Indonesia PPP Projects in Water Supply Sector

By Ir. Henry M. Limbong. MM
Jakarta, September 17th 2019
Support Government and Local Government in improving water supply services managed by state-owned and/or local-owned enterprises.

1. **Assess the performance** of water supply services managed by state-owned and regional-owned enterprises in relation to quality, quantity, and continuity requirements in water supply services.

2. **Facilitate the improvement of water supply services performance** managed by state-owned and regional-owned enterprises in relation to quality, quantity, and continuity requirements in water supply services.

3. **Provide recommendations to the central and local government** to improve water supply services performance conducted by state-owned enterprises and regional-owned enterprises.

4. **Provide recommendations to the central and local government** to maintain the balance interests between water supply provider and its customers.
MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
REKAPITULASI KINERJA PDAM TAHUN 2015-2019

<table>
<thead>
<tr>
<th></th>
<th>Tahun 2015</th>
<th>Tahun 2016</th>
<th>Tahun 2017</th>
<th>Tahun 2018</th>
<th>Tahun 2019</th>
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<tr>
<td>Sehat</td>
<td>196</td>
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<tr>
<td>Kurang Sehat</td>
<td>100</td>
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<td>Sakit</td>
<td>72</td>
<td>65</td>
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<td>Jumlah</td>
<td>368</td>
<td>371</td>
<td>378</td>
<td>374</td>
<td>380</td>
</tr>
</tbody>
</table>

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
SUMMARY OF PDAM PERFORMANCE IN 2018

**PERFORMANCE OF 374 PDAM IN 2018**

- **380 PDAM**
  - 99, 26%
  - 52, 14%
  - 223, 60%

**TOTAL CUSTOMER**
11,428,132 HOUSEHOLD CONNECTION

**AVERAGE TARIF**
Rp 4,819/m3

**COST OF PRODUCTION**
WITH REAL NRW Rp 4,726/m3

**133 PDAM FULL COST RECOVERY**
240 NON FULL COST RECOVERY

**NATIONAL AVERAGE RATE OF NON REVENUE WATER (NRW) 33,2%**

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
WATER SUPPLY SECTOR ISSUES

National Medium Term Planning (RPJM) 2020-2024 Target: 100% safe access of drinking water supply in 2024

Safe access coverage for drinking water is 72.04%. However, pipeline system coverage by Indonesia water enterprises (PDAM) is only around 17%.
(Source: Dit.SPAM, 2018)

Limited capacity of State Budget (APBN) for Infrastructure Development

Total investment needed to achieve 100% access to drinking water supply is IDR 253.8 trillion. It is planned to be funded by State budget plan as much as IDR 67.5 trillion (27%), APBD of IDR 199.23 trillion (47%) and private funds are expected as much as IDR 49.05 trillion (27%).
(Source: Dit. Pengembangan SPAM CK, 2017)

Low Performance Management of Water Supply Enterprises (PDAM)

PDAM in Good performance is only 60%, Average Performance is 26% and Low Performance is 14%.
(Source: BPSPPAM, 2018)
STRATEGIES TO IMPROVE PDAM PERFORMANCE
OUR COLLABORATIVE PARTNERSHIP SCHEME

Action Plan (Recommendation) → Unhealthy and Less healthy PDAM → Healthy PDAM → Investment Model

Balancing interests of Customer and water supply provider

BPPSPAM Facilitates in:
- Performance Evaluation
- Performance Improvement
- Balancing interests between customer and provider

BPPSPAM

PDAM Funds
Central/Local Government Funds
Alternative Financing (CSR, commercial bank loan, etc)
Bilateral / Multilateral Donor Agency
PPP/B to B

BPPSPAM Facilitates in:
- Planning
- Preparation
- Transaction

BPPSPAM

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
BPPSPAM COLLABORATIVE PARTNERS

**Donors**

- NUWSP – World Bank (National Urban Water Supply Project)
  - Providing urban water supply development platform

- IUWASH PLUS (INDONESIA URBAN WATER SANITATION & HYGINE)
  - Support GOI to improve water supply and sanitation access especially to the Low Income Community

- KIAT (KEMITRAAN INDONESIA AUSTRALIA UNTUK INFRASTRUKTUR)
  - Provide the performance based grant scheme for water utility

**Governments**

- Directorate General of Water Resources
- Directorate of Water Supply System Development
- National Development Planning Board
- Ministry of Finance
- Ministry of Home Affairs
- Finance and Development Auditor

