#### Japan – Indonesia Environmental Week January 15, 2021

## Strengthening Partnership between Public and Private on Marine Plastic Litter and Waste Management

Michikazu Kojima Research Fellow Economic Research Institute for ASEAN and East Asia (ERIA)

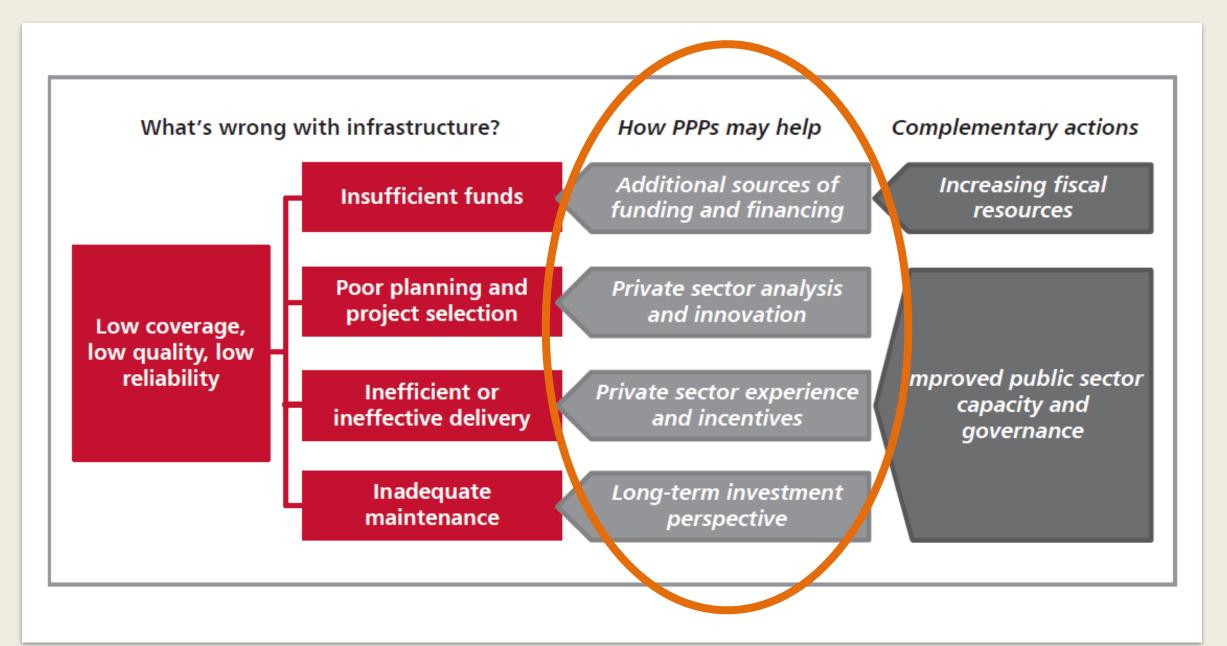
michikazu.kojima@eria.org

### Public Private Partnership (PPP)

"Transfer and control of a good or a service currently provided by the public sector, either in whole or in part, to the private sector ". (Massoud & Fadel, 2002).

"A range of possible relationships among public and private entities in the context of infrastructure and other services" (ADB, n.d.)

The importance in the role of private sector is increasing, in terms of not only infrastructure development but also wide-ranging partnerships between public and private. (Background of this session)



(The World Bank, ADB, & IDB, 2014)



Case study

PPP in various activities

Bantar Gebang landfill, Bekasi, Indonesia (Source: Own documentation).

Various Opportunities of Public and Private Partnership on Marine Plastic Litter and Waste Management

- Awareness raising
- Monitoring, Prevention
- Alternative material, Reducing use of plastics
- Waste collection
- Recycling
- Energy Recovery (Waste to Energy)
- Disposal (Sanitary landfill)
- Clean up, and others

# Waste Management

### <u>Thailand</u>

Municipal solid waste (MSW) is the main issue in the country, and it lacks funding from central government

#### Study case in Rayong Provincial Adm. Org. (PAO):

- WtE is developed under PPP contract between Rayong PAO and GPS Company
- Rayong PAO is responsible to coordinate local governments to provide at least 500 tons of waste/day, the company invests in separation plant and refuse derived fuel (RDF) production lines.

