

IWK CORPORATE OVERVIEW

TOWN HALL FORUM AIR 2026

IR NOOR WAHYU NGADIMIN
KETUA UNIT OPERASI MELAKA

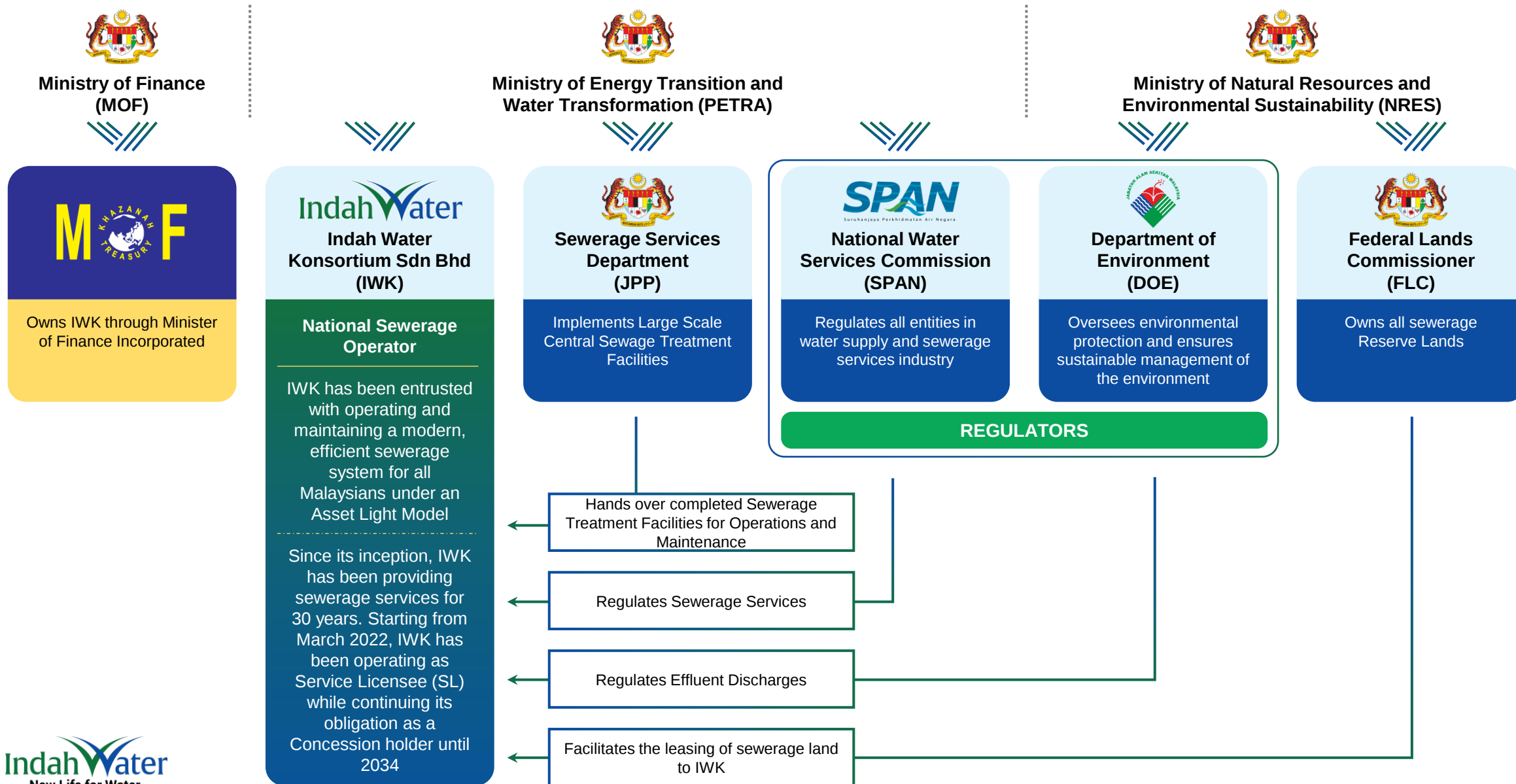
IndahWater
New Life for Water

Feb 2026

COMPANY OVERVIEW



IWK'S CORPORATE STRUCTURE AND STAKEHOLDERS



BUSINESS ACTIVITIES



Operation And maintenance of Public Sewerage Systems

Provides scheduled operation and maintenance of public STPs, NPSs and sewers within our service areas



Septage Management and Desludging Services

Performs scheduled desludging and demand desludging services for septic tank users within our service areas



Sewerage Capital Works and Refurbishment Management

Provides project management and monitor capital works for both Government & SPAN funded sewerage projects and IWK's internal projects



Sewerage Planning, Sewerage Asset Data Monitoring and Certifying Services

Provides certification services: evaluating, certifying and approving of sewerage facilities applications on behalf of SPAN



Sewerage Technical, Operational And Environment Trainings / Consultancy Services

Provides consultancy services and delivers professional technical and non-technical training on sewerage planning, engineering and the operation and maintenance of sewerage systems through ASTRICE



Treated Effluent Supply and Water Reclamation Project

Supplies of treated effluent and collaborates with Water Operators on water reclamation projects for non-potable use in various industries



Other Businesses and Green Initiatives

Implements non-core business (i.e., Eco Park, Private STP O&M Services, land rental) and green initiatives (i.e., organic fertiliser, biogas and solar projects) to supplement the main income stream and achieve cost savings

