

**Student Exchange Support Program in FY2017  
between NUCE (National University of Civil Engineering, Hanoi)  
and SU (Saitama University)**

**Date: 2018/2/26-3/11 and 2018/3/4-3/18**

**Venue: Saitama University**

**Participants (from National University of Civil Engineering, Hanoi):**

Mr. Tran Viet Cuong (M1) and Mr. Vu Van Huy (M1)

**Schedule in Japan**

Mr. Tran Viet Cuong

2018/2/26: Arrive at Saitama

2018/2/27-2018/3/10: Study in Prof. Kawamoto's laboratory and site visit to landfill

2018/3/11: Return to Vietnam

Mr. Vu Van Huy

2018/3/4-5: Arrive at Saitama

2018/3/5-2018/3/17: Study in Prof. Kubota's laboratory and survey Japanese traffic

2018/3/18: Return to Vietnam

**Photo**



# CONTENT

- 1 • Master research plan
- 2 • Experimental work
- 3 • Site visit

Presenter: Tran Viet Cuong

# I. Master research plan

1. Legal frame work about construction waste in Viet Nam
2. Objectives of questionnaire survey.
3. Process
4. Schedule

# I. Master research plan

1. Legal frame work about construction in Vietnam.
  - Definition of the solid waste.
  - Classification of the solid waste: Hazardous, non – hazardous.
  - Definition of construction and demolition waste.
  - Classification of the construction and demolition waste.
  - Classifiacation of the building structure based on design standard in Viet Nam
  - The flow of demolition, collection, transportation and treatment of construction and demolition waste in Viet Nam.

# 1. Master research plan

## 2. Objectives of questionnaire survey.

- To understand basic information of the construction contractors in Ha Noi and Hai Phong, which do demolition work.
- To know their attitude to construction and demolition waste management.
- To understand the difficulty of on-site classification of C&D waste.

# 1. Master research plan

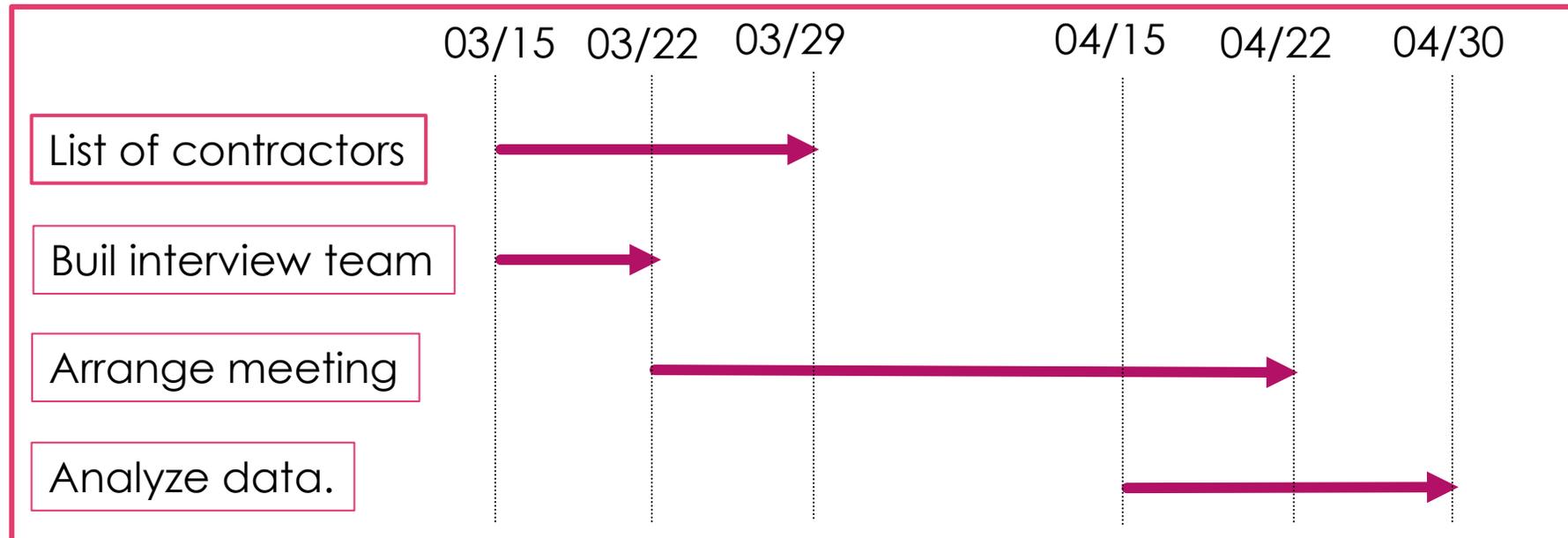
## 3. Process.

- Find the list of demolition contractors in Ha Noi and Hai Phong.
- Build interviewing team (NUCE member, Ha Noi DOC, Hai Phong DOC, undergraduate students).
- Arrange meeting with demolition contractors.
- Analyze interview data.