**Others**

- IIGF
- PT. SMI
- Perum Jasa Tirta
- PERPAMSI

**Business Entity**

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
Summary to Improve 151 Less Healthy and Unhealthy Performing PDAM through Collaboration

<table>
<thead>
<tr>
<th>BPPSPAM</th>
<th>NUWSP</th>
<th>IUWASH PLUS</th>
<th>KIAT</th>
<th>PERP AMSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>151</td>
<td>67</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

- **BPPSPAM**
  - TA. 2020-2022: 33 PDAM
  - BPPSPAM - NUWSP
  - TA. 2018: 19 PDAM
  - TA. 2019: 15 PDAM

- ** IUWASH**
  - 67 PDAM

- **IUWASH dan NUWSP (TACB & Stimulan):**
  - 1. PDAM Kota Tebing Tinggi
  - 2. PDAM Kab. Deli Serdang

- **IUWASH dan NUWSP (TACB):**
  - 1. PDAM Kab. Bulukumba
  - 2. PDAM Kab. Barru
  - 3. PDAM Jayapura

- **KIAT dan NUWSP (TACB):**
  - 1. PDAM Kab. Ngawi

Keterangan:
TACB = Technical Assistance and Capacity Building
1. Implementation of *Full Cost Recovery tariff* *(Re-class & tariff adjustment)*

2. Improvement of Operational Service Hour *(reservoir Volume, Distribution system)*

3. Reducing Non Revenue Water rates *(physical & commercial)*

4. Improvement of Efficiency in Production *(Capacity optimization)*

5. Improvement of Water consumption *(Reservoir Volume, Distribution System, NRW)*

6. Water meter Replacement *(Fund allocation, Trade credit, water meter verification)*

7. Investment fund model to improve coverage *(State Budget, Local State Budget, PPP, B to B, Trade Credit)*

8. Improvement of human resource competency *(Inline with SKKNI SPAM, training and recruitment)*
FUNDING NEEDS

Achieving the target of 100% access requires ± Rp 244,4 Trillion

**Source:** BAPPENAS
Regulation on Investment Cooperation of Water Supply Sector

1. **PP No 121 Year 2015**
   - Government Regulation Number 121 Year 2015 on Water Resources Management

2. **PP No 122 Year 2015**
   - Government Regulation Number 122 Year 2015 on Water Supply System

3. **Perpes 38 Year 2015**
   - Presidential Regulation Number 38 Year 2015 on Cooperation Between Government and Business Entities in Infrastructure Provision

4. **Permen PPN/Bappenas No. 4 Year 2015**
   - Regulation of Minister of National Planning and Development Number 4 of 2015 on Procedures for Cooperation Between Government and Business Entities in Infrastructure

5. **Perka LKPP No. 29 Year 2018**
   - Regulation of Head of National Public Procurement Agency (LKPP) Number 29 Year 2018 on PROCEDURES FOR PROCUREMENT OF PROVISIONS FOR IMPLEMENTING BUSINESS AGENCIES INFRASTRUCTURE THROUGH GOVERNMENT COOPERATION WITH THE AGENCY BUSINESS FOR INITIATING MINISTER / HEAD OF INSTITUTION / REGIONAL HEAD

6. **Permen PUPR No. 19 Year 2016**
   - Regulation of Minister of Public Works and Housing Number 19 of 2016 on the Provision of Support by the Central Government and / or Regional Government in the Cooperation of Implementation of Drinking Water Supply System

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
The Stages of PPP

**PLANNING**
- Preparation of the PPP Plan
- Preliminary Study and Public Consultation
- Value for Money Assessment
- Decision on PPP Continue / No

**PREPARATION**
- Outline Business Case
- Market Sounding
- Location Arrangement
- Establishment of the project company
- Request for Proposal & Bid Submission
- Signing of PPP Agreement
- Prequalification
- Financial Close
- Evaluation & Deciding the winning bidder

**TRANSACTION**
- Final Business Case
- Establishment of the project company
- Financial Close
- Construction
- Operation and Transfer
- The PPP Agreement comes to an end

**PPP IMPLEMENTATION**

Based on Regulation of Minister of National Planning and Development Number 4 of 2015 on Procedures for Cooperation Between Government and Business Entities in Infrastructure

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
PRINCIPLES IN WATER SUPPLY PARTNERSHIP

Based on Minister of Public Works and Housing Regulation No. 19 of 2016 on the Provision of Support by the Central Government and / or Regional Government in the Cooperation of Implementation of Drinking Water Supply System