SERVICE COVERAGE, ASSETS & RESOURCES

11

States & 3 Federal Territories

101

out of 152 Local Authorities

33.35 mil

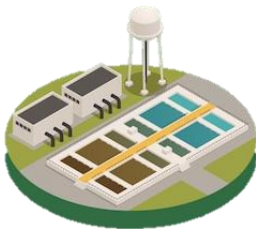
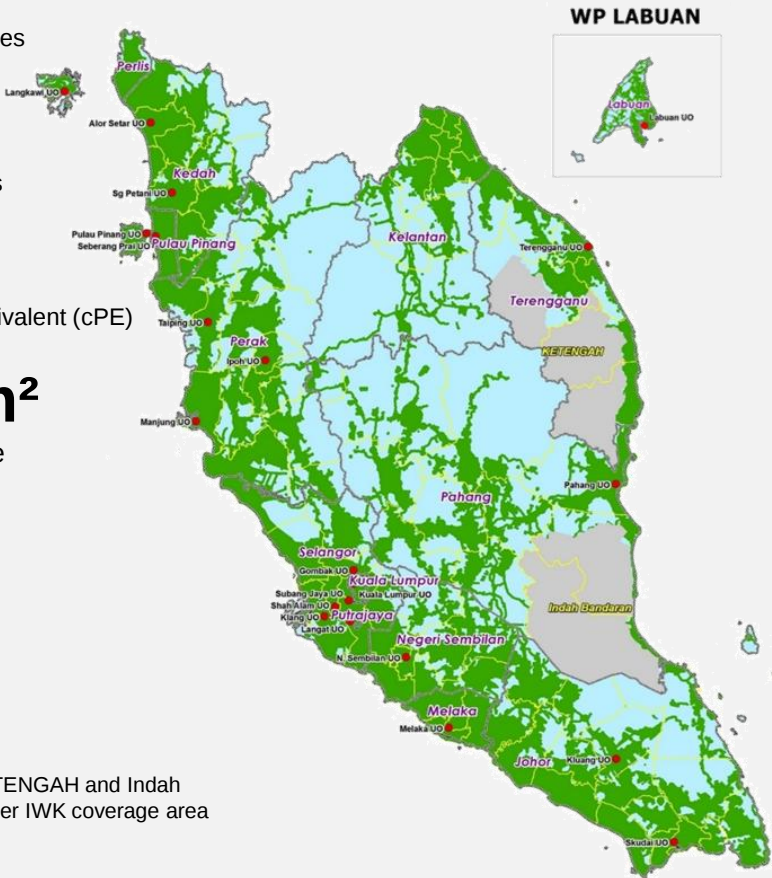
Connected Population Equivalent (cPE)

81,954 km²

Area of service coverage

Legend

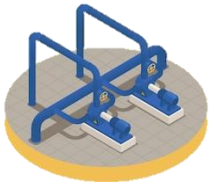
- Unit Office (UO)
- State Boundary
- LA Boundary
- LA Service Area
- Non-LA Service Area
- Sabah, Sarawak, KETENGAH and Indah Bandaran are not under IWK coverage area



7,741
Sewage Treatment
Plants (STP)



1
Water Reclamation
Plant (WRP)



1,563
Network Pump
Stations (NPS)



23,271
Pipelines Length
(km)



