



香港建築師學會
The Hong Kong Institute of Architects

HKIA 3rd Quarterly General Meeting 2021

Total Water Management: Building a Sustainable Future

Ir Kelvin K W LO
Director of Water Supplies
The Government of HKSAR



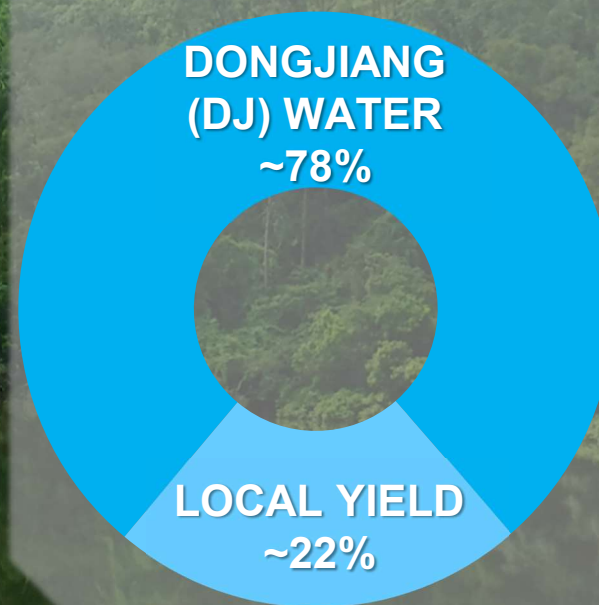
Water Supplies Department
The Government of the Hong Kong Special Administrative Region



SECURE WATER SUPPLY?