SCHEMES

- Public Private Partnership
  - Need government supports
  - Risks are shared by parties

- Business to Business
  - Without Government Support
  - Risks are shared by both parties

GOVERNMENT CONTRACTING AGENCY

Partnership with Private Sector either through PPP or B to B scheme can only be done by State - Owned Enterprise (BUMN) / Regional - Owned Enterprise (PDAM) as the Government Contracting Agency (CA)

PROCUREMENT

Both PPP and B to B schemes must ensure the Principles of free competition, transparency and fairness (Conducted through Open Auction / Tender)

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
PARTNERSHIP SCOPE IN WATER SUPPLY SECTOR

## ACTIVITIES

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>Raw Water Unit</th>
<th>Production Unit</th>
<th>Distribution Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Build</strong></td>
<td>• Directorate General of Water Resource (SDA) and/or&lt;br&gt;• Private Sector</td>
<td>Private Sector</td>
<td>• Directorate General of Human Settlement (CK) and/or&lt;br&gt;• Private Sector and/or&lt;br&gt;• Local Government and/or&lt;br&gt;• Regional-Owned Enterprise/ ROE (PDAM).</td>
</tr>
<tr>
<td><strong>Operation &amp; Maintenance</strong></td>
<td>Private Sector</td>
<td>Private Sector</td>
<td>Water Enterprise (PDAM)</td>
</tr>
</tbody>
</table>
PDAM Performance

1. Assists PDAMs in reducing NRW and improving efficiency in production process
2. Assists unhealthy PDAM in preparing Feasibility Study for expansion of water supply systems
3. Assists PDAM in preparing Business Plan and recommend action plans to improve water supply performance.
4. Assists PDAMs in implementing Good Corporate Governance (GCG).
5. Capacity Building on water supply system development.

Investment Improvement

1. Preparing Business Plan
2. Financial Experts
   Review Financial Projection KPBU and BtoB Unsolicited
Gap Investment

- **6,429**
  - PPP Investment Realization
  - 26.3 % IDR 6,429 Trillion

- **17,971**
  - Investment Need
  - 73, % IDR 17,97 Trillion

Now vs. Gap

**Investment Funds Needs from PPP IDR 24,4 Triliun.**
**Gap Investment ± IDR 17,971 Triliun**
### PARTNERSHIP OPPORTUNITY IN PDAM PERFORMANCE’S IMPROVEMENT

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reducing Non-Revenue Water (NRW) to 20% (national target)</td>
</tr>
<tr>
<td>2</td>
<td>Implementing Full Cost Recovery (FCR) tariff on PDAM</td>
</tr>
<tr>
<td>3</td>
<td>Assisting PDAM in preparing business plan and recommend action plans to improve water service performance</td>
</tr>
<tr>
<td>4</td>
<td>Improving efficiency in PDAMs’ production process to &gt;90%</td>
</tr>
<tr>
<td>5</td>
<td>Expanding PDAMs’ service coverage from 60% ➔ 100%</td>
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PPP PROJECT IN WATER SUPPLY SECTOR ON PROGRESS