3,438
Indahans



629
Vehicles



21
Unit
Offices



59
Reporting
Centers



5 Laboratories



1 Training
Center



2 Eco Parks

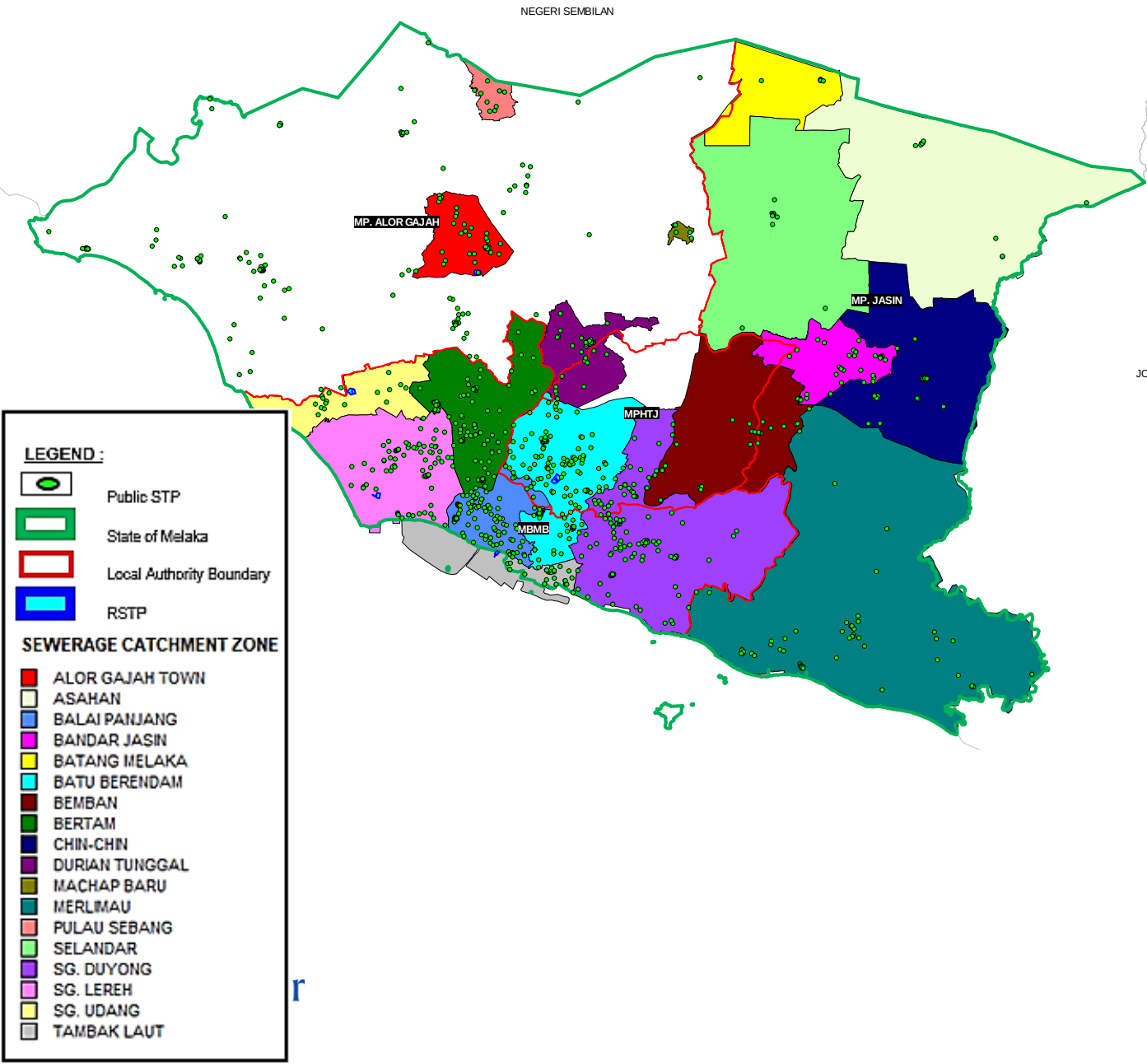


1 Research
Center



1 Gallery

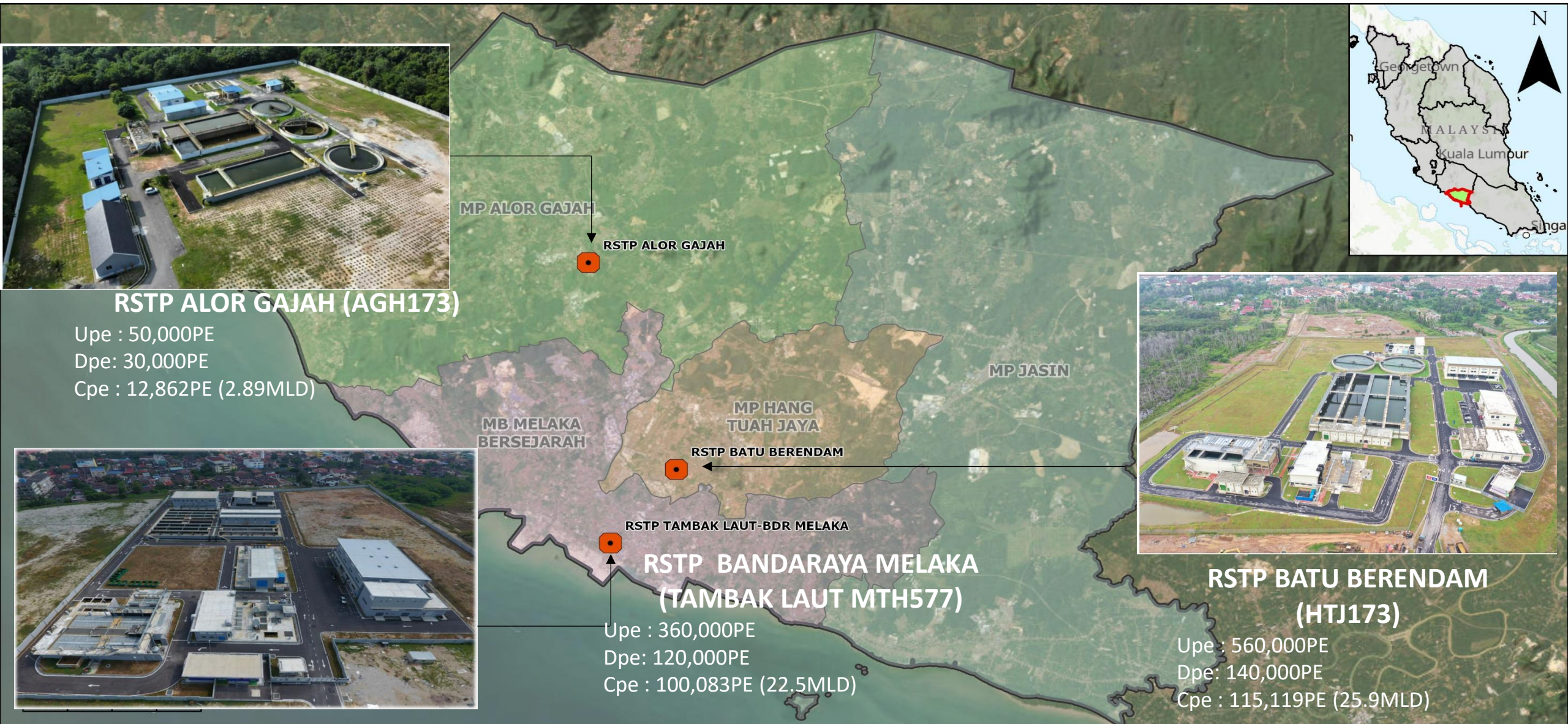
IVENTORY UNIT OPERASI MELAKA



Asset /UO	Melaka UO
No of Manpower	114
No of Plants	624
1. Regional STP	3
2. Network Pumping Station (NPS)	37
3. Local STPs	621
Communal Septic tank (CST)	351
Individual Septic Tank (IST)	67,087
Pour Flush	95,110
Length of Sewerline (km)	1,300
Area of Coverage (Sq. km)	1,763
No of Connected Population Equivalent (cPE)	1,320,318
Sludge Treatment Facility	4
LA (Nos)	4
LA Name	MP ALOR GAJAH, MP JASIN, MB MELAKA BERSEJARAH, MP HANG TUAH JAYA
No of Reporting Centre (RC)	4
No of Vehicles	34
No of Billed Customers @ December 2025	211,033
Overhead Cost (RM)	RM35,651,456.94
Revenue (RM)	RM37,380,013.15

*Source: IWK's Asset Management Information System, December 2025

REGIONAL SEWAGE TREATMENT PLANTS IN MELAKA



International Expansion

We are expanding our international footprint through capacity building, consultancy services and training programmes



Baguio City, The Philippines



THE PHILIPPINES (2023-2024)

Water Organisation Partnerships for Resilience (WOP4R) Programme
Baguio City, The Philippines

