REGIONAL WATER TALKS

WATERINDONESIA

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INDONESIA SESSION

WEDNESDAY | 4 AUGUST 2021

09.00 – 11.00 WIB / 10.00am – 12.00pm (KL TIME)

Indonesia's Coastal Reservoir: ***Development & Strategy***

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INDONESIA SESSION

4 AUGUST 2021

Indonesia's Coastal Reservoir: *Development & Strategy*

Moderator

Dian Prasetyawati, ST., MT., M.Sc,
Phd. Student
Department of Urban Design and Planning
College of Built Environment
University of Washington

Speakers

Prof. Dr. Ir. Eko Winar Irianto, M.T.,
Director of Technical Development of Water Resources Directorate General of Water Resources
Ministry of Public Works & Housing (PUPR) Indonesia

Hadjad Widadgo S. Hut., MM.
Head of Reservoir Management, Raw Water, Facility & Environment
Batam Free Zone Authority (BP BATAM)

Gert Borrits
Regional Managing Director Southeast Asia
AVK Fusion

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Prof. Dr. Ir. Eko Winar Irianto, M.T.,
Director of Technical Development of Water Resources
Directorate General of Water Resources
Ministry of Public Works & Housing (PUPR) Indonesia

Topic

Coastal reservoir development to secure water availability & create sustainability

MINISTRY OF PUBLIC WORK AND HOUSING

THE IMPLEMENTATION of INDONESIAN ESTUARY DAM TECHNOLOGY

WORK HARD* FAST MOVING* CORRECT ACTION

Prof. Dr. Ir. Eko Winar Irianto, MT.
Direktur Bina Teknik Sumber Daya Air
Direktorat Jenderal Sumber Daya Air

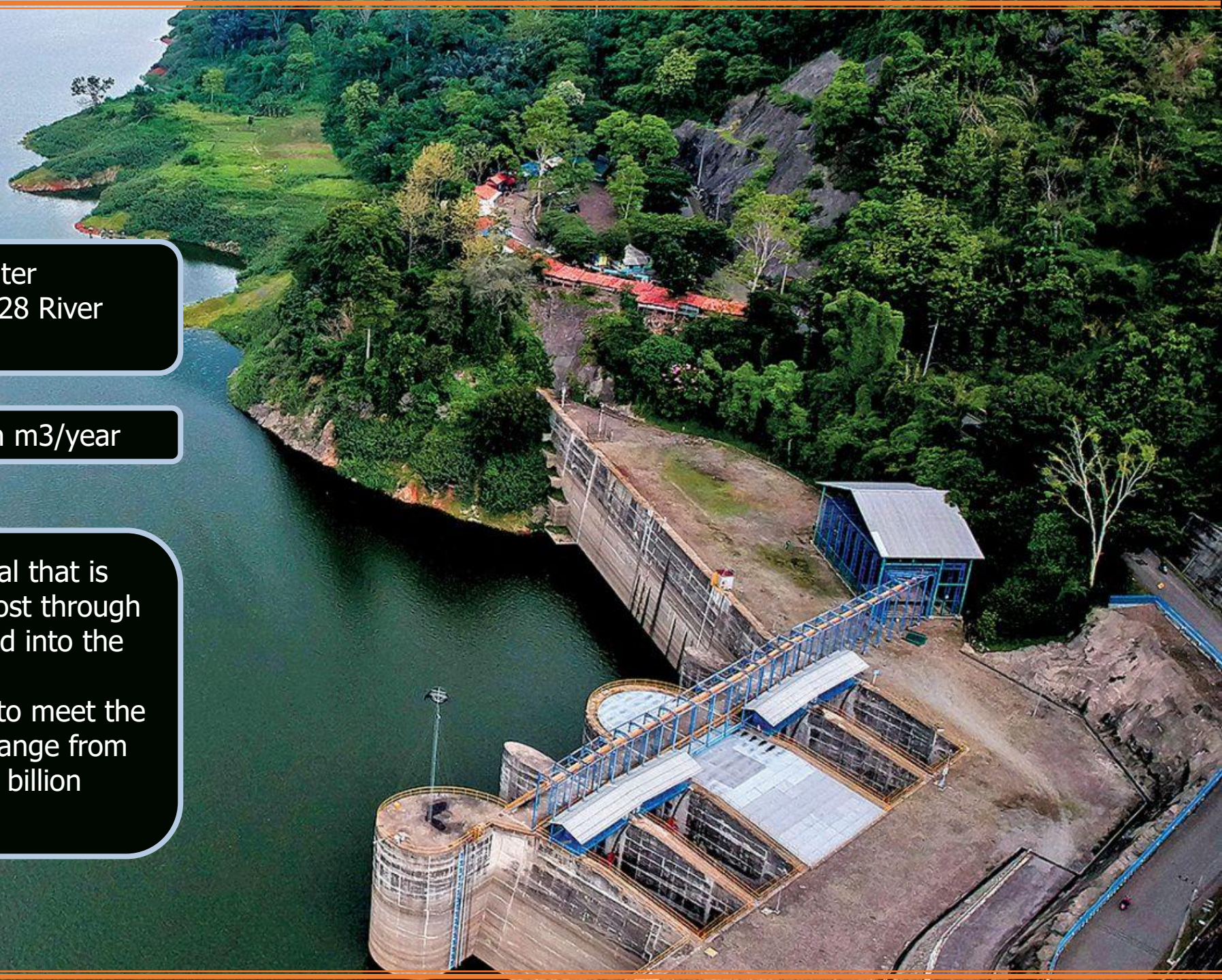
Waduk Duriangkang (doc BatamNews.co.id)

PUPR
SIGAP MEMBANGUN NEGERI

Indonesia's annual average surface water availability of 2.78 trillion m3/year in 128 River Regions

Dam capacity until 2019 is 16.27 billion m3/year

1. There is still a lot of water potential that is not accommodated, not utilized, lost through hydrological processes, and wasted into the sea;
2. Alternative reservoirs are needed to meet the current raw water needs, which range from 120 m3/capita/year or about 32.6 billion m3/year.



Waduk Cirata (doc ANTARA)

PUPR
SIGAP MEMBANGUN NEGERI

Indonesia:

1. 23 Provincial Capitals of 34 Provinces directly adjacent to the sea (coastal areas);
2. Based on the BPS Census in 2018: the volume of clean water distributed to customers is 3.8 billion m3/year (only 10% of the population have access to clean water).

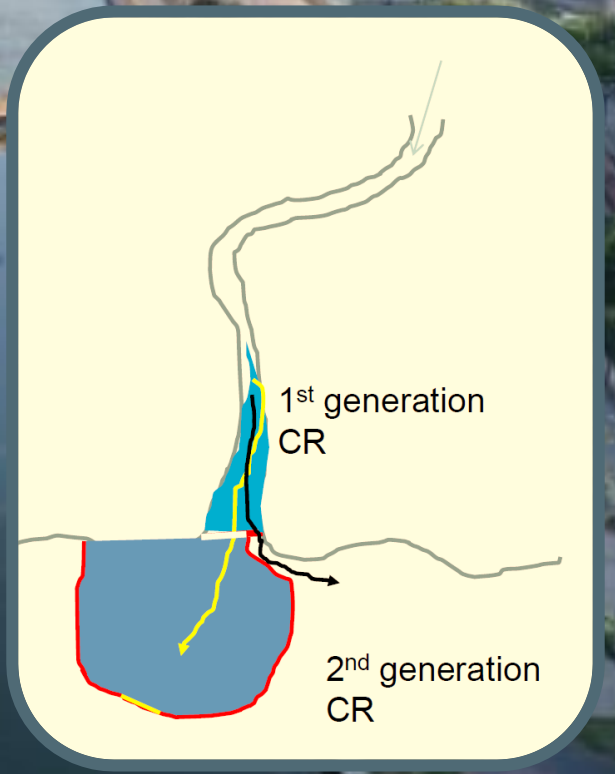
Need innovation in the provision of raw water - clean water that is more efficient on distribution distance, management, and environmentally friendly.

ESTUARY DAM

Bali (doc pemburuombak.com)

THE CONCEPT OF ESTUARY DAM

1. Reduce water loss from rivers to the sea;
2. The use of the concept of the 1st Generation Coastal Reservoir (CR) or 2nd Generation Coastal Reservoir (CR) depends on the economic value (location, management, strategic level, consumer, GDP, etc.);
3. The area of the dam is following the needs of raw water services.

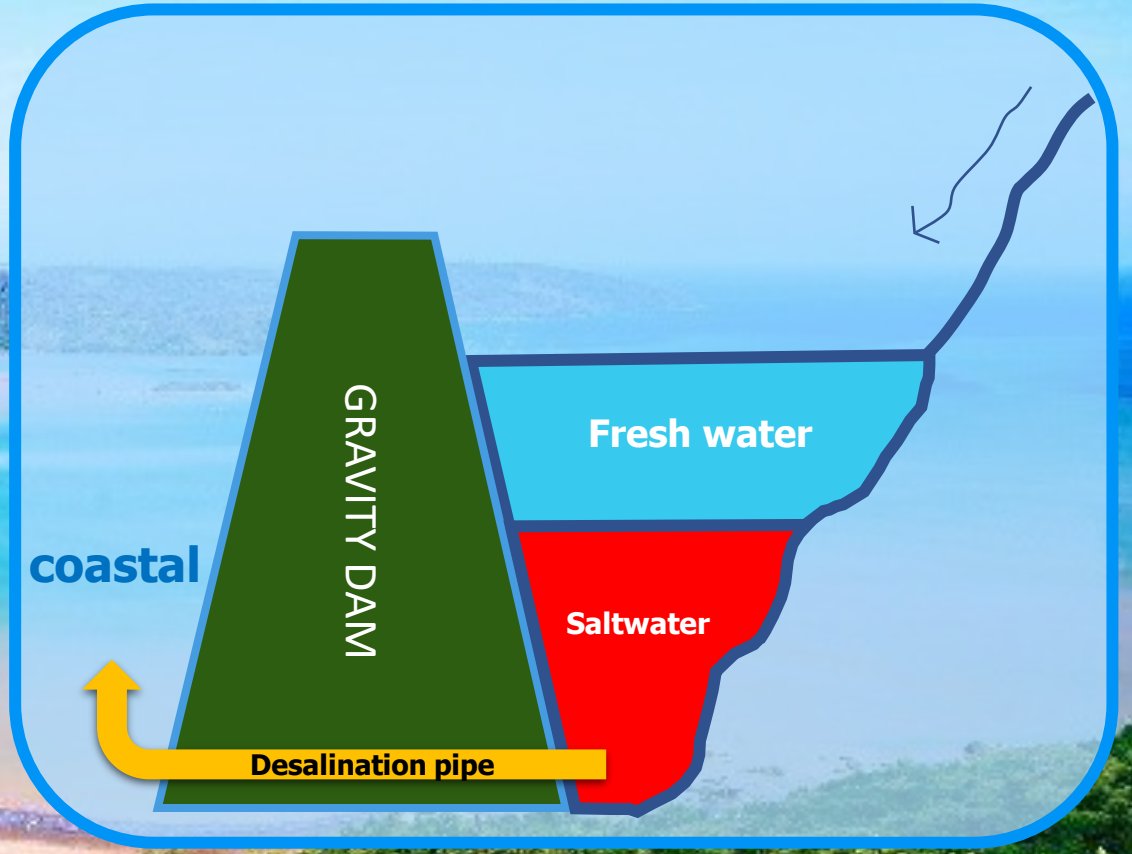


Waduk Nusa Dua (doc BWS Bali Penida)

SIGAP MEMBANGUN NEGERI

DESIGN OF ESTUARY DAM IN INDONESIA

1. The majority of estuary dam in Indonesia use gravity dam;
2. The desalination process takes a long time, usually using the concept of pipes planted at the bottom of the dam to dispose of saltwater slowly;
3. Estuary dam in Indonesia have functioned for various needs such as raw water, preventing seawater intrusion, flood control, tourism, fisheries, tidal control, etc.