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
<table>
<thead>
<tr>
<th>Subject</th>
<th>Kamijoro DIY</th>
<th>Jatigede</th>
<th>Karian- Serpong</th>
<th>Sarbagikung</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Water Source</td>
<td>Progo River</td>
<td>Jatigede Dam</td>
<td>Karian Dam</td>
<td>Unda river</td>
</tr>
<tr>
<td>Capacity</td>
<td>500 liter/ second</td>
<td>1,500 liter/second</td>
<td>4,600 liter/second</td>
<td>3,200 liter/second</td>
</tr>
<tr>
<td>Estimated Investment</td>
<td>IDR 0.45 Trillion</td>
<td>IDR 2.1 Trillion</td>
<td>IDR 2 Trillion</td>
<td>IDR 3.2 trillion</td>
</tr>
<tr>
<td>Benefit Recipients</td>
<td>200,000 people, 40,000 house connections</td>
<td>600,000 People, 120,000 House Connections</td>
<td>2.2 Million People, 539,000 House Connections</td>
<td>920,000 people, 84,000 house connections</td>
</tr>
<tr>
<td>Cooperation Period</td>
<td>25 years</td>
<td>30 years</td>
<td>30 years</td>
<td>25 years</td>
</tr>
<tr>
<td>PPP Metode</td>
<td>KPBU Solicited</td>
<td>KPBU Solicited</td>
<td>KPBU Unsolicited</td>
<td>KPBU Unsolicited</td>
</tr>
<tr>
<td>Contracting Agency</td>
<td>Director of DIY PDAB (in process)</td>
<td>There has been no assignment from the Governor of West Java</td>
<td>There has been no assignment from the Minister of Public Works and Public Housing</td>
<td>Director of PDAB Provinsi Bali</td>
</tr>
<tr>
<td>Service Area</td>
<td>Integrated economic area (KAPET) of Kulon Progo, 9 sub-districts (Wates, Bendungan/ Panjatan, Temon, Pengasih, Lendah, Galur, Sentolo, Girimulyo) and Bantul Regency</td>
<td>5 Offtakers (Cirebon City, Cirebon District, Sumedang District, Majalengka District, Indramayu District)</td>
<td>3 Offtakers (PAM Jaya : 3,200 lps, PDAM PDAM Tangerang City: 750 lps, PT PITS : 650 lps)</td>
<td>PDAM Denpasar, 200 lps; PDAM Badung, 2,000 lps; PDAM Gianyar, 50 lps; PDAM Klungkung 50 lps</td>
</tr>
<tr>
<td>Status</td>
<td>Preparation of pre-Feasibility Study</td>
<td>Preparation of pre-Feasibility Study</td>
<td>Finalisation of Feasibility Study</td>
<td>Finalisation of Feasibility Study</td>
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# List of Indonesia PPP Water Supply Projects

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pekanbaru</th>
<th>Jatiluhur I</th>
<th>Dumai</th>
<th>Umbulan</th>
<th>Bandar Lampung</th>
<th>West Semarang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raw Water Source</td>
<td>Siak River</td>
<td>Jatiluhur Dam</td>
<td>Masjid river</td>
<td>Umbulan Spring Water</td>
<td>Way Sekampung River</td>
<td>Jatibarang Dam</td>
</tr>
<tr>
<td>Capacity</td>
<td>500 liter/second</td>
<td>5.000 liter/second</td>
<td>450 liter/second</td>
<td>4.000 liter/second</td>
<td>750 liter/second</td>
<td>1.000 liter/second</td>
</tr>
<tr>
<td>Estimated Investment</td>
<td>IDR 0.49 Trillion</td>
<td>IDR 2 Trillion</td>
<td>IDR 0.45 Trillion</td>
<td>IDR 2.05 Trillion</td>
<td>IDR 1.1 Trillion</td>
<td>IDR 1.1 Trillion</td>
</tr>
<tr>
<td>Benefit Recipients</td>
<td>200.000 People, 40.000 House Connections</td>
<td>2 Million People, 400.000 House Connections</td>
<td>170.000 people, 32.000 house connections</td>
<td>1,3 Million People, 310.000 Houses Connection</td>
<td>300.000 People, 60.000 Houses Connection</td>
<td>450.000 People, 80.000 House Connections</td>
</tr>
<tr>
<td>Cooperation Period</td>
<td>25 years</td>
<td>27 years</td>
<td>25 years</td>
<td>25 years</td>
<td>25 years</td>
<td>25 years</td>
</tr>
<tr>
<td>PPP Method</td>
<td>KPBU Solicited</td>
<td>KPBU Unsolicited</td>
<td>KPBU Unsolicited</td>
<td>KPBU Solicited</td>
<td>KPBU Solicited</td>
<td>KPBU Solicited</td>
</tr>
<tr>
<td>Contracting Agency</td>
<td>Director of Pekanbaru PDAM</td>
<td>Head Director of Perum Jasa Tirta II (PJT II)</td>
<td>Director of PDAM Dumai city</td>
<td>Governor of East Java</td>
<td>Head Director of PDAM Bandar Lampung</td>
<td>Head Director of PDAM Semarang City</td>
</tr>
<tr>
<td>Service Area</td>
<td>6 Sub-Districts (Payung Sekaki, Sukajadi, Sail City, Senapelah, Limapuluh Kota and Pekanbaru City)</td>
<td>4 Offtakers (PAM Jaya : 4.000 lps, PDAM Bekasi City : 300 lps, PDAM Bekasi District : 350 lps, PDAM Karawang District : 350 lps)</td>
<td>3 Sub-districts (West Dumai, Dumai City, North Dumai)</td>
<td>6 Offtakers (PDAM Surabaya City: 1.000 lps, PDAM Pasuruan District: 410 lps, PDAM Pasuruan City: 110 lps, PDAM Sidoarjo District: 1.200 lps, PDAM Gresik District: 1.000 lps, PDAB East Java Province: 200 lps)</td>
<td>8 Sub-Districts (Rajabasa, Labuhan Ratu, Way Halim, Kedaton, Tanjung Senang, Sukarame, Sukabumi, and Kedamaian)</td>
<td>3 Sub-Districts (Tugu, Ngaliyan, Semarang Barat Sub-district)</td>
</tr>
<tr>
<td>Status</td>
<td>Preparation of Request for Proposal (RfP)</td>
<td>Preparation of Request for Proposal (RfP)</td>
<td>Preliminary Requirements Process</td>
<td>Construction stage (83.05% on Agt 2019)</td>
<td>Construction stage (59.08% on Agt 2019)</td>
<td>Fondasian Construction (2.4% on Agt 2019)</td>
</tr>
</tbody>
</table>
LIST OF INDONESIA B To B WATER SUPPLY PROJECTS