- Mentor to Baguio City Environment and Parks Management Office (CEPMO)



INDONESIA (2022-2025)

Water Operators' Partnerships (WOP) Programme
Banjarmasin, Indonesia

- Project team leader and fund manager for a joint collaboration with WaterLinks to mentor Perumda PALD Banjarmasin



YEAR 2007 TO 2017

- Extensive experience in wastewater management and capacity building, including study visits, audits, and workshops across diverse international settings such as Senegal, Saudi Arabia, Oman, Pakistan, India, Sri Lanka and Vietnam



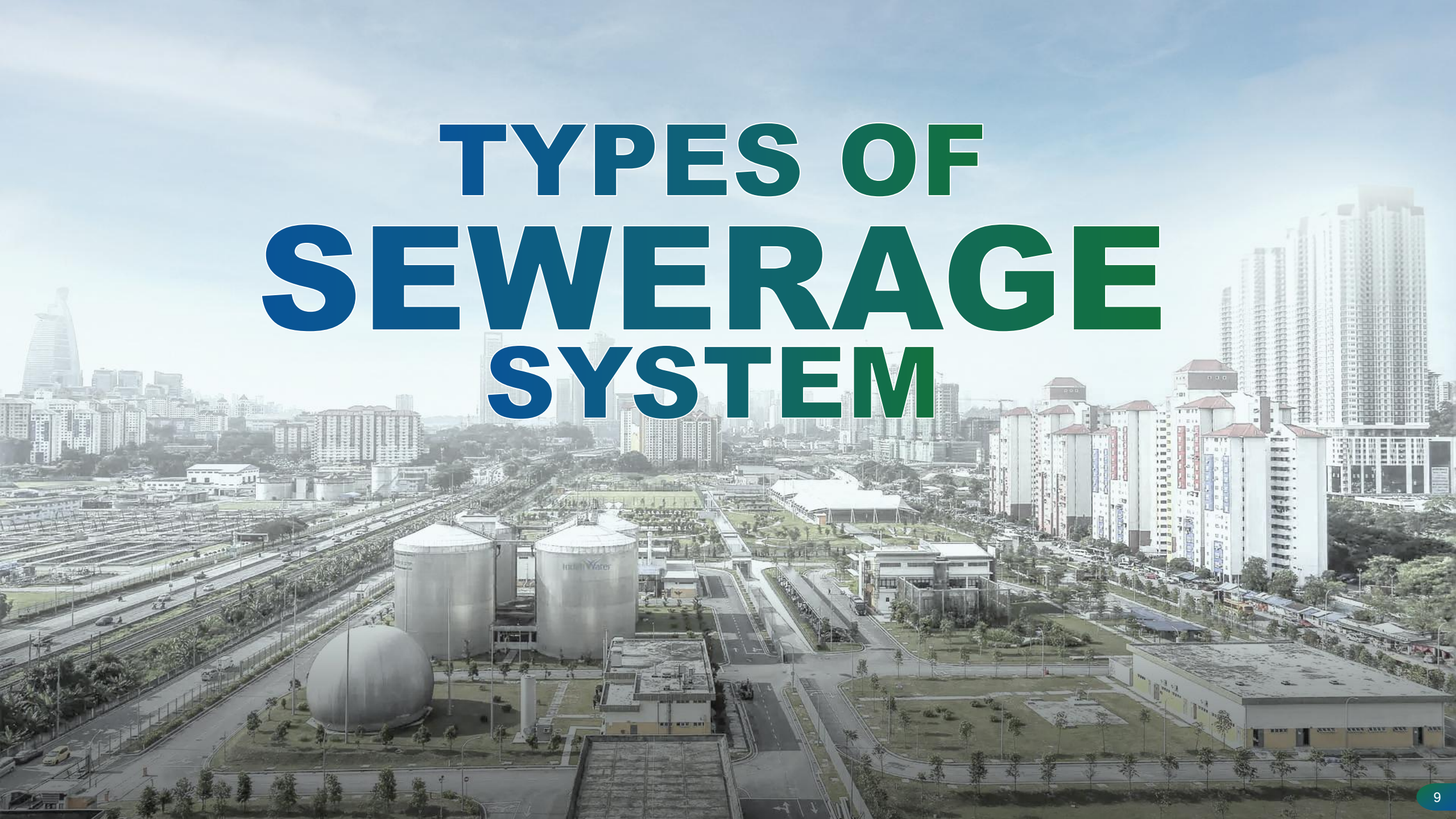
COLLABORATIONS AND PARTNERSHIPS:



ASIAN DEVELOPMENT BANK



TYPES OF SEWERAGE SYSTEM



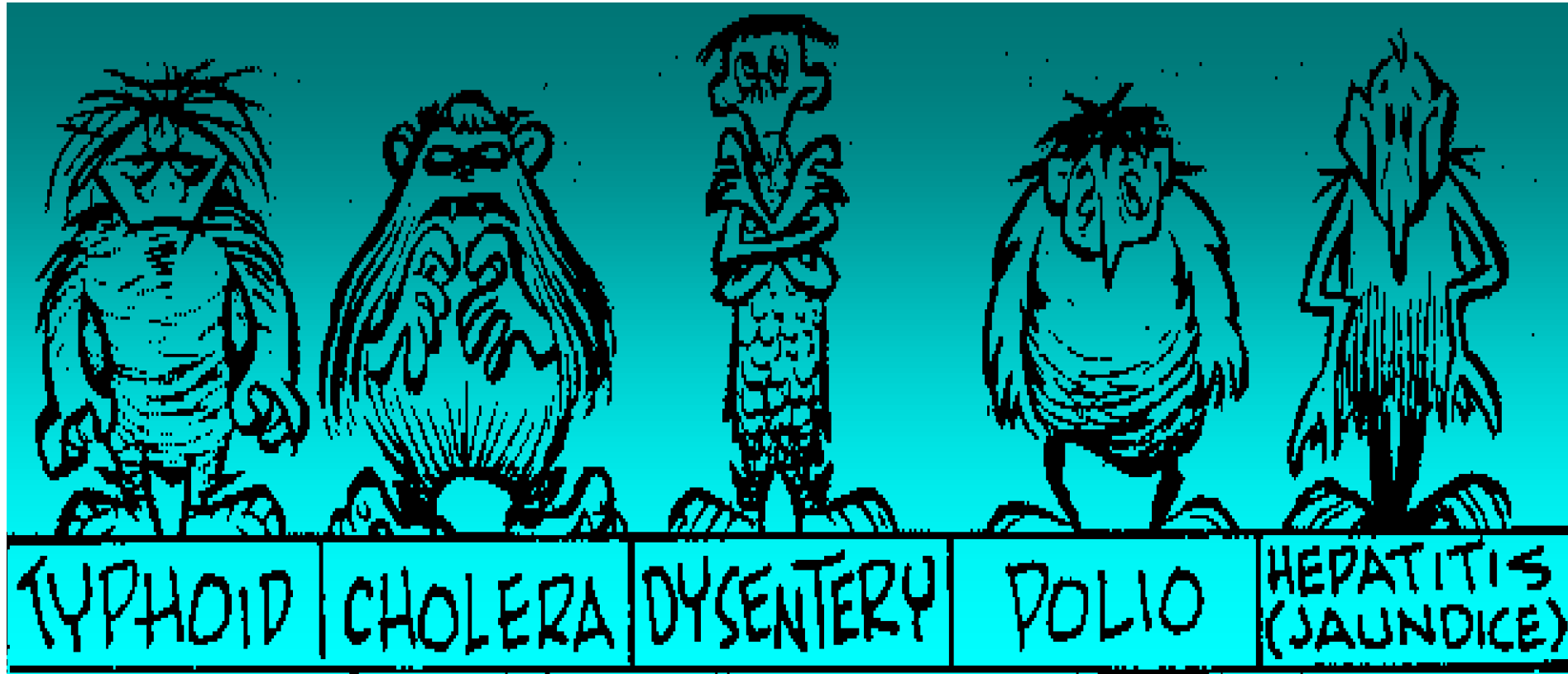
SOURCES OF SEWAGE



- ❖ **Sewage** is water that has been contaminated by daily human activities such as washing clothes, using the bathroom and washing dishes.
- ❖ **Water pollution** is caused by various factors. Some of them from factory's manufacturing processes, construction activities and daily human activities.

WHY SEWAGE TREATMENT?

Some **diseases** can be transmitted through **untreated sewage** that can caused **WATERBORNE DISEASES**.



IWK offers both connected and desludging services to ensure comprehensive coverage to different types of premises and customers.

