

DHS System

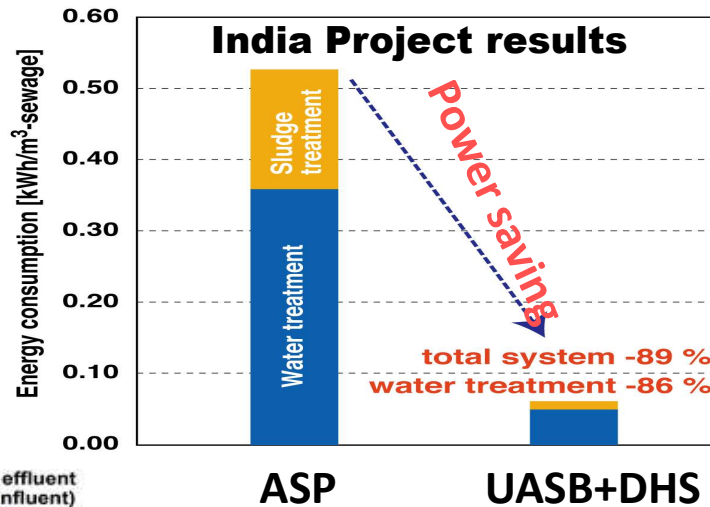
~**Quick Installation** And **Minimum Maintenance** DHS
Pilot Plant in Kota Kinabalu City, Malaysia~

2021, October

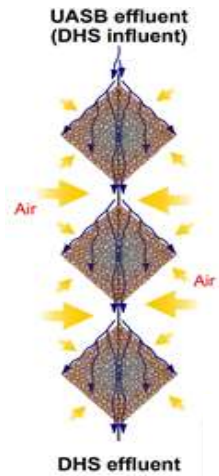


Yoshihiro KIRISHIMA
NJS Co., Ltd.

DHS reactor (Agra, India)



- Low Power Cost (No Aeration)
- Less Space (Short HRT)
- Less Sludge Production (Long SRT)
- Easy Maintenance



	DHS	vs.	ASP
SRT (days)	>100		<10
Sludge production (kgSS/kg COD rem.)	0.06		0.42~0.46



**Polyurethane
Sponge (D=40mm)**

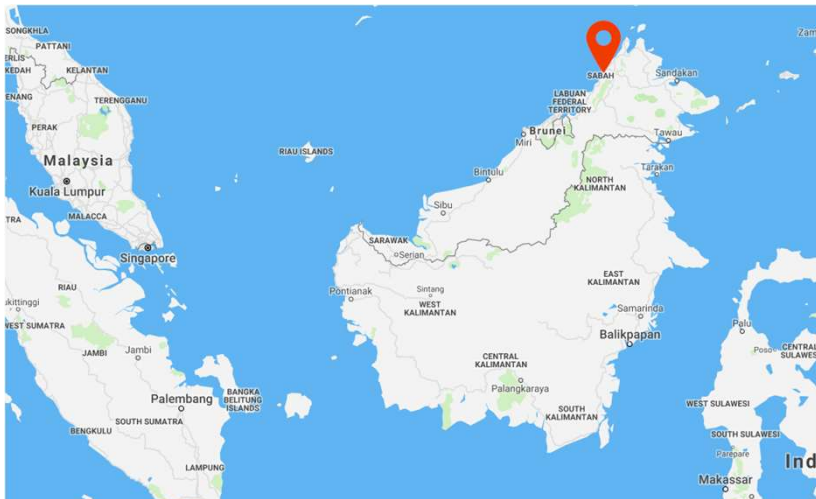


Kota Kinabalu, Malaysia, 2019~Present



PROJECT : Model Project for Improvement of Water Environment in Asia (MoE, Japan)

1. Improvement of Water Env. in Likas Bay
2. Conservation of Tourism Resources
3. Easy O&M as well as Reducing CO₂ & GHGs



<https://www.freedomdive.com/uploads/Image/map/map-kota-kinabalu.png>

https://img.freepik.com/free-vector/covid-coronavirus-in-real-3d-illustration-concept-to-describe-about-corona-virus-anatomy-and-type_17005-733.jpg?size=626&ext=jpg



DHS Plants in the World



UASB + DHS system
2012-2014 (5,000m³/d)