MINISTRY OF PUBLIC WORKS AND HOUSING
National Agency For Water Supply System Improvement
<table>
<thead>
<tr>
<th>Subject</th>
<th>Ciawi</th>
<th>Tangerang City</th>
<th>Wilayah Timur Kota Makasar</th>
<th>South Tangerang</th>
<th>Gresik Regency</th>
<th>Bekasi City</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Raw Water Source</strong></td>
<td>Suka Birus River</td>
<td>Cisadane river</td>
<td>Sungai Tallo</td>
<td>Kali Angke</td>
<td>Gerak Sembayat Dam</td>
<td>Cikeas river</td>
</tr>
<tr>
<td><strong>Capacity</strong></td>
<td>150 liter/second</td>
<td>1000 liter/second</td>
<td>600 liter/detik</td>
<td>200 liter/second</td>
<td>1000 liter/second</td>
<td>200 liter per second</td>
</tr>
<tr>
<td><strong>Estimated Investment</strong></td>
<td>IDR 0.15 Trillion</td>
<td>IDR 0.583 Trillion</td>
<td>Rp. 400 milyar</td>
<td>IDR 0.3 Trillion</td>
<td>IDR 0.79 Trillion</td>
<td>IDR 0.06 Trillion</td>
</tr>
<tr>
<td><strong>Benefit Recipients</strong></td>
<td>60,000 people 8000 house connections</td>
<td>400,000 people 80,000 house connections</td>
<td>4.800 house connection</td>
<td>165,000 people 33,000 house connections</td>
<td>400,000 people 80,000 house connections</td>
<td>100,000 people 20,000 house connections</td>
</tr>
<tr>
<td><strong>Cooperation Period</strong></td>
<td>25 years</td>
<td>25 years</td>
<td>-</td>
<td>25 years</td>
<td>25 years</td>
<td></td>
</tr>
<tr>
<td><strong>Contracting Agency</strong></td>
<td>Director of Bogor Regency PDAM</td>
<td>Director of PDAM Tangerang City</td>
<td>Director of PDAM Makasar City</td>
<td>Director of PT. PITS</td>
<td>Director of PDAM Gresik Regency</td>
<td>Director of PDAM Bekasi City</td>
</tr>
<tr>
<td><strong>Service Area</strong></td>
<td>2 sub-districts (Ciawi and Mega Mendung)</td>
<td>3 zone in service area</td>
<td>East domestic area Makasar City</td>
<td>3 sub-districts (Ciputat, Ciputat Timur, and Pamulang)</td>
<td>Northern Gresik domestic area (Bungah, Manyar, Kebomas, Gresik) and non-domestic area (JPII industrial area)</td>
<td>3 sub-districts (Jatisih, Jatisampurna, Pondok Melati)</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Evaluation of Pre-Feasibility Study (from PT. Sauh Sejahtera as initiator candidate)</td>
<td>Finalisation of Director Decree and Pre-Feasibility Study by PDAM</td>
<td>Finalisation of Director Decree and Pre-Feasibility Study by PDAM</td>
<td>Preliminary requirements from PT. Tirta Tangsel Mandiri</td>
<td>Signing of cooperation agreement with PT. Pembangunan Perumahan Kraratau Tirta at April, 11 2019</td>
<td>Announce Commercial Date</td>
</tr>
</tbody>
</table>
THANK YOU

BPPSPAM

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