CILETUH, SUKABUMI, JAWA BARAT

RONALD AGUSTA
Pic POLS
Doc. PAPSI

NEXT CHALLANGES

POTENTIAL OF ESTUARY DAM

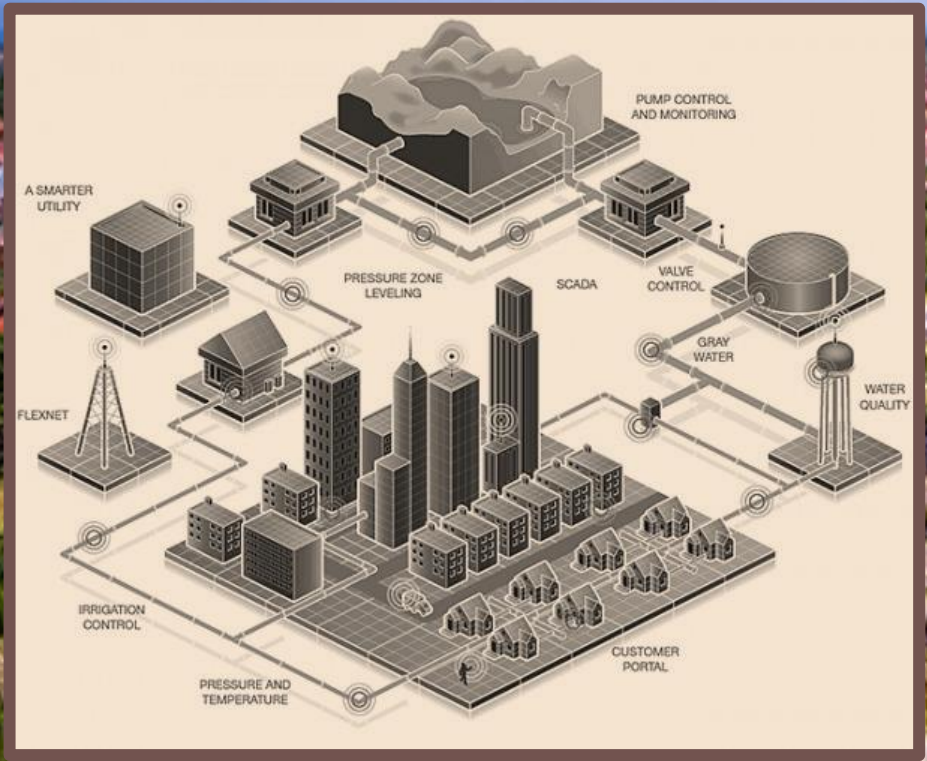
Sumber: Shu-Qing Yang, IACRR

1. Indonesia has many coastal that potential to build Estuary Dam;
2. Development priorities based on the regional strategic level (to be more efficient and more empowered);
3. It needs the planning for more effective management/ utilization such as **Smart Water Management System**.

Pulau Padar, Flores (Doc IHG.Com)

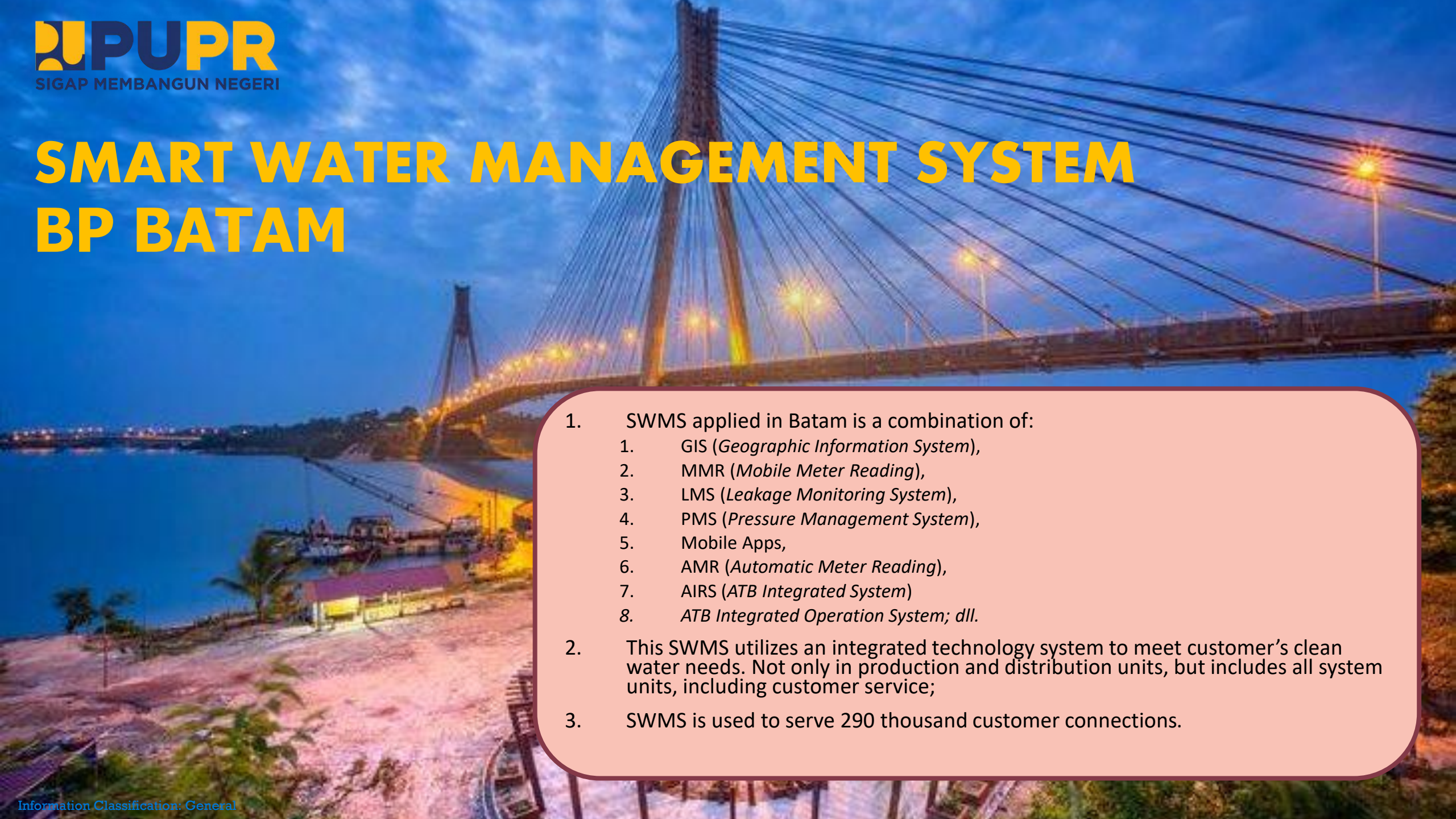
SMART WATER MANAGEMENT SYSTEM

DENPASAR, BALI



1. The entire provision of clean water, from the storing, intake, processing, distribution in monitoring using information and communication technology (ICT);
2. Sharing knowledge is given to regulators, implementers, supervisors and consumers in order to establish a culture of good water utilization;
3. The use of the latest technology such as IoT (internet of things) remains adapted to local policies to maintain the nation's cultural value (ICT for added value not for change value)

Kota Denpasar, Bali (Doc 99.blog)



SMART WATER MANAGEMENT SYSTEM BP BATAM

1. SWMS applied in Batam is a combination of:
    1. GIS (*Geographic Information System*),
    2. MMR (*Mobile Meter Reading*),
    3. LMS (*Leakage Monitoring System*),
    4. PMS (*Pressure Management System*),
    5. Mobile Apps,
    6. AMR (*Automatic Meter Reading*),
    7. AIRS (*ATB Integrated System*)
    8. *ATB Integrated Operation System; dll.*
2. This SWMS utilizes an integrated technology system to meet customer's clean water needs. Not only in production and distribution units, but includes all system units, including customer service;
3. SWMS is used to serve 290 thousand customer connections.

1st GENERATION COASTAL RESERVOIR

DURIANGKAN DAM - BATAM

PUPR
SIGAP MEMBANGUN NEGERI

1. Type : earthfill dam
2. Volume : 101.200.000 m^3
3. Catchment area : 7.259,1 Ha
4. Crest height: 10 m
5. Crest length : 952 m
6. Crest width : 11 m
7. Reservoir area: 2.460 Ha
8. Reservoir function: 3.000 liter/s

WADUK DURIANGKANG (Doc posmetro.co)

1st GENERATION COASTAL RESERVOIR

SEI TEMBESI - BATAM

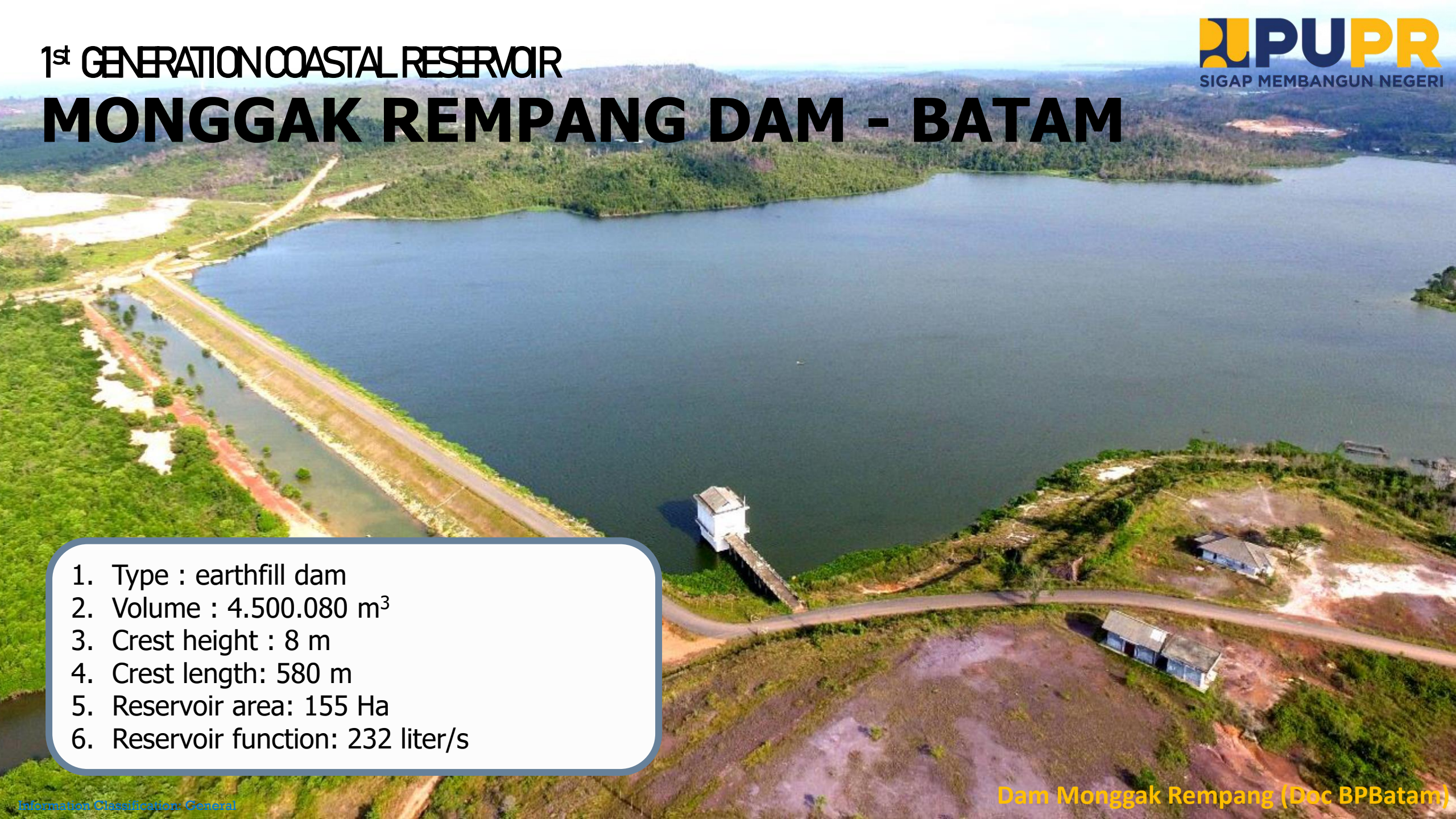
1. Type : earthfill dam
2. Volume : 56.180.080 m^3
3. Crest height: 10 m
4. Crest length: 2.016 m
5. Crest width: 11 m
6. Reservoir area: 842 Ha
7. Reservoir fuction: 600 liter/s

SEI TEMBESI (Doc BPBatam)

1st GENERATION COASTAL RESERVOIR

MONGGAK REMPANG DAM - BATAM

1. Type : earthfill dam
2. Volume : 4.500.080 m^3
3. Crest height : 8 m
4. Crest length: 580 m
5. Reservoir area: 155 Ha
6. Reservoir function: 232 liter/s



Dam Monggak Rempang (Doc BPBatam)