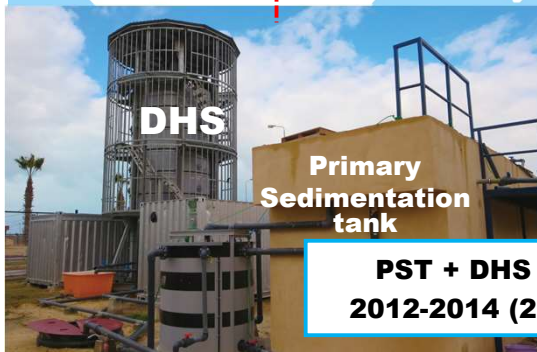
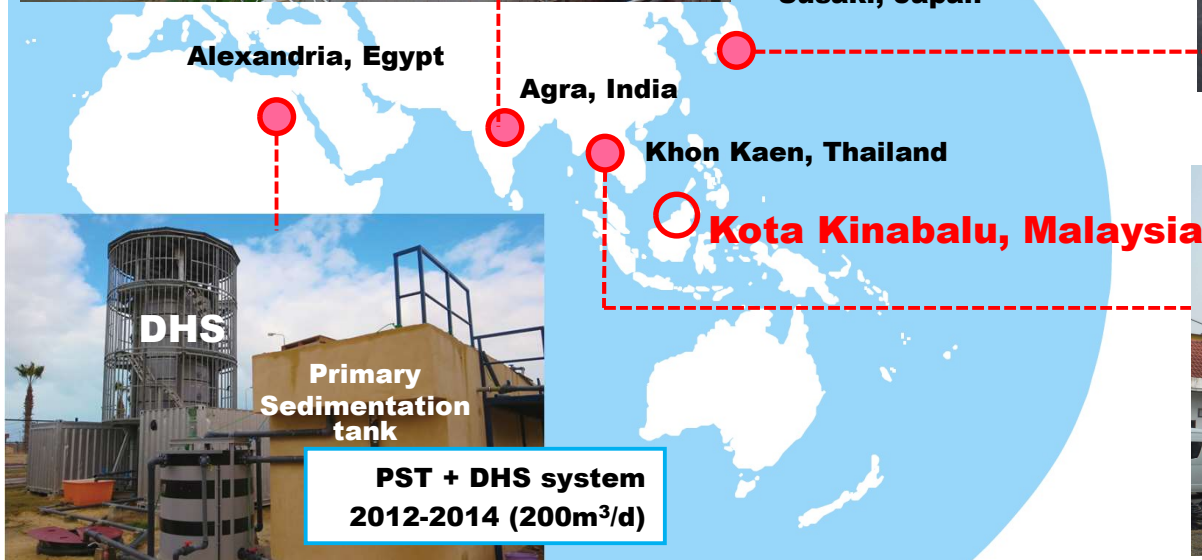
Susaki, Japan



[O&M]
NJS Co., Ltd., etc

[Consortium] Susaki City, Japan Sewage Works Agency,
Sanki Engineering Co., Ltd., Tohoku University,
National Institute of Technology, Kagawa College,
National Institute of Technology, Kochi College

Compact Package type DHS
2016- (500m³/d)



