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**Poster Session 3 – Poster 63**

**Disparities in the city:  
Poverty and urban environment in Hanoi and Ho Chi Minh City  
(Vietnam)**

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In a context of strong urban growth and economic liberalization, the interrelations between migration, poverty and urban environment are major issues for development and an increasing concern of the population of the large Vietnamese cities. In this respect, authorities are confronted with the competition between the necessity for supporting economic growth to develop employment, and that other necessity which is environmental protection within a sustainable development policy.

In a given city, natural environment is widely shared by the whole urban population with very localized nuances. But urban environment is an environment essentially transformed by man, artificial and no more “natural”. Above all it is under the influence of constructions of all kinds, infrastructures (roads, water and electricity supply, waste water discharge...) and human activities (factories, informal sector activities, intra-urban and suburban intensive agriculture, transport...). These activities are notably at the origin of an “urban heat islet”.

Hanoi and Ho Chi Minh City (with respectively around 2 million and 6 million urbanites in 2009) are the two largest cities in Vietnam in terms of population and economic potential<sup>4</sup>.

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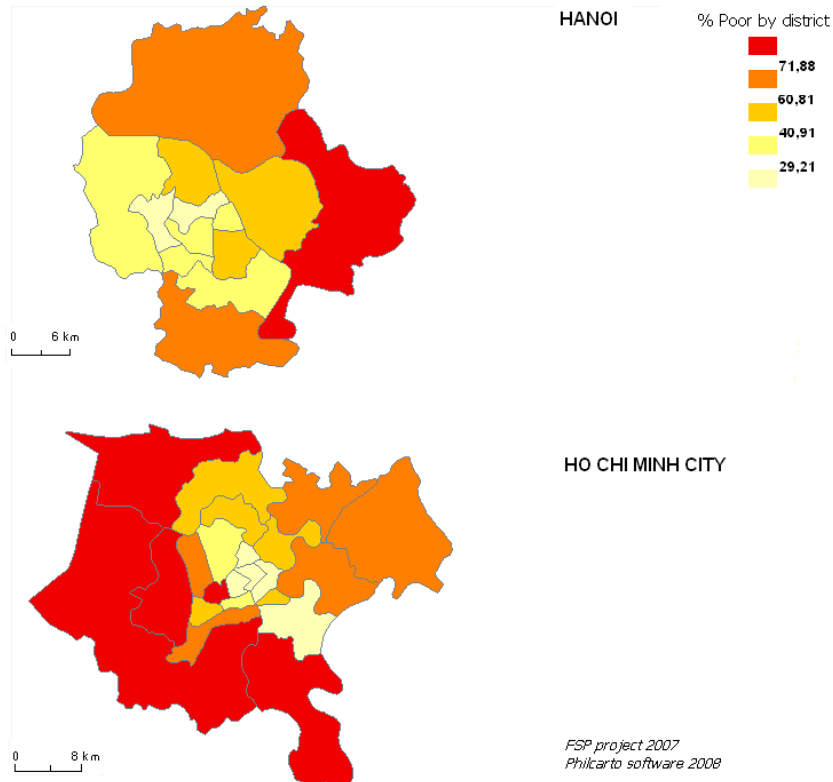
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<sup>4</sup> In Vietnam, it is necessary to explicitly refer to “urban population”, the only one which can be internationally compared, because the administrative limits of the Vietnamese large cities include a wide peripheral rural zone.

It appears that non-migrants and migrants on one side, poor and rich people on the other side have different relationships with environment. Poor and rich people are unevenly distributed in the city; in particular, the poor are more numerous in outer suburbs and in rural districts belonging to the cities (map 1)<sup>5</sup>. Thus they are unequally confronted with environmental problems but also contribute in a different way to the degradation of this environment.