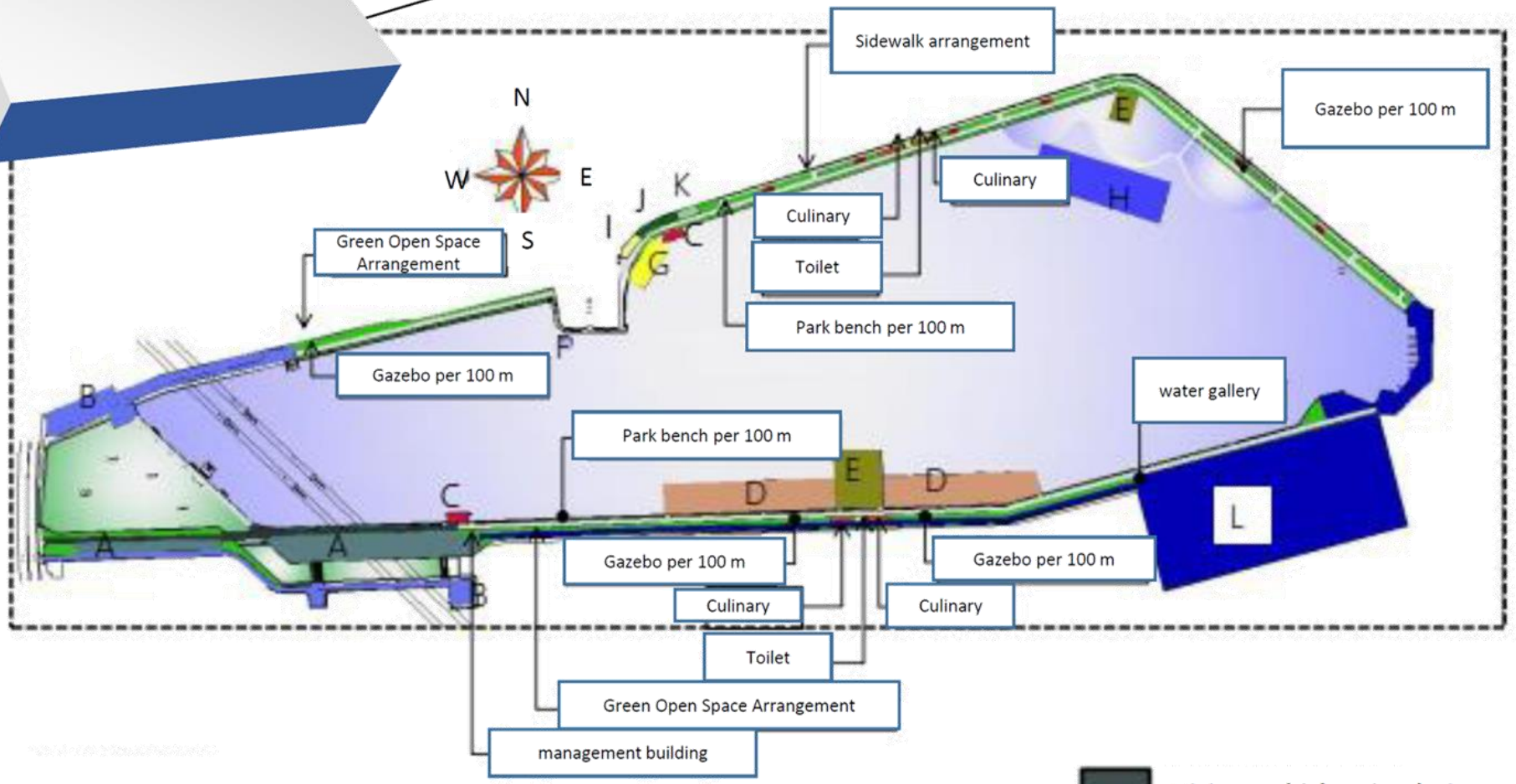
1st GENERATION COASTAL RESERVOIR

NUSA DUA ESTUARY DAM - BALI

1. Type : earthfill dam
2. Volume : 770.000 m^3
3. Crest height : 2,85 m
4. Catchment area : 40,95 km^2
5. Reservoir area : 35 Ha
6. Reservoir function: 300 liter/s

Masterplan Concept

To organize Nusa Dua Estuary Dam as one of public green open spaces in Southern Bali



A. PARKING AREA
B. MAINTENANCE BULDING
C. DOCK
D. FISHING AREA
E. SELFIE AREA
F. DRAGON STATUE
G. FOUNTAIN ATTRACTION
H. FOUNTAIN ATTRACTION
I. CHILDREN PLAYGROUND
J. ELDER GARDEN
K. TEENAGE GARDEN
L. PDAM OFFICE

Visitor vehicles circulation area
PDAM vehicle circulation area
Visitor circulation area

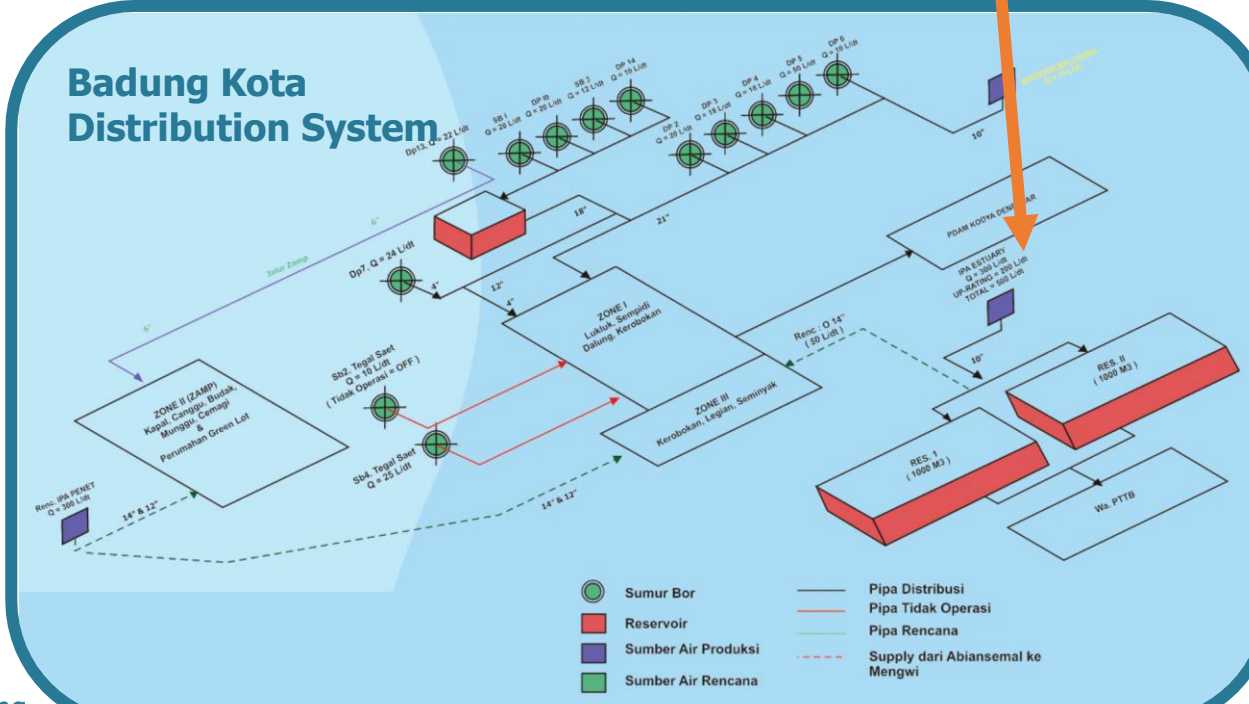
Source:
DED of Nusa Dua Estuary Dam Area Arrangement, 2020

CLEAN WATER DISTRIBUTION OF NUSA DUA ESTUARY DAM

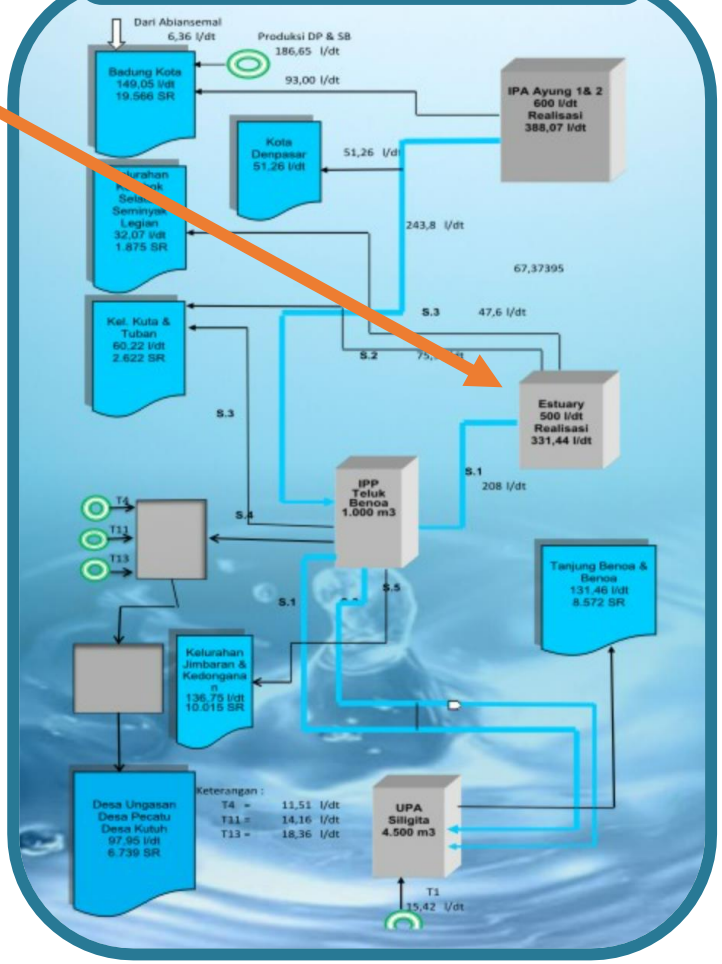
Raw water source from Muara Nusa Dua Reservoir distributed by PDAM Badung through Badung Kota Distribution System and South Badung Distribution System

NUSA DUA ESTUARY DAM
Q = 300 l/s
Up-Rating = 200 l/s
Total = 500 l/s

Badung Kota Distribution System



South Badung Distribution System



Sumber: PDAM Badung

2nd GENERATION COASTAL RESERVOIR

NATIONAL CAPITAL INTEGRATED COASTAL DEVELOPMENT

Phase A,

Improvement the protection of existing beaches is a high priority. The high-priority efforts include :

1) Decrease the land subsidence rate (by providing an alternative to vacuuming groundwater);
2) strengthening and elevating the seawall;
3) improvement of urban drainage systems, and
4) prevent upstream river water from entering low-residential areas of Jakarta. The acceleration of water sanitation is included in Phase A.

Phase B and Phase C,

1. The land subsidence is estimated not to slow down in the next few years, as it will take time to develop alternatives other than groundwater vacuum. Sea level will rise, canals and rivers will gradually stop flowing water gravitationally into the sea.
2. Large drainage pumps are needed, especially in the central part of North Jakarta, where the rate of land subsidence is high. Pumping stations require lakes for the temporary reservoir of river discharges that reach their peak.

BEKERJA KERAS * BERGERAK CEPAT * BERTINDAK TEPAT

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QUESTIONS & ANSWERS

Submit your questions to Q&A button

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Indonesia's Coastal Reservoir: *Development & Strategy*

Speaker

Hadjad Widadgo S. Hut., MM.
Head of Reservoir Management,
Raw Water, Facility & Environment
Batam Free Zone Authority (BP BATAM)

Topic

Indonesia's readiness in coastal development:
current challenges of Batam

INDONESIA'S READINESS IN COASTAL DEVELOPMENT : Current Challenges in Batam

(**Duriangkang** Reservoir, **Sei Tembesi** Reservoir, and **Rempang** Reservoir)

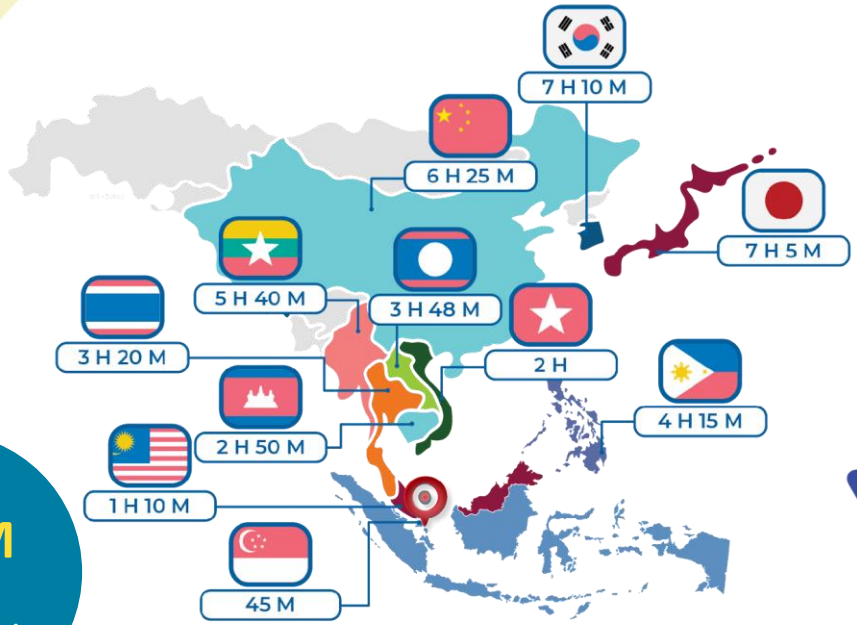
HADJAD WIDAGDO, S.Hut., MM
Batam Free Trade Zone Authority, Indonesia

