

Appropriate Management of Construction and Demolition Waste to Prevent Waterway Blockage



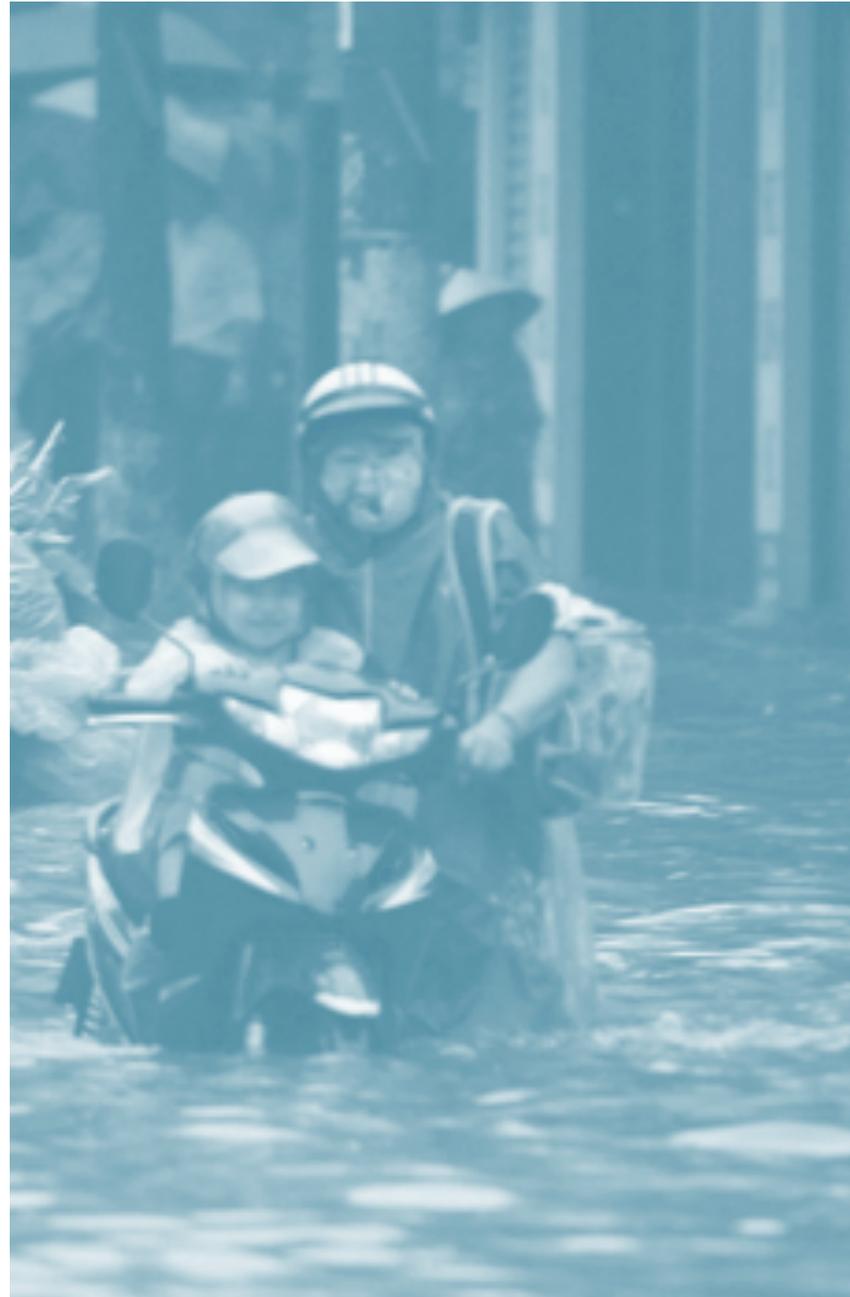
Han Hoang, Dr. Masato Yamada, Dr. Tomonori Ishigaki

Center for Material Cycles and Waste Management Research,
National Institute for Environmental Studies

