ASEM LLL Hub Lifelong Learning and Resilience in Disaster Management: Conference Asian and European Perspectives

### **Risk identification and Preparedness**

# Flood preparedness – Lesson learned from private households in Vietnam

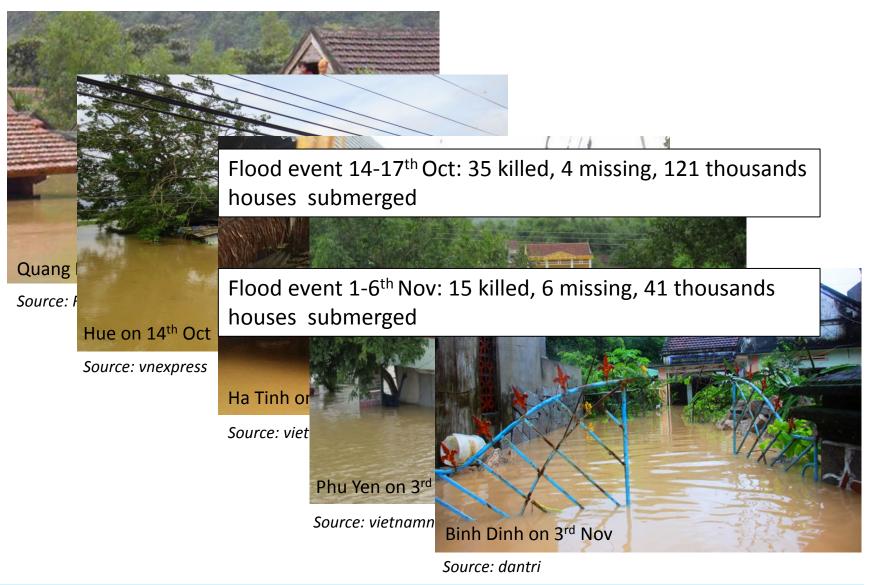
Thi-Chinh Do

**GFZ** German Research Centre for Geosciences, Section Hydrology

Ho Chi Minh city, November 2016



### ASEM LLL Hub Conference LATEST NEWS ON FLOOD IN VIETNAM

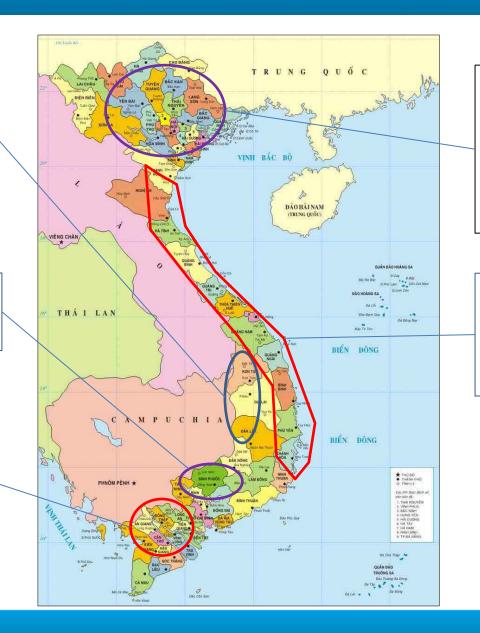


### ASEM LLL Hub Conference SOME INFORMATION ABOUT FLOOD IN VIETNAM

Flood in mountainous areas: Flash flood, very fast and strong

Flood in Southern river system: not strong but long-lasting, very rare

Flood in mekong delta: slow and last for a long period of 4 to 5 months annually



Flood in Northern river systems and areas: about 3 to 5 floods within the region annually, each of them may last from 8 to 15 days

Flood in central Vietnam: from June to October every year with amplitude of about 7-8m