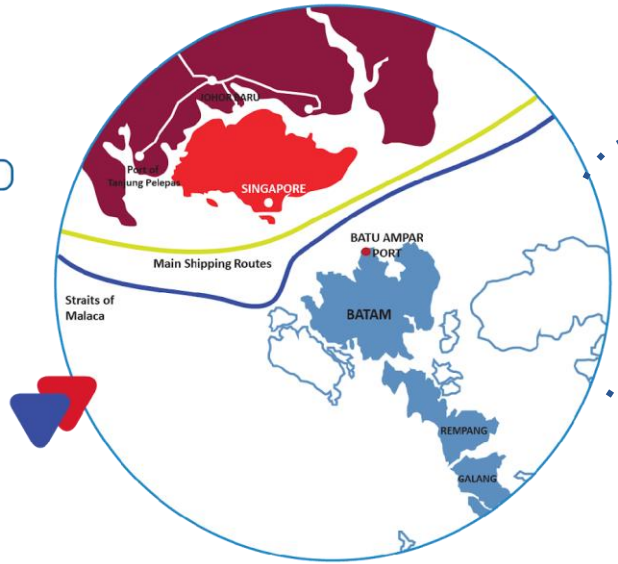
BP BATAM

Strategic Location

20 KM Batam - Singapore

>60,000 Ship Crosses Malacca Strait



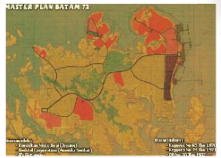


BATAM
415 sq-km

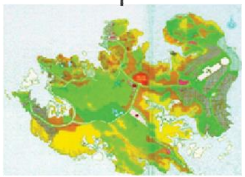
BARELANG
715 sq-km

669 M
ASEAN Population

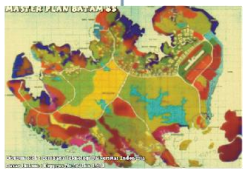
1972



1979

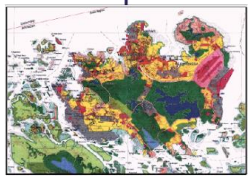


1985

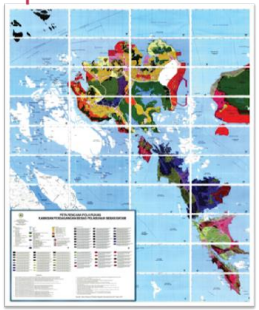


1991

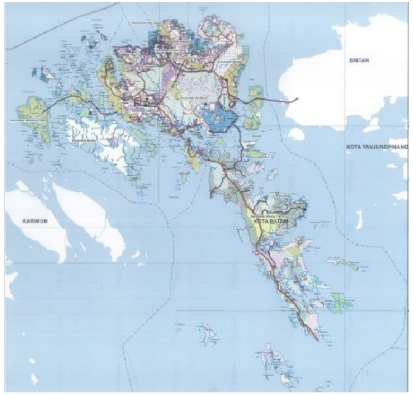
2001



2011
Presidential Decree
No 87/2011



2021
Regional Decree
3/2021 on Batam
Masterplan



Implementation on Government Regulation No. 41/2021

Government Regulation No 41/2021 is a strategic policy for managing Free Trade Zone and Free Port of Batam, Bintan and Karimun to improve the investment ecosystem to enhance economy growth, job opportunities and regional competitiveness.

Institutional:
- Regional Council: Establishment, Secretariat, Technical Team
- Business Administration (BP): organization & work procedures, financial management, employees, remuneration

Licensing Services according to NSPK (PP Number 5 of 2021 concerning Licensing

Risk Based Business):
- BP issues all business licenses: 8 groups Ports (10 types), Health (1 type), Trade (8 types), Industry (8 types), Waste and environment (8 types), Forestry (9 types), ESDM 2 types), Marine and fisheries (3 types))
- Determine the types and quantities of consumer goods and issue entry permits

Asset Development and Utilization:
- Asset Utilization Collaboration with Business Entities (State Owned, Local Owned, Cooperative, Private Company, Foreign Legal Entity)
- Assets:
  a. Hang Nadim Airport
  b. Seaports
  c. Water, waste, assets, others

Facilities and Facilities:
- Export & Import of goods
- Taxation
- Customs
- Excise
- Immigration
- Prohibitions and restrictions
- Other facilities and conveniences

BBK Area Development and Management:
- The Master Plan is for a period of 25 years and is subject to review every 5 years
- The Master Plan is stipulated by a Presidential Regulation

Penalty:

Violation of entry of goods, unloading and loading, and prohibitions and restrictions

Transition:
- Regional Council Transitions
- Transition of BP Batam, BP Bintan and Tanjung Pinang, BP Karimun
- OSS transition

Infrastructures

Hang Nadim International Airport Batam
Run Way : 4025 x 45 M

5 Passenger International Ferry Terminal &

4 Cargo Ports

7 Operated &
2 Development Progress Water Reservoirs

Electrical Power Supply
Total capacity:
538.95 MW

Road Infrastructures
Total Road Constructions
1,676.78 km

Internet and Telecommunicatio n Phone Capacity
111,768 Line Unit
FO Internet Back Bone
Up to 1 Gbps

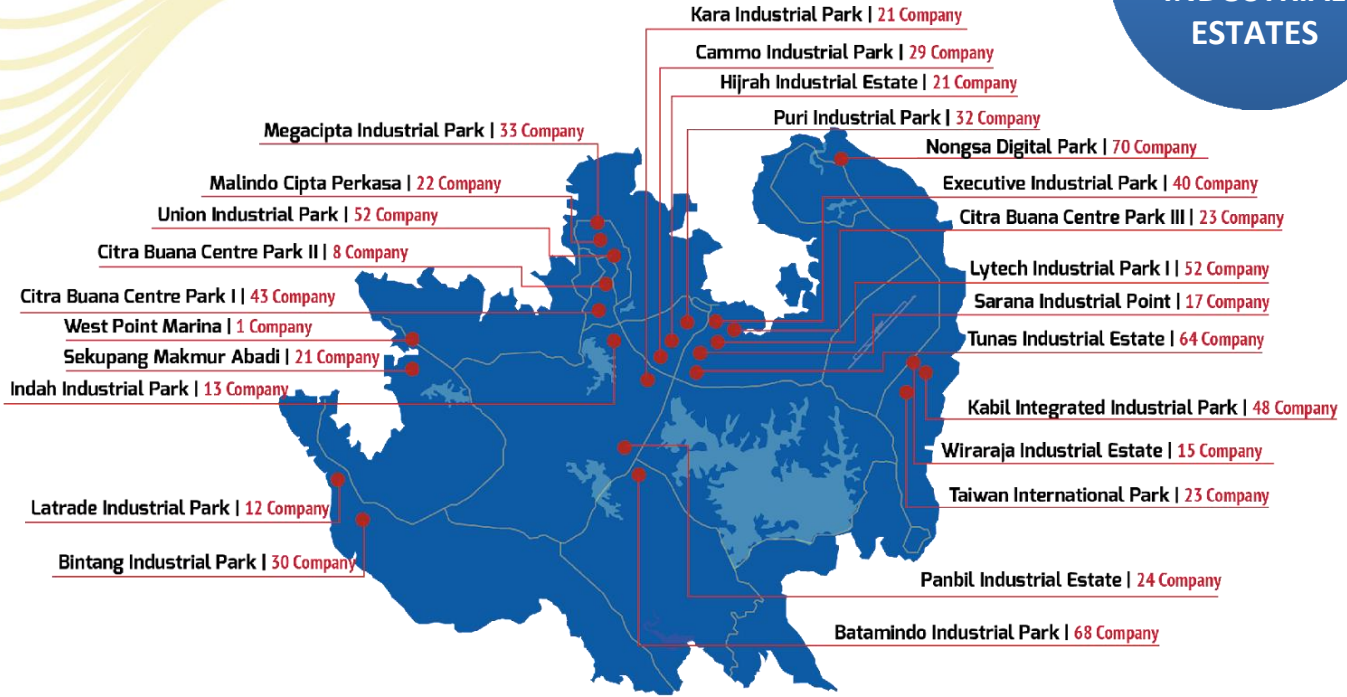
Expansion of BP Batam Hospital
Development of Building B with 138 room capacities

Barelang Bridge
6 Bridges Connecting Batam, Rempang and Galang

IT Centre
Disaster Recovery Center

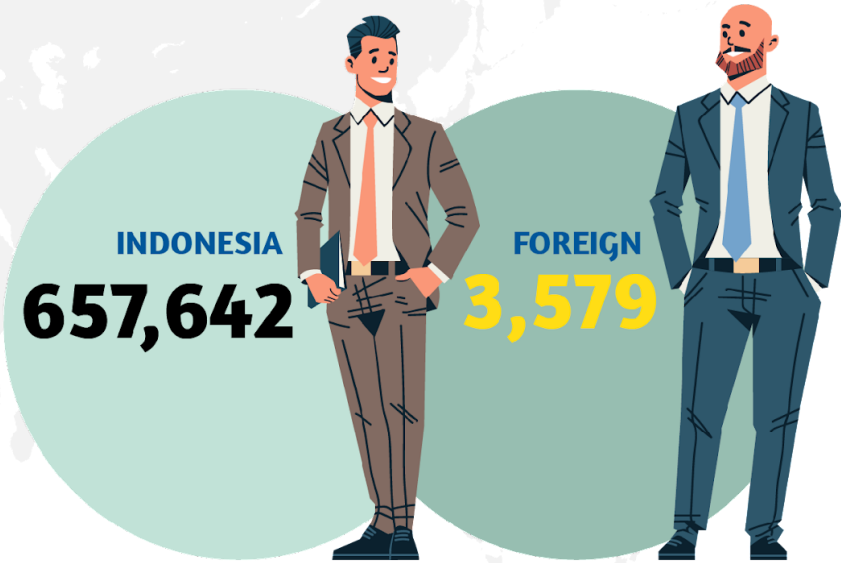
Industrial Estates

26
INDUSTRIAL ESTATES



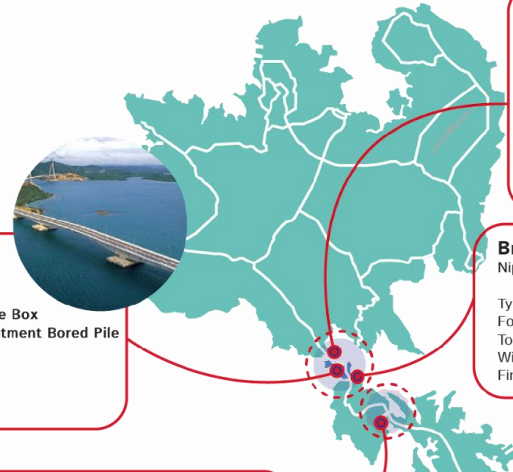
Population and Workforce

Source: Central Bureau of Statistics of the Riau Islands as at 2020



Source: Development Progress of Batam Book as at 2020

Barelang Bridge



Bridge #1: Tengku Fisabilillah
Batam - Tonton Island

Type : **Cable Stayed**
Foundation : **Bored Pile 120 O 1.5 m**
Total Length : **642 m**
Main Landscape Length : **350 m**
Bridge Width : **21.5 m**
Pylon Height : **119,744 m**
Finished Development Date : **15 January 1998**

Bridge #2: Nara Singa II
Tonton Island - Nipah Island

Type : **Balance Cantilever Box Gierder Single Box**
Foundation : **Abutment Shallow Footing Abutment Bored Pile**
Total Length : **420 m**
Main Landscape Length : **160 m**
Width : **18 m**
Finished Development Date : **31 May 1997**

Bridge #3 : Raja Ali Haji
Nipah Island - Setokok Island

Type : **Segmental Concrete Box Girder**
Foundation : **Abutment Bored Pile (land), Spun Pile (sea)**
Total Length : **270 m**
Width : **18 m**
Finished Development Date : **31 March 1996**

Bridge #4: Sultan Zainal Abidin
Setokok Island - Rempang Island

Type : **Balance Cantilever Box Gierder Double Box**
Foundation : **Abutment 12 / 28**
Main Landscape Length : **145 m**
Width: **18 m**
Finished Development Date: **31 May 1997**

Bridge #5 : Tuanku Tumbusai
Rempang Island - Galang Island

Type : **Arch Bridge**
Foundation : **Diaphragma Wall, Bored Pile**
Total Length : **385 m**
Main Landscape Length : **245m**
Width : **18 m**
Finished Development Date : **25 January 1998**

Bridge #6 : Raja Kecil
Galang Island - Galang Baru Island

Type : **Segmental Concrete Box Gierder**
Foundation : **Abutment 12 / 28 Bored Pile**
Total Length : **180 m**
Width : **18 m**
Finish Development Date : **15 November 1996**

