

Emulsion Flow Technologies Ltd.



- ❑ Address: Naka County, Ibaraki Pref.
- ❑ Employees: 21
- ❑ Established in 2021
- ❑ Business: Rare metal recycling services and solvent extraction solutions

<https://www.emulsion-flow.tech/en>

Outline of the demonstration project

- Feasibility Study for Smart Mill Malaysia by utilizing wastewater treatment technology and IoT in palm plantations in Malaysia.

Cooperation with local companies/governments

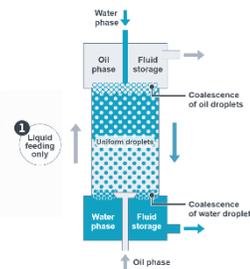
- Local Partners: Malaysian government agencies, industry partners, (in discussion) palm plantation conglomerates
- Details of Partnership/Cooperation: R&D, POC



WASTEWATER



SEPARATION OF OIL/WATER



Targeted economic/social issues

- There are issues related to palm oil mill effluent (POME), a by-product of the palm oil production process; up to 7.5 tons of water is required to produce one ton of palm oil, and more than 50% of this water is eventually disposed of as POME.

Details of demonstration

- The innovative technology developed and operated by our company, Emulsion Flow Technologies, the only spin-off startup of the Japan Atomic Energy Agency, has been implemented as a sustainable plant for recycling rare metals with high efficiency, high productivity, and modular design, primarily for lithium-ion battery recycling. However, the technology can also be applied to oil-water separation.
- In this project, we aim to adapt our technology to the local factory environment and design a comprehensive system configuration utilizing Internet of Things (IoT) sensors for smart mill integration.

Expected outcome of beneficiary effects

- Creation of New Markets and Customer Expansion: The innovative wastewater treatment solutions designed for palm oil factories has potential to create entirely new markets. Meeting the wastewater treatment needs of 400 plantations in Malaysia and 700 plantations in Indonesia will lead to acquiring a great number of new customers.
- CAPEX Reduction: The modular designed plant is easily scalable and can be seamlessly integrated into existing plants without major equipment modification or large investments. And DX will facilitate the efficiency.