DHS

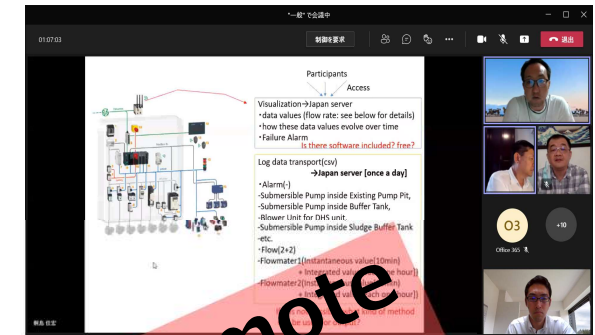
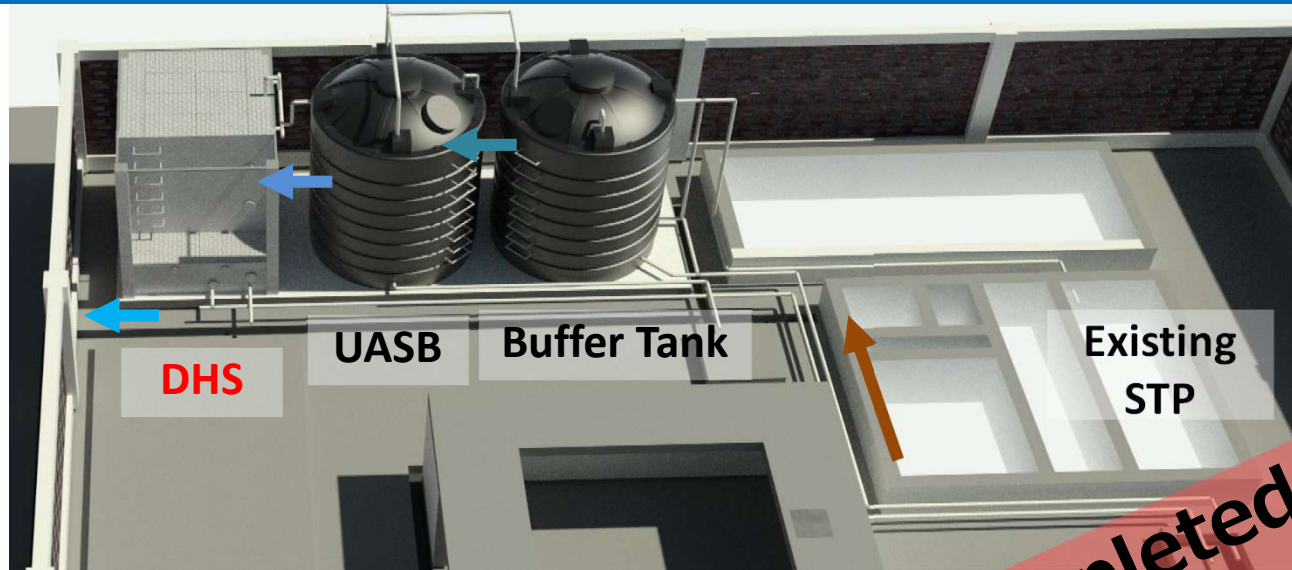
Primary
Sedimentation
tank

PST + DHS system
2012-2014 (200m³/d)



PST + DHS system
2018- (100m³/d)

Kota Kinabalu, Malaysia, 2019~Present



**Completed by Remote
Constr. on 8th Sept.**

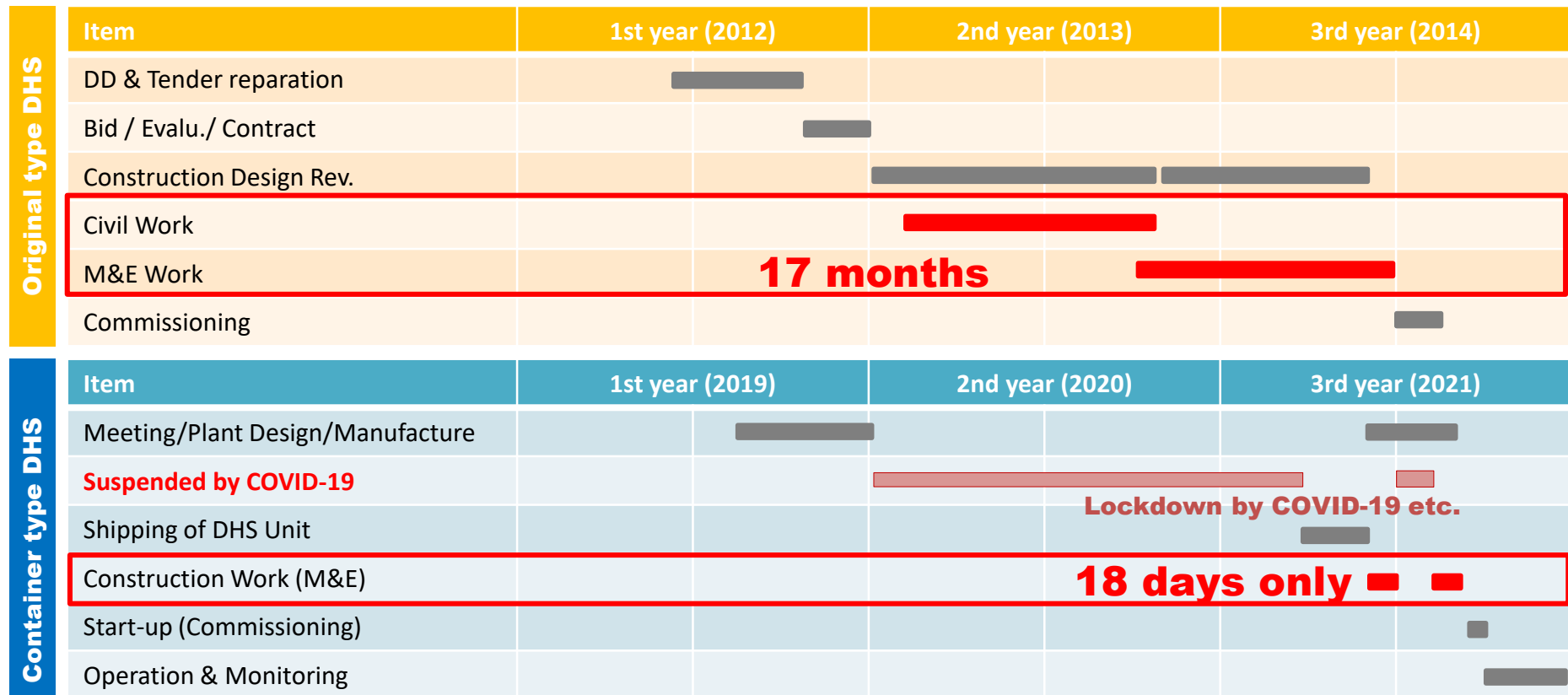


**Apply Built-in
Container Type**

Quick Construction



REVIEW : Construction Speed



Quick Construction



REVIEW : Construction Speed



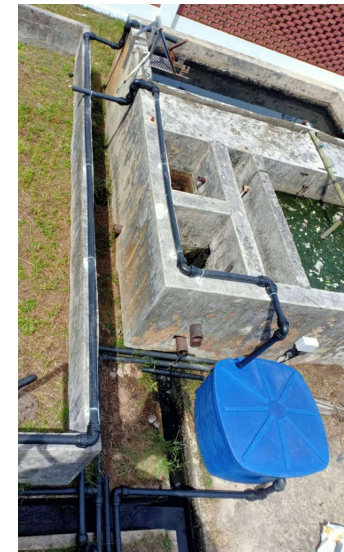
Foundation Construction (2 days)



Installation Work for Buffer Tank, UASB Tank and DHS Reactor (2 days)



Only 18 days to complete set-up



Pipe Work (8 days)



Electrical Construction Work (3 days)



Test Run(3 days)

Water Quality & Power Consumption



DHS Outlet Channel

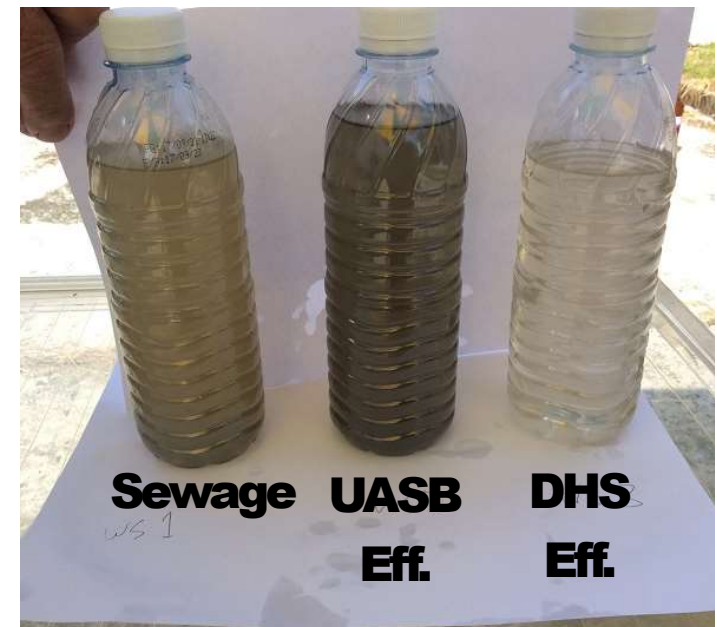


Date	BOD (LAB Test)
10 th Sept.	3 mg/L
17 th Sept.	4 mg/L

DHS Overflow Part



Start Operation on 8th September
Power Consumption 0.6 kWh/m³ (30m³/day)



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Pilot Plant in Kota Kinabalu City, Malaysia~

Contact Details

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