

# Hanoi School of Public Health

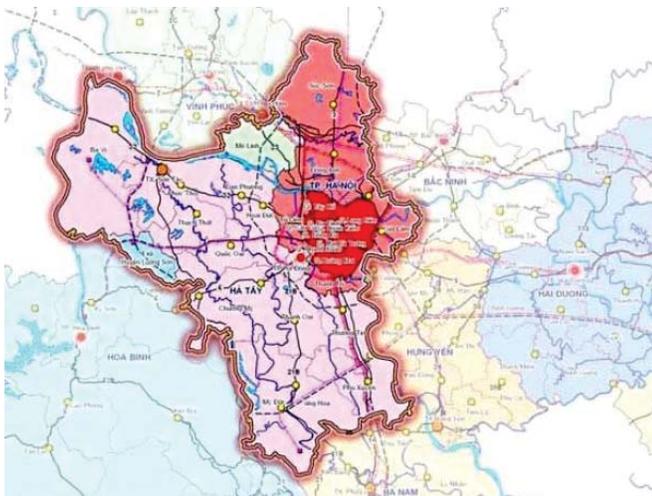
**Principal Investigator Contact:**  
 La Ngoc Quang, MPH  
 Dept of Epidemiology, Hanoi School of Public Health  
 138 Giangvo, Badinh, Hanoi, Vietnam  
 E-mail: lnq@hsph.edu.vn  
 Phone: 84-4-62662326  
 Fax: 84-4-37365896  
 Le Thi Thanh Ha, Msc  
 E-mail: lth3@hsph.edu.vn

## Survey Site: Hanoi, Vietnam

### Background of the Study

In the last days of October and the first week of November 2008, rains with high intensity and large magnitude in Hanoi resulted in a historic flood. It was the biggest flood in Hanoi capital city in the past 35 years (since 1973). According to a primary evaluation of the heavy rains and 10 days of flooding, there were 22 people that died, 3 injured; 60,960 hectares of winter plants and vegetables and flowers lost; 11,498 hectares of aqua-cultural production damaged; and many assets at 90 flooded points in street routes and residential areas were damaged.

Figure 1: Hanoi map, 2008



Source: www.vietnam.vnanet.vn

In order to ascertain the flood vulnerability, health risks, and the social and economic impacts of the historic flood, a MICRODIS cross-sectional study was conducted through household surveys.

### Summary Statistics

A total of 871 respondents participated in the MICRODIS household survey in 2009 (two severely flooded communes and two less/non flooded communes in the area of Hanoi). About half of the people in Nam P Tien sample and a fifth of the people in Thinh Liet sample (two severely flooded communes) reported that their family members had to migrate due to the flood.

About half of the respondents in these affected communes mentioned that access and use of usual health care/medication was compromised mostly because of road damage, lack of transportation or health facilities damaged. With regards to communicable conditions, red eye diseases and skin diseases were reported after the flood - higher in the flooded areas than in the non-flooded areas. There were just a few reported cases of dengue fever in the study sites, but the number of dengue fever cases reported seemed to be higher in flooded area than in the non-flooded area after the flood.

Table 1: Communicable conditions after the flood

Communicable conditions	Rural area of Hanoi				Urban area of Hanoi			
	Dong son Non-flooded		Nam P. Tien Flooded		Thanh Tri Non-flooded		Thinh Liet Flooded	
	Total	After flood	Total	After flood	Total	After flood	Total	After flood
Having red eye diseases after the heavy rain and flood	42	27	69	64	11	5	10	10
Having skin diseases after the heavy rain and flood	38	22	229	219	23	21	34	30
Having dengue fever after the heavy rain and flood	1	0	15	13	3	2	7	6

Almost all people in flooded communes mentioned that their economic condition got worse or much worse after the flood (92.1% and 80.6% in Nam P Tien and Thinh Liet respectively).

Among network of social support, the mean score for receiving family support and receiving support from children came out to be the highest, and there was not much difference between flooded and non flooded areas. The mean score of support received from government organizations appeared to be higher in flooded areas as compared with that of non-flooded areas (1.75 in Nam P. Tien and 1.67 in Thinh Liet - flooded affected areas and 1.33 and 1.1 in Dong Son and Thanh Tri less/non affected areas).

Household interview in Hanoi



Photo: HSPH MICRODIS Team