

Model Project for Improvement of Water Environment in Asia

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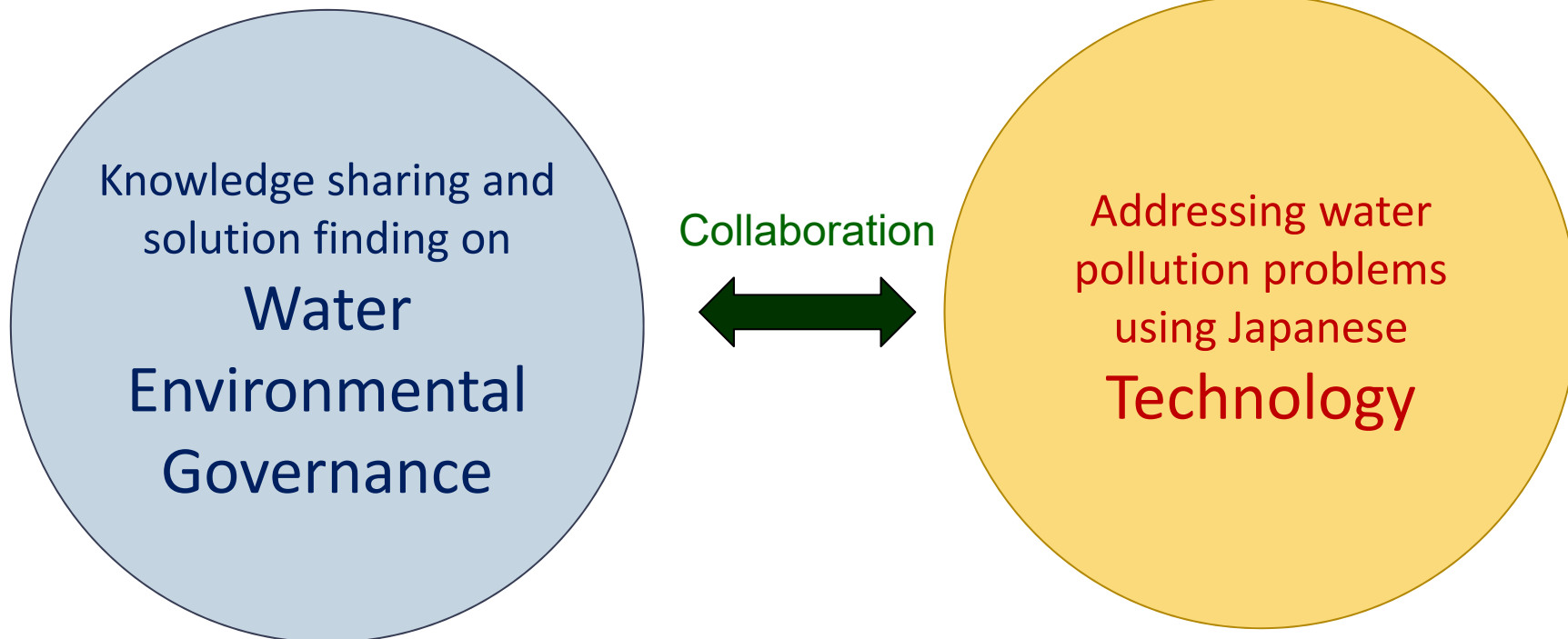
Ministry of the Environment, Japan



Water Environmental Conservation in Asia

Water Environmental
Partnership in Asia (WEPA)

Pilot Projects for Water
Environment Improvement in Asia



Purpose

- To support the dissemination of appropriate water treatment technologies made by Japanese private companies to foreign countries.
- To support the improvement of water environment in Asia-Pacific by disseminating Japanese water treatment technology.

Method

- Ministry of Environment seeks publicly appropriate technology from Japanese private companies. Selected companies will be supported financially by MOEJ.
- Selected companies shall conduct a Feasibility Study in the first year and a Pilot Project after the second year as well as develop business models through advertisement of the applied technology.
- Projects can disseminate the applied technology to other areas as well as contribute to water environment improvement in the country.

Outcome - Issue

- To have selected 24 projects for 8 years.
- 9 projects in Viet Nam, 5 projects in Indonesia, 2 projects in China, India and Malaysia, 1 project each in Philippine, Myanmar, Fiji and the Solomon Islands.
- Domestic wastewater treatment, Industrial wastewater treatment, Phosphorus resource recovery system, control of Non-point source pollution.
- The smooth operation needs cooperation from local actors including the government. In addition to pricing, the legal system and maintenance management of the local government can be bottlenecks in commercialization.

The List of Pilot Projects for Water Environment Improvement in Asia

City Country	Project name [Implementer]	Classification	Technology	Fiscal Year [Project Stage]
Haryana, India	Comprehensive upgrading of industrial wastewater treatment systems and promotion of water reuse [Toyo Engineering Co., etc.]	Industrial WW	MBR	2011(FS)
Da Nang, Viet Nam	Da Nang City Industrial Complex Wastewater Treatment [Kajima Co., Maeda Co., Hitachi Plant Technology, Ltd., etc.]	Industrial WW	Flocculation-coagulation & membrane (MF,UF)	2011(FS)
National Railway, Viet Nam	Water quality improvement by biotoilet implementation [Chodai Co., Ltd., Hokkaido University, Etc]	Domestic WW	Biotoilet	2011(FS)
Penang, Malaysia	Zero emission treatment system for piggery wastewater [Aqua Co.,Ltd., EX Research Institute Ltd., etc.]	Livestock WW	Chlorella serial culture (MIYABI System)	2011(FS) 2012(PS)
Jakarta, Indonesia	Improving water quality by Johkasou demonstration test in Jakarta [Kubota Corporation, etc.]	Domestic WW	Johkasou	2011(FS) 2012-2013 (PS)