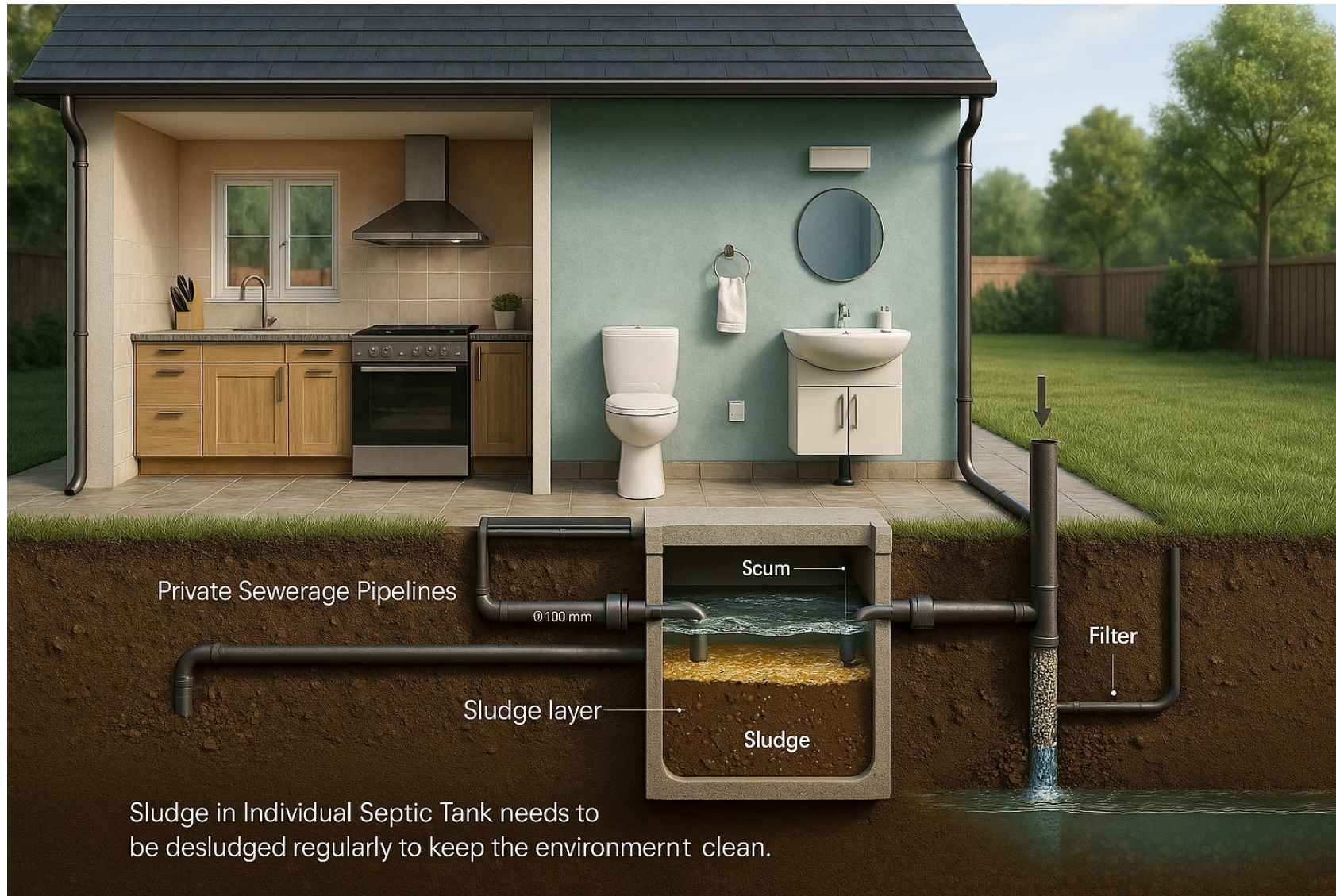
CONNECTED SERVICES



DESLUDGING SERVICES

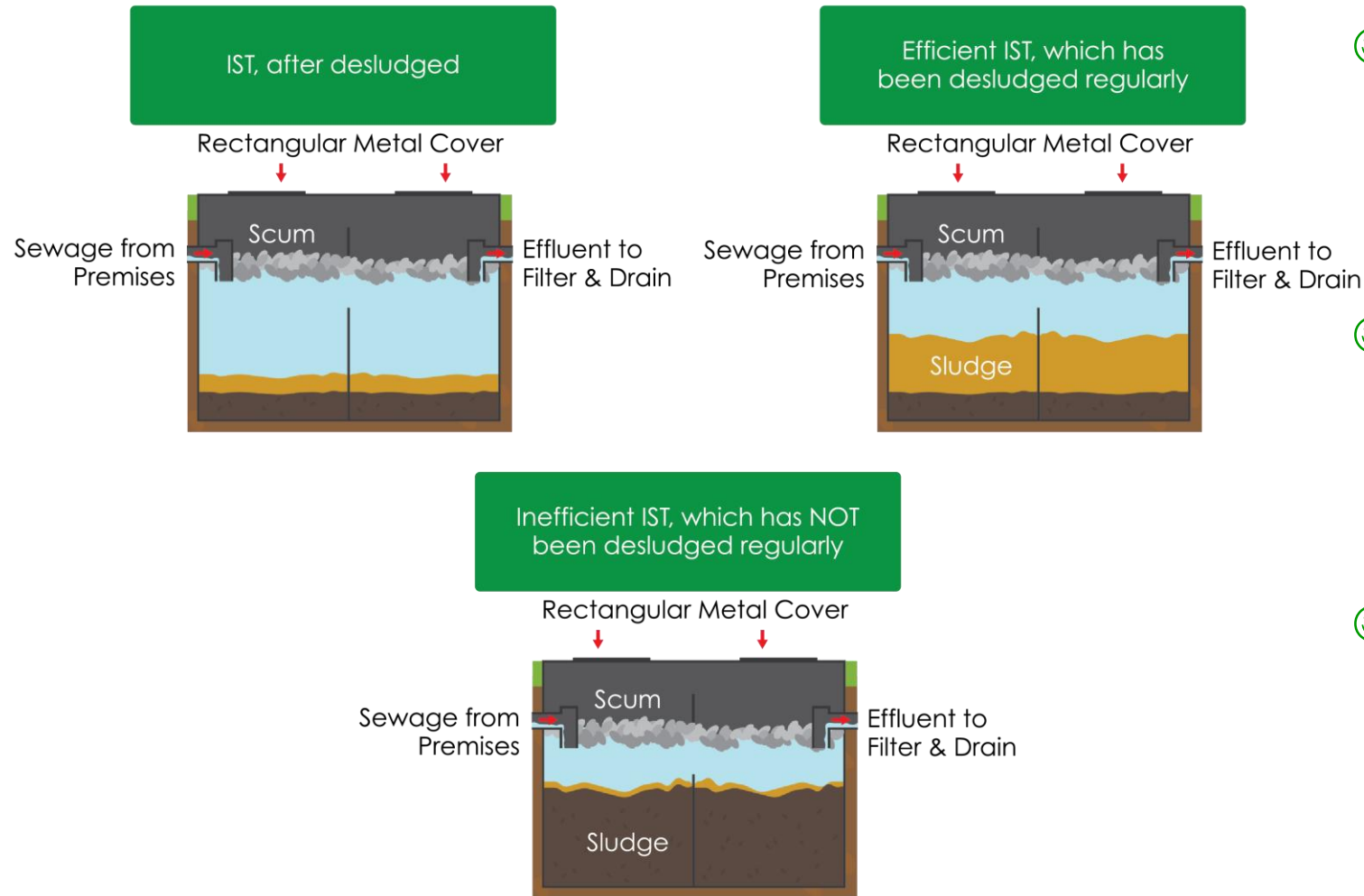


INDIVIDUAL SEPTIC TANK (IST)



- 😊 Settlement tank that provides partial treatment of sewage and wastewater.
- 😊 Desludged regularly at least once every 2 years to prevent spillage & pollution
- 😊 Distinctive feature of 2-4 metal rectangular cover located either in front, side or rear of the premises.