fresh water
consumption in 2020

1 027 million m³

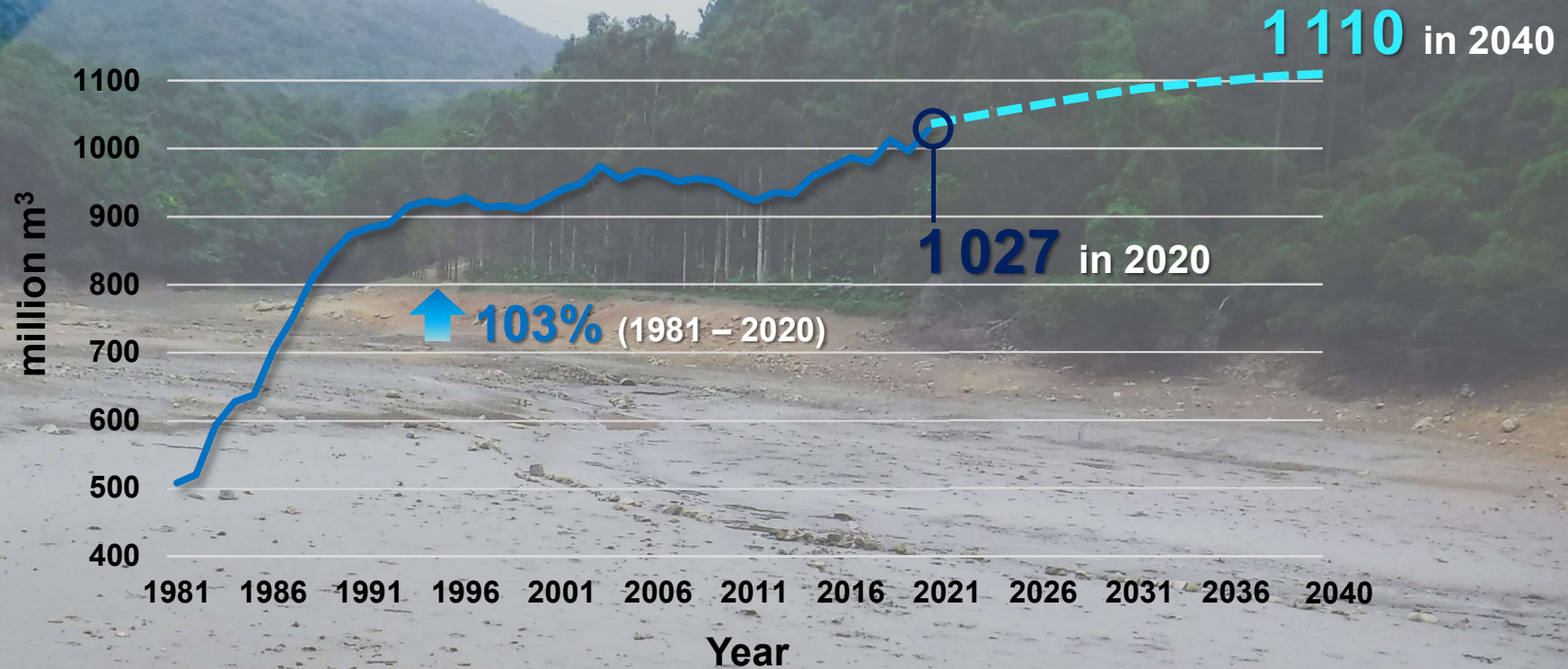


Lau Shui Heung Irrigation Reservoir (Sep 2019)



SMART WATER MANAGEMENT REQUIRED!

Hong Kong's Fresh Water Consumption



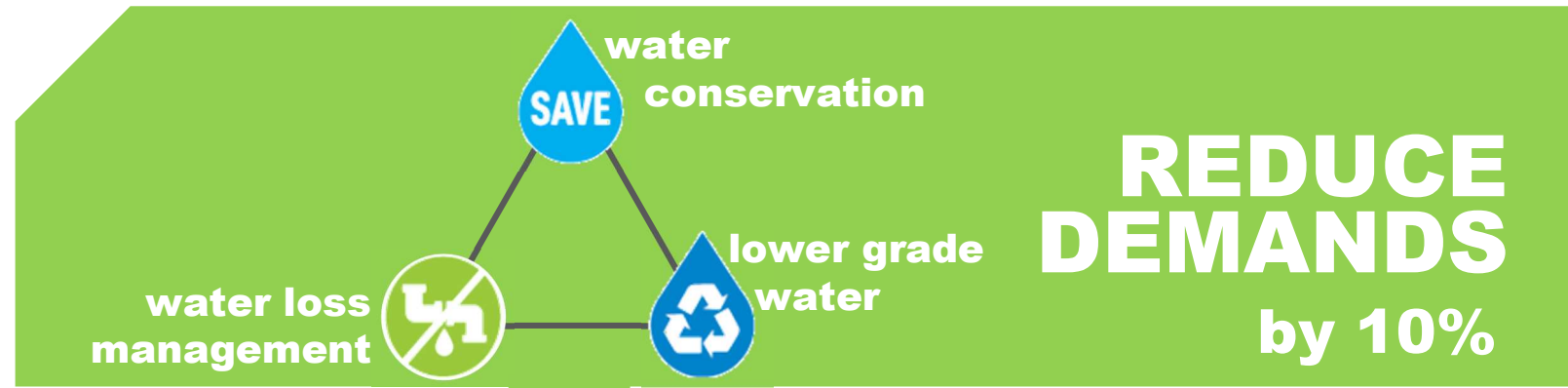
Lau Shui Heung Irrigation Reservoir (Mar 2020)