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Presentation outline

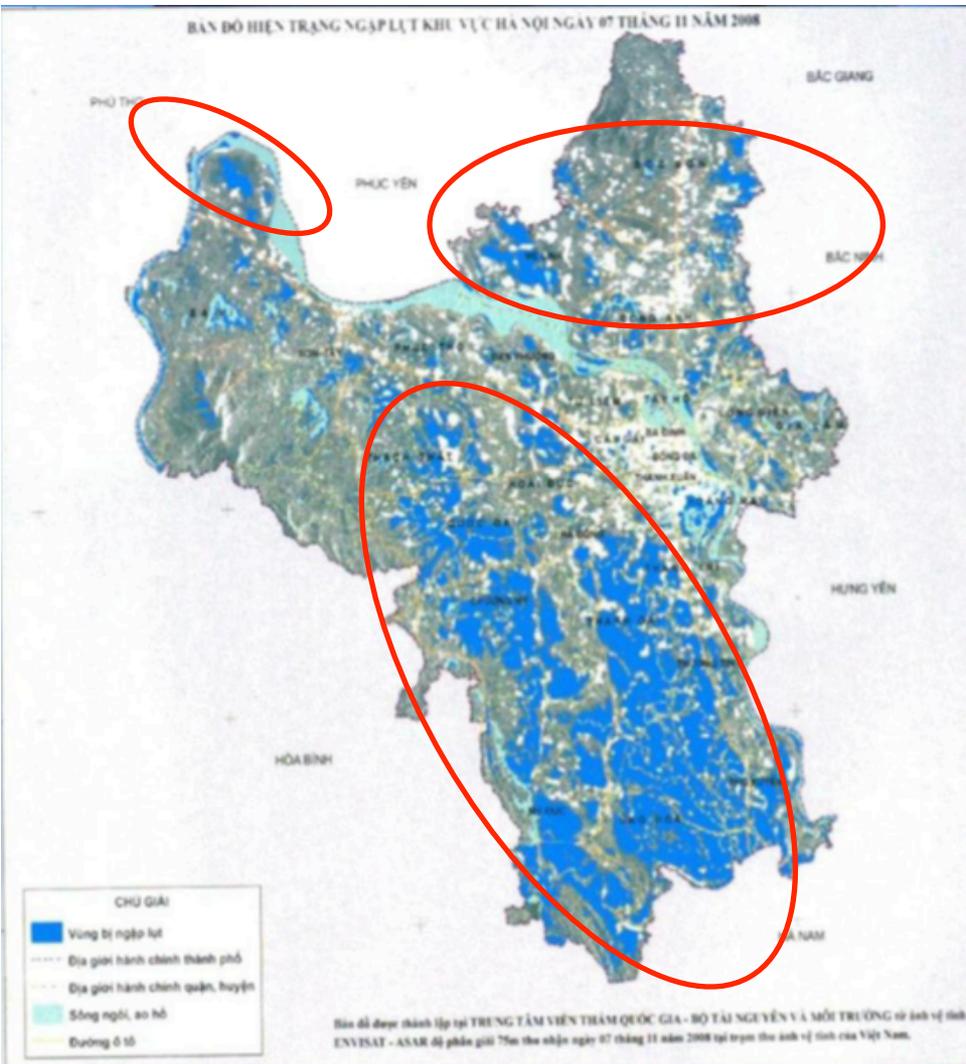
- Increasing vulnerability to urban flooding in Vietnam
- Construction and Demolition Waste management: SATREPS
- Survey on CDW generation and management
- Conclusions



Increasing vulnerability to urban flooding in Vietnam

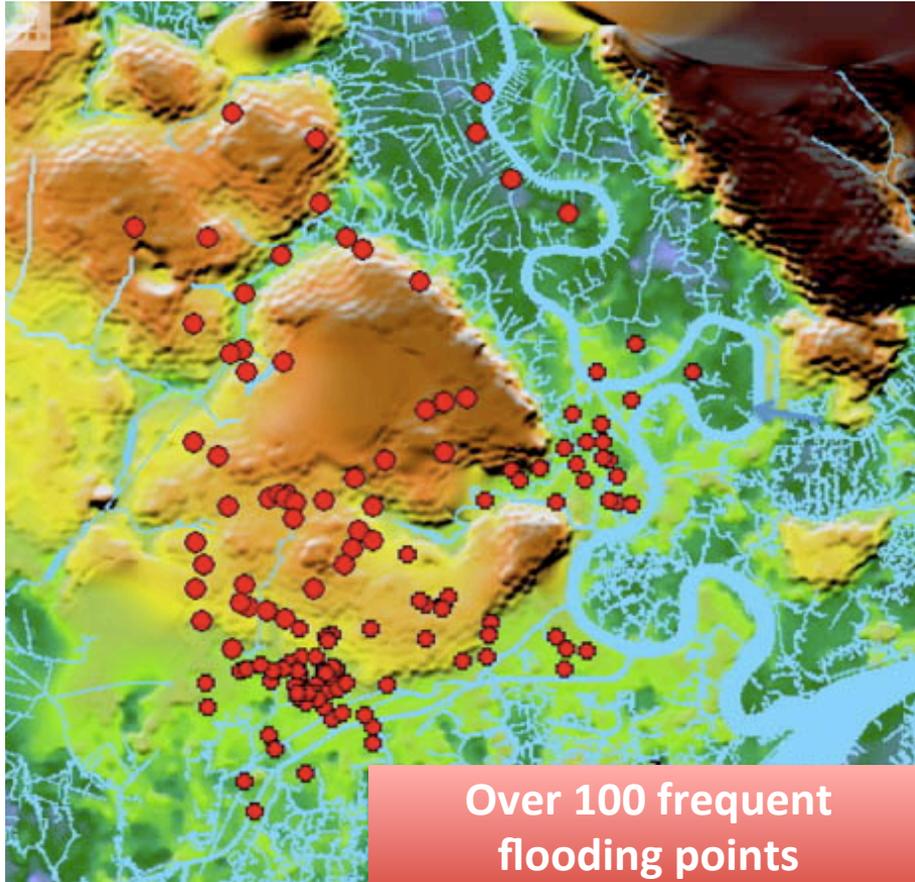
- Flood is the second most **frequent** disasters in Vietnam (42%)
- Growing numbers of urban flooding events and of affected areas/individuals
- Hanoi, 2008: three day storm rainfalls caused the most devastating flood since 1973 with 90 inundated points of over 0.3m depth, 22 casualties, USD 400 million of economic losses.