### ASEM LLL Hub Conference BACKGROUND

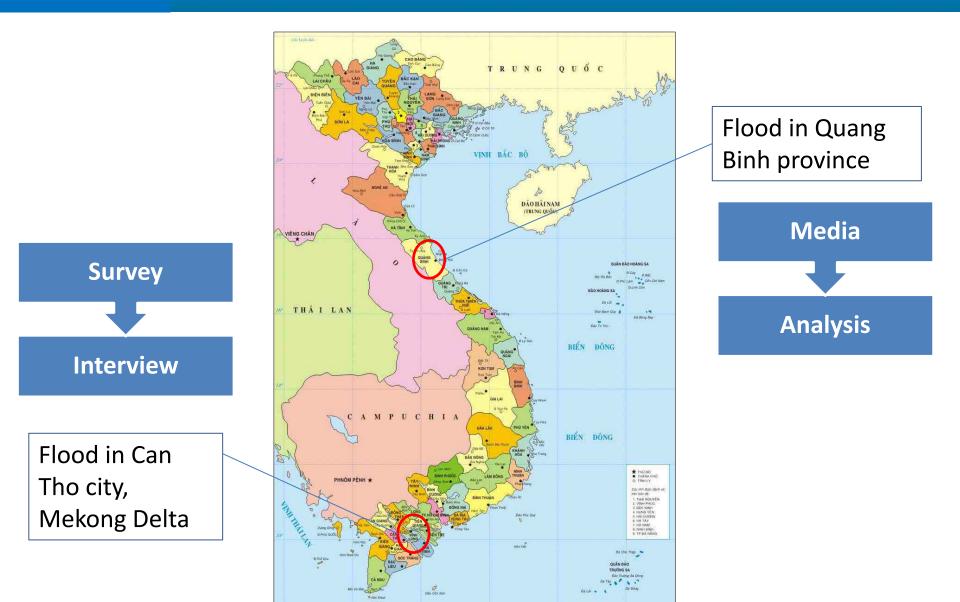
- Flood reoccurs annually, it is the most severe natural disaster in Vietnam and a further increase in flood risk is projected
- Private flood preparedness measures are increasingly considered as promising adaptation strategy
- In Vietnam, the principle of Disaster management is four-on-the-spot:

Command on the spot, man-power on the spot, materials on the spot and logistics on the spot. Organizations, households and individuals have the responsibility to prepare actively under the guidance of the Government (Law of disaster prevention)

For Lifelong Learning and Resilience in Disaster Management, especially in flood management, more knowledge is needed about:

- What is the current implementation level of flood preparedness measures?
- Can flood preparedness measures reduce flood damage?
- How to keep the awareness about flood preparedness over time

### ASEM LLL Hub Conference STUDY AREA, APPROACH AND METHOD



Flood preparedness measures in

Can Tho city, Mekong delta



Can Tho located in the Mekong delta.

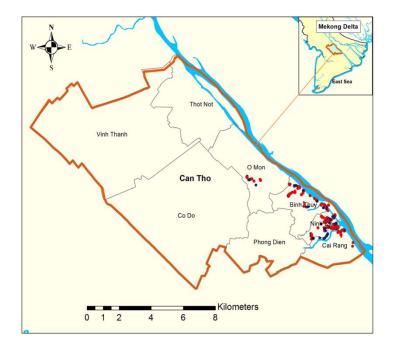
Area: 1390 sq. km

Population: 1.2 mil inhabitants

Recent flood events: in 2000, 2001, 2002, 2011

2011 in Can Tho: riverine flood and tidal flood.

Flood lasted for 4 months. Water depth from 0.2 to 1m.











- ✤ 480 private households and 378 businesses interviewed
- ✤ 70 questions for households and 88 questions for businesses
- Questionnaire covered the following topics: Flood characteristic, preparedness, early warning and emergency measures, damage to household and business, recovery, risk perception





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## **PREPAREDNESS MEASURES**