Water Supplies Department

The Government of the Hong Kong Special Administrative Region

TOTAL WATER MANAGEMENT STRATEGY



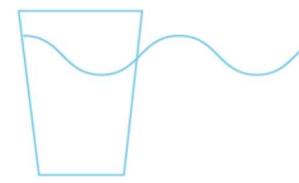
~ 1 B m³ in 2040

DIVERSIFY SUPPLIES

1st stage of Tseung Kwan O Desalination Plant

TOTAL WATER MANAGEMENT STRATEGY
STRATEGY FOR SUSTAINABLE WATER SUPPLY IN HONG KONG
2019

Water Supplies Department



WATER CONSERVATION



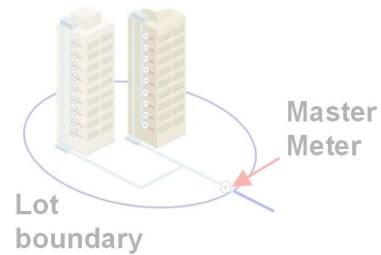
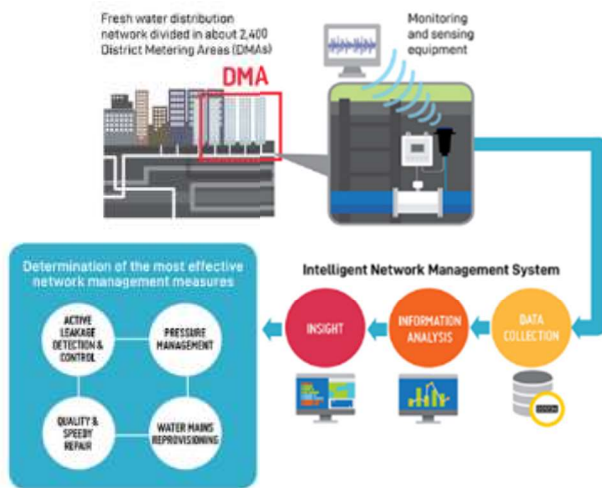
WATER CONSERVATION



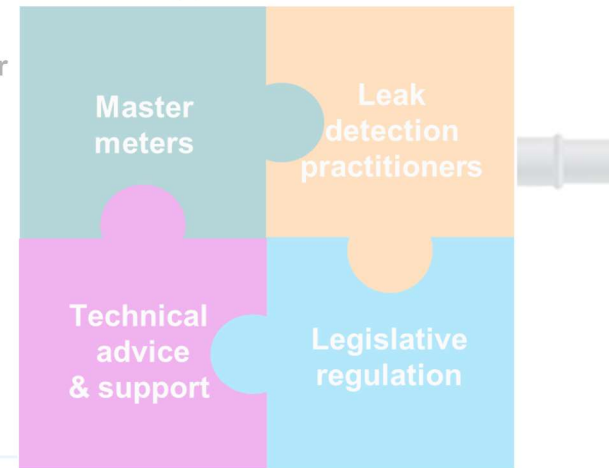


WATER LOSS MANAGEMENT

Water Intelligent Network (WIN)



Private Water Main Leakage Reduction



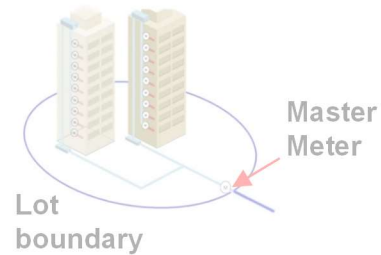
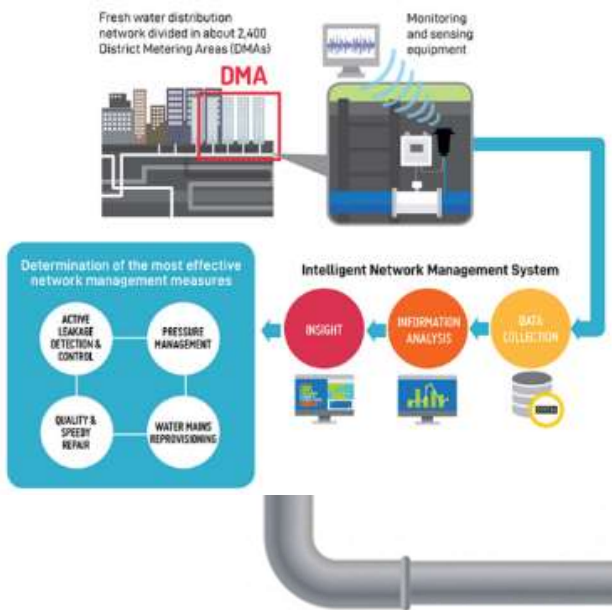
Water Main Asset Management