# I. Master research plan

## 4. Schedule.

From 2018/03/15 to 2018/04/30



## II. Experimental work

- ▶ 1. Physical properties of material.
  - 1.1. Water content
  - 1.2. Specific gravity
- ▶ 2. Chemical properties of material.
  - 2.1. pH
  - 2.2. EC (Electrical conductivity)
- ▶ 3. Heavy metal removal
  - 3.1. Material crushing
  - 3.2. Material weighing
  - 3.3. Batch experiment
  - 3.4. pH & EC measurement

## II. Experimental work

### ► 1. Physical property of material

#### 1.1. Water content.

Measure  
 $m_1$  of bowl + material  
before putting oven

Dry within  
24 hours

Measure  
 $m_2$  of bowl + material  
after putting oven

The water content determined by formula:

$$W = \frac{m_1 - m_2}{m_1} \times 100\%$$



## II. Experimental work

### ► 1. Physical property of material

#### 1.1. Water content

Measure  
m1 of bowl

Measure m2  
of glass vase

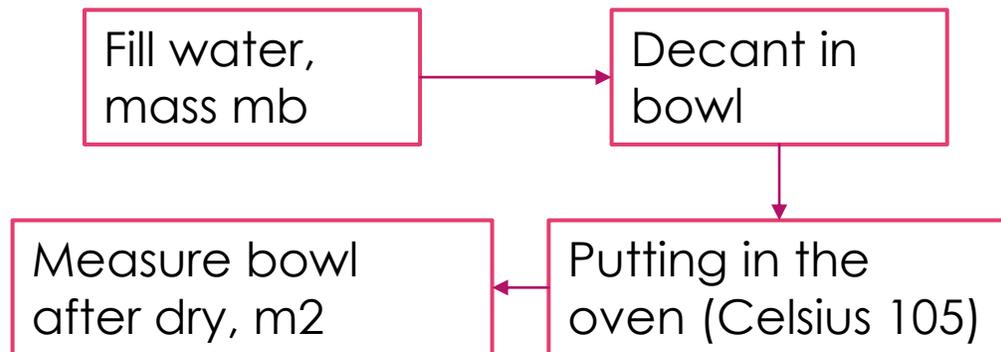
Fill with  
water, m3',  
†

Put material, dump  
water  $\frac{3}{4}$  glass vase

put in vacuum holder  
to remove air(2hours)



## II. Experimental work



The formula:

$$m_a = \frac{\rho_w(T)}{\rho_w(T')} \times (m_{a'} - m_f) + m_f$$

$$\rho_s = \frac{m_s}{m_s + (m_a - m_b)} \times \rho_w(T)$$



With:  $m_s = m_2 - m_1$  (mass of material after dry)

## II. Experimental work

### ▶ 2. Chemical properties of material.

Prepare 6(g)  
of material  
each tube

Add 30ml  
H<sub>2</sub>O, KCl into  
the tube

Put sample into the  
shake & shake 2  
hours

Centrifuge in  
8 minutes



## II. Experimental work

### ▶ 3. Heavy metal removal

Crush material and sieve, into 3 sizes:

- Less than 0.105 mm
- From 0.0105 to 2 mm
- From 2 to 4.76 mm

Keep them into the bag.

## III. Site visit

### 3.1. Background information of landfill site.

- Name: Saitama Environment Improvement Center
- Location: Near Nanasato Park, Saitama city.
- Source of sludge: From incinerator
- Leachate treatment capacity: 82-100 m<sup>3</sup>/day

## III. Site visit

### 3.2. Material sampling.

- Take 300 kg of MSW slag.



### III. Site visit



**Thanks for your attention!**



**MASTER PROGRAM**  
**NATIONAL UNIVERSITY OF CIVIL ENGINEERING AND**  
**SAITAMA UNIVERSITY**



**REPORTED AFTER TWO WEEKS IN JAPAN (2018/MARCH/05-18)**  
**COMPARISON OF TRAFFIC ON ROADS IN JAPAN AND VIETNAM THROUGH MY EYES**

