

## COMPLETION REPORT

### **A Study on Readiness of Malaysian to Adopt Composting Method based on Japanese Sustainable Food Waste Management Model**

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The major aim of this project is to examine the readiness of Malaysian towards the centralized treatment system for domestic wastewater. A series of thorough discussions with Dr. Ebie Yoshitaka and Mr. Koryu Kawatani from the National Institute for Environmental Studies, Japan was executed in Kuala Lumpur and through an online platform. From the discussion, the current practice and performance of centralized wastewater treatment in Japan were highlighted. The potential policy intervention and enabling or disabling factors for the implementation of centralized wastewater treatment system in Malaysia were also identified. Besides, the learning visit to Pantai Sewage Treatment Plant which is part of the National Sewage Treatment Plant Project funded by the Japanese ODA Loan program was carried out to examine the Japanese practice on the successful domestic wastewater treatment.

Apart from that, the interview on the current situation of domestic wastewater with experts in the sewerage industry has been conducted in Kuala Lumpur and Selangor. The focus group discussion involving the representative from the Department of Irrigation and Drainage, Sewerage Services Department, Federal Department of Town and Country Planning Peninsular Malaysia, National Water Services Commission and Indah Water Konsortium was also held in Kuala Lumpur and Johor Bahru city. Based on the discussion, it was found out that more than half of the population in Malaysia are still using the septic tank following the regulatory standard and management. The advancement of the centralized wastewater treatment technologies in the urban areas still needs to be enhanced and expanded to the rural areas to ensure the feasible implementation of technology related to domestic wastewater management. Lack of budget and technical staff as well as the low public awareness on the adoption of technology are amongst the disabling factors that affect the better implementation of technology. For instance, the low public willingness to pay the adequate sewerage tariff leads to an insufficient budget for the government to build the infrastructure for domestic wastewater treatment. Therefore, it is particularly significant to come out with the policy recommendation and guidelines for centralized domestic wastewater management in Malaysia.

After the comprehensive discussions with the sewerage experts, authority and operator, the policy guidelines and roadmap for the appropriate domestic wastewater management have been developed to promote the readiness of Malaysians in adopting the centralized wastewater treatment technologies. The policy guidelines and roadmap could assist the authority to perform a concrete effort related to the betterment of the centralized wastewater treatment system in terms of legislation, finance and technology. Furthermore, the standardization which includes the effluent standard regulation and monitoring should be enhanced by the authority. The program related to public awareness should also be multiplied to educate the community on the importance of the centralized wastewater treatment system and technologies. The outcome from this project has been documented as the research article and is currently undergoing the publishing process.

Publication of the Results of Research Project:

Verbal Presentation (Date, Venue, Name of Conference, Title of Presentation, Presenter, etc.)

1. 20-21 January 2020, Jakarta, Indonesia, ASEAN-JAIF Project – 1<sup>st</sup> Regional Policy Dialogue and Network Building of Multi-Stakeholders on Integrated Decentralized Domestic Wastewater Management in ASEAN Countries (PoDIWM), Dato' Ir. Mohd Azmi Ismail (Director of Water Resources Management and Hydrology Division, Department of Irrigation and Drainage) and Aeslina Abdul Kadir.
2. 21, 22 and 27 October 2020, Online Platform, ASEAN-JAIF Project – 2<sup>nd</sup> Regional Policy Dialogue and Network Building of Multi-stakeholders on Integrated Decentralized Domestic Wastewater Management in ASEAN Countries (PoDIWM), Dato' Ir. Mohd Azmi Ismail (Director of Water Resources Management and Hydrology Division, Department of Irrigation and Drainage) and Aeslina Abdul Kadir.

Thesis (Name of Journal and its Date, Title and Author of Thesis, etc.)

1. Submitted to Journal of Management Information and Decision Science, March 2021, Holistic Investigation Towards Better Transition of Domestic Wastewater Management in Malaysia, Aeslina Abdul Kadir, Mohd Ikhmal Haqem Hassan, Azini Amiza Hashim. (Under review process and a little delay due to pandemic of Covid 19). If the review process is too long it will be submitted to a conference for publication.

Book (Publisher and Date of the Book, Title and Author of the Book, etc.)