COASTAL RESERVOIRS

Fresh Water Supply

Sei Baloi Reservoir
Volume : 0.293 million m³
capacity : 30 L/sec

Sei Nongsa Reservoir
Volume : 0.274 million m³
capacity : 60 L/sec

Sei Ladi Reservoir
Volume : 9.448 million m³
capacity : 240 L/sec

Sei Harapan Reservoir
Volume : 3.637 million m³
capacity : 210 L/sec

Duriangkang Reservoir
Volume : 101.2 million m³
capacity : 3000 L/sec

Muka Kuning Reservoir
Volume : 12.72 million m³
capacity : 310 L/sec

Sei Rempang Reservoir
Volume : 0.45 million m³
capacity : 232 L/sec

Tembesi Reservoir
Volume : 56.82 million m³
capacity : 600 L/sec

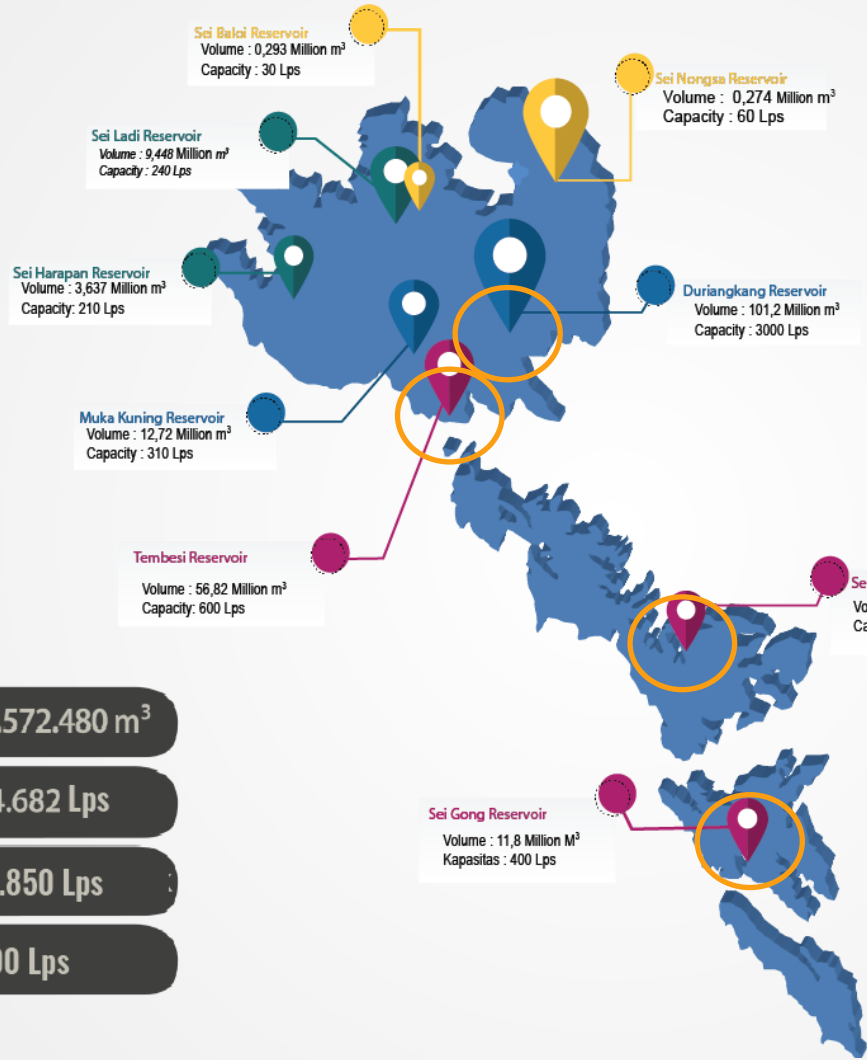
Sei Gong Reservoir
Volume : 11.8 million m³
capacity : 400 L/sec

Total Volume
151,572,480 m3

WTP Desain
4,682 L/sec

Total Capacity
3,850 L/sec

Operational
3,600 L/sec



- Total Volume : 151.572.480 m³
- Design Capacity : 4.682 Lps
- Total Capacity : 3.850 Lps
- Operasional : 3.600 Lps

Fresh Water Supply

development of COASTAL DAM

DURIANGKANG - SEI TEMBESI - REMPANG

Community Resettlement

Community resettlement from catchment and reservoir area

Pilot Dyke

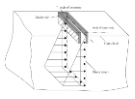
Development platform with sand and eartfill until height of + +4m msl

Dam Complementtary Building

Development of Permanent Bottom Outlet, Intake Tower, Spillway

Desalination

Installing and unloading pipe (Dia 800 mm) to desalination process



Cut of Wall

Installing Diafragma Wall with cement bentonite slurry

Instrumentation Installment

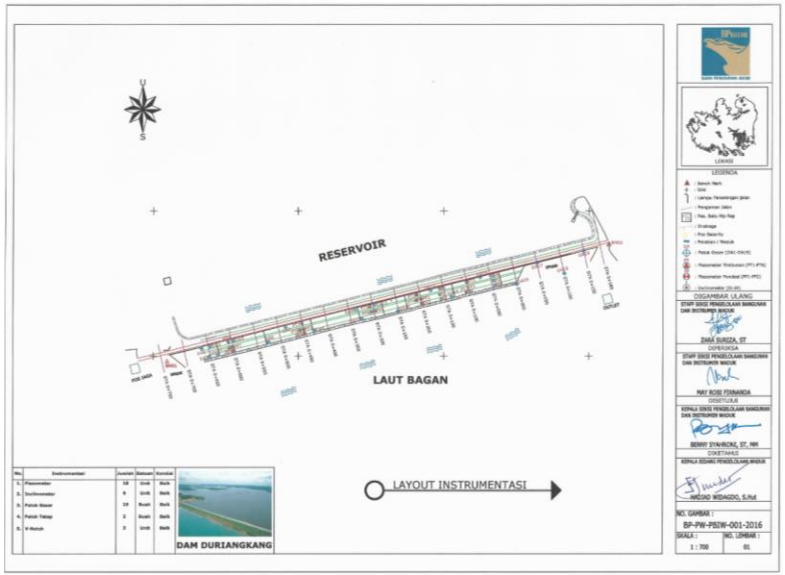
Installing piezometer, inclinometer, surface movement point, V-Notch

DURIANGKANG DAM

DURIANGKANG DAM

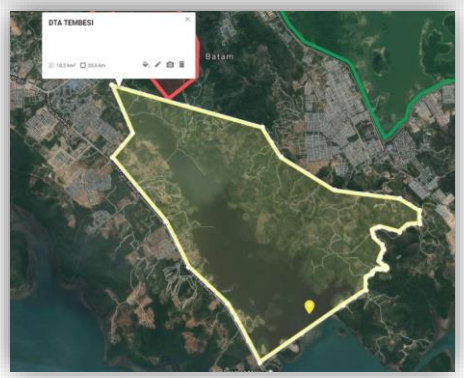
Technical Spesification

Village district	*: Muka Kuning, Tj Piayu*
Sub district	*: Sei Beduk*
Year of development	*: 1990*
Year of Operation	*: 2001*
Catchment area	*: 7.259,10 Ha*
Crest Height	*: 10 m*
Crest Lenght	*: 952 m*
Crest Width	*: 11 m*
Reservoir area	*: 2460 ha (2014)*
Reservoir capacity	*: 101,2 million m^3 (2014)*
Reservoir Fungtion	*: Raw Water 3000 lps*
Production capacity	*: 2200 + 375 + 50 lps*
Type of dam	*: Earthfill Dam*



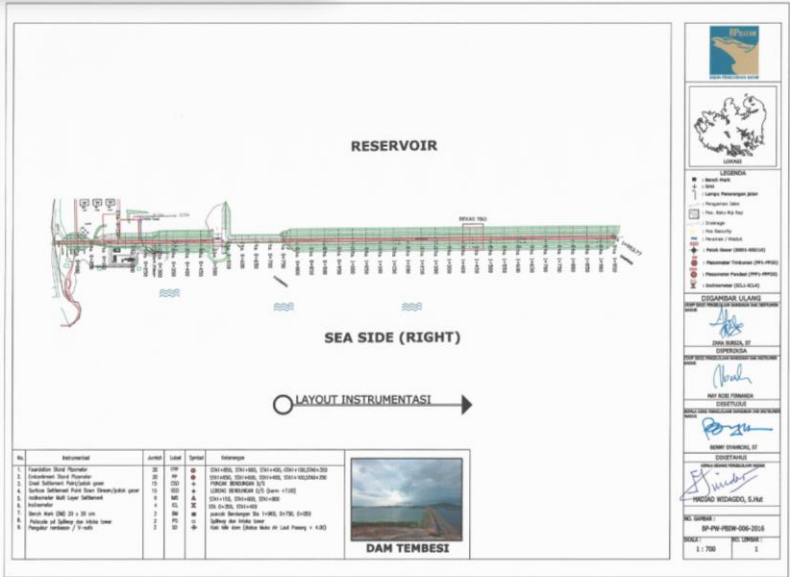
SEI TEMBESI DAM

Sei Tembesi Dam



Technical spesification

Village district	*: Tembesi*
Sub district	*: Sagulung*
Year of development	*: 2014*
Year of operation	*: 2020*
Crest Height	*: +10 m*
Crest Lenght	*: 2016 m*
Crest Width	*: 11 m*
Reservoir area	*: 842 Ha*
Reservoir capacity	*: 56,820 million m^3*
Reservoir fungtion	*: Raw water 600 lps*
Type of dam	*: Earthfill Dam*



SEI REMPANG DAM

Rempang DAM

Technical spesification

Village district	*: Monggak*
Sub district	*: Galang*
Year of development	*: 1998*
Year of operation	*: 2020*
Crest Height	*: +8 msl*
Crest Lenght	*: 580 m*
Crest Width	*: ..... m*
Reservoir area	*: 155 Ha*
Reservoir capacity	*: 4.500.000 m^3*
Reservoir fungtion	*: Raw water232 lps*
Type of dam	*: Earthfill Dam*

BENEFIT OF COASTAL RESERVOIR

Benefit

Promote More O2 and Carbon Sink

- During photosynthesis, trees and plants absorb carbon from the atmosphere in the form of CO2 and proceed it to become oxygen
- As trees grow, they store carbon in their trunks, branches, roots and leaves

Biodiversity

Biodiversity refers to the range of life forms and species that exist within a given ecosystem. Tropical rain forests are some of the most biologically diverse ecosystems.

Urban Forest

- Conserves energy by shading and cooling homes and buildings
- Increase air quality
- Reduces water consumption by reducing landscape watering needs and increasing atmospheric moisture
- Reduces water runoff and soil erosion by breaking rainfall and holding soil.

Reduce Land

Saving land utilization

Availability of Water

Provide more clean water for the reservoir

Opportunities

Clean Energy Ecotourism

Clean Energy

Floating Photo Voltage
The reservoir can become a place to produce clean energy such a floating photo voltage, while it can provide electricity for people.

Ecotourism

Biodiversity Wildlife on Forest
Forest as a ecotourism can provide local communities with motivation to maintain and protect forests and wildlife.

Monitoring of The Catchment Area

Potential Risks of Pollution

As there is no intensive cultivation, the risk of pollution from agriculture is not significant (pesticides, herbicides). The main risks will be from industries, and human presence related to these industrial activities.

Pollution Control

Arrangements to provide for Catchment Area Protection Pollution control for the protection of Duriangkang reservoir is a matter of great concern and appropriate measures must be taken as possible

Special Measures

It is clear that all areas still free of human settlements must be kept as they are in the future. Any new installation must be strictly forbidden. In particular, all permanent housing in forest areas should be avoided, forbidden. All dumping of wastes should be forbidden.

Monitoring of The Reservoir Water Quality

Sand Trap Trash Rack

Sand Trap was used to trap a sand that going in to water so it will gather at one points and can't go to the water, and Trash Rack used to prevent floating and particulate debris from clogging stormwater outlet control structures.

Sewerage System

A good sewerage system can help provide a good quality water, and can even prevent flood because it can deliver water to another place.

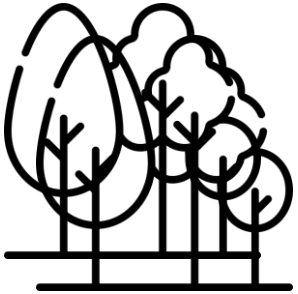
Hyachint

A lot of water hyachint will reduce the amount of water, so it need to be cleaned for a better water environment system.