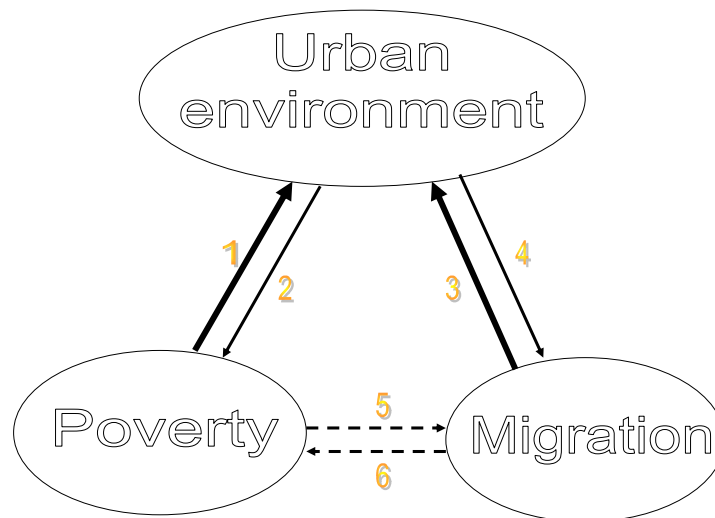


**Map 1: Proportion of low living standards households by city and district**

### *A specific research project*

In Vietnam, technical data on environment are very numerous but socio-demographic approaches at household level are rare and not statistically representative. Thus, a specific research project was implemented. It was decided to especially study the interrelations of migration status and living standards with urban environment (figure 1). The purpose was to know the actual living conditions of the population in connection with environment, to systematically compare both largest cities of the country –the history of which made that they were submitted for a long time to a separate development– and to bring out political measures to be taken, by basing them on concrete observations.

<sup>5</sup> The expressions “poor” and “rich” which will be used here refer to relative living standards and not to an official classification.



**Figure 1: Interrelations between migration status, poverty and urban environment**

The research project on “Migration, poverty and urban environment: Hanoi and Ho Chi Minh City” is one of the 10 projects implemented in the frame of the FSP Social Sciences Research Programme (FSP2S) in Vietnam. It has been funded by French Ministry of Foreign and European Affairs and IRD, and managed by the French embassy in Hanoi.

The project has been implemented in partnership between Institute of Research for Development (IRD), Marseille; Institute for Development Studies of Ho Chi Minh City (HIDS), Ho Chi Minh City; Institute of Population and Social Studies (IPSS), National Economics University, Hanoi.

Six researchers collaborated: Patrick Gubry (IRD-UMR 201, University Paris 1), Le Thi Huong, Tran Thi Thanh Thuy, Le Ho Phong Linh (HIDS), Nguyen Thi Thieng, Pham Thuy Huong, Vu Hoang Ngan (IPSS), and several other colleagues took part to survey, data processing and analysis.

The project includes a two-degree random sample household survey, representative of the population of both cities<sup>6</sup>. The sampling design is innovative as far as it was proceeded to a new inventory of households inside the blocks drawn at first degree, without taking the available lists at the level of local administration contrary to the quasi-totality of previous surveys (these last lists are mainly intended for the management of residential registration still current in Vietnam). So sampling biases

<sup>6</sup> Except Soc Son district in Hanoi, and Cu Chi and Can Gio districts in Ho Chi Minh City, which are almost completely rural. Thus, 13 districts over 14 in Hanoi and 22 over 24 in Ho Chi Minh City were taken into account in the survey.

and omissions were minimized. Households were drawn at second degree. On the whole, the survey, implemented on the field in June-July 2007, concerned 1,000 households (3,818 individuals) in Hanoi and 1,500 households (6,416 individuals) in Ho Chi Minh City.

### *Household environment and living standards*

To compensate for the impossibility to obtain reliable data on incomes and expenses in a single round survey, we established a *wealth index* calculated from the housing quality and the assets possessed by the household.

Nobody will be surprised by the fact that living environment of households improves with living standards: it is so with the housing quality (type of construction, equipment of the rooms, surface), as with the access to water, the discharge of waste water or still the waste management (with in this last case, the exception of Hanoi), the transportation means, but also the location of the house.