INDIVIDUAL SEPTIC TANK

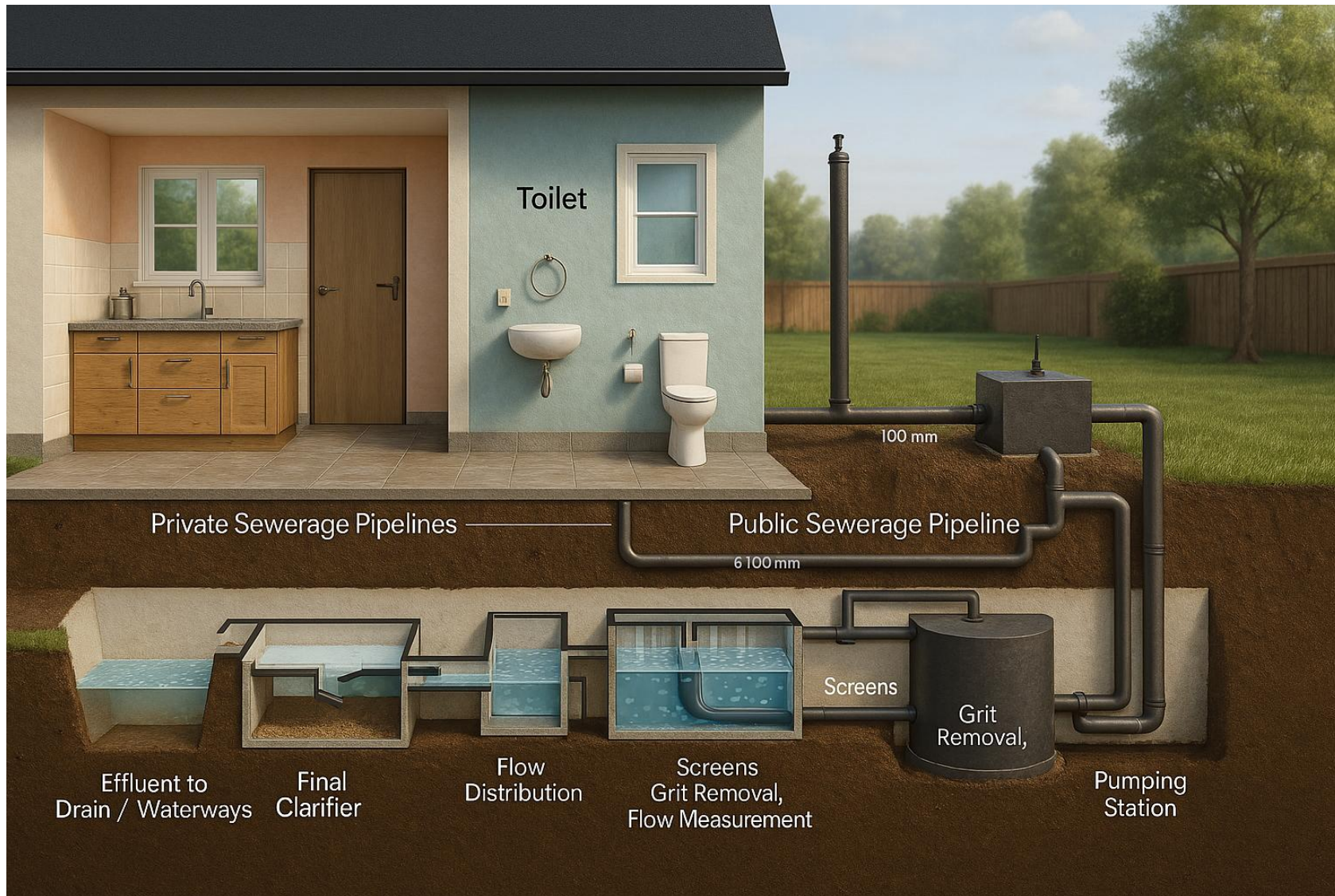


😊 Solids from the incoming sewage settle forming a "sludge", while greases and oils float to the surface forming a "scum" layer.

😊 Effluent from between the scum and sludge layers then passes into the second chamber where further sedimentation occurs

😊 The effluent leaves the second chamber and is discharged into a drain

CONNECTED SYSTEM



😊 Distinctive features of premises / areas with connected sewerage services are the 'inspection chamber' within the premises compound and 'manholes' along the road leading to a sewage treatment plant (STP)

POTENTIAL RENEWABLE RESOURCES

An aerial photograph of a city, likely Singapore, featuring a water treatment plant in the foreground with large cylindrical tanks and a spherical storage tank. The plant is situated next to a multi-lane highway. In the background, a dense urban skyline is visible, including the distinctive Esplanade - Theatres on the Bay. The sky is overcast.

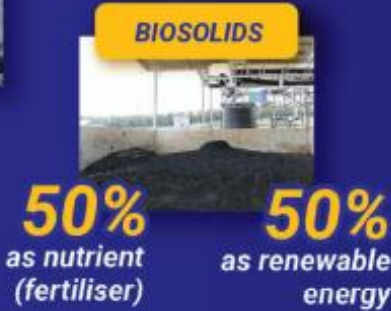
GREEN TECHNOLOGY MASTERPLAN TARGET

IWK's TARGETS in Green Technology



IWK's commitment is in line with the country's direction in achieving the Sustainable Development Goals (SDG) translated in the Green Technology Master Plan (GTMP) Malaysia 2017 – 2030 whereby 100% of biosolids and 33% of bioeffluent are recycled.

IWK's PRIMARY TARGETS BY 2030



IWK's MAIN TARGET INITIATIVES

RECYCLE BIOEFFLUENT



REUSE BIOSOLIDS



BIOGAS POTENTIAL



IWK's SECONDARY TARGETS

- ✓ Energy efficient especially in reducing electricity consumption by 15%.
- ✓ Construction of green building and sewage treatment plants that incorporate green technology.
- ✓ MyHijau programme (through Procurement, Human Resources, Labelling and Certification).
- ✓ Reuse 28% of wastes in all IWK offices.

BIO-EFFLUENT

Bio-effluent Recycle for Non Potable Applications is targeted to grow and meet the Green Technology Masterplan (GTMP) target of 33% recycle rate by 2030

INDUSTRIAL APPLICATIONS



RSTP Setia Alam 1
WRP – 4 MLD

Distribution by dedicated pipeline for Industrial Use. CWR is operating its first WRP project located in Setia Alam, Selangor with the production capacity



IWK established key agreements to supply treated effluent for producing reclaimed water and supporting the operational needs of data centers in Johor and the Klang Valley respectively

BIO-EFFLUENT

Internal Bio-effluent Recycle at STPs



Polymer Blending



General Cleaning



Housekeeping

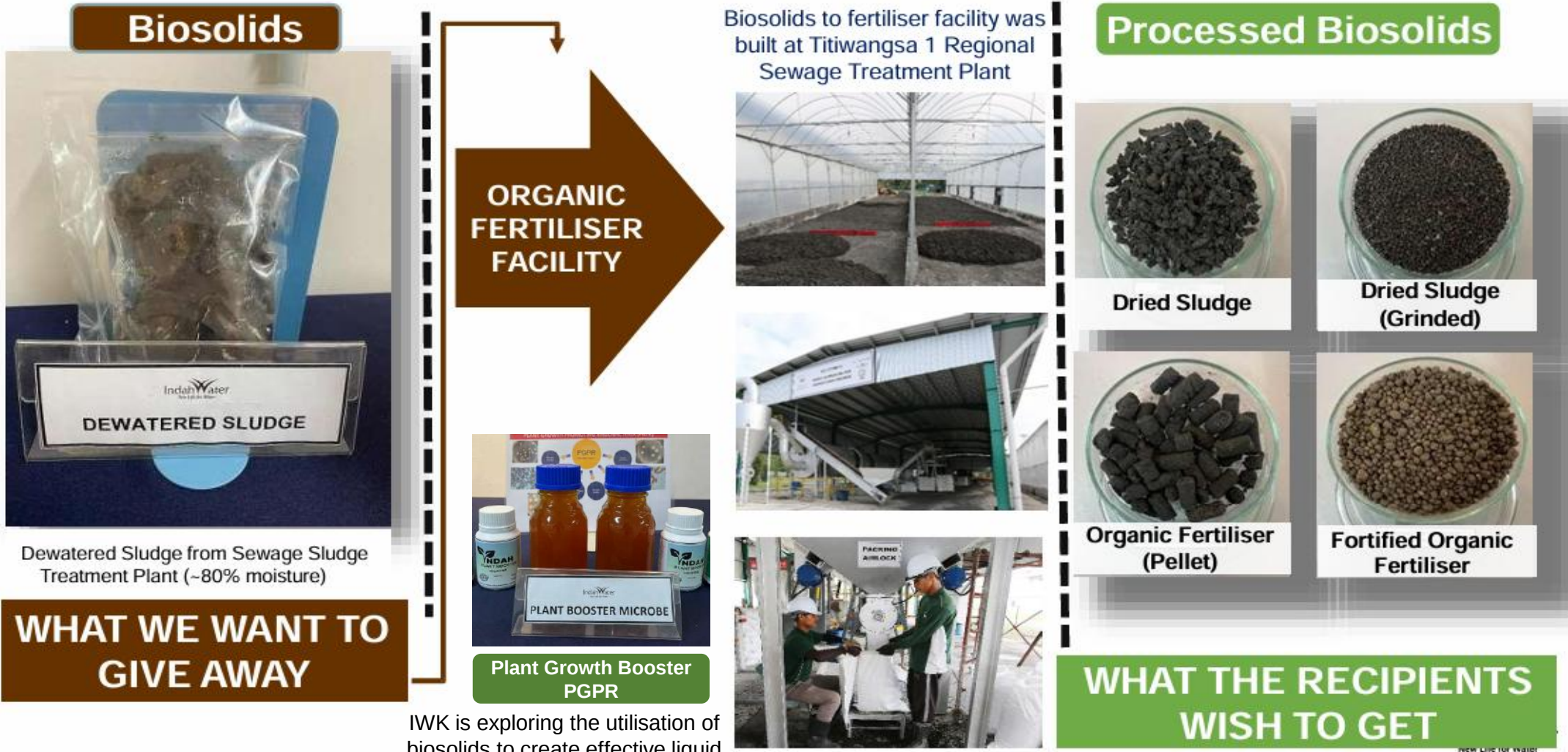


Water Spray

- Regional STPs (RSTPs) equipped with polishing of bioeffluent using filter media
- Approximately **10%** of bioeffluent produced at the RSTPs will be **recycled for internal use**
- Some applications of the recycled bioeffluent
 - Compound cleaning,
 - Landscaping,
 - Polymer preparation,
 - Service water in plant operation (equipment cleaning, etc).
- Reduce dependency on potable water
- Currently, an average of **35MLD** is being recycled internally

BIO-SOLID

Aligned with circular economy principles, IWK minimizes landfill disposal by exploring innovative sludge treatment technologies to recover valuable resources like fertilizers and renewable energy.



BIO-SOLID

SOME RESEARCH COLLABORATIONS

1. IWK-RRIM



- Biosolds improved growth of rubber plants

2. IWK-UPM dan IWK-MARDI



- Biosolids reuse for ornamental plants

3. IWK-UPM-MAHB



- Study on how biosolids improved soil fertility and landscape plants at MAHB (KLIA landscape area)

4. IWK-UPM



- Study on producing value add product from biosolids in the form of pellets, trade name "BioPellen"

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5. PILOT PROJECTS MPPD, MBAS & MPK



- Use of Biosolids and Bioeffluent for Landscape applications with Local Authorities

6. MOU IWK & FRIM



- Study on Biosolids for Forestry applications

BIO-GAS / RENEWABLE ENERGY

SOLAR

- IWK implements a phased approach to install solar panels at selected STP sites to reduce operational costs.
- Solar Power Systems can be installed at Roof Tops and Ground Mounted at IWK's STPs.
- As reference, Pantai 2 RSTPs has solar panel installed at 200kW.



BIOGAS

- Initiative is in early stage of development, angled as a cost efficiency measure with future potential as a diversified revenue stream.

Biogas Project in RSTP
Shah Alam 2



Anaerobic Co-Digestion & Electricity
Generation from Biogas. Potential to
generate 4,000m³/day that can produce
8MWh per day.

Presentation Outline

FOLLOW US!



eBill jer!



Convert to eBill
YOUR FINGERTIPS

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