### Information



Collecting information



Neighborhood networks

### Flood adapted use



### No expensive furniture



Water resistant usage

### **Building measures**



Flood barrier



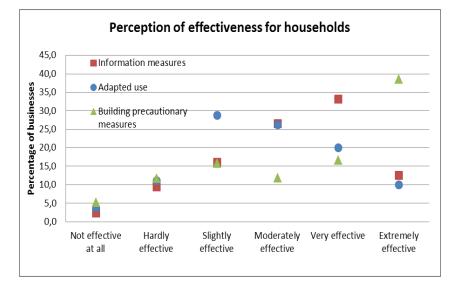
Elevating floor

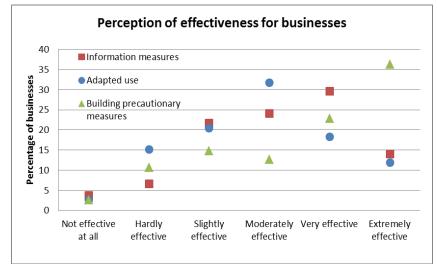


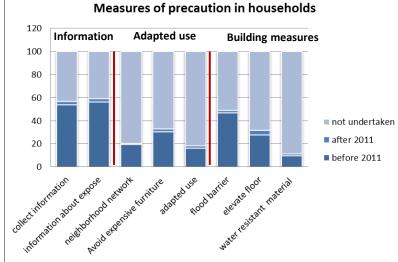
ASEM LLL Hub MOTIVATION OF UNDERTAKING PRECAUTIONARY Conference MEASURES

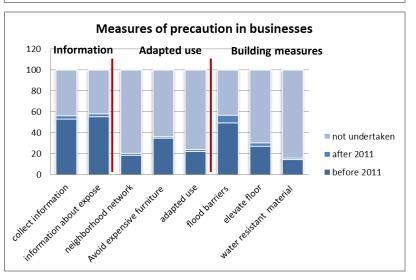
Motivation		Percentage of interviews
Experience	Households	74
	Businesses	65
Owner	Households	96
	Businesses	86
Perception of effectiveness	Households	87
	Businesses	86

### PREPAREDNESS MEASURES UNDERTAKEN IN CAN THO

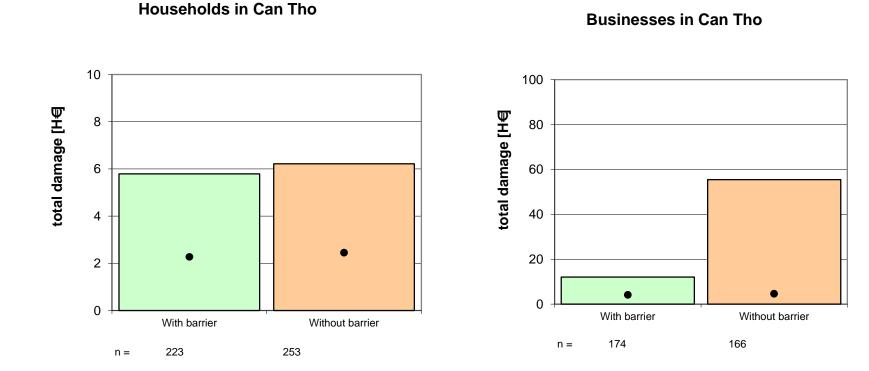








### CAN THO



GFZ

POTSDAM

Flood preparedness measures in Quang Binh province, central region

## FLOOD IN QUANG BINH IN 2016

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Conference





Pictures and information from social media, for example Facebook.

Pictures and information newspapers such as vietnamnet, vnexpress, nguoilaodong, dantri, zing, soha....

Website of Nhachonglu – a Civil society group to support float houses for flood areas

Website of Phongchongthientai – Department of natural disaster prevention and control

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### **PREPAREDNESS MEASURES**

### Information



Collecting information



### Neighborhood networks



Social media network

### Flood adapted use



Private boat



#### Water resistant usage

### **Building measures**



### Floating houses



Upstair houses



### ASEM LLL Hub EFECTIVENESS OF PREPAREDNESS MEASURES Conference





Upstairs houses and floating houses saved people and asset during the flood in Quang Binh

According to the report of Nhachonglu 100% floating houses in Quang Binh worked effectively during the flood



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### **EMERGENCY MEASURES**



Source: Nguoilaodong

Source: Vnexpress

Source: Vietnamnet





- Private preparedness measures were undertaken both in Can Tho and Quang Binh and they are significantly mitigating damage. However, operational application of such measures still needs to be improved.
- One important factor influencing the motivation to undertake private measures is flood experience.
- Thus, in areas with no regular flooding, one should make better use of past flood experience.

To keep the awareness over time, it is recommended:

- To install or extend historical flood marks right after an event.
- To implement flood commemoration days and to carry out regular information gatherings.
- More efficient risk communication to promote incentives is essential.
- More knowledge exchange between similar flood risk regions via networking or social media is needed



# Thank you for your attention! Xin chân thành cảm ơn!