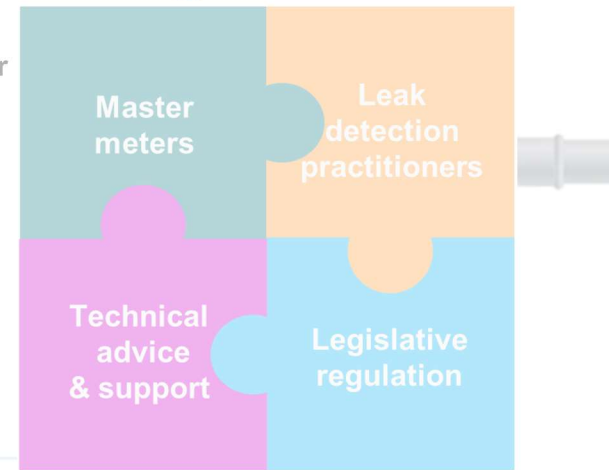


WATER LOSS MANAGEMENT

Water Intelligent Network (WIN)



Private Water Main Leakage Reduction

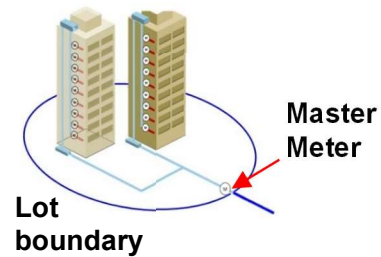
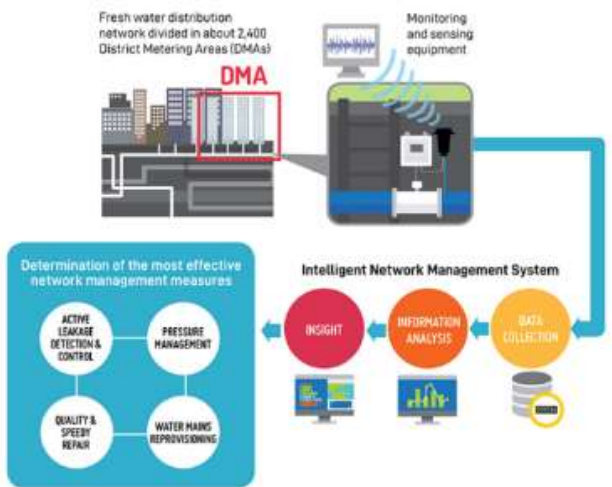


Water Main Asset Management



WATER LOSS MANAGEMENT

Water Intelligent Network (WIN)

