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Media Release

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KULIM AIRPORT PROJECT PROPOSES TO START PUMPING 40 MILLION LITRES PER DAY OF WASTEWATER INTO SUNGAI MUDA?

- **Airport and aerotropolis sewerage planning report proposes sewage treatment plant capacity of 200,000 PE from 2021, 300,000 PE by 2026 and 500,000 PE by 2040.**
- **Wastewater discharge from a proposed sewage plant will flow into Sungai Muda, Penang's primary raw water resource, 6km upstream of PBAPP's Lahar Tiang Intake.**

PENANG, Thursday, 9.9.2021: A sewerage planning report for the proposed Kulim International Airport (KXP) and its "aerotropolis" project indicates that it will discharge increasingly large volumes of wastewater into Sungai Muda.

Statistics from the report* summarises the cumulative sewage treatment plant (STP) capacity required to be as follows:

Year	Development	Cumulative STP capacity	Estimated Volume
2021 - 2025	Phase 1 of airport & aerotropolis, as well as part of Phase 1 of SLAM	200,000 PE	40 MLD (million litres per day)
2026 – 2030	Phase 2 of aerotropolis, as well as part of Phase 1 of SLAM	300,000 PE	60 MLD
2031 – 2035	Phase 3 aerotropolis and part of Phase 2 of SLAM	450,000 PE	90 MLD
2036 – 2040	Phase 4 & 5 of aerotropolis and part of Phase 2 of SLAM	500,000 PE	100 MLD
2040 and beyond	Phase 2 of airport and Phase 3 & 4 of SLAM	500,000 PE	100 MLD

The following are 5 reasons why this proposed volume of wastewater discharge represents a high risk and dangerous scenario that is unacceptable for 1.78 million people living in Penang:

1. High volume of wastewater discharge

Excerpt from Wikipedia:

“Population equivalent (PE) in wastewater treatment is the number expressing the ratio of the sum of the pollution load produced during 24 hours by industrial facilities/services to the individual pollution load in household sewage produced by one person in the same time. The calculations assume that 1 person living in a normal house will produce 200L (liters) of effluent per day, and that will contain 60g of biochemically active material.”

As such, the required wastewater load capacity for sewage treatment may be interpreted as (PE x 200): 40 MLD from 2021, 60 MLD by 2026, 90 MLD by 2031 and 100 MLD by 2036.

To clarify, MLD means “million litres per day”. 1 MLD of water can be used to fill 2 million small (500ml) bottles of drinking water, while 2.5 MLD fills an Olympic-sized swimming pool.

Imagine a daily discharge of 40 million litres (ML) of wastewater into Sungai Muda from 2021, increasing to 100 ML by 2036. What will be the impact on the raw water quality of Sungai Muda downstream?

2. Sungai Muda is a raw water resource

For Penang and South Kedah, Sungai Muda is an indispensable and irreplaceable raw water resource. Perbadanan Bekalan Air Pulau Pinang Sdn Bhd (PBAPP) abstracts more than 80% of the raw water that it needs daily to produce treated water from Sungai Muda.

If Sungai Muda is polluted or contaminated, water supply services for 1.78 million Penangites will be disrupted. A water supply crisis in Penang will also cause huge losses to all the businesses that contributed RM94.7 billion to the national GDP in 2019.

3. Proximity to PBAPP's Lahar Tiang Intake

The environmental impact assessment (EIA) report published online by the Department of Environment (DoE), showed the KXP project will occupy 3,982.51 hectares of land, adjacent to about 14km of the riverbanks of Sungai Muda. It also proposed the construction of a sewage treatment plant near Sungai Jurong, 2km from where Sungai Jurong flows into Sungai Muda.

This places the nearest point of the KXP project to be just 6km away from PBAPP's Lahar Tiang Intake in Seberang Prai.

Potentially, the negative impacts of any accidents/mishaps/issues will affect PBAPP's raw water abstraction operations almost immediately ...and water supply services throughout Penang within hours.

Due to proximity, there is almost no "wobble room" to implement any meaningful emergency mitigation actions to avoid a state-wide water crisis in Penang if something goes awry at the KXP site.

4. Conventional water treatment limitations

Raw water that PBAPP abstracts from Sungai Muda is treated using "conventional water treatment" technology at the Sungai Dua Water Treatment Plant (WTP).

Today, the Sungai Dua WTP produces treated water that is amongst the safest in Malaysia, according to test results of the National Drinking Water Quality Assurance Programme set by the Ministry of Health.

As such, it is proven that "conventional water treatment" technology is effective enough for the treatment of raw water abstracted from Sungai Muda, *as-is-where-is* ...without the KXP project.

However, "conventional water treatment" technology may not be potent enough to treat raw water that is infused with large volumes of wastewater and/or river water which contains unknown or high levels of chemical/microbiological loads that are toxic or hazardous.

5. Impact of continuous discharge of high volumes of wastewater into a raw water resource

We do not know what will happen when 40 million litres (ML) of wastewater is discharged into the river in one day. However, we may reasonably surmise that a continuous discharge of 40 ML every day for a year will generate some negative impact on raw water quality downstream.

Moreover, the wastewater discharge load is projected to gradually increase to 100 ML in 25 years' time. Once it takes off, the KXP project will continue to operate for many more years to come.

Continuously discharging high volumes of wastewater into Sungai Muda over an extended period of time will inevitably compromise its role as viable raw water resource. Logically, this is not a matter of "if", it is a matter of "when".

In summary, there is a fundamental reason why a new airport project cannot be sited in close proximity to important a raw water resource (such as Sungai Muda): Water supply sustainability is more important than additional air transportation infrastructure. People may live without another airport but they cannot live and prosper without daily supply of water that is safe and healthy.

In this context, I hope the Penang state government, Penang state members of Parliament, NGOs and the people of Penang to join PBAPP in calling for the Federal Government to kindly relocate the KXP project to a safer place, as far as possible from Sungai Muda. This is to protect members of "Keluarga Malaysia" in the state of Penang and Southern Kedah.

Thank You.

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*<https://drive.google.com/drive/folders/1w3JWHiHUmwEfDrF2hto5IXxYR4DQR94z>
(Appendix 5.5.5 Full Report_Sewerage Planning Report_01_R.pdf)