Flooding is severe in Hanoi

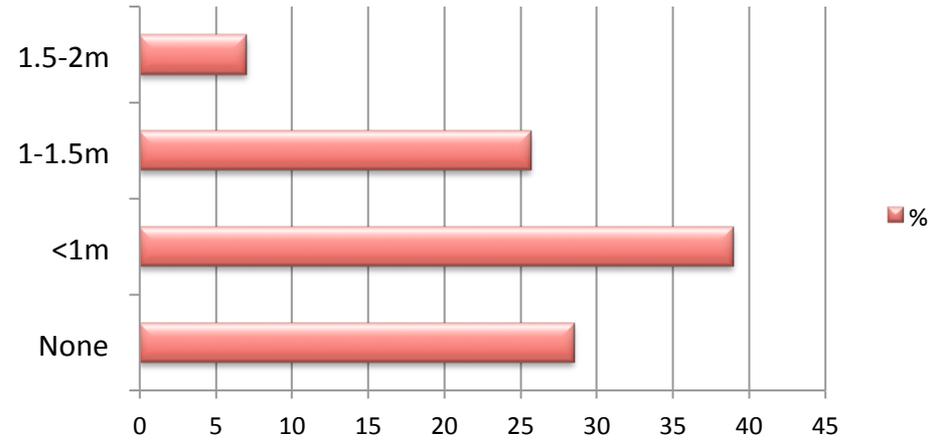


Hanoi flooding map 2008

and worse in HCMC



Inundated areas by flood depth



Identified main causes



Natural disasters



Dynamic social changes



Urban waste management

Construction and demolition waste in water bodies



CDW management and recycling: SATREPS

Implementation agencies

Saitama University



**National University
of Civil Engineering**



Progress management

PR, Outreach activity :
SU, NUCE

Activity 1: Guidelines

CESS

MOC · NUCE

Hanoi DOC · Hanoi URENCO
Haiphong DONRE

* Guideline committee

Activity 2: Technical standards

SU · NIES

NUCE

MOC

* Technical standard committee

Activity 3 : New technologies

SU

NUCE · HUST

MOC

Activity 4 : Business models

NIES

ISPONRE · NUCE

MOC · Hanoi DOC
Hanoi URENCO

* Business model committee

* Hanoi Master Plan committee

R&D

Administration · Implementation

Survey on current state of CDW generation and management

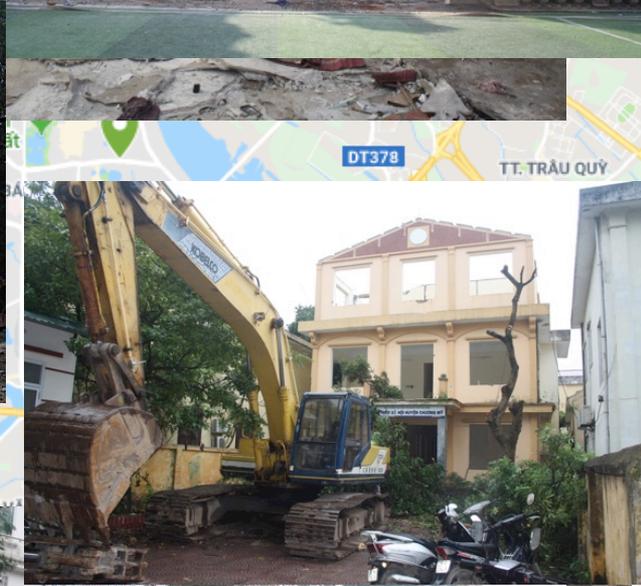
Survey objectives

- CDW generation and composition;
- CDW treatment and flow;
- typical recycling practices of CDW in the last five years;
- rules, regulations and policies on CDW management (generation, treatment, disposal);
- market data on CDW management in the last five years;
- current market of construction materials.