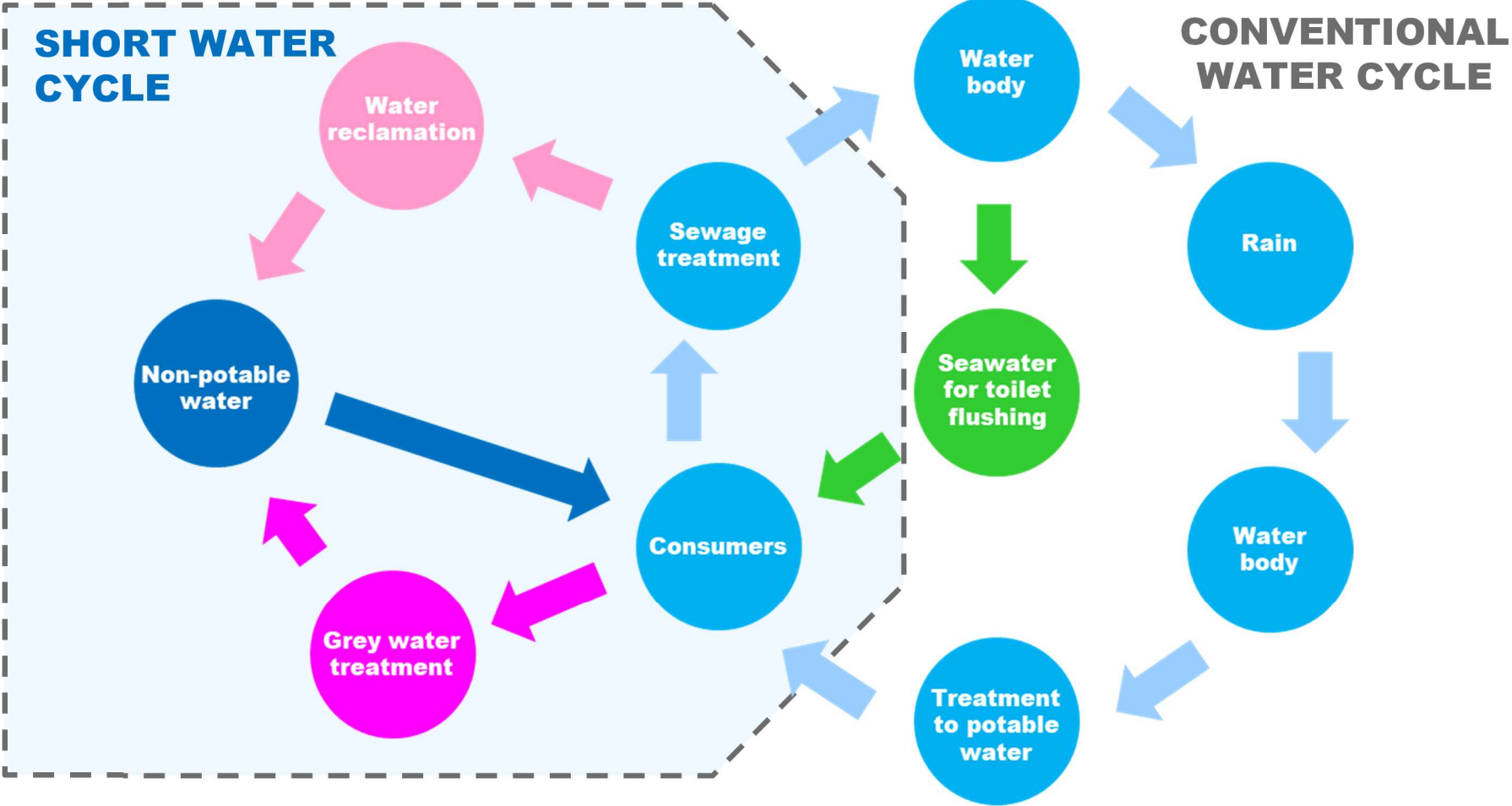


Private Water Main Leakage Reduction



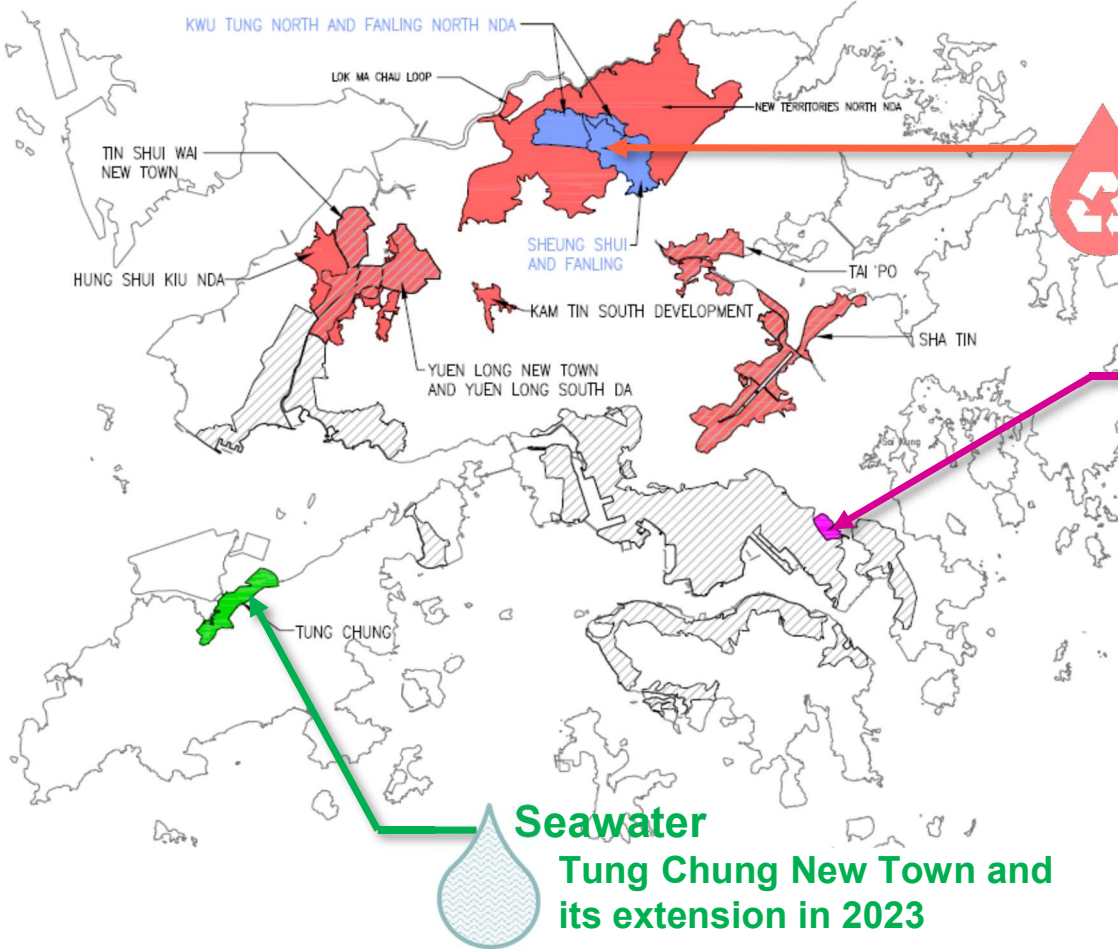
Water Main Asset Management

LOWER GRADE WATER