The proportion of households having tap water inside their house increases with living standards in both cities. But in this respect, the situation is better in Hanoi (with a more frequent access to drinking water in the house and lesser differences between rich and poor) than in Ho Chi Minh City.

In spite of the observed differences according to living standards, only hardly in Hanoi do people estimate that the health of one of their household members was affected by water pollution. Paradoxically, it affects more frequently wealthy people, in spite of their better situation, because of their higher degree of consciousness. On the other hand, the proportion of people who declare not knowing logically decreases while living standards increase. This can be related to education.

Besides, there is almost no difference between people as far as connection to the electric network is concerned, the entire urban population being connected, either directly, in an official way, or through any neighbour, in an informal way.

The heating means for cooking fundamentally differ according to living standards: among the most impoverished people, in Hanoi, gas –predominant in general– is often replaced by coal and additionally by wood; in Ho Chi Minh City, it is replaced –in a lesser measure– by wood and petroleum. In these conditions, the poor are subject, more than the rich, to domestic air pollution inside their homes.

In a similar way, in both cities, the proportion of households including one or several persons who regularly smoke appreciably decreases when living standards increase: smoking remains the entertainment par excellence of poor men, as it was already found in the scientific literature. It contributes to the degradation of their domestic environment.

Motorcycles are the most frequent transportation means for moving in the city. In both cities, they are less frequently used by the poor who are obliged to walk on foot or to ride bicycles, the gap between poor and rich being higher in Hanoi.

*Environment of the surrounding areas and living standards*

The poor live more frequently than the rich near factories or in frequently flooded zones, where land is obviously less expensive.

The air quality is considered much worse by the inhabitants of Hanoi than by those of Ho Chi Minh City, probably not because pollution would be superior, but because the population is more concentrated near the city centre. Moreover, the poor being more scattered in suburbs –in zones with lower densities and in zones that remained rural– declare themselves less disturbed by the bad quality of the air and by the noise, contrary to what could be expected.

It is difficult to explain why insecurity is considered more worrisome in Hanoi. It is also considered higher by the rich than by the poor. In this respect, we can put forward the idea that the rich have more to lose because of lack of security, but also that the poor are living in districts having kept a friendlier way of life, where everybody knows each other –thus limiting incursions from outside.



*PG, 2008*

**Photo 1: Hanoi, Floods of 31<sup>th</sup> October 2008**



*PG, 2008*

**Photo 2 : Ho Chi Minh City, New housing estate in District 2**

*Awareness of environmental issues*

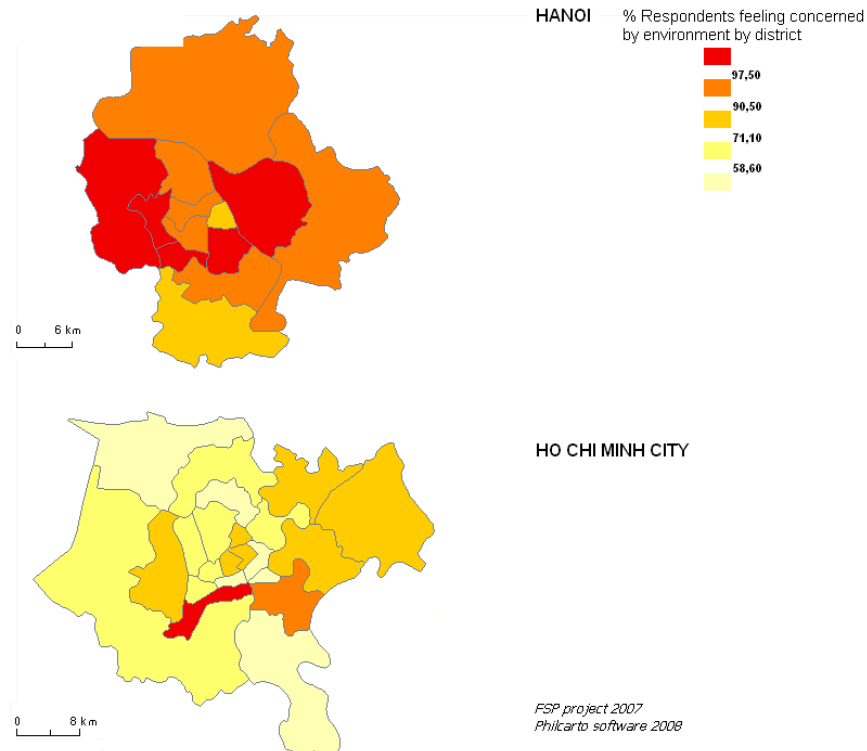
The awareness of environmental issues is relatively high including the awareness of global environment. An inhabitant of Hanoi explains:

*“The more environment is sustainable, the more human development is sustainable”.*

However, on average, awareness is much higher in Hanoi than in Ho Chi Minh City (map 2). In the latter, the proportion of those who answer that they don't know is also high. Gender differences are low in Hanoi, but higher in Ho Chi Minh City. This can be related to a lower education level of women in the southern metropolis.

Paradoxically, in spite of their more frequent confrontations with the problems of the environment and its degradation, poor people declare themselves “less concerned” about environment. In this respect, the distance between poor and rich is higher in Ho Chi Minh City than in Hanoi.

Poor people are also those who have the least proposals to be made. The difference of awareness between poor and rich is to be related to a lower education level of the first ones. It is inside close suburban zones that people declare themselves the most concerned by environment –those where environmental problems are the most often felt (lack of infrastructures, nearness to industrial parks, problems of urban transports...).



**Map 2: Proportion of respondents feeling personally “concerned” by the environment by city and district**

### *Conclusion and proposals*

The very big differences of living setting and urban environment according to living standards are highlighted. The most worrisome domains in urban environment are identified in the household environment (housing quality, water supply, water pollution, waste water discharge, domestic garbage, energy use, transportation means...), and in the surrounding environment (location of the house, infrastructures, quality of roads, pavement congestion, floods, air pollution, noise, security...).

Numerous solutions are proposed by the people themselves about their actual environmental problems, among which the most frequent are the modernization of the waste water discharge and treatment system, the modernization of the garbage collection and the need for awareness campaigns.

The fundamental role of road traffic in the air pollution is admitted, but the solution of developing collective public transports is still not sufficiently mentioned. The floods occurring more and more frequently in each of both cities and making the headlines of newspapers would deserve to be approached in a specific way.

At the same time, the fundamental role of education is brought out, as well for the awareness of the problems as for the capacity to propose solutions. This is confirmed by the fact that women –in average, less educated– are much more numerous than men to be “without opinion”. In spite of an increasing awareness of the population, a

specific effort in the field of education about environmental issues is needed. Hanoi seems to have taken an advance on Ho Chi Minh City in this domain.

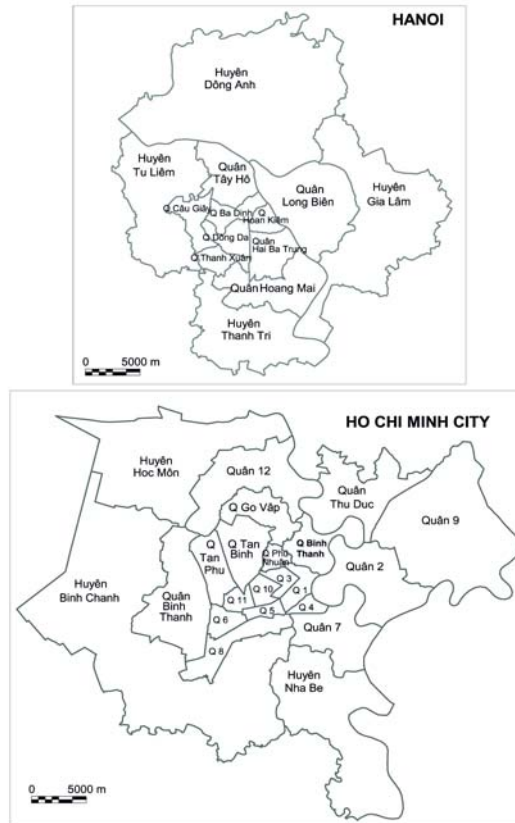
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*Appendix*