#### Study case in Phuket municipality

- The existing incinerator exceeded the capacity due to urbanization and high number of tourists → the excess waste went to landfill → the landfill leaked, polluting the marine environment
- The municipality signed PPP contract with PJT Company to invest, build, and operate WtE with high capacity
- The WtE can accommodate disposal services for 18 local governments in Phuket province

# Industrial Standard and Public Procurement to Promote recycled products

- Japanese government developed various industrial products for recycled products.
  - Some recycled products may not satisfy the level of quality defined in conventional industrial standards for products made from virgin materials.
- To ensure an adequate level of quality for recycled products, and to reduce the transaction cost between the suppliers and buyers of recycled products, industrial standards should be developed for recycled goods.
- Malaysia issued guideline for Green Government Procurement, specifying some products and services, including rainwater harvesting system and cleaning services, which has criteria related to plastics (2018 version).

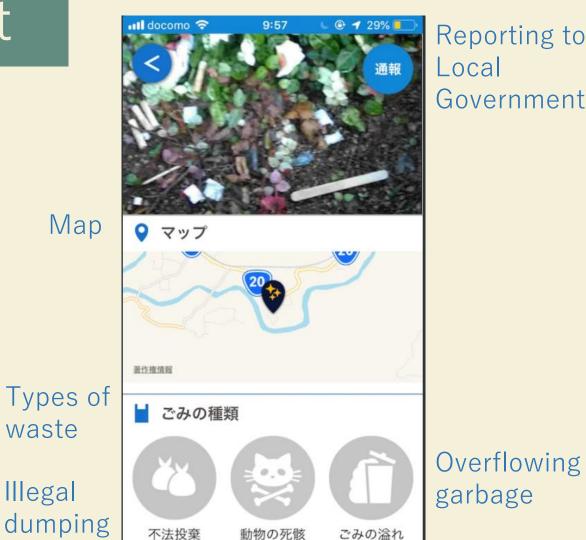
JIS Code	Title of Japan Industrial Standard	BP- PGP
A5741	Products of wood-plastic recycled composite	$\bigcirc$
A5742	Products of wood-plastic recycled composite – assembled decks	
K6930	Reclaimed granulate moulding materials of agricultural polyvinyl chloride film	
K6931	Reclaimed plastics bars, rods, plates, and piles	
K6932	Recycled plastics stakes	
A9401	Recycled plastics medial strip block	0
A9402	Recycled plastics buffer for parking	
K9797	Un-plasticised poly(vinyl chloride)(PVC-U) three-layer pipes with recycled solid core	0
K9798	Un-plasticised poly(vinyl chloride)(PVC-U) three-layer pipes with recycled foamed core	0

 Some of JIS for recycled plastic products were mentioned in "Basic Policy on Promoting Green Procurement" (BP-PGP) adopted by the Cabinet.

# Reporting Improper Waste Dumping to Local Government

- Pirika is a start-up established in 2011 in the research facilities of Kyoto University in Japan. The company aims to solve environmental problems with the power of science and technology.
- One of the app Pirika developed is a system reporting illegal dumping from citizens to local government.
  - Information on location, types of waste and photo were sent to local government by smart phone.
  - 7 local governments in Japan use this app.

### Image of app



Carcass of

animals

Reporting to Local Government

Source: https://en.sns.pirika.org/

## Clean-up



(Citarum river with mountains of waste. Source: The ASEAN Post, 2018) (DW Indonesia, 2020)

#### Study case in Citarum River, Indonesia

Citarum is regarded as one of the dirtiest rivers in the world

Partnership between West Java government and

Plastic Fischer Company, Germany

The company installs trash booms to collect the floating waste

The collected waste is then sorted and treated in local waste bank

# New Announcement



# RKC-MPD launches today a new online platform entitled:

## Private sector initiatives to reduce plastic waste and marine plastic debris

This is an online platform where, private companies operating in ASEAN+3 countries can take part in order to showcase their **products**, **technologies and services** which contribute to plastic waste reduction and/or marine plastic debris mitigation.



