Water Environment Improvement Project by the Reduction and Purification of Highly Concentrated Waste Liquid in Quang Nam Province, Vietnam

Ministry of the Environment Government of Japan



### Implementation systems

Kyowakiden Industry Co., Ltd., Nagasaki Prefecture, Nagasaki University, Nagasaki Vietnam Friendship Association

# Background

- Industrial parks in Quang Nam Province are actively attracting companies in the fields of machining, automobile-related and electrical and electronics.
- It is difficult for general wastewater treatment facility to adequately treat highly concentrated waste liquid discharged from industrial parks and factories. So they are usually outsourced to industrial waste disposal companies at higher costs, which is <u>a major cost factor</u> in company's production activities.
- Some of these concentrated waste liquids are discharged into the environment without proper treatment, which is one of the causes of the <u>water environmental degradation</u>.

# **Project Outline**

- Verification of effects of "Improvement of Water Environmental Issue" and "Cost Reduction for highly concentrated wastewater treatment" by Marketing survey in Vietnam about highly concentrated waste liquid treatment, Waste sample treatment experiment and Training for system operation.
- F/S (FY 2017): Survey of actual condition about highly concentrated wastewater treatment in Quang Nam province, waste sample treatment experiment by experimental unit installed in HCMC and then verification of treated water quality and Return On Investment(ROI).
- Demonstration (FY 2018): Installation of the system to a industrial waste disposal company in Quang Nam province, operation training and verification of the Business model.

#### Location

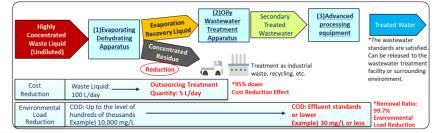
#### Quang Nam Province, Vietnam

- High GDP growth rate.
- Seven industrial park are in operation and will increase in the future.
- Has a historical relationship of approximately 400 years with Nagasaki Prefecture, and has concluded an MOU on friendship and exchange relationship with Nagasaki Prefecture in 2017.



### Outline of Technology

- Combined system of (1)Evaporating Dehydrating Apparatus, (2)Oily Wastewater Treatment Apparatus (oil separation) and (3)Advanced processing equipment(advanced biological treatment) has many experiences in Japan and China.
- This technology achieves significant reduction of highly concentrated waste liquid and meets effluent standard by advanced treatment of evaporation recovery liquid.



## **Expected results and business prospects**

- Contribution to water environment improvement by "Reducing waste disposal costs by reducing highly concentrated waste liquid" and "proper disposal".
- Develop a system sales and maintenance business for factories and industrial parks that generate highly concentrated waste liquid and industrial waste disposal companies that treat highly concentrated waste liquid.