LOWER GRADE WATER

Network coverage 85% ➔ 90%



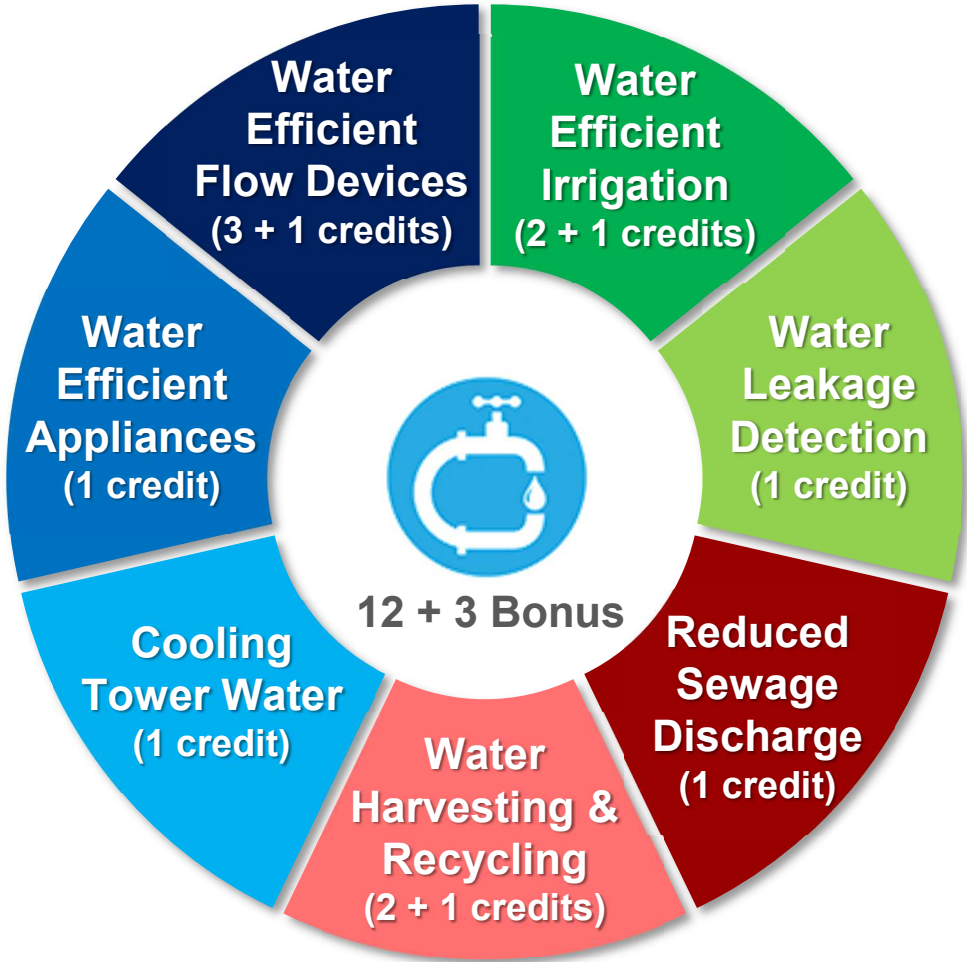
Reclaimed water
Sheung Shui and Fanling, and
NDAs from 2024 onwards