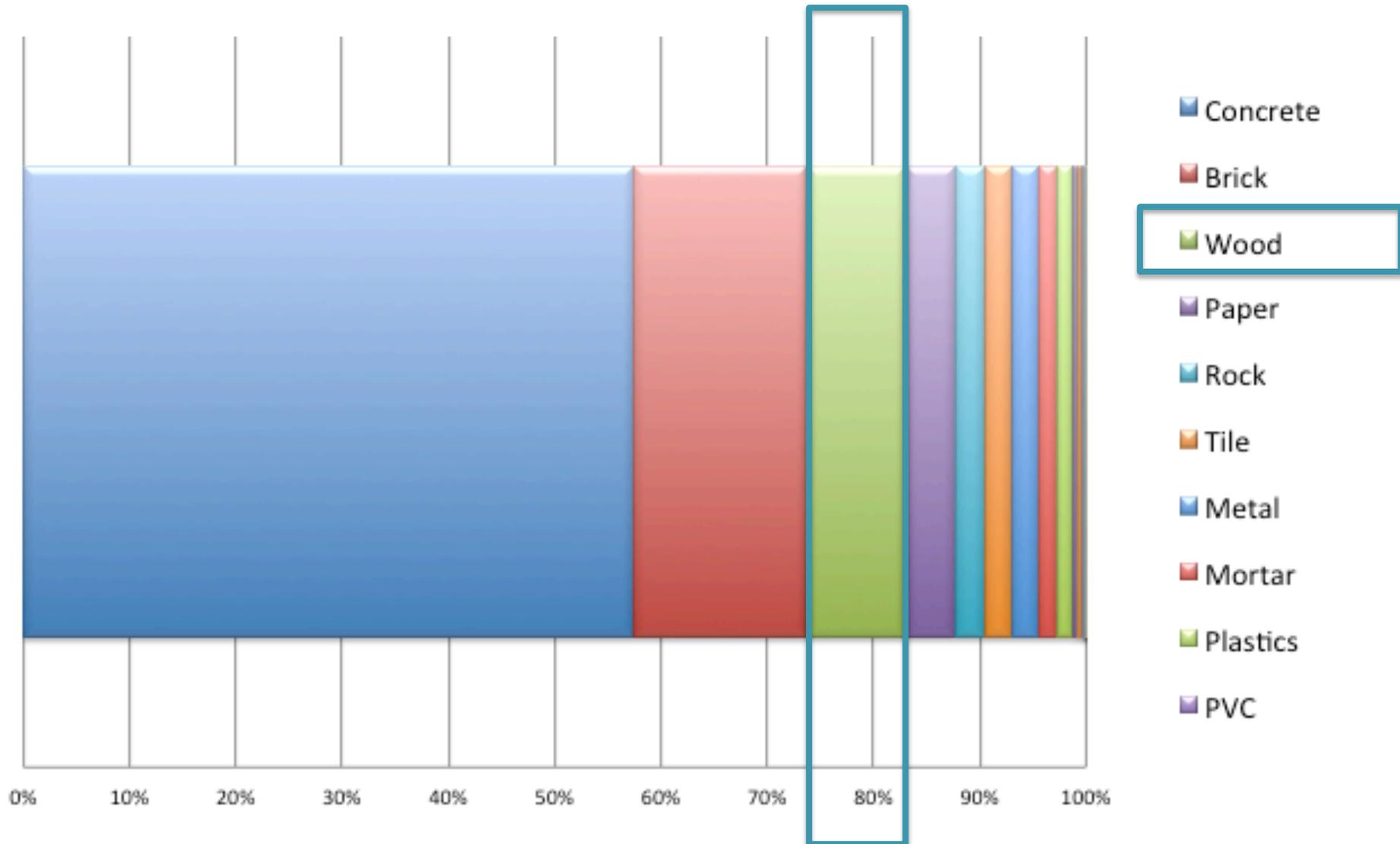
- 20 surveyed residential construction/ demolition works