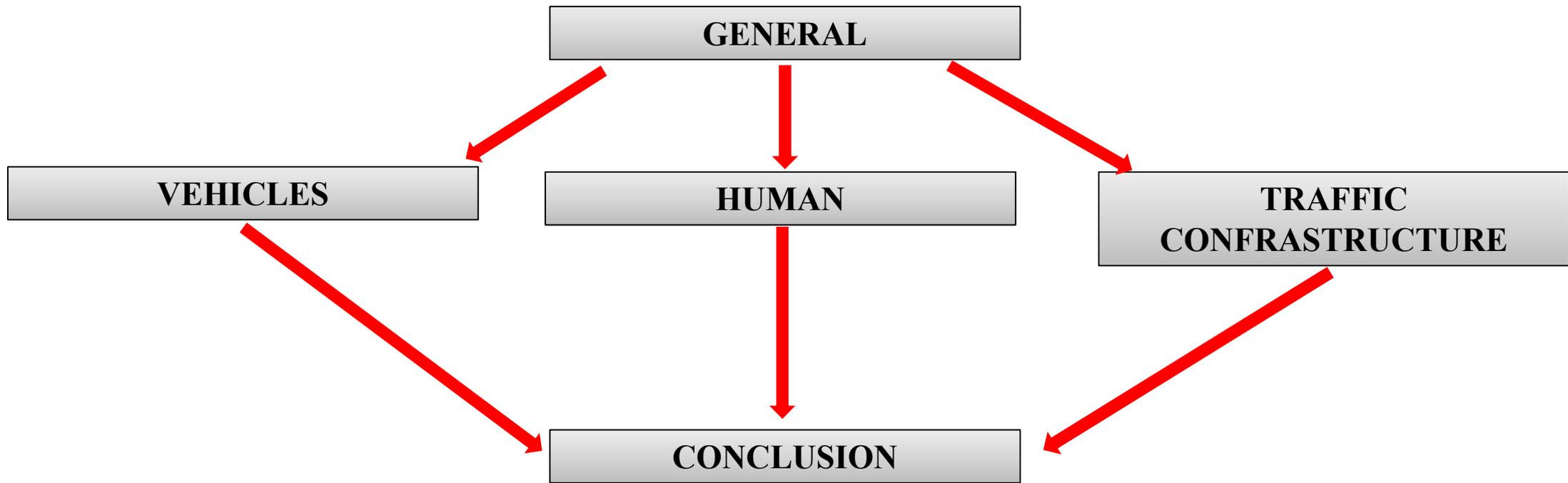


**JAPAN**



**VIETNAM**

**STUDENT : VU VAN HUY**





# PART I

# GENERAL



## PART I: GENERAL



Contents	Japan	VietNam
Area	378,000 km <sup>2</sup>	331,200 km <sup>2</sup>
Total road length	About 1,215,000 km (April 2012)	About 289,775 km (2017)
People density	6000 peoples/km <sup>2</sup> (Tokyo)	3700 peoples/km <sup>2</sup> (Hanoi)
Traffic jams	Rarely	frequently
Noise pollution	Low	High
Air pollution	Very low	High
Rate of traffic accidents	Among the lowest in the world	Among the highest in the world



# PART II

# HUMAN

## PART II: HUMAN

### Japan

Students and adults stand by and walk across the street in the right place



Users of larger vehicles give way to smaller vehicle users, pedestrians are given the most priority

When there are traffic jams, everyone waits patiently and walks in the right lane



At the intersection without the lights, they stopped watching and then went on

### VietNam

Students and adults cross the road every where



Traffic chaos, there are no clear rules for this

When there are traffic jams, each one in one direction, see the lanes that do not have cars are they come in



Most people did not observe, leading to unfortunate accident



## PART II: HUMAN



Japan	VietNam
Almost no humming sound, pollution noise.	Humming sound, pollution noise is importance problems
Taxi and bus drivers are old, have enough experience, responsibility to passengers, always adhere to the speed, ensuring the safety of people sitting on the car.	Taxi and Bus drivers of all ages.
The bus driver apologizes for other passengers because the passengers have to wait	Passengers often miss the bus if not pay attention
Those who drank alcohol will be subject to heavy fines, lost driving license permanently, if the police detect that the driver has drunk, and the person who is traveling with them is not prevented, the penalty will be imposed.	People who drink a certain amount of alcohol will be fined, higher will be get a driver's license, then one time they will get their driver's license again.
Rarely seen traffic police on the road	Frequently seen the traffic police on the road



# PART III

# VEHICLES



## PART III: VEHICLES



Japan	Viet Nam
Small cars, save fuel, less waste, limit environmental pollution.	Wide range of vehicles, many emissions, noise, environmental pollution
Transportation go to the left of the road	Transportation go to the right of the road
Bicycles, bus and automobiles are commonly used in short distances; Trains or airplanes are mainly used for long distance trains	Bicycles, motorbikes and cars are commonly used in short distances; Airplanes are mainly used for long distance, less use of trains
Public transport is by bus and train	Public transport is only by bus



# PART IV: TRAFFIC CONFRASTRUCTURE

# PART IV: TRAFFIC CONFRASTRUCTURE

## Japan

The quality of pavement on the road is good, the signboards are clear, the paint lanes are new, the drivers are easily recognizable



Land for traffic and parking are relatively large.



## Viet Nam

The quality of pavement on the road is not good, Some signboards are placed in a difficult position to observe, the paint lanes are old, the drivers are not easily recognizable



Land for traffic (9%) and parking (0,28%) in Hanoi are very low



# PART IV: TRAFFIC CONFRASTRUCTURE

## Japan

Very good drainage system



The horizontal distance between the cars going in the opposite direction is large, increasing safety when speed is high



## Viet Nam

Frequently, water on the road surface, rainwater drainage system is not working well



The horizontal distance between the cars going in the opposite direction is small, causing danger when the vehicle speed is high



## Japan

Paint lane changes the number of lanes suitable traffic volume when approaching the intersection



## Viet Nam

NO



# PART V

# CONCLUSION



- Road traffic conditions in Vietnam and Japan are markedly different in terms of people, vehicles and traffic infrastructure.
  - The statistics on traffic congestion, traffic accidents, environmental pollution are large differences between the two countries.
- Appropriate policies should be in place for Vietnam to make better traffic

## Traffic in the school area in Japan