Treated grey water
Anderson Road Quarry
Development in 2023

Seawater
Tung Chung New Town and
its extension in 2023



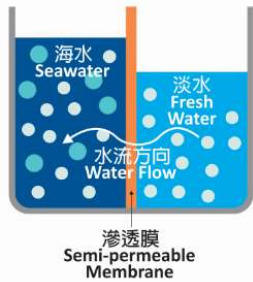
BEAM PLUS WATER USE INITIATIVE





SEAWATER DESALINATION

Desalination Plant at Tseung Kwan O (TKO)



Natural Osmosis



Reverse Osmosis

Reverse Osmosis

More Energy
Efficient



Stage 1 by 2023

50 million m³ of
fresh water per annum

Potential expansion (Stage 2)
Double the capacity of Stage 1






TKO DESALINATION PLANT

Sustainable Features



 **32%** greenery

 **53%** annual water saving

 **30%** energy use reduction 








TKO DESALINATION PLANT

Sustainable Features



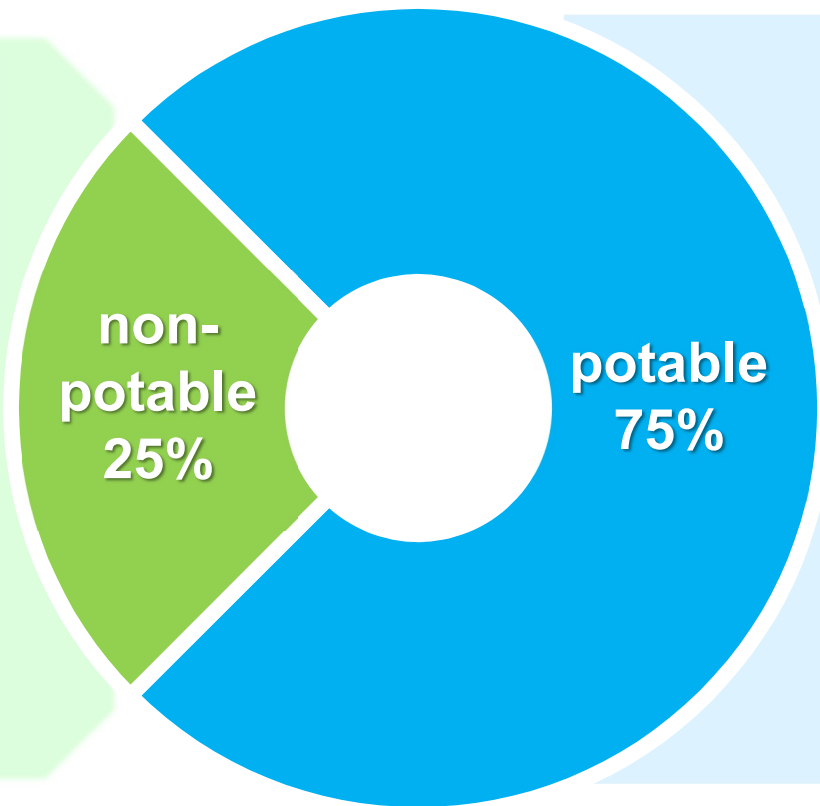
 **32%** greenery

 **53%** annual water saving

 **30%** energy use reduction 

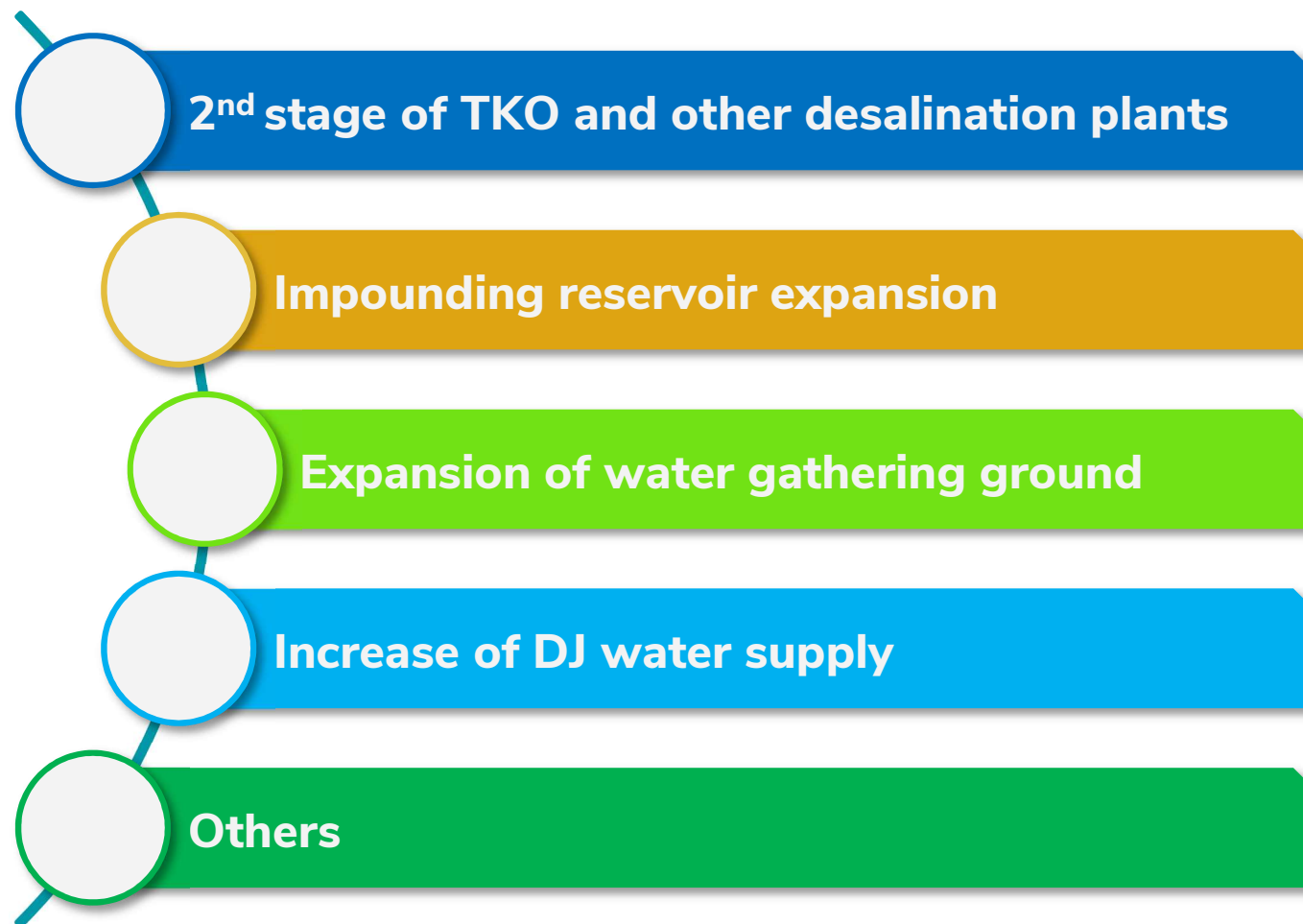


DIVERSIFIED WATER RESOURCES





BACKUP MEASURES





*Let's work together to
build a sustainable future*



Water Supplies Department

The Government of the Hong Kong Special Administrative Region