Sedimentation

If there are too much sedimentation in the reservoir or the drainage system, it can reduce the capacity of the reservoir to save the water. So there are needed to have a dredger to dredge sediment on the reservoir

Recovery Action



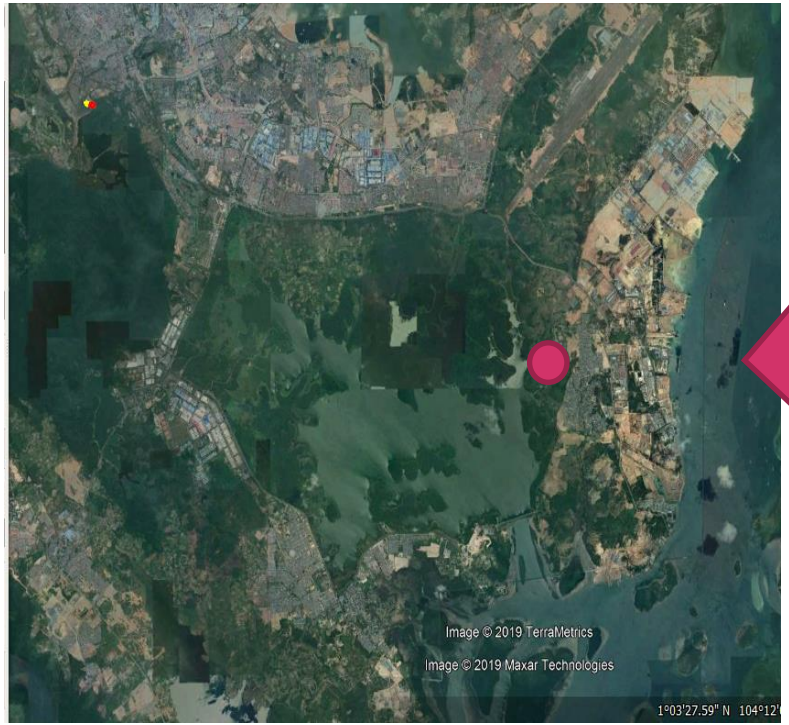
Trees Plantation

Trees can reduce the amount of storm water runoff, which reduces erotion and pollution in our waterways and may reduce the effects of flooding

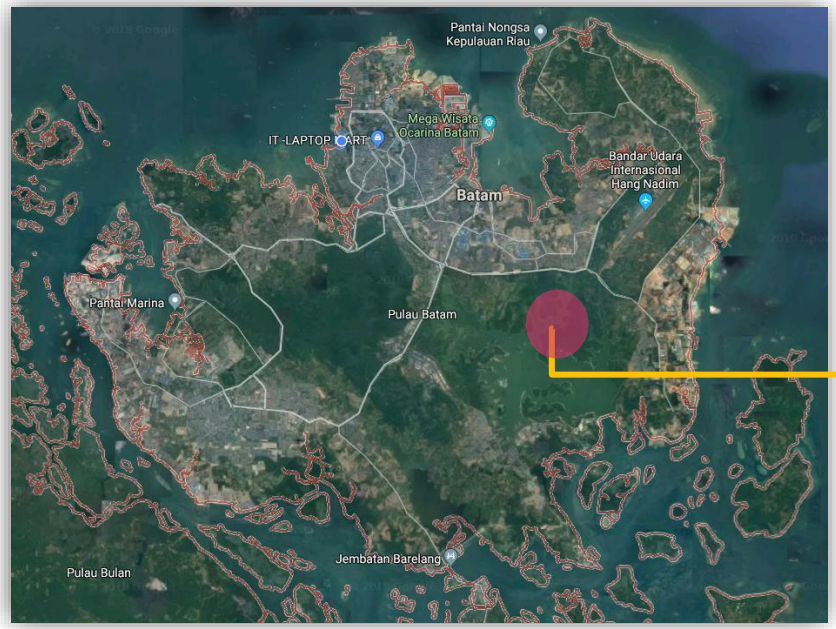
Modification Weather Technology

The most common form of weather modification is cloud seeding, which increase rain, usually for the purpose of increasing the local water supply.

Encroachment Location at Duriangkang Protected Forest (Catchment Area)

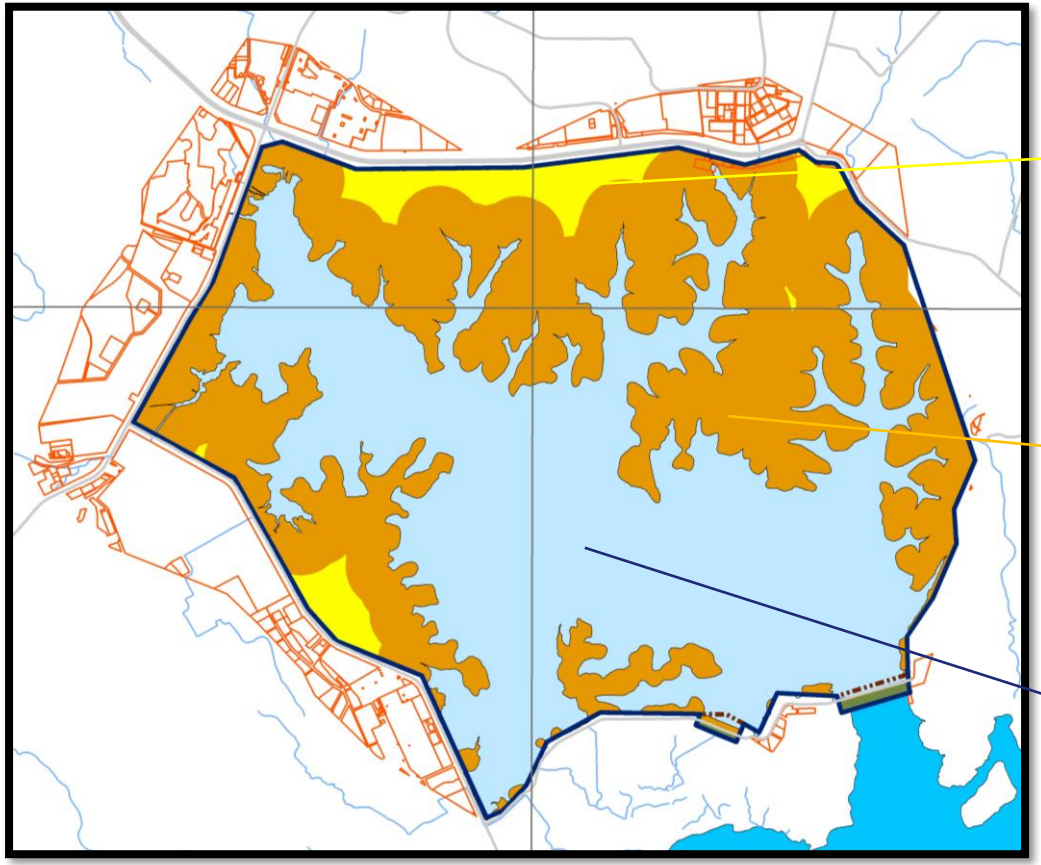


LOCATION OF FOREST FIRE LAND IN DURIANGKANG CATCHMENT AREA



OCUPATION OF RESERVOIR BOUNDARIES

Management and Security of Duriangkang Reservoir Catchment Area With Reservoir Security Zonation



Transition Zone

Is a buffer zone from the buffer zone boundary to land use boundary of reservoir

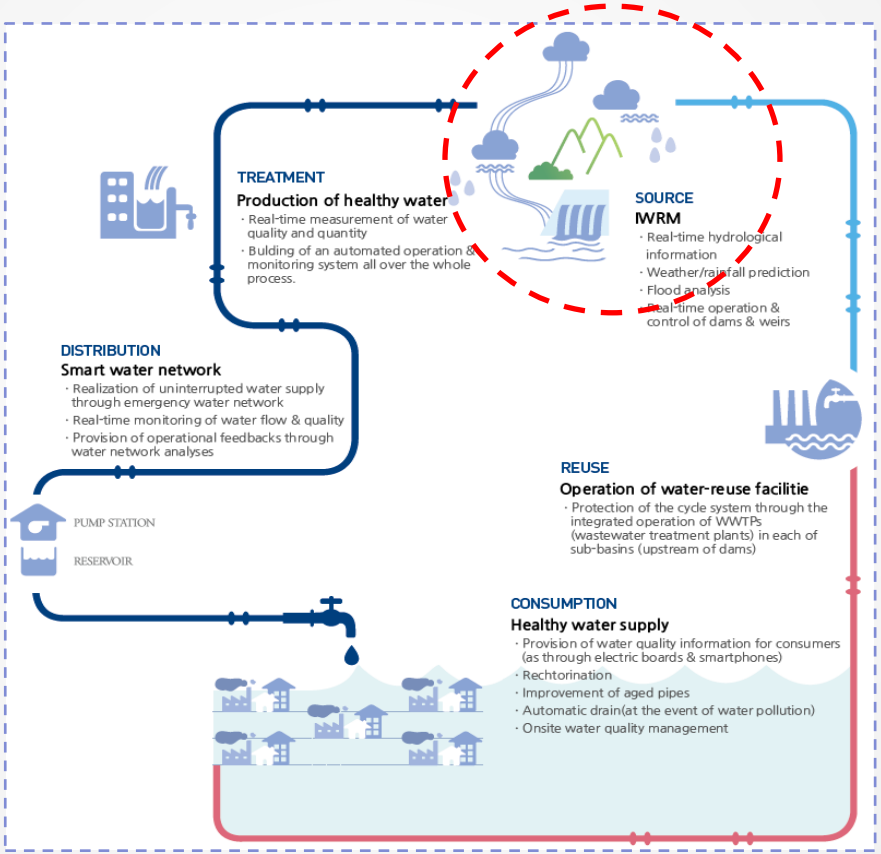
Buffer Zone

Is a buffer zone of 500 meters from the core zone boundary

Core Zone

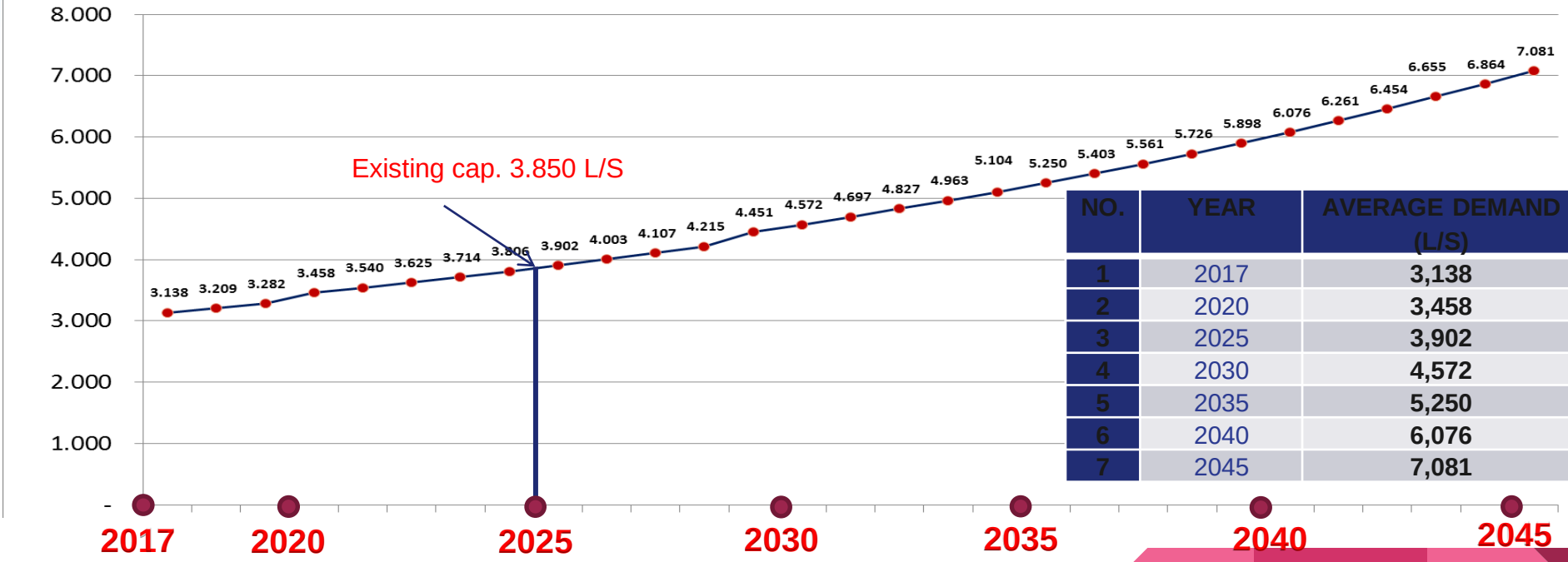
Is the area of water in the reservoir

SWMI (Smart Water Management Initiative)



