation of 20% for NRW reduction is equivalent to a Basic Grant of Rp 1,600 million per PDAM (assuming 15 PDAMs participate).

Total grant funds allocated for NRW are Rp 28,500 million which are therefore sufficient to reward a maximum of 4,750,000 m^3 saved per year for 2 years. With an estimated water production of 270 million m^3 per year across 15 PDAMs the maximum saving represents 1.8% of annual production.

The minimum payment request shall be for 50,000 m^3 saved (Rp 150 million).

Grant Calculation

The Baseline will be established from the volume of water distributed minus the volume of water billed in the first month after new metering is commissioned, factored by 12 to establish the Year 1 baseline NRW rate in m^3 per year.

The first Verification will check the volume of water distributed minus the volume billed in the year prior to Verification, to determine the NRW rate in m^3 per year and establish a new Year 2 baseline NRW rate.

NRW reduction will be the difference in NRW rate between the Baseline and first Verification, which will give the volume of NRW saved in a year in m^3.

The Grant due will be calculated from the volume of NRW saved in a year x the grant value Rp 3,000 / m^3. The grant payment is conditional on the volume of water billed having increased during the same period.

A.6.4.5. Operational Efficiency - Energy Efficiency

Grant Eligibility

PDAM energy cost must exceed Rp 300/m3 to be eligible for the Energy Efficiency grant.

Energy efficiency works recommended in the Energy Audit will be eligible for the grant, provided that the energy saving can be clearly identified.

PBG Energy Efficiency is expected to focus on Treated Water/ Distribution pumps. Inefficiencies can occur in the mechanical pump, the electric motor, the cables supplying the power, the pipework, fittings, throttling valves and pump control systems. Eligible work might include replacing pumps, or electric motors, or rehabilitating pump impellers.
Savings in Reactive Energy consumption will also be eligible for the grant.

Grant Value

The grant value does not need to be related to the cost of improving Energy Efficiency as investment in improving Energy Efficiency has a much more certain outcome, and therefore lower risk, than investment in the other types of performance improvement measures.

The average PLN tariff paid by PDAMs is estimated to be around Rp 1500/kWh, but it is an established principle that grant allocation should be a fraction of the intrinsic benefit of the intervention.

For grant purposes the value of electricity saved has been set at Rp 500/kWh, which is approximately 50% of the PLN Industrial 3 base tariff - currently Rp 1035.78/kWh.

Grant Payment

The PBG grant allocation of 15% for Energy Efficiency is equivalent to a Basic Grant of Rp 1,200 million per PDAM (assuming 15 PDAMs participate).

Grant funds are sufficient to reward a maximum of 21,375,000 kWh saved per year for 2 years. With an estimated electricity consumption of 59,580,000 kWh per year across 15 PDAMs the maximum saving represents 35.9% of annual consumption.

The minimum payment request shall be for 200,000 kWh saved (Rp 100 million).

Grant Calculation

The total energy consumption and volume of water pumped in the previous 12 months will be used to establish the Year 1 Baseline energy consumption rate in kWh/m^3.

The first Verification will check total energy consumption and volume of water pumped in the 12 months prior to Verification to determine the new energy consumption rate in kWh/ m^3 and establish a new Year 2 baseline consumption rate.

The energy saving will be calculated from the reduction in energy consumption rate in kWh/ m^3 multiplied by the volume of water pumped in the previous 12 months.

The Grant due will be calculated from the kWh saved in a year x the grant value Rp 500/kWh.

A.6.4.6. Quality of Service - Continuity of Supply

Grant Eligibility

Supply interruptions are mainly caused by inadequate storage in the distribution system, insufficient production capacity, and / or undersized distribution mains, although outside Java frequent interruptions to the electricity supply are also a cause.

The Pre-FS is expected to support PDAM in identifying areas where new storage can improve supply to 24 hours/day. PDAM will need to procure a suitable site for new storage quickly, or use existing community-owned land.

Alternatively PDAM may increase production capacity, provide a booster pump, install generators, or reinforce existing distribution mains where new storage is impractical within the PBG pilot project timescale, or would not provide continuity of supply.

Unlike the Output-Based Grant the PBG does not provide a grant specifically for increasing service coverage by adding new customers. PDAMs which are able to extend their service to new customers and provide them with a continuous supply will be eligible for the Continuity of Supply grant.

Grant Value

The grant allocation for Continuity of Supply is Rp 1,200 million.

Grant Payment

Grant funds will be awarded for customer connections which receive continuous water service for 24 hours a day, but which did not have such a supply at the time of the Baseline survey.

The amount of the grant will be calculated as follows:

a) The customer connections which receive continuous water supply will be calculated from the pressure and hours of service, provided that a minimum pressure of 0.3 bar is maintained for 21 hours a day and for a minimum of 24 days a month.

b) The percentage payment will be calculated from the number of service hours in a day divided by 24, averaged over 6 or 12 months.

The pressure shall be monitored by data loggers.

Grant Calculation

PDAM will be paid the grant for the percentage of connections verified as receiving an uninterrupted PDAM supply which have previously been verified as not receiving a continuous PDAM supply.

No connection shall be rewarded more than once, nor any connection which had continuous supply at the Baseline survey.

A.6.4.7. Quality of Service - Water Quality Monitoring

Grant Eligibility

PDAM and Dinas Kesehatan must follow the requirements of Ministry of Health Regulation *PerMenKes 736/2010* on "Monitoring Management of Drinking Water Quality" which specifies the: responsibilities, frequency and location of sampling, and reporting of results.

PDAM must also follow the requirements of Ministry of Health Regulation *PerMenKes 492/2010* on "Drinking Water Quality Requirements" which specifies the mandatory microbiological, physical and chemical parameters which must be tested:

1) 6 physical parameters: odour, colour, Total Dissolved Solids (TDS), turbidity, taste, temperature;
2) 2 microbiological parameters: E. Coli & Total Coliform bacteria;
3) Residual chlorine;
4) 8 inorganic chemical parameters that are directly related to health: Arsenic, Fluoride, Total Chromium, Cadmium, Nitrite, Nitrate, Cyanide, Selenium.

The results of the laboratory tests should meet the drinking water quality standards set out in Ministry of Health Regulation *PerMenKes 492/2010*.

Grant Value

The valuation of Water Quality Monitoring for grant purposes has been simulated during the PBG Design. Collecting a sample and testing all mandatory parameters at an independent accredited laboratory is estimated to cost Rp 1.0 million The total cost of field sampling and laboratory testing based on the number of samples, and testing all mandatory parameters given in *Permenkes 492/2010*, is on average Rp 666 million per PDAM.

The average number of "internal" tests is 363 and "external" tests 303 for the average PDAM in a year; the "external" testing is Dinas Kesehatan's responsibility, and the grant is intended to encourage them to fulfil that responsibility. The total cost of the "external" tests is an average of Rp 303 million / PDAM / year. The Base Grant allocation for water quality monitoring is Rp 600 million/ PDAM/year.

The grant will only be paid where there is full compliance with the requirements of PerMenKes 736/2010 on the frequency and location of "internal" and "external" sampling, and reporting of results.

Monitoring compliance will be rewarded with 30% of the grant.

If the frequency and location of "internal" and "external" sampling are fully compliant the remaining 70% of the grant will be available for compliance with the water quality requirements, as measured by the 17 mandatory parameters, of PerMenKes 492/2010. The percentage of samples that meet the standard in a year will be applied to 70% of the allocated grant.

The laboratory which Dinas Kesehatan proposes to use for testing the samples should be subject to KIAT's approval

Grant Payment

The PBG grant allocation of 15% for Water Quality Monitoring is equivalent to a Basic Grant of Rp 1,200 million per PDAM (assuming 15 PDAMs participate).

The minimum payment request shall be for 30% (Rp 360 million)

Grant Calculation

The grant calculation shall use the following criteria:

Water Quality Monitoring: Full compliance with the monitoring requirements of Ministry of Health Regulation PerMenKes 736/2010 on "Monitoring Management of Drinking Water Quality";

Water Quality Parameters: Percentage compliance with the 17 mandatory parameters, of PerMenKes 492/2010 on "Drinking Water Quality Requirements" counted from all the monitoring samples.