**Regional Knowledge Centre** 

for Marine Plastic Debris





## Please visit https://rkcmpd-



The platform will emphasize the importance of the private sector as one of the major stakeholder to address marine plastic issue. It also intends to expand business opportunities for such private companies and to facilitate PPP in the future.

### References

- Ahmed, S. and Ali, M., 2004. Partnerships for solid waste management in developing countries: linking theories to realities. Habitat International, 28(3), pp.467-479.
- Asian Development Bank (n.d.), Public-Private Partnership Handbook. <u>https://www.adb.org/sites/default/files/institutional-document/31484/public-private-partnership.pdf</u> (accessed 4 January 2021).
- Aqua (2020), Danone-AQUA dan Grab Libatkan Masyarakat untuk Ikut Mendaur ulang Sampah lewat GrabExpress Recycle. [Danone-AQUA and Grab Involve the Community to Participate in Recycling of Waste through GrabExpress Recycle]. <a href="https://aqua.co.id/danone-aqua-dan-grab-libatkan-masyarakat-untuk-ikut-mendaur-ulang-sampah-lewat-grabexpress-recycle">https://aqua.co.id/danone-aqua-dan-grab-libatkan-masyarakat-untuk-ikut-mendaur-ulang-sampah-lewat-grabexpress-recycle</a> (accessed 4 January 2021).
- Deutsche Welle (DW) Indonesia (2020). Sungai Citarum Bisa Bebas Plastik! Bagaimana Caranya?. [The Citarum River Can Be Plastic Free! How Does It Work?] [Video file]. <u>https://www.youtube.com/watch?v=YQroo5vNpsg</u> (accessed 16 April 2020).
- Kojima, M. (2020). Regional Waste Management in Asia. In M. Kojima (Ed.), Regional Waste Management Inter-municipal Cooperation and Public and Private Partnership. (pp. 1-9). https://www.eria.org/uploads/media/Research-Project-Report/2020-12-Regional-Waste-Management-in-Asia/Regional-Waste-Management-Inter-municipal-Cooperation-and-PPP.pdf (accessed 4 January 2021).
- Löhr, A., Savelli, H., Beunen, R., Kalz, M., Ragas, A. and Van Belleghem, F., 2017. Solutions for global marine litter pollution. Current Opinion in Environmental Sustainability, 28, pp.90-99.
- Massoud, M. and El-Fadel, M., (2002). Public-Private Partnerships for Solid Waste Management Services. *Environmental Management*, 30(5), pp.621-630.
- Petkanjanapong, P, (2020). Clustering and Public–Private Partnerships: The Tools of Municipal Solid Waste Management Reformation in Thailand. In M. Kojima (Ed.), Regional Waste Management Inter-municipal Cooperation and Public and Private Partnership. (pp. 167-180). https://www.eria.org/uploads/media/Research-Project-Report/2020-12-Regional-Waste-Management-in-Asia/Regional-Waste-Management-Inter-municipal-Cooperation-and-PPP.pdf (accessed 4 January 2021).
- Schmidt, C., Krauth, T. and Wagner, S., 2017. Export of Plastic Debris by Rivers into the Sea. *Environmental Science & Technology*, 51(21), pp.12246-12253.
- The World Bank, Asian Development Bank (ADB), & Inter-American Development Bank (IDB) (2014), Public-Private Partnerships Reference Guide Version 2.0. <u>http://documents1.worldbank.org/curated/en/600511468336720455/pdf/903840PPP0Refe0Box385311B000PUBLIC0.pdf</u> (accessed 4 January 2021).
- Vanapruk, P. (2020). Regional Waste Management and Public Private Partnership in Thailand. Unpublished work.