**District maps of Hanoi and Ho Chi Minh City in 2007**  
(except Soc Son district in Hanoi, Cu Chi and Can Gio districts in HCMC)

# Disparities in the city: Poverty and urban environment in Hanoi and Ho Chi Minh City (Vietnam)

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## PRESENTATION

Hanoi and Ho Chi Minh City (with respectively around 2 million and 6 million inhabitants in 2009) are the two largest cities in Vietnam in terms of population and economic potential.

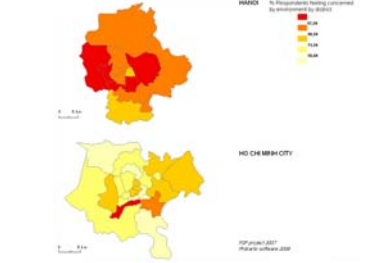
In a context of strong urban growth and economic liberalization, rural-urban migration, poverty and urban environment are major issues for development and increasing concerns of the population in both metropolises. In this respect, authorities are confronted with the competition between the necessity for supporting economic growth to develop employment, and that other necessity which is environmental protection within a sustainable development policy.

It appears that non-migrants and migrants on one side, poor and rich people on the other side, have different relationships with environment. Poor and rich people are unevenly distributed in the city, in particular, the poor are more numerous in outer suburbs and in rural districts belonging to the cities (map 1). Thus they are unequally confronted with environmental problems but also contribute in a different way to the degradation of this environment. Thus, it was decided to study the interrelations of migration status and living standards with urban environment (diagram below).

In Vietnam, technical data on environment are very numerous but socio-demographic approaches at household level are rare and not statistically representative. Thus, a specific research project was implemented. The purpose was to know the actual living conditions of the population in connection with environment, to systematically compare both largest cities of the country—the history of which made that they were submitted for a long time to a separate development—and to bring out political measures to be taken, by basing them on concrete observations.



Hanoi  
Floods of 31<sup>st</sup> October 2008 (PG, 2008)



Map 2: Proportion of respondents feeling personally "concerned" by the environment by city and district

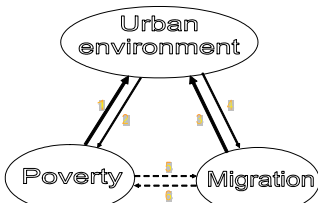
### Household environment and living standards (2)

Besides, there is almost no difference between people as far as connection to the electric network is concerned, the entire urban population being connected, either directly, in an official way, or through any neighbour, in an informal way.

The heating means for cooking fundamentally differ according to living standards: among the most impoverished people, in Hanoi, gas—predominant in general—is often replaced by coal and additionally by wood; in Ho Chi Minh City, it is replaced—in a lesser measure—by wood and petroleum. In these conditions, the poor are subject, more than the rich, to domestic air pollution inside their homes.

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Ho Chi Minh City  
New housing estate in District 2 (PG, 2008)

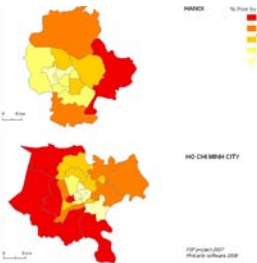
## A SPECIFIC RESEARCH PROJECT

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Map 1: Proportion of low living standards households by city and district

### Awareness of environmental issues

The awareness of environmental issues is relatively high including the awareness of global environment. An inhabitant of Hanoi explains: "The more environment is sustainable, the more human development is sustainable".

However, on average, awareness is much higher in Hanoi than in Ho Chi Minh City (map 2). In the latter, the proportion of those who answer that they don't know is also high. Gender differences are low in Hanoi, but higher in Ho Chi Minh City. This can be related to a lower education level of women in the southern metropolis.

Paradoxically, in spite of their more frequent