WQ Monitoring grant payment: 30%	grant earned = 30% x Rp 1,200 million = Rp 360 million
Water Quality grant payment: 70%	grant earned = percentage compliance x 70% x Rp 1,200 million

The minimum payment request shall be for 30% (Rp 360 million).

A6.5 Technical Assistance

DFAT is committed to supporting the Water Hibah Performance Based Grant pilot activity through a comprehensive program of Technical Assistance provided by the Program Implementation Consultant (PIC):

1. Preparation and Baseline
2. Implementation and Oversight Support
3. Verification and CPMU Support
4. Capacity Development for Government and Improvement in PDAM Performance Monitoring
5. Gender Equality and Social Inclusion Support
6. Monitoring and Evaluation

KIAT has allocated a budget of AUD 7.9 million for these TAs in addition to the AUD 16 million budget for the PBG. The PIC will provide support to both central and local governments, and PDAMs, in implementing the PBG, and to promote a culture of gender equality and social inclusion in PDAMs for both staff and customers. The detailed "Scope of Services" for the PIC was under preparation at the time of preparing this document.

The Program Implementation Consultant will be responsible for the procurement of bulk water meters, data loggers and other specialised equipment for use in monitoring NRW and continuity of supply. The equipment required has not yet been determined or the cost estimated but a Provisional Sum will be included in the contract.

Annex 7 – Monitoring Evaluation and Reporting Framework

A.7.1 Scope and purpose

This Annex presents an approach and framework to monitor and evaluate performance of the *Water Hibah Performance-Based Grant (PBG)* activity. The main purpose of this framework is to ensure consistent, timely and reliable performance assessment throughout the activity lifespan with the aim of:

- Informing decision-making on PBG implementation at strategic and operational levels;
- Generating information that contributes to a broader knowledge base, including evidence-driven policy reform.

This approach and framework will be translated into an operational monitoring and evaluation (M&E) plan during the activity preparation phase in collaboration with all stakeholders including the KIAT M&E team.

It is important to highlight that this M&E framework will not monitor and evaluate PDAM performance with respect to earning the Performance-Based Grant; that will be implemented through a separate process described in **Annex 4** "Detailed Description of Investment Activities" and managed by the PBG Central Project Management Unit (CPMU) during the PBG activity implementation. This framework is designed to provide reliable information on end-of-activity outcomes and sub-outcomes, using the information generated by the CPMU and partners to measure changes in PDAM performance for the PBG.

This Annex includes the following sections:

- An introductory section describing the M&E approach and arrangements, target M&E users, harmonisation of the PBG M&E with other relevant M&E systems (DFAT Performance Assessment Framework [PAF], KIAT M&E Facility framework, GoI sector monitoring);
- Key monitoring and evaluation questions stakeholders will want answers to by the end of the investment;
- An M&E results framework presenting the PBG activity logic and its links to the KIAT Facility logic and DFAT PAF (covering goals, long-term outcomes, end-of-programme outcomes, sub-outcomes and outputs) and including performance indicators, targets, baseline, data collection methods and frequency (including for baseline information) and responsibilities;
- Identification of possible thematic research activities required to support implementation and learning;
- A proposal for impact evaluation of the PBG model implementation and its sustainability;
- The proposed M&E reporting structure.

A.7.2 Monitoring and evaluation approach and arrangements

A7.2.1 General

The main objective of the PBG M&E framework is to provide relevant, accessible, timely and accurate information that will help decision-makers during and after the PBG implementation. This means that the M&E framework must be realistic, and the indicators should be relatively easy to measure with data generated by the project (or other easily accessible data).

The framework is designed to fit into the 'nested' M&E approach adopted by the KIAT Facility. The Facility M&E is based on a logic of hierarchical objectives (goals, end-of-facility outcomes, possible nearer-term outcomes) and M&E at the facility level depends on receiving clear M&E inputs from the activities implemented. The KIAT facility logic (presented in the KIAT monitoring and evaluation framework of March 2018) provides the overall M&E framework

and is meant to facilitate the linkages of all activities to a defined set of end-of-facility outcomes (EOFOs) and possible nearer-term outcomes.

The PBG results framework (described in detail in section A7.4) including the goal (long-term expected result), the end-of-activity outcomes (EOAOs), sub-outcomes and related outputs establishes the basis for measuring how the activity contributes to the EOFOs and the broader KIAT goal '*sustainable and inclusive economic growth through improved access to infrastructure for all people*'.

The framework also establishes the basis for activity *performance monitoring* and *evaluation*. While the PBG Baseline and Verification consultant will develop the information and database systems for calculating grant payments (i.e.: the 'process'), this framework will assess how the average PDAM performance (of the 15 PDAMs selected) is (or is not) improving over time and will therefore provide higher level, strategic monitoring information related to the defined outcomes in **Annex 3** "Activity Logic Model". To ensure clear strategic reporting on progress, a series of key monitoring and evaluation questions (KEQs) have been developed for each outcome and sub-outcome area, as well as for gender equality and social inclusion concerns.

To summarise, PBG performance monitoring includes the following:

- Activity goal and long-term outcome progress monitoring, upon activity completion;
- End-of-activity outcome progress monitoring, mid-term and upon activity completion;
- Activity sub-outcome progress monitoring, annually;
- Annual monitoring of compliance with environmental / gender and social inclusion themes, anti-corruption measures, and any other relevant standards /measures applied.

There are a relatively large number of stakeholders involved in the PBG implementation (see the table below), each with their own performance assessment frameworks and M&E systems and requirements. While the 'ideal' M&E system would harmonise partner performance management systems and use data generated from existing systems to the extent possible, this may be difficult given the limited timeframe of the PBG. The PBG M&E framework is therefore designed to use primarily existing data from the PBG CPMU. The linkages between the different monitoring systems, however, and the extent to which they can be integrated into the PBG M&E framework, can be further explored when the M&E plan is developed during the PBG preparation phase.

Since this is a demonstration activity, a careful evaluation[22] of the PBG and its suitability for mainstreaming will be of importance. Evaluation activities (to be further developed as part of the detailed M&E plan during activity implementation and in consultation with the KIAT Facility) will take place at specific points during project implementation. Under the PBG, evaluation could include:

- Joint assessments (bi-annually, mid-term, end-of-activity) of the effectiveness of the PBG financing and delivery model in achieving targeted outcomes;
- An assessment of the effectiveness of the PBG team in developing evidence for mainstreaming, including lessons learned from its application, its replicability and sustainability, including likelihood of policy-level influence;
- Other KIAT relevant evaluation procedures.

Further information on evaluation is presented in section A7.5.

[22] The aim of evaluation is to provide a systematic and objective assessment of an on-going or completed project (activity or program or policy), including its design, implementation and results, with the aim of determining its relevance, efficiency, effectiveness, impact and sustainability.

A7.2.2 Arrangements and responsibilities

The PBG Monitoring and Evaluation Consultant will be responsible for the further development of the M&E framework, including development of the detailed M&E Plan.

A7.2.3 Target users of the PBG M&E information

The main users of the PBG M&E information, what information they will need and why they need it is described in the table below. The PBG M&E framework is designed to ensure that, to the extent possible, it can provide the needed monitoring information for each user/partner.