- 5 public works to be surveyed: road construction, river improvement, subway

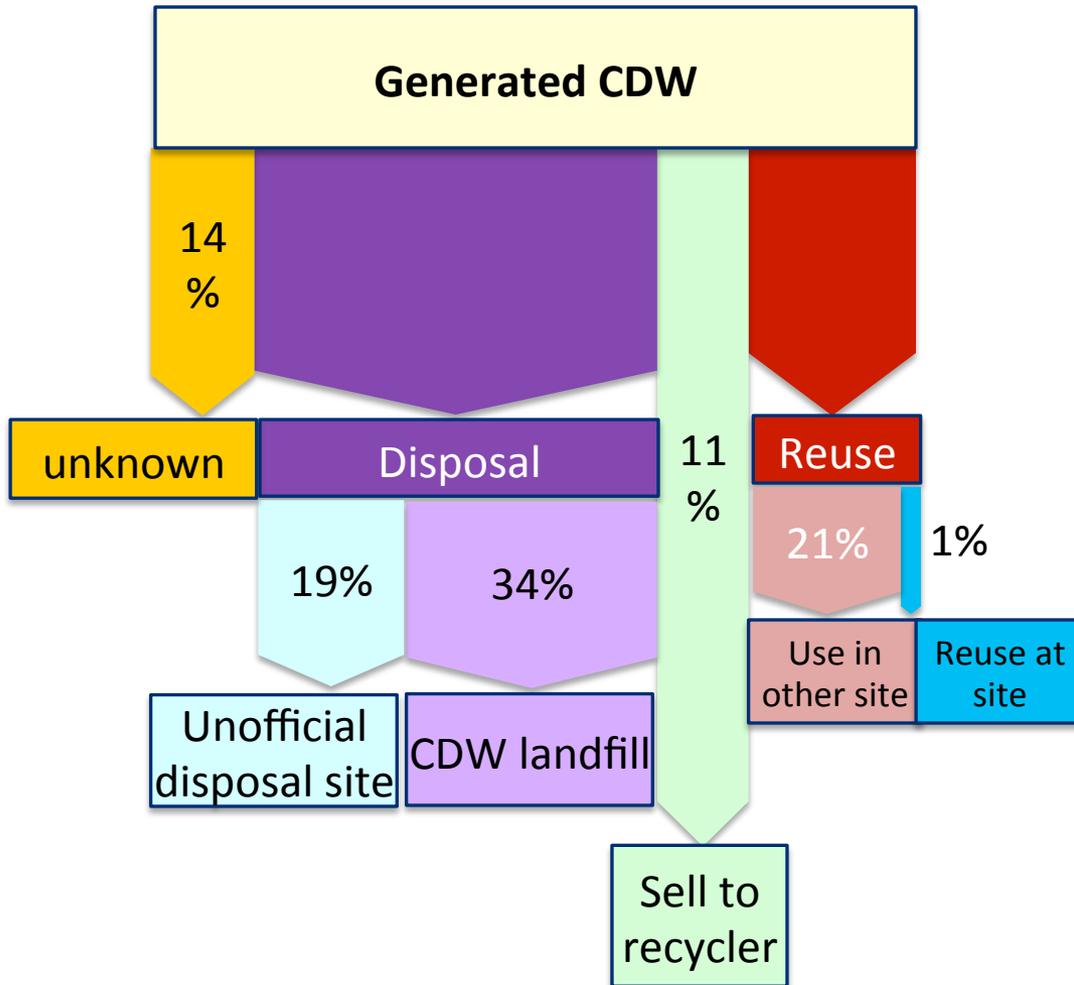




CDW composition



CDW destination



Unofficial disposal sites: **lakes, and ponds,** “company site”.

CDW management system

- MOC is the primary governmental agency in charge
- **Developed** legal documents on CDW management: Construction law, Law on Environmental Protection and designated documents (Decree 12, Circular 08, etc.)
- **Poor** law enforcement along with **overloaded** CDW landfills → significant amount of CDW dumped illegally
- Systematic mechanism to promote CDW reuse and recycling???

Manual for Sorted Demolition of Wooden Buildings

- Committee for the Promotion of Recycling of Construction By-product
- Technical guidance on **sorting at source** and good practices of demolition approach → **appropriate management of CDW and prevention of dumping into canal**
- Knowledge transfer between Japan and Asian countries
- Other manuals for construction sludge, construction hazardous waste, etc.

Conclusions

- Urban flooding becomes a **prevalent** phenomena in Vietnam.
- Construction and demolition waste **aggravates** the blockage of waterways, leading to more severe urban flooding.
- Better sanctions/systems for CDW controlling is required.
- Promotion of CDW **segregation** at site is of great importance.
- Development of **business models** to manage CDW flows and promote CDW recycling would contribute to integrated urban flood management plan.



THANK YOU