[Project Stage] FS : Feasibility Study, PS : Pilot Study

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Shenyang, China	Water quality improvement and resource recovery in Shenyang, Liaoning Province [Daiki Ataka Engineering Co., Ltd., etc]	Phosphorus recovery	Phosnix (MAP method)	2012 [FS]
Linyungang, China	Non-Point Source Pollutants Purification System [CTI Engineering co., TBR, Masaki ENVEC, SIDRI, etc.]	NP source, direct treatment	Fibrous contact media mass-produced biomanipulator	2012 [FS] 2013 [PS]
Ha Noi, Viet Nam	Water Environment Improvement Business by Energy-Saving Industrial Organic Wastewater Treatment [Sekisui Aqua Systems Co., Ltd., Sun Engineering Co., Ltd., Osaka Prefectural Government, etc.]	Organic Industrial WW	Biofilm (Rotating contact filter)	2012 [FS] 2013-2014 [PS]
Honiara, Solomon Islands	Diffusion of soil absorption system supportive to Environment [Original Engineering Consultants, Taisei Kogyo, Japan Environment Sanitation Center, etc.]	Domestic WW	Environmental Toilet TSS (Soil treatment, Adsorption/diffusion)	2013 [FS] 2014- 2015 [PS]
Ho Chi Min, Viet Nam	Promotion of Textile Dyeing Industrial Wastewater Treatment [Kobelco Eco-Solutions Co., Ltd., etc.]	Textile Dyeing WW	Biological (USDB, MBBR) Redox (Heavy metals) Physico-chemical (color)	2013 [FS] 2014-2015 [PS]

[Project Stage] FS : Feasibility Study, PS : Pilot Study

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Mumbai, India	Establishment of water recycling system for Patalganga industrial park in, India [Fuji Electric Co., Ltd., etc.]	Recycled water	Water recycling system	2014 [FS]
Da Nang, Viet Nam	Project for improving the water quality from the wastewater treatment facility and its operation in fishery processing factories [The General Environmental Technos, etc.]	Fishery processing WW	Bioaffinity Polyvinyl alcohol (PVA) gel	2014 [FS] 2015-2016 [PS]
Selangor, Malaysia	Johkasou introduction project for domestic wastewater treatment improvement [Japan Education Center of Environmental Studies (JECES), Daiki Axis Co., Ltd., etc.]	Domestic WW	Johkasou	2014 [FS] 2015-2016 [PS]
Ho Chi Min, Viet Nam	Dissemination Project of AOSD Control System as the Advanced and Cost-Saving Wastewater Treatment Technology for Restoration [Foundation for Advancement of International Science, etc.]	Organic WW	Automatic Oxygen Supply Device (AOSD) Biological optimized control system	2015 [FS] 2016-2017 [PS]

[Project Stage] FS : Feasibility Study, PS : Pilot Study

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Ho Chi Min, Viet Nam	Septage Treatment Project [Hitachi Zosen Co., Kyoto University, etc.]	Domestic WW	Sludge digestion	2015 [FS]
Wundwin, Myanmar	Improving water quality of wastewater from dye factories and O&M skills [HORIBA, Ltd., Hitachi Zosen Co., etc.]	Textile Dyeing WW	Continuous water quality monitoring	2015 [FS] 2016-2017 [PS]
Manila, Philippines	Pasig River basin water environment improvement project using Hi-Beads (Coal Ash Granule) [MI Consulting co., Hiroshima University, etc.]	Direct river purification	Hi-Beads (Granulated Coal Ash)	2016 [FS]
Thai Nguyen, Viet Nam	Dissemination of hybrid subsurface flow constructed wetland systems in Viet Nam [Tusk Co., Ltd., etc.]	Livestock WW	Hybrid subsurface flow constructed wetland system	2016 [FS] 2017-2018 [PS]
East Java, Indonesia	Efficient Industrial wastewater treatment at industrial park in Indonesia by using aerator [Environmental Management and Technology Center, etc.]	Textile Dyeing WW	Aerator	2016 [FS] 2017-2018 [PS]

[Project Stage] FS : Feasibility Study, PS : Pilot Study

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Quang Nam, Vietnam	Water Environment Improvement Project by the Reduction and Purification of Highly Concentrated Waste Liquid [Kyowakiden Industry Co.,Ltd.,etc.]	Industrial WW	Evaporation dehydration, Biological treatment	2017 [FS] 2018 [PS]
Balikpapan, Indonesia	Project for upgrading existing septic tank by Johkasou technology [DAIE Industry Co.,Ltd.,etc.]	Domestic WW	Johkasou	2017 [FS] 2018 [PS]
Cimahi, Indonesia	Pilot project on textile industry wastewater treatment technology (combination of ABR and DHS) in Citarum river basin [Nihon Suido Consultants Co.,Ltd.,etc.]	Textile industry WW	Anaerobic Baffled Reactor (ABR) and Down-flow Hanging Sponge (DHS)	2018 [FS]
Palembang, Indonesia	Implementation of Portable Toilet System for Improving Water and Hygiene of Slum Environment [LIXIL Corporation, etc.]	Domestic WW	Container-Based Sanitation	2018 [FS]
Western Viti Levu, Fiji	Low environmental impact type wastewater treatment and resource circulation system dissemination project utilizing Anaerobic Aerobic Filter Method (A2F) [Hitachi, Ltd., etc.]	Domestic WW	Anaerobic Aerobic Filter Method (A2F)	2018 [FS]