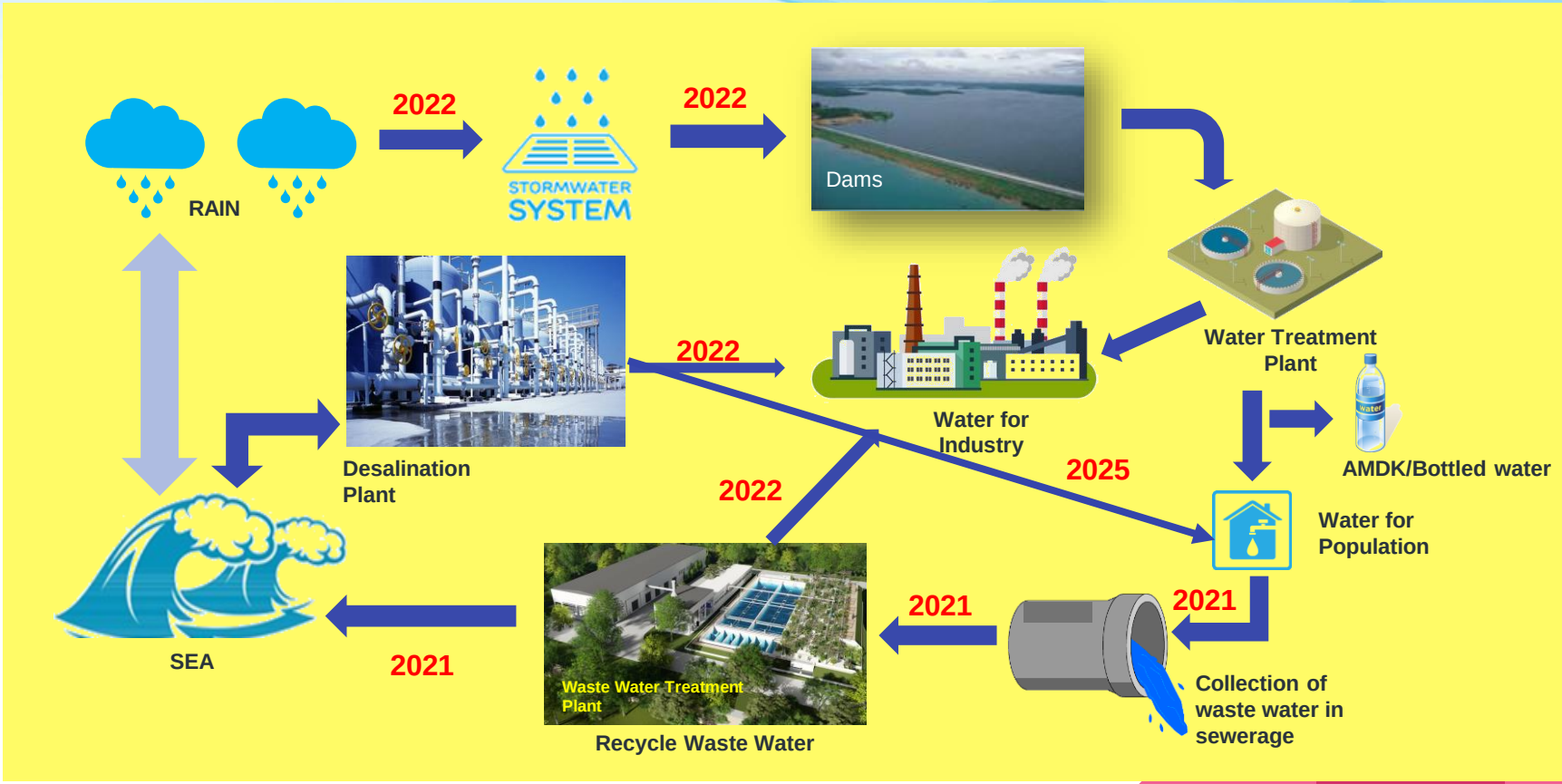
SUPPLY & DEMAND BY 2045

Total up to : 7.081 L/S



NO.	YEAR	AVERAGE DEMAND (L/S)
1	2017	3,138
2	2020	3,458
3	2025	3,902
4	2030	4,572
5	2035	5,250
6	2040	6,076
7	2045	7,081

BATAM INTEGRATED TOTAL WATER MANAGEMENT



Shortage of Water

THANK YOU

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INDONESIA SESSION

WEDNESDAY | 4 AUGUST 2021

Indonesia's Coastal Reservoir: *Development & Strategy*

Speaker

Gert Borrits

Regional Managing Director Southeast Asia

AVK Fusion

Topic

Affordable high-quality solution for all water businesses

AVK Company presentation

Affordable High-Quality Solutions for all Water Businesses

Expect… AVK

It all started in 1941

In 1941 **A**age **V**aldemar **K**jær started producing compressors and performing plumbing services.

Expect... AVK

True entrepreneurship

In 1970 his son, Niels Aage Kjær, took over and developed a resilient seated gate valve for water supply. Niels Aage Kjær is still heading the AVK Group, and has grown the business into a global company.

Expect... AVK

The AVK Group

Dedicated people

4,400+ employees

Global organisation

100+ production and sales companies worldwide

Continuous growth

Net turnover USD 960 million

Expect... AVK

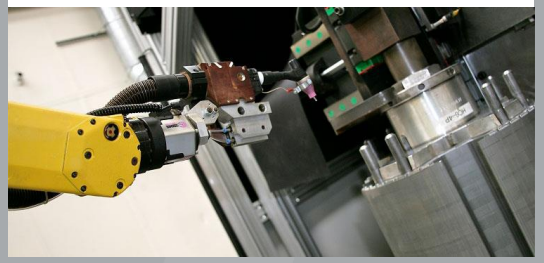
AVK's three divisions

AVK Water

Serving customers within water, wastewater, gas, fire protection, Irrigation and HVAC

AVK Advanced Manufacturing

Serving customers and AVK with rubber, plastic and metal components.



AVK Industrial Valves

Serving customers within power generation, oil and gas, marine etc.

Expect...

..that we will keep pushing the boundaries of what the market can expect.

Our 8 promises to the market:

Expect quality in every step

Expect solutions, not just products

Expect lasting innovations

Expect a long-term partnership

Expect total savings

Expect global leadership and local commitment

Expect a prompt response

Expect it to be effective and easy

Expect... AVR

AVK IN SOUTHEAST ASIA

Expect... AVK

AVK Southeast Asia

AVK SEA includes 6 Manufacturing facilities/sales companies that cover most markets within the region

= AVK Facility = Market covered by AVK

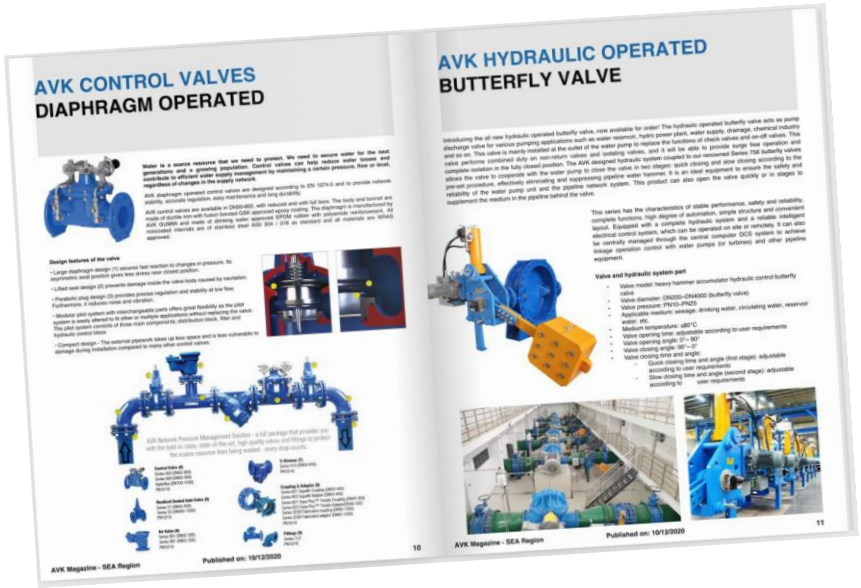
Expect… AVK

AVK Southeast Asia – Regional Magazine

- AVK Southeast Asia issues a biannual magazine that focusses on our activities in Southeast Asia – next issue will be published in august 2021!
- Compiles stories and content from our companies in Indonesia, Malaysia, Singapore, Vietnam and Philippines
- Learn about products, read about projects or get to know our organization and the leaders that run it
- The magazine can be downloaded from our websites in English, Vietnamese and Bahasa

Exciting content from our Regional companies – including…

- New products and product-innovations
- New technology
- Case stories from some of our many projects in Southeast Asia
- Organizational news and updates
- CSR-initiatives
- And much more!



Expect… AVK

AVK PRODUCTS

Expect... AVK

AVK Water

The majority of the AVK companies belongs to this division, manufacturing and selling valves, hydrants and accessories for:

- water distribution
- wastewater handling
- natural gas supply
- fire protection systems

We take an active part in fulfilling the Global Sustainable Development Goal no. 6 set by UN, securing water and sanitation for all.

Expect... AVK

AVK Range (Water Supply)

- Gate valves
- Butterfly valves
- Control valves
- Swing check valves
- Air valves

- Service connection valves
- Couplings & adaptors
- Tapping saddles & repair clamps
- Valve accessories and fittings
- Hydrants, under and above ground

Expect… AVK

AVK Range (Wastewater treatment)

- Knife gate valves
- Butterfly valves
- Check valves
- Gate valves
- Air valves
- Penstocks
- Service connection valves
- Couplings & adaptors
- Repair clamps

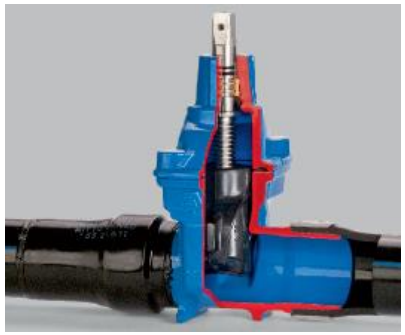
AVK S36 – Resilient seated Gate Valve with PE pipe connection

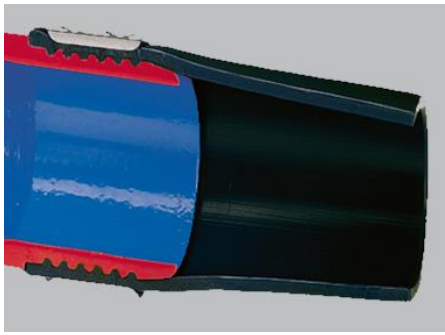
Unique benefits

- Same features to that of flanged resilient seated gate valve (Series 02)
- No mechanical joints - The valve/pipe connection has no bolts and is stronger than the PE pipe itself.
- Extra-long pipe ends that leave room for an additional weld, if needed.
- Corrosion-resistant and fully welded PE pipe systems for maximum durability and minimum risk of leakage and defects.

Easy Installation

- PE pipes are flexible and follow the terrain
- Less space needed in the trench
- PE pipes are easy to handle - typically welded above ground for easy installation.
- Fusion and electro welding processes provide a joint which is even stronger than the pipe itself
- PE pipes ensures same welding parameters can be used throughout the entire network
- The soft PE material allows the pipes to be squeezed for temporary shut-off during repair





Expect... AVK

AVK S712 Cross Flange Fitting

- Simplifies the installation.
- One fitting for four or more branches.
- Allows you to avoid installation of multiple fittings, which can be costly!

AVK S18 Combi Cross

- Combi-cross four outlets with ball valves and high quality flanged AVK gate valve.
- Ball valves make it possible to take out water samples or to supply auxiliary water.
- Bracket connection and anchoring of the centre-part ensures safety of the pipeline and makes it easy to replace the gate-valves

Expect… AVK

AVK Water (Fusion)

Fusion Group Limited pioneered polyethylene pipe jointing in the UK and across the globe.

Fusion became a member of the AVK Group of Companies in 2017. A partnership that has resulted in a broader product and service offer and strengthened our manufacturing base.

We offer :

- Electrofusion fittings
- Electrofusion machine
- Spigot fittings
- PE Ball valves
- PE Butterfly valves
- Transition fittings
- Tooling and accessories

AVK Advanced Manufacturing

Rubber

- AVK GUMMI A/S (Denmark)
  - AVK Sealing Kunshan Co. Ltd. (China)

Plastics

- AVK Plastics BV (The Netherlands)
  - AVK Syntec Anhui Co. Ltd. (China)
  - AVK Plast A/S (Denmark)
- G+W GmbH (Germany)
- KSK GmbH (Germany)

Castings & components

- AVK Advanced Castings Anhui (China)
- AVK Components Sp. Z.o.o (Poland)
- AVK Tooling A/S (Denmark)

AVK Industrial Valves

Strong global brands serving customers within:

- Power Generation
- Pulp and Paper industry
- Chemical Processing
- Oil and Gas Industry
- Marine
- Life Science
- Dams and Reservoirs
- District Cooling/Heating
- Mining /slurry and cement
- Bulk Handling
- Air Separation
- Steel Industry
- Industrial Water Treatment Plants
- HVAC (building services)

Core products:

- Knife gate valves
- Butterfly valves
- Penstocks
- Desuperheaters
- High pressure ball valves
- Valves for Dams and Reservoirs

AVK Fire Protection Products

Let's make a difference when every second counts

Reliability is crucial and system downtime for maintenance and replacement must be kept to an absolute minimum.

Expect... AVK

AVK Products for Fire Protection

Dry Barrel Hydrant

Wet Barrel Hydrant

Gate Valve

Butterfly Valve

Underground Hydrant

Wall Indicators

Post Indicators

Monitors

Expect... AVK

ICV is a fully owned AVK subsidiary for building services

- ICV (Indoor Climate Valves) is the AVK company dedicated to valves for buildings (mainly water and HVAC)
- ICV is a fully owned subsidiary of the AVK Group
- ICV is from the AVK Water segment until it was established as a separate global brand by AVK's owner in 2005
- ICV sells under the AVK brand and under it's own brand
- ICV manufactures and sells
  - General and manual valves
  - Balancing valves
  - Motorized control valves

Expect… AVK

ICV general valves and fittings

General and manual valves

- Butterfly valves
- Gate valves
- Check valves
- Strainers
- Globe valves
- Air valves
- Soft connections etc.
- Stainless steel valves

ICV balancing and automatic control valves

Balancing valves:

- Flowmaster™ - PICV
- Flowmaster™ - for fan coils
- Deltacontrol™ - Differential pressure ctrl valves
- Deltaflow™ - Manual/Static balancing valves
- Deltamatic™ Dynamic balancing valves

Expect… AVK

ICV control valves and PICVs

ICV's control valves:

- PICV
- Motorized stroke/globe valves
- Motorized control ball valves
- Motorized butterfly valves

Worldwide product approvals





AND MANY MORE…

Expect… AVK

The only valve-manufacturer producing valves with Halal-approved Rubber components

HFCE Halal Food Council of Europe المجلس الأوروبي للأغذية الحلال

4 Rue de la Presse, 1000 Brussels, Belgium | Tel: +32-2227-1114, +32-2227-2728 | Fax: +32-2218-3141 | www.HFCE.eu Registration No: 827964482

HALAL CERTIFICATE شهادة حلال

المجلس الأوروبي للأغذية الحلال يشهد بأن المنتجات المذكورة أدناه قد إستوفت شروط الحلال وفقاً للشريعة الإسلامية

The Halal Food Council of Europe hereby certifies that the products listed below have met the Halal requirements in accordance with Islamic laws.