M&E user (partner)	Information needed about:	For the purpose of:
DFAT (represented by KIAT FMC)[23]	PAF achievements related to funds leveraged, policies improved, water supply connections, and Aid Quality Checks (AQCs) and PBG results, successes and challenges	PAF annual and completion reporting Completing AQCs
KIAT	High level progress against KIAT end-of-facility outcomes/objectives Progress on achievement of activity-level outcomes	KIAT Facility annual reporting PAF indicator reporting Strategic monitoring[24] As inputs to strategic guidance to activities
Dit PSPAM (DGHS of MPWH)	Progress on achievement of activity-level outcomes	Reviewing design of NUWSP PBG Mainstreaming performance-based grants to achieve government policy objectives
BPPSPAM (MPWH)	Performance of local government-owned water supply companies	Reporting on their own PAF
BAPPENAS	High-level progress of KIAT Facility and PBG outcomes	Providing the needed government guidance to ensure effective programme implementation Increasing understanding on how to better achieve SDG 6 on access to clean water and sanitation
MoHA	Local government performance with respect to PDAM governance	Increasing understanding on how to better support local governments in managing their PDAMs
Ministry of Finance (MoF)	PBG outcomes	Reporting on use of grant funds (as budget holder)
Participating local governments	PDAM performance and sustainability	Increasing understanding on how to better support their PDAMs Increasing understanding on how to better meet their responsibilities related to public water supply services
PDAMs	Their own performance and sustainability	Identifying needs for investments, maintenance and effective management As input for dialogue with local government on investment requirements

Table 15 Target users of PBG M&E Information

[23] Facility Managing Contractor

[24] This could include, for example, information on how to monitor and analyse patterns in local government and PDAM performance and investment to refine the mechanism and identify levers to increase program effectiveness.

A.7.2.4 Key activity-level evaluation questions

A total of seven key evaluation questions are proposed at the PBG activity level. These have been developed based on the PBG 'theory of change' underpinning the main PBG goal[25] and focus on the evaluation criteria of sustainability and effectiveness.

Firstly there is one question about the sustainability of the PBG in terms of the likelihood of adoption and continuity.

KEQ 1 related to the activity goal: Is there evidence that the Government of Indonesia has or will be providing funds for Performance Based Grants through the state budget by the end of the activity or before?

Secondly there are several questions related to the PBG effectiveness in achieving its desired results.

KEQ 2 related to long-term outcome 1: Is there concrete and reliable evidence from the pilot PBG implementation that a PBG is an effective instrument for helping the local governments to achieve GoI policy goals with respect to PDAMs (i.e.: to 'actively manage, invest in and improve the performance of their water companies'?

KEQ 3 related to long-term outcome 2: How effective has the PBG activity been in ensuring well managed, financially sound and operationally efficient PDAMs?

KEQ 4 related to end-of-activity outcome 1: How effective has the PBG been in encouraging the LGs to better engage with PDAMs?

KEQ 5 related to end-of-activity outcome 2: How effective has the PBG been in helping improve PDAM performance?

KEQ 6 related to end-of-activity outcome 3: What are the most critical actions needed to improve national level PDAM monitoring if the PBG is to be mainstreamed?

KEQ 7 related to gender equality and social inclusion: To what extent has the PBG activity implementation strengthened the realisation of gender equality and social inclusion.

A.7.2.5 Key activity-level monitoring questions

To provide information to answer the key evaluation questions, several indicative key monitoring questions have been developed. The monitoring questions are categorised into general questions on the physical progress of the PBG and its work with the partners and the PDAMs and specific questions related to the KEQs in the preceding section.

Reporting on this progress will be primarily the responsibility of the PBG Monitoring and Evaluation Consultant. It should be noted that KEQ 1 and KEQ 2 will require more in-depth evaluations and are therefore not included here. During the activity preparation phase, further relevant monitoring questions will be developed.

Some of the information needed to answer these monitoring questions will come from the Key Performance Indicators (KPIs) developed to measure the progress of the sub-outcomes (13 in total) under each of the three end-of-activity outcomes (please refer to Appendix A7-2, M&E Results Table). The data required to measure these KPIs will come primarily from the PBG CPMU PDAM database that will be established to assess and allocate the

[25] The theory of change is 'when the local governments have a stake in their PDAM's performance, they will become more actively engaged in the PDAM oversight duties and this in turn will lead to a better understanding of the investment needed not only to improve PDAM service quality but also to enable PDAMs to extend their service coverage in line with SDG 6.1

performance-based grant funding to the PDAMs. To the extent possible, and where feasible, sex disaggregated data will be collected.

General monitoring questions (MQs) related to physical progress of PBG activities

MQ 1: What is the status of the physical implementation of PBG activities as compared to the approved work plan?

MQ 2: What is the status of the PBG CPMU PDAM database development? (Has a database been developed that can display the information in a simple and user-friendly format, is the required data accessible and reasonably accurate, and is it being collected in a timely fashion?)

MQ 3: Is the PBG CPMU PDAM database able to provide the information needed to accurately report on the 13 sub-outcome indicators developed to measure progress of the EOAOs (in addition to determining the grant allocation)

MQ 4: Have the planned capacity development activities for PDAMs been implemented in line with expectations? Are there mechanisms for assessing the impact of the capacity development? (such as before and after surveys, post-training questionnaires, etc)

MQs related to effectiveness of the PBG activity in ensuring well managed, financially sound and operationally efficient PDAMs (KEQ 3)

MQ 5: Over the course of the PBG, how many PDAMs are exhibiting improved indicators relating to financial management, operational efficiency, service quality and customer base? (to be collected from PBG CPMU PDAM database, BPKP audit reports and interviews with PDAMs)

MQs related to effectiveness of the PBG in encouraging LGs to better engage with PDAMs (KEQ 4)

MQ 6: How many LGs have increased their investments in PDAMs over the course of the PBG activity?

MQ 7: How many PDAMs have been encouraged to establish public websites that provide useful and up-to-date information on their status, services, etc?

MQ 8: How many PDAMs have active supervisory boards that are effectively implementing their assigned tasks?

MQs related to effectiveness of the PBG in helping improve PDAM performance (KEQ 5)

MQ 9: Where has the PBG been most successful in encouraging PDAMs to improve? (this refers to the eight sub-outcomes under EOAO 2 in the Activity Logic Model)

MQ 10: What are the main lessons of relevance for future mainstreaming of the PBG?

MQs related to improvements to national level PDAM monitoring (KEQ 6)

MQ 11: Is the technical support provided for PDAM monitoring improvement having an impact? Is the accuracy and availability of government (BPKP and BPPSPAM) PDAM indicator data improving over time and are reports available in a timely manner?

MQs related to gender equality and social inclusion:

MQ 12: To what extent are PDAM addressing gender equality in the workplace, including the gender balance of employees and gender balance at each level of management, as a result of PBG project support?

MQ 13: To what extent are PDAM ensuring that their workplaces are women-friendly as a result of PBG project support?

MQ 14: To what extent are PDAM increasing the GESI responsiveness of their operations and services, including socialisation activities, as a result of PBG project support?

MQ 15: To what extent are PDAM employing people with disability as a result of PBG project support?

MQ 16: To what extent are PDAM increasing accessibility for employees and customers as a result of PBG project support?

MQ 17: To what extent are PDAM systematically reviewing and planning future GESI improvements in their workplaces and operations as a result of the PBG project support?

A.7.2.6 The Performance-Based Grant System Results Table (M&E logframe)

The PBG M&E results table is based on the activity goals, long-term outcomes, EOAOs and sub-outcomes and builds on the Activity Logic Model presented in **Annex 3** of this Design Document. The table is presented in Appendix A7-2. To ensure common understanding, Appendix A7-1 defines the key terms used in the M&E results framework.[26]

The three end-of-activity outcomes will be monitored using the KPIs developed for each sub-outcome, as already described above.

A.7.2.7 Proposal for evaluation of the PBG model implementation and its sustainability

PBG evaluation will consist of a series of initiatives, including collaborative reviews with key stakeholders, oversight missions and a specific evaluation of the success of the PBG model. Key evaluation questions defined in section A7.3 will be used to guide these reviews and evaluations. An indicative schedule is provided below. During PBG activity preparation, a more detailed evaluation proposal will be developed in consultation with the KIAT Facility M&E team.

Type of review / evaluation	Timing / frequency	Participants	Purpose	Target audience	Relevant Key Evaluation Questions
Quarterly review	Over the project lifetime	TBD	Document and communicate progress, identify priorities for improvement	TBD	none
Annual oversight mission	Annually at end of each year except last	TBD	Identify priorities and develop action plan	TBD	All except KEQ 1 and 2
Evaluation of PBG model (KEQ 1 and 2)	At the end of the second year of implementation or after the model has gone through at least two cycles of financing	TBD	To assess the comparative advantages and challenges and develop an Action Plan for next steps	TBD	All

[26] Adapted from the PRIM–PIUC Monitoring and Evaluation Plan, March 2018 to December 2019.

GESI review (KEQ 7)	At the end of the activity, to assess the impact of the GESI support consultant				KEQ 7

To effectively assess the changes in the PDAMs (KEQs 3, 4 and 5), which may be difficult to do using just the indicator information, a Most Significant Change (MSC) exercise could be appropriate. Such an evaluation could be designed during activity preparation and implemented over the course of the activity to supplement the indicator information.

Possible research work to support implementation, learning and sustainability will be further defined in dialogue with partners during development of the M&E Plan. Initial ideas include a careful assessment of the BPPSPAM indicators and possible improvements to establish a firm monitoring basis for PBG mainstreaming (KEQ 6).

A.7.2.8 Reporting

The PBG M&E results will be included in the PBG reports. This will most likely comprise quarterly, annual and final (project completion) reports, as well as regular financial reports, including an annual audited financial report.

Appendix A7-1 M&E results-based framework for a Performance-Based Grant for Water Utilities – Key Definitions

Results Framework (log frame) – Definition of Terms

RESULTS (What we want to achieve)	**INDICATORS** (How to measure change)	**MEANS OF VERIFICATION** (Where / how to get information)	**ASSUMPTIONS** (What else to be aware of)
Goal The long-term results that an intervention seeks to achieve, which may be contributed to by factors outside the intervention.	**Impact Indicators** Quantitative and/or qualitative criteria that provide a simple and reliable means to measure achievement or reflect changes connected to the goal.	How the information on the indicator will be collected *(can include who will collect it and how often).*	External conditions necessary if the Goal is to contribute to the next level of intervention.
Outcomes[27] The primary result(s) that an intervention seeks to achieve, most commonly in terms of the knowledge, attitudes or practices of the target group.	**Outcome Indicators** As above, connected to the stated outcome.	As above	External conditions not under the direct control of the intervention but are necessary if the outcome is to contribute to reaching intervention goal.
Outputs The tangible products, goods and services and other immediate results that lead to the achievement of outcomes.	**Output Indicators** As above, connected to the stated outputs.	As above	External factors not under the direct control of the intervention which could restrict the outputs leading to the outcome.
Activities[28] The collection of tasks to be carried out in order to achieve the outputs.	**Process Indicators** As above, connected to the stated activities.	As above	External factors not under the direct control of the intervention which could restrict progress of activities.

[27]When there is more than one outcome in a project the outputs should be listed under each outcome – see the examples on the following pages.

[28]Activities may often be included in separate document (e.g. activity schedule /workplan) for practical purposes

Appendix A7-2 M&E results table for a Performance-Based Grant for Water Utilities

RESULTS	INDICATORS	TARGETS	BASELINE	MEANS OF VERIFICATION	MONITORING FREQUENCY	M&E RESPONSIBILITY	LINK TO KEQs	LINK TO PARTNER INDICATORS
Activity goal: Government of Indonesia mainstreams Performance Based Grants for water supply with funding from APBN	# of LGs applying PBG using APBN funding	TBD	0 LGs applying PBG	PBG internal and external evaluations	Upon completion	KIAT (main responsibility) PBG M&E consultant	KEQ 1	Contributes to KIAT EOFO # 3 **GoI delivers, manages and maintains high quality infrastructure** through the adoption of specific improved mechanisms for delivery, management and maintenance Contributes to DFAT outcomes 5 and 7
Long-term outcome 1: Government of Indonesia has a proven method of encouraging Local Governments to achieve policy objectives, in this case to actively manage, invest in, and improve the performance of their water companies	Evaluation studies confirming success and utility of PBG for water supply	At least one evaluation study implemented	0 PBG water supply methodology	PBG external evaluation	Upon completion	KIAT	KEQ 2	Same as above, contributes to EOFO # 3
Long term outcome 2: PDAMs are properly managed, financially sound, operationally efficient and provide a good quality of service to a greater number of customers	# of PDAMs where key indicators relating to financial management, operational efficiency and service quality and # of customers is consistently increasing	TBD	TBD	BPKP audit reports supplemented by PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 3	

RESULTS	INDICATORS	TARGETS	BASELINE	MEANS OF VERIFICATION	MONITORING FREQUENCY	M&E RESPONSIBILITY	LINK TO KEQs	LINK TO PARTNER INDICATORS
End-of-activity outcome 1: Local Governments actively engaged with PDAMs (Governance)	Aggregate of output indicators	Should be improving over the activity lifetime	TBD	An aggregate score of the four output indicators can be developed and applied to measure sub-outcome indicator	Annually	PBG M&E consultant	KEQ 4	
Sub-outcome 1.1: LGs willing to invest in PDAMs	% of LG investment in 15 selected PDAMs	Should be increasing over activity lifetime	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 4	KIAT ind # 1 (DFAT PAF ind # 1)
Sub-outcome 1.2 PDAMs are publicly accountable	% of 15 selected PDAMs posting minimum required public information[29] over activity lifetime	Should be increasing	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 4	KIAT ind # 8 (DFAT PAF ind # 11)
Sub-outcome 1.3: PDAMs have active supervisory boards	% of 15 selected PDAMs with Supervisory Boards effectively implementing their assigned tasks[30]	Should be increasing over activity lifetime	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 4	
End-of-activity outcome 2: Improved PDAM performance						PBG M&E consultant	KEQ 5	
Sub-outcome2.1 Improved PDAM operating ratio	Average operating ratio of 15 selected PDAMs	0.90 by end of activity	1.0	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	BPKP indicators BPPSPAM indicators

[29]Minimum required public information includes the PDAM Annual Report (including financial statements, PDAM performance and technical report), the Business Plan, and names of the Director and Supervisory Board.

[30]Tasks include reviewing of PDAM Business Plan, BUMD annual work plan and budget, financial statements, supervision reports, performance contract, minutes of meetings and working paper. The Board should become a trusted advisor to the LG and DPRD on improving PDAM performance.

RESULTS	INDICATORS	TARGETS	BASELINE	MEANS OF VERIFICATION	MONITORING FREQUENCY	M&E RESPONSIBILITY	LINK TO KEQs	LINK TO PARTNER INDICATORS
Sub-outcome 2.2 PDAMs have a higher billing collection	% average bill collection rate of 15 selected PDAMs	% average over 95% by end of activity	91%	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	
Sub-outcome 2.3 PDAMs have reduced NRW	% average NRW of 15 selected PDAMs	% average should be decreasing over activity lifetime	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	BPKP indicators BPPSPAM indicators
Sub-outcome 2.4 PDAMs are energy efficient	% average energy cost (for given outputs) of 15 selected PDAMs	% average for given outputs should be decreasing over activity lifetime	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	
Sub-outcome 2.5 PDAMs have continuous water supply	% average of water supply continuity in 15 selected PDAMs	% average should be increasing over activity lifetime	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	BPKP indicators BPPSPAM indicators
Sub-outcome 2.6 PDAMs have verified water quality	% of 15 selected LG Dinas Kesehatan complying with PERMENKES 737/2010	% should be increasing over activity lifetime	15	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	BPKP indicators BPPSPAM indicators
Sub-outcome 2.7 PDAMs have expanded service coverage	Service coverage of 15 selected PDAMs	Should be increasing over activity lifetime	TBD	PBG CPMU's PDAM database	Annually	PBG M&E consultant	KEQ 5	KIAT ind # 5 (DFAT PAF ind #6) LG RPJMD and other indicators RPJMN indicators SDG target 6
Sub-outcome 2.8 PDAMs have improved gender equality	Gender ratio of female middle and senior management in 15 selected PDAMs	Should be increasing over activity lifetime	TBD	PBG CPMU's PDAM database	Mid-term and end-of-activity	PBG M&E consultant	KEQ 7	KIAT ind # 7 (DFAT PAF ind #10)
End-of-activity outcome 3: Improved national monitoring of PDAM performance						PBG M&E consultant	KEQ 6	

RESULTS	INDICATORS	TARGETS	BASELINE	MEANS OF VERIFICATION	MONITORING FREQUENCY	M&E RESPONSIBILITY	LINK TO KEQs	LINK TO PARTNER INDICATORS
Sub-outcome 3.1 Accurate indicator measurement	BPKP and BPPSPAM indicator information accuracy for 15 selected PDAMs	Should be increasing over activity lifetime	TBD	BPKP and BPPSPAM annual reports PBG CPMU's PDAM database	End-of-activity	PBG M&E consultant	KEQ 6	
Sub-outcome 3.2 Prompt production of results	# of months delay in publication of annual BPKP, BPPSPAM and other PDAM-related reports	Should be decreasing	TBD	TBD	End-of-activity	PBG M&E consultant	KEQ 6	

Annex 8 – Risk and Safeguards Screening Tool

A8.1 Safeguards Screening Checklist

Safeguards Screening Checklist

Environmental and Social Safeguards	No, Yes Unsure	If Yes or Unsure		Inherent Risk rating (before controls)
		Likelihood	Consequence	
Environmental protection				
1.1 Could the investment have an adverse impact on the environment? For example, by supporting or providing advice on any of the following: • infrastructure development, such as roads, bridges, airports, railways, ports, dams, water, sanitation and hygiene (WASH), waste management, telecommunications, energy production and distribution facilities, urban development. •construction/renovation/refurbishment/demolition of buildings such as schools, hospitals, health facilities or any of the infrastructure above • diversion of water, including for water supply, irrigation, flood-mitigation, or aquaculture • rural development, agriculture, food production, or forestry activities • activities in the extractives (oil, gas, mining), manufacturing, transportation and tourism sectors.	Yes	Possible	Minor	Medium
1.1 Could the investment increase environmental, climatic and/or social vulnerability, including by (but not limited to): • increasing emissions of greenhouse gases (e.g. energy intensive process will lead to an increase in Green House Gas production) • reducing incentives to adapt (e.g. change in social norm away from responsible water conservation to increased consumption) • increasing the vulnerability of people (particularly the most vulnerable) or the environment to climate change (e.g. pesticides, used to eradicate mosquitoes that carry dengue fever, damage native insect populations which reduces agricultural productivity, leading to food insecurity) • increasing the impact of disasters, e.g. will infrastructure building codes and specifications be adequate for the intensity of disasters/hazards experienced in the investment area (e.g. floods, earthquakes, cyclones), will the investment impact the food security of a vulnerable population • setting paths that limit future choices (e.g. large capital and institutional commitment reduces portfolio of future adaptation options).	No			-
Children, vulnerable and disadvantaged groups				
2.1. Could the investment have an adverse impact on vulnerable and/or disadvantaged groups including children, women, people with disabilities, minority groups, or the elderly?	No			-
2.2. Could the investment involve contact with children or working with children?	No	N/A	N/A	
Displacement and resettlement				
3.1 Could the investment involve activities or provide advice about an activity that will: • displace people, either physically or economically • exclude or reduce people's access to land they live on or used to generate livelihoods • exclude or reduce people's access to land that is of cultural or traditional importance to them?	No			-
Indigenous peoples				
4.1. Could the investment involve activities that adversely impact the: • dignity, human rights, livelihood systems or culture of indigenous peoples • land or natural and cultural resources that indigenous peoples own, use, occupy or claim?	No			-
Health and safety				
5.1 Could the investment involve activities that adversely impact the health and safety of workers and/or communities?	No			-
5.2 Could the investment involve DFAT workers?	No	If yes follow relevant departmental WHS polcies and contact whs@dfat.gov.au for advice		
5.3 Could the investment involve risk of exposing workers and/or communities to asbestos?	No	If yes ensure that this investment complies with the Department's policy on manageing asbestos risk in the aid program		
Overall Safeguard Risk Rating		Medium		

A8.2 Activity Risk Assessment and Management

The risks identified for the PBG, together with the risk management and proposed treatments, are shown in the Risk Management Matrix Table A8.6 below. The Likelihood of each risk is assessed based on the generic descriptions shown in Table A8.2 below. The Consequence of each risk is assessed based on the descriptions shown in the Risk and Safeguard Screening Tool in Table A8.3. Having determined the Likelihood and Consequence the level of Risk is shown in the matrix with coloured cells, Table A8.1.

Table 16 Risk Levels Determined by Likelihood and Consequence

Likelihood	Limited Consequences	Minor Consequences	Moderate Consequences	Major Consequences	Severe Consequences
Almost Certain	Medium	Medium	High	Very High	Very High
Likely	Medium	Medium	High	High	Very High
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Low	Medium	Medium	High
Rare	Low	Low	Low	Medium	Medium

Table 17 Likelihood of a Risk Occurring

Likelihood	Description
Almost Certain	**Very likely. Expected to occur in most circumstances** • Has occurred on an annual basis in DFAT or similar agencies in the past • Circumstances are in train that will cause it to happen
Likely	**Will probably occur in most circumstances** • Has occurred in the last few years in DFAT or has occurred recently in similar agencies/organisations • Circumstances have occurred that will cause it to happen in the next few years
Possible	**Might occur at some time** • Has occurred at least once in the history DFAT / AusAID or in similar agencies/organisations
Unlikely	**Not expected to occur** • Has never occurred in DFAT / AusAID but has occurred infrequently in similar agencies/organisations
Rare	**May occur only in exceptional circumstances** • Has not occurred to date in DFAT / AusAID or any other similar agency/organisations

Consequences					
Limited	**Minor**	**Moderate**	**Major**	**Severe**	**Investment risk category**
Limited impact on investment objectives and beneficiaries, including from operating environment, disaster, reputational, fraud/ fiduciary, partner, resourcing and/or other risks factors.	Political, governance, social and/or security (conflict or violence) factors threaten investment effectiveness but can be dealt with internally.	Political, governance, social and/or security (conflict or violence) factors creates moderate disruption to one or more investment activities.	Political, governance, social and/or security (conflict or violence) factors creates major disruption to the investment.	Political, governance, social and/or security (conflict or violence) instability severely undermines the investment.	**Operating environment**
	Minor disaster impacts to investment objectives and outcomes.	Moderate disaster impacts to investment objectives and outcomes. Moderate damage to property.	Significant disaster impacts to key investment objectives or outcomes. Major damage to critical property or multiple properties.	Severe disaster impacts to overall investment objectives or outcomes. Extensive damage or loss of property/or multiple properties.	**Disaster risk**
Results in consequences that can be dealt with by routine operations.	Delay in achieving investment objectives, resulting in minor impact on service delivery beneficiaries and/or country program.	Delay in achieving investment objectives, resulting in moderate impacts on service delivery, beneficiaries and/or country program.	Delay or failure to achieve investment objectives, resulting in major impact on service delivery and/or beneficiaries. Threaten the continued effectiveness of the country program.	Critical failure to achieve investment objectives, resulting in severe impact on service delivery, beneficiaries and/or country program. Country program stopped as a result of investment.	**Development results**
	Institutional and/ or partner capacities is generally adequate. Some weakness may reduce effectiveness of aspects of the investment.	Institutional and/ or partner capacity is constrained, resulting in moderate impact on investment effectiveness.	Institutional and/ or partner capacity is very weak, resulting in major impact on investment effectiveness.	Critical institutional and/ or partner capacity failure undermines the effectiveness of entire investment.	**Partner capacity and relations**
	DFAT funds are not used for intended purposes, not properly accounted for and/or do not achieve value for money.	DFAT funds are not used for intended purposes, not properly accounted for and/or do not achieve value for money. Fraud threatens the effectiveness of key investment objectives and/or services.	DFAT funds are not used for intended purposes, not properly accounted for and/or do not achieve value for money, affecting achievement of key investment objectives. Systemic fraud perpetrated over a period of time.	DFAT funds are not used for intended purposes, not properly accounted for and/or do not achieve value for money, undermining overall investment viability. Systemic institutional fraud involving multiple organisations over an extended period of time.	**Fiduciary and fraud**
	Minor breach of investment accountability, legislative/ contractual or security obligations.	Moderate breach of investment accountability, legislative/ contractual or security obligations.	Multiple breaches of investment accountability, legislative/ contractual or security obligations.	Systemic breach of investment accountability, legislative/ contractual or security obligations. Funds are diverted to known terrorists/ terrorist organisations.	**Compliance**
	Minor damage to national interests.	Significant damage to national interests. Funds are unintentionally diverted to a Terrorist Organisation or individual i.e. goods/funds are ceased.	Serious damage to national interests. Funds are negligently / recklessly diverted to a Terrorist Organisation or Individual i.e. local service providers are not appropriately screened / due diligence completed.	Exceptionally grave damage to national interests. Funds are knowingly and deliberately diverted to a Terrorist Organisation or Individual i.e. Engagement of a Terrorist Organisation to provide security services / access in country. DFAT funds are used to fund a terrorist attack domestically or overseas.	**Security**
	Minor impact to relations with stakeholders.	Moderate damage to relations with partners, beneficiaries, or other key stakeholders and media criticism.	Major damage to relations with partners, beneficiaries, or other key stakeholders. Strong media criticism.	Total loss of confidence in DFAT and breakdown of partner relations. Severe public criticism of DFAT.	**Reputation**
	DFAT resources (budget, people, or timeframes) occasionally constrained.	DFAT resources (budget, people, or timeframes) moderately constrained.	DFAT resources (budget, people, or timeframes) significantly constrained.	DFAT resources (budget, people, or timeframes) critically constrained.	**Other**
Minimal impact on the environment. Impacts are largely undetectable. No or negligible increase to people's vulnerability to climate change impacts, and negligible GHG emissions	Minor impact on the environment. Impacts are temporary and confined to a small area of low environmental sensitivity. Minimal and short term increase to people's vulnerability to climate change impacts, and/or minimal GHG emissions.	Moderate impact on the environment. Impacts may be long lasting, extend beyond the local area and include sensitive environmental communities. Moderate and short term increase to people's vulnerability to climate change impacts, and/or moderate GHG emissions.	Significant impact on the environment. Impacts are irreversible, diverse, over a sensitive geographic area. Significant and long term increase to people's vulnerability to climate change impacts, and/or significant GHG emissions.	Significant impact on the environment. Impacts are irreversible, diverse, with strong cumulative impacts over a large and/or sensitive geographic area. Severe and permanent increase to people's vulnerability to climate change impacts, and very high GHG emissions.	**Environmental Protection**
No harm/injury to a child. Minimal social impact, vulnerable and/ or disadvantaged groups. No concern from local community, NGOs, medium or other stakeholders.	Minor injury to a child, requiring first aid. Short-term nuisance or minor social impact on local population, including vulnerable and/or disadvantaged groups. No attention from affected community, NGOs, media or stakeholders beyond the affected population.	Serious harm/ injury to a child. Moderate social impact which effects the majority of the local population including vulnerable and/or disadvantaged groups. Concern from affected community, NGOs, media or stakeholders may cause delay to the investment.	Life-threatening harm/ injury to a child. Significant social impact which extends beyond local population, including vulnerable and/or disadvantaged groups. Concern from affected community, NGOs, media or stakeholders may prevent the investment from continuing.	Fatality of a child. Life-threating injury/ harm of more than one child. Significant social impact which extends beyond local population, including vulnerable and/or disadvantaged groups. Increases conflict and/or social fragility. Concern from affected community, NGOs, media or stakeholders prevents the investment from continuing.	**Children, vulnerable & disadvantaged groups**
No displacement and/ or resettlement. Limited impact on potentially affected households.	>5 households/ businesses displaced.	>5<20 households/ businesses displaced.	>20<100 households/ businesses displaced.	>100 households/ businesses displaced.	**Displacement & resettlement**
Indigenous group living in project area of influence. No adverse impact.	Short-term nuisance to indigenous population. No damage to/ or loss of access to indigenous land, assets, resources, and/or cultural heritage.	Moderate impact on indigenous population. Damage to/ or temporary loss of access to indigenous land, assets, resources, and/or cultural heritage.	Significant impact on indigenous population. Damage to/ or protracted loss of access to indigenous land, assets, resources, and/or cultural heritage.	Significant, long-lasting impact that effects the indigenous population. Permanent loss of/ or access to indigenous land, assets, resources, and/ or cultural heritage.	**Indigenous Peoples**
Limited worker and/ or community health and safety impacts. Injury requiring first aid.	Short-term worker and/ or community health and safety impacts. Minor injury requiring medical care.	Moderate worker and/ or community health and safety impacts. Serious injury or multiple minor injuries.	Significant worker and/ or community health and safety impacts. Life threatening injury/ multiple serious injuries.	Significant worker and/ or community health and safety impacts. Death or multiple life threatening injuries.	**Health and Safety**

Table 18 Consequences of a Risk Occurring

Table 19 Risk Register

DFAT RISK REGISTER TEMPLATE

Investment Name:	**Water Hibah Performance Based Grant**											**Aidworks Number:**				
Date of Last Review:				**Date of Next Review:**								**Country: Indonesia**				
Investment Manager:				**Delegate:**								**Sector/s :** Water				
Objective/s:																
					Risk rating before any controls			Current/ Residual Risk Rating				Target rating when Proposed Treatments are in place				
Risk Category	Risk Event - what could happen	Risk Source/s - what could cause the event to happen	Risk Impact/s - what would happen if the event occurs?	Risk Owner - Who is responsible for ensuring this risk is managed?	Likelihood (refer to matrix)	Consequence (refer to matrix)	Risk Rating (refer to matrix)	Risk Rating (refer to matrix)	Proposed Treatments (If no further treatment required or available, please explain why)	Person Responsible for Implementing Treatment/s	Implementation Date for Proposed Treatment/s	Likelihood (refer to matrix)	Consequence (refer to matrix)	Risk Rating (refer to matrix)	Does this risk need to be escalated?	
Operating environment	Risk that natural disaster e.g. landslide, tsunami, earthquake, volcanic eruption might impact the investment.				Unlikely	Major	Medium	Medium	No treatment proposed. GoI has good volcanic eruption warning systems in place. No effective tsunami warning and no earthquake or landslide warning.			Unlikely	Major	Medium		
Operating environment	Risk that climate change affects raw water availability				Likely	Major	High	High	Implementation TA to consider possible impact of climate change on water resource availability.			Unlikely	Major	Medium		
Partner capacity and relations	Risk that relationship with DGHS breaks down				Unlikely	Moderate	Medium	Medium	DFAT funded Watsan Lead Adviser in DGHS to support KIAT activities. Regular meetings between KIAT and DGHS senior staff.			Rare	Moderate	Low		
Partner capacity and relations	Risk that DGHS does not have capacity and/or resources for CPMU to oversee the PBG effectively.				Likely	Minor	Medium	Medium	Oversight and monitoring requirements are defined in a Project Management Manual. PBG is designed to support NUWAS strategy, giving DGHS an interest in its success. **Consultant support for CPMU will be funded by KIAT.**			Unlikely	Minor	Low		
Partner capacity and relations	Risk that LGs are unwilling to accept risk of PDAM failing to improve performance and earn the grant				Possible	Moderate	Medium	Medium	Selected LGs will be invited to a Workshop to explain the PBG and the risks. LGs unwilling to accept this risk will not be invited to join the PBG.			Unlikely	Moderate	Medium		
Partner capacity and relations	Risk that PDAMs lack technical and management capacity to improve performance				Likely	Moderate	High	High	Implementation TA will provide technical support to PDAM.			Unlikely	Moderate	Medium		
Fiduciary and fraud	Risk that funds are not used for their intended purpose.				Possible	Minor	Medium	Medium	Project design means DFAT funds are not at risk. Grant is paid to Local Government as reward for improved PDAM performance. LG takes on PDAM procurement risks.			Unlikely	Minor	Low		
Fiduciary and fraud	Risk that funds do not achieve value for money.				Possible	Minor	Medium	Medium	Project design means DFAT funds are not at risk. Grant is paid to Local Government as reward for improved PDAM performance. LG takes on PDAM procurement risks.			Unlikely	Minor	Low		
Fiduciary and fraud	Risk of collusion between bidders.				Possible	Minor	Medium	Medium	Project design means DFAT funds are not at risk. Grant is paid to Local Government as reward for improved PDAM performance. LG takes on PDAM procurement risks.			Unlikely	Minor	Low		
Political	Risk that Presidential election in April 2019 results in a major change in GoI policy for the water sector.				Rare	Moderate	Low	Low	No treatment proposed.			Rare	Moderate	Low		
Political	Risk that DPRD refuses to allow equity injection for PDAM.				Possible	Moderate	Medium	Medium	KIAT to engage with DPRD to explain the PBG and assess whether they will agree to investing in PDAM.			Unlikely	Moderate	Medium		
Resources, management and planning	Risk that LG has limited capacity for Pre-financing.				Possible	Moderate	Medium	Medium	Selected LGs will be invited to a PBG Workshop. Only those agreeable to pre-financing will be offered an On-Granting agreement which will include a LG financing commitment.			Rare	Moderate	Low		
Resources, management and planning	Risk that LG fails to, or is late, injecting equity into PDAM.				Possible	Moderate	Medium	Medium	No treatment proposed.			Possible	Moderate	Medium		

DFAT RISK REGISTER TEMPLATE

Risk Category	Risk Event - what could happen	Risk Source/s - what could cause the event to happen	Risk Impact/s - what would happen if the event occurs?	Risk Owner - Who is responsible for ensuring this risk is managed?	Risk rating before any controls			Current/ Residual Risk Rating	Proposed Treatments (If no further treatment required or available, please explain why)	Person Responsible for Implementing Treatment/s	Implementation Date for Proposed Treatment/s	Target rating when Proposed Treatments are in place			Does this risk need to be escalated?
					Likelihood (refer to matrix)	Consequence (refer to matrix)	Risk Rating (refer to matrix)	Risk Rating (refer to matrix)				Likelihood (refer to matrix)	Consequence (refer to matrix)	Risk Rating (refer to matrix)	
Resources, management and planning	Risk that grant values offered are unattractive to LG/PDAM				Possible	Major	High	High	If feedback from the LGs/PDAMs at the Workshop is negative then proposed grant values will be reconsidered.			Unlikely	Major	Medium	
Resources, management and planning	Risk that there is insufficient time for PDAM to achieve an improved performance.				Likely	Moderate	High	High	Progress will be reviewed at the end of the first year and the possibility of adding a third year considered.			Possible	Moderate	Medium	
Resources, management and planning	Risk that inexperienced staff are provided for implementation support to PDAM.				Possible	Moderate	Medium	Medium	Careful selection of experienced consultants who understand PDAMs.			Unlikely	Moderate	Medium	
Resources, management and planning	Risk of insufficient focus on gender equality and social inclusion.				Likely	Minor	Medium	Medium	KIAT will provide a Gender Equality and Social Inclusion TA to develop awareness in each PDAM.			Unlikely	Minor	Low	

Table 20 Investment Risk Summary

Investment Risk Summary	Highest individual inherent risk rating in each category (before controls)	Highest individual residual risk rating in each category after controls but before treatments
1. **Operating environment:** What factors in the operational or physical environment (security, lack of essential infrastructure, gender inequality, land tenure etc.) might impact directly on achieving the outcomes? Is the investment or intended outcomes exposed to disasters that typically occur in the investment area and/or country? Will the investment be exposed to climate change risk?	high	High
2. **Partner capacity and relations**: Could a relationship breakdown occur with key partners or stakeholders and would this prevent the outcomes from being achieved? Does the intended partner/s (if known) have the capacity and capability to manage their role/work involved in this investment, including risks? Are there governance mechanisms (in the design and agreement) in place to ensure adequate ongoing communication and reporting between DFAT and the investment partner?	high	High
3. **Fiduciary and fraud:** Are there any significant weaknesses that mean funds may not be used for intended purposes, not properly accounted for or do not achieve value for money? Is there a risk that DFAT aid program funding could be diverted for use by terrorists**?**	Medium	Medium
4. **Political:** Is there a likelihood that political instability, changes to a partner government's strategy or policy may jeopardise the investment outcomes? Change in government? Might this negatively affect DFAT's relationship with the partner government?	Medium	Medium
5. **Resources, Management and Planning:** How realistic are the outcomes and can they be achieved within the timeframe? Are the outcomes sustainable? What factors may prevent the outcomes being met? Are there adequate resources, including budget and people allocated to implementation (within DFAT and/or the partner government)?	high	High
6. **Environment and Social Safeguards:** Do any of the activities involved in this investment have the potential to cause harm to the environment and people - (environmental protection; children, vulnerable and disadvantaged groups; displacement and resettlement, indigenous peoples; health and safety)?	Medium	Medium
7. **Other:** Are there any other factors specific to this investment that would present a risk (e.g. this is a new area of activity or it is an innovative approach?	-	-
	Use this overall inherent risk rating during planning and concept	Use this overall residual risk rating during design and implementation
Overall Risk Rating	High	High

Table 21 Risk Management Plan for Operating Environment Risks

Risk event: Operating Environment Risks	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
Risk that natural disaster e.g. landslide, tsunami, earthquake, volcanic eruption might impact the investment.	Unlikely	Major	Medium	Yes	No treatment proposed. GoI has good volcanic eruption warning systems in place. No effective tsunami warning and no earthquake or landslide warning.		Unlikely	Major	Medium
Risk that climate change affects raw water availability	Likely	Major	High	No	Implementation TA to consider possible impact of climate change on water resource availability.	Implementation TA	Unlikely	Major	Medium

Table 22 Risk Management for Partner Capacity and Relations

Risk event: Partner Capacity and Relations	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
Risk that relationship with DGHS breaks down	Unlikely	Moderate	Medium	No	DFAT funded Watsan Lead Adviser in DGHS to support KIAT activities. Regular meetings between KIAT and DGHS senior staff.	KIAT & DGHS	Rare	Moderate	Low
Risk that DGHS does not have capacity and/or resources for CPMU to oversee the PBG effectively.	Likely	Minor	Medium	No	Oversight and monitoring requirements are defined in a Project Management Manual. PBG is designed to support NUWAS strategy, giving DGHS an interest in its success. Consultant support for CPMU will be funded by KIAT.	KIAT & DGHS	Unlikely	Minor	Low

Risk event: Partner Capacity and Relations	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
Risk that LGs are unwilling to accept risk of PDAM failing to improve performance and earn the grant	Possible	Moderate	Medium	No	Selected LGs will be invited to a Workshop to explain the PBG and the risks. LGs unwilling to accept this risk will not be invited to join the PBG.	KIAT	Unlikely	Moderate	Medium
Risk that PDAMs lack technical and management capacity to improve performance	Likely	Moderate	High	No	Implementation TA will provide technical support to PDAM.	Implementation TA	Unlikely	Moderate	Medium

Risk event: Fiduciary and Fraud Risk	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
Risk that funds are not used for their intended purpose.	Possible	Minor	Medium	Yes	Project design means DFAT funds are not at risk. Grant is paid to Local Government as reward for improved PDAM performance. LG takes on PDAM procurement risks.		Unlikely	Minor	Low
Risk that funds do not achieve value for money.	Possible	Minor	Medium	Yes	Project design means DFAT funds are not at risk. Grant is paid to Local Government as reward for improved PDAM performance. LG takes on PDAM procurement risks.		Unlikely	Minor	Low
Risk of collusion between bidders.	Possible	Minor	Medium	Yes	Project design means DFAT funds are not at risk. Grant is paid to Local Government as reward for improved		Unlikely	Minor	Low

Risk event: Fiduciary and Fraud Risk	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
					PDAM performance. LG takes on PDAM procurement risks.				

Risk event: Political / Project Risk	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
Risk that Presidential election in April 2019 results in a major change in GoI policy for the water sector.	Rare	Moderate	Low	Yes	No treatment proposed.		Rare	Moderate	Low
Risk that DPRD refuses to allow equity injection for PDAM.	Possible	Moderate	Medium	No	KIAT to engage with DPRD to explain the PBG and assess whether they will agree to investing in PDAM.	KIAT	Unlikely	Moderate	Medium

Risk event: Management and Planning Risks	Likelihood Risk Rating with existing controls in place (refer to matrix)	Consequence Risk Rating with existing controls in place (refer to matrix)	Risk Rating (refer to matrix)	Is risk rating acceptable? Yes/No	Proposed Treatments	Agency or Unit Responsible for Implementing Treatments	Likelihood Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Consequence Target Risk Rating when Proposed Treatments are in place (refer to matrix)	Risk Rating (refer to matrix)
Risk that LG has limited capacity for Pre-financing.	Possible	Moderate	Medium	No	Selected LGs will be invited to a PBG Workshop. Only those agreeable to pre-financing will be offered an On-Granting agreement which will include a LG financing commitment.	KIAT	Rare	Moderate	Low
Risk that LG fails to, or is late, injecting equity into PDAM.	Possible	Moderate	Medium	Yes	No treatment proposed.		Possible	Moderate	Medium
Risk that grant values offered are unattractive to LG/PDAM, or performance targets too demanding	Possible	Major	High	No	If feedback from the LGs/PDAMs at the Mid-term Review is negative then grant values and targets will be reconsidered.	KIAT & DGHS	Unlikely	Major	Medium
Risk that there is insufficient time for PDAM to achieve an improved performance.	Likely	Moderate	High	No	Progress will be reviewed at the end of the first year and the possibility of adding a third year considered.	DFAT & KIAT	Possible	Moderate	Medium
Risk that inexperienced staff are provided for Implementation support to PDAM.	Possible	Moderate	Medium	No	Careful selection of experienced consultants who understand PDAMs.	KIAT	Unlikely	Moderate	Medium
Risk of insufficient focus on gender equality and social inclusion.	Likely	Minor	Medium	Yes	KIAT will provide a Gender Equality and Social Inclusion TA to develop awareness in each PDAM.	KIAT	Unlikely	Minor	Low
Risk that improvements in performance are not sustained.	Possible	Moderate	Medium	Yes	M&E will continue for 3 years after completion to assess the reasons for any failure to sustain performance.	KIAT	Possible	Moderate	Medium

Risk event: Environmental	Likelihood Risk Rating	Consequence Risk Rating with existing	Risk Rating (refer	Is risk rating acceptable?	Proposed Treatments	Agency or Unit Responsible	Likelihood Target Risk Rating	Consequence Target Risk Rating when Proposed	Risk Rating

and Social Safeguards Risks	with existing controls in place (refer to matrix)	controls in place (refer to matrix)	to matrix)	Yes/No		for Implementing Treatments	when Proposed Treatments are in place (refer to matrix)	Treatments are in place (refer to matrix)	(refer to matrix)
Risk that additional water resources required cause over-abstraction of ground or surface water.	Possible	Minor	Medium	No	Implementation TA to consider risk of over-abstraction of groundwater and ensure AMDAL threshold of ≥ 50 l/s in an area < 5 ha is not breached.	KIAT & Implementation TA	Unlikely	Minor	Low
Risk that increased water use causes pollution.	Possible	Minor	Medium	No	Implementation TA to ensure compliance with PP No.122/2012 on the prevention of water pollution. New PDAM customers must have a septic tank.	KIAT & Implementation TA	Unlikely	Minor	Low

Annex 9 – Stakeholder Meetings and People Met

A9.1 Stakeholder Meetings

No.	Meeting Details
1	PBG Kick Off Meeting on 20/08/2018 at 1 pm chaired by Ibu Tirta Sutedja, Kasubdit Air Minum, BAPPENAS
2	PERPAMSI meeting on 24/08/2018 at 9 am chaired by Ashari Mardiono, Direktur Eksekutif, PERPAMSI
3	BPPSPAM meeting on 27/08/2018 at 9.30 pm chaired by Ibu Poppy Indrawati, Anggota Unsur Masyarakat Profesi, BPPSPAM
4	MoF DJPK meeting on 27/08/2018 at 1.00 pm chaired by M. Zainuddin, Kasubdit Hibah, Dana Darurat & Dana Insentif
5	IUWASH meeting on 30/08/2018 at 3.00 pm, chaired by Sofyan Iskandar from IUWASH PLUS
6	Dit. PSPAM meeting on 04/09/2018 at 1 pm chaired by Agus Achyar as Direktur PSPAM, PUPR
7	BPKP meeting on 07/09/2018 at 9.00 pm, chaired by Juliver Sinaga as the Direktur Pengawasan Badan Usaha Milik Daerah, BPKP
8	BAPPENAS meeting on 14/09/2018 at 10 am chaired by Ibu Tri Dewi Virgiyanti, Director Dev. Of Urban, Housing and Settlement Areas, Bappenas
9	Dit.SUPD II-Kemen DaGri meeting on 14/09/2018 at 1.30 pm chaired by Ibu Nitta Rosalin, Ka.Sudit, Dit. SUPDII, Kementrian Dalam Negeri
10	NUWAS meeting on 18/09/2018 at 1.30 pm chaired by Irma Setiono, Team Leader NUWSP, World Bank
11	Ditjen. KEUDA, Kemen.DaGri meeting on 01/10/2018 at 10.30 am, chaired by Riris Prasetyo, KaSubDit BUMD Air Minum, Ditjen Keuangan Daerah, KemenDalamNegeri.
12	BPPSPAM meeting on 03/10/2018 at 08.30 am chaired by Limbong BPPSPAM Team
13	IUWASH meeting on 09/10/2018 at 09.30 am chaired by Hernadi from IUWASH PLUS
14	Dit. PSPAM (MPWH) meeting on 10/10/2018 chaired by Ibu Mieke from Dit PSPAM
15	Gender Mainstreaming Sekretariat MPWH meeting on 30/10/2018 at 10.00 am chaired by Ineke Indrarini from Gender Mainstreaming Sekretariat
16	Dit.PSPAM meeting on 31/10/2018 at 14.00 pm chaired by Agus Ahyar Direktur PSPAM, PUPR
17	World Bank meeting on 13/11/2018 at 09.30 am chaired by Risyana from NUWSP Team
18	PDAM Kota Bandar Lampung meeting on 22/11/2018 at 10.30 am chaired by ustimigo, President Director PDAM Kota Bandar Lampung
19	PDAM Kota Demak meeting on 27/11/2018 at 10.30 am chaired by Qomarul Huda, Direktur PDAM Demak
20	PDAM Kab. Kudus meeting on 28/11/2018 at 10.00 am chaired by AhmadiSyafa, Direktur PDAM Kab. Kudus
21	PDAM Kota Pekalongan meeting on 29/11/2018 at 10.00 am chaired by Sugiyatmo, Kabag. PDAM Kota Pekalongan
22	PDAM Kab. Gianyar meeting on 03/12/2018 at 10.30 am chaired by Made SastraKencana, President Director PDAM Kab. Gianyar
23	BAPPEDA Kab. Gianyar meeting on 04/12/2018 at 09.00 am chaired by GedeWidarmaSuharta, Ketua BAPPEDA Kab. Gianyar
24	PDAM Kota Jambi meeting on 11/12/2018 at 09.00 am chaired by Erwin Jaya Zuchri, President Director PDAM Kota Jambi
25	BPPSPAM meeting on 20/12/2018 at 13.00 pm chaired by Oscar R.H.S, Kabag. Duknis
26	BPG Consultant meeting on 16/01/2019 at 15.30 pm chaired by Gede Widarma Suharta, Ketua BAPPEDA Kab. Gianyar
27	Puslitbang PKPT-DJCK meeting on 25/01/2019 at 14.00 pm chaired by Chandra R.P.S, Ketua CPMU Prohamsan
28	PDAM Kota Sukabumi meeting on 12/02/2018 at 10.30 am chaired by H. Toto Sucipto, SE, Plt President Director PDAM Kota Sukabumii

29	Dit. PSPAM meeting on 06/03/2019 at 8.30 am, chaired by Agus Achyar, Direktur PSPAM, PUPR
30	MoF DJPK meeting on 14/03/2019 at 14.30 pm, chaired by Aries, Kasubdit Hibah, Dana Darurat & Dana Insentif

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