Date: **August 27, 2020**

Document #: **15773.15774.IH200002**

Company Name & Address: **AVK GUMMI A/S** Mosegaardsvej 1 Laasby, - 8670 Denmark

Plant Name & Address: **AVK GUMMI A/S, Mixing Plant** Mosegaardsvej 1 Laasby, - 8670 Denmark

	Product Name	Product Code	Halal-ID	Product Certificate #
1.	EUW-70 (Pneumatic Rubber)	EUW-70 (Pneumatic Rubber)	C88300	HC-20AVJS97

Mujahid Masood, Ph.D.
Vice President

This certificate is valid until **September 30, 2021** and subject to renewal at that time.

Page 1 of 1

D150129302-HCP1E

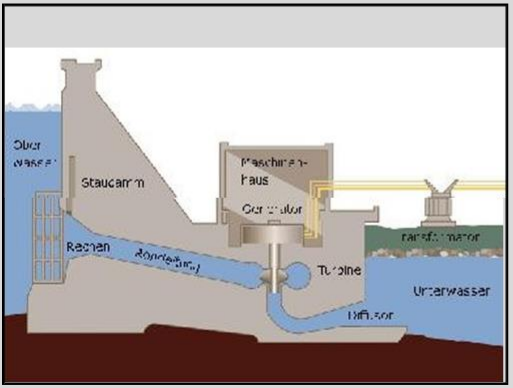
Expect... AVK

AVK IN DAMS & RESERVOIRS

DAM FUNCTION

Clean Water Reserve

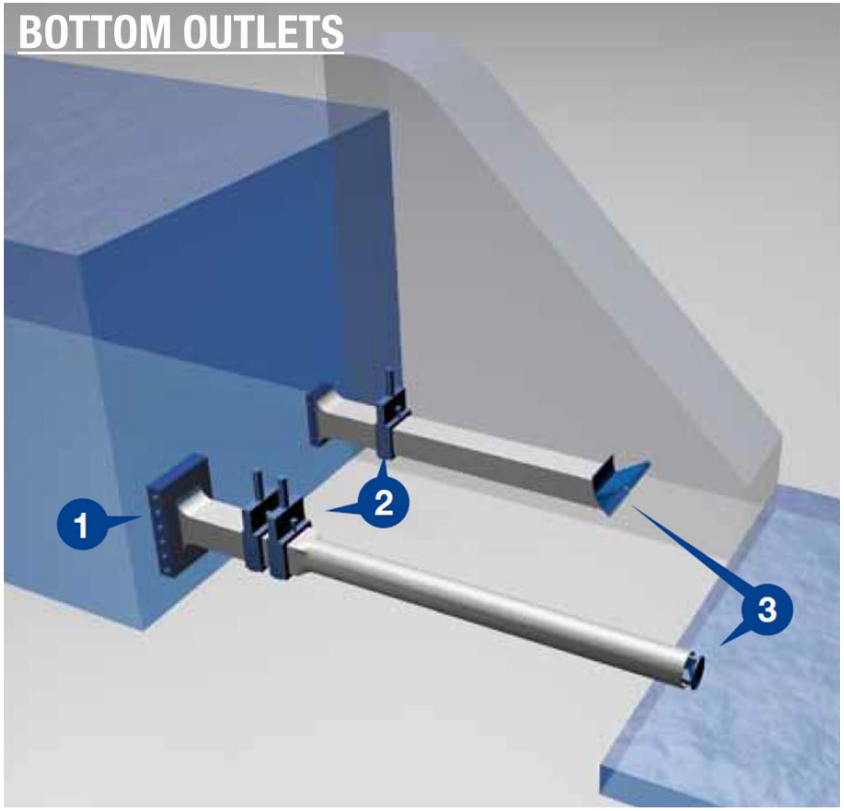
Power Plant

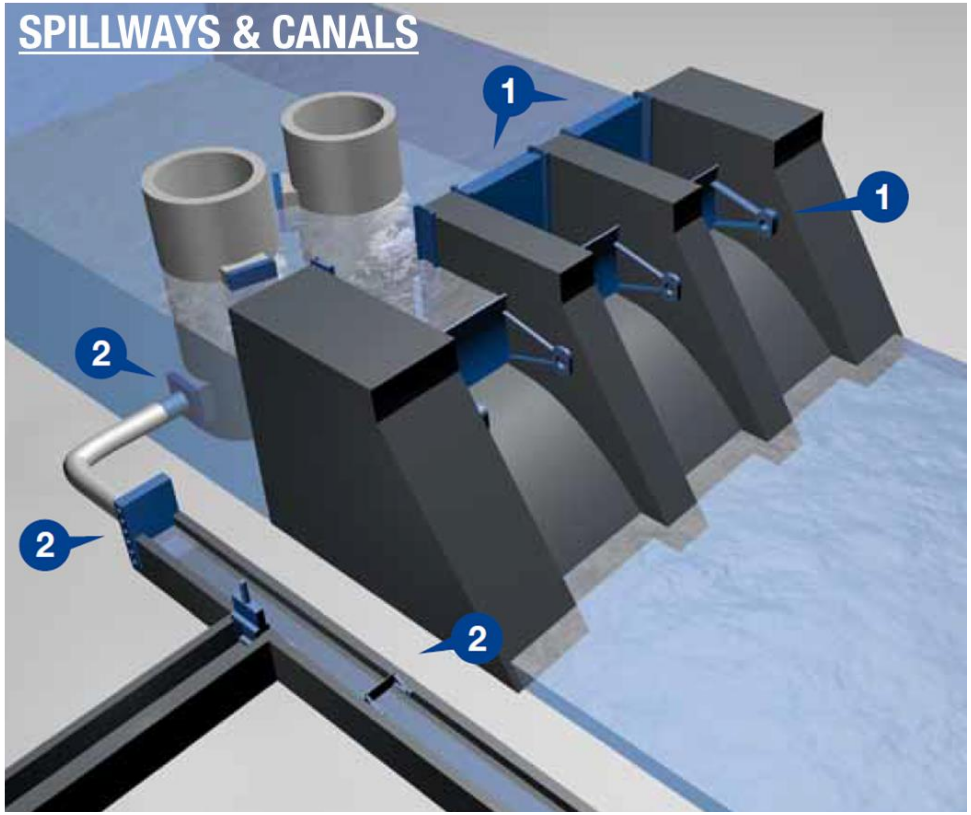


Flood Control

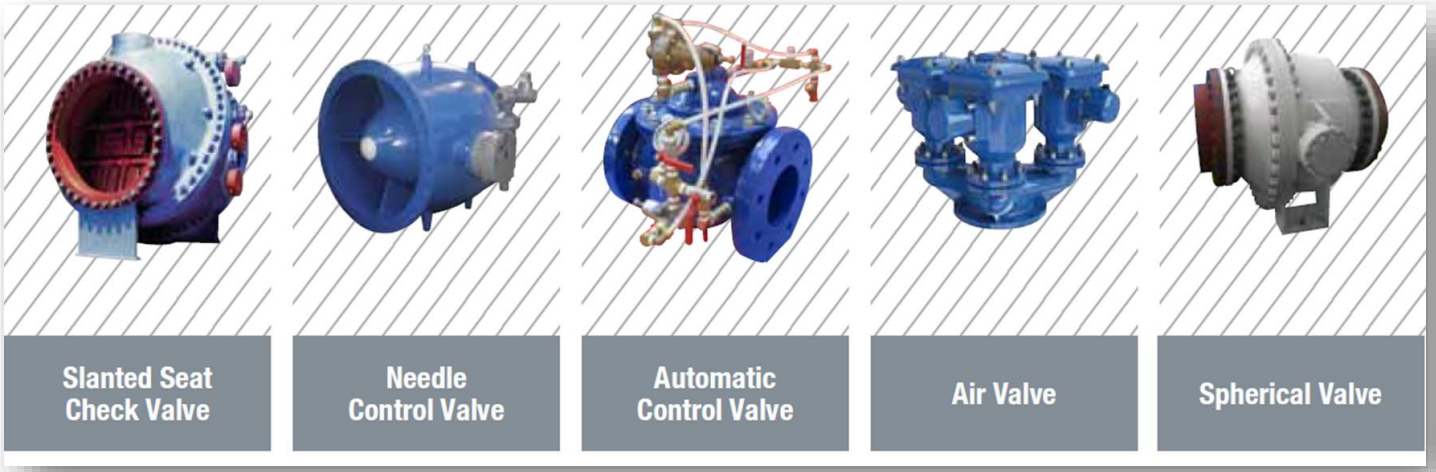
Irrigation

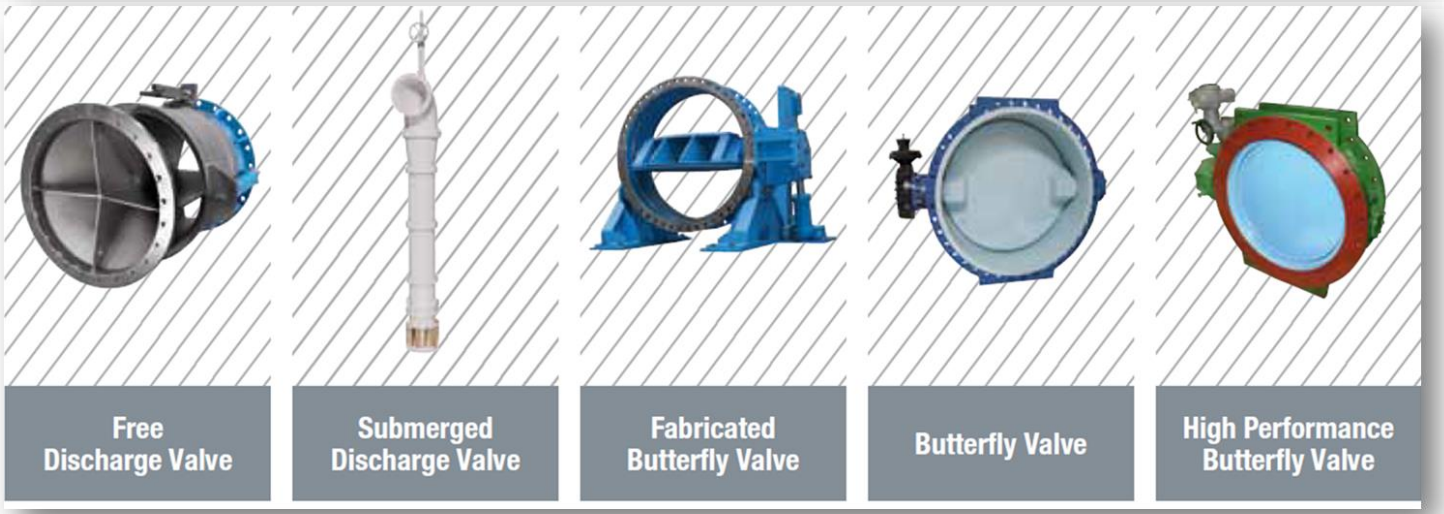
Applications





AVK Product Range (Dams & Reservoirs)





Expect... AVK

AVK Product Range (Dams & Reservoirs)

Expect... AVK

Contact Us!

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Email: customercare@avkfusion.co.id

AVK VALVES MANUFACTURING MALAYSIA SDN. BHD

Address: Klang, Malaysia Lot 1 42100, 8, Jalan Kapar, Batu 5 1/2, 42100 Klang, Selangor

Website: www.avkvalves.com.my
Email: customer.care@avkvalves.com.my

AVK VIETNAM CO. LTD

Address: So 19 So 1D, Khu dân cu Trung Son, Bình Chánh, Thành pho Ho Chí Minh, Vietnam

Website: www.avkvn.com
Email: info@avkvn.com

AVK SINGAPORE PTE. LTD.

Address: 40 Gambas Cres, Nordcom II, Singapore 757018

Website:www.avksg.com/en
Email: info@avksg.com

AVK PHILIPPINES INC.

Address: No. 70 West ave., Bgy. West Triangle 1104, Philippines

Website:www.avk.ph
Email: sales@avk.ph

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Thanks!

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QUESTIONS & ANSWERS

Submit your questions to Q&A button

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Thank You & See You

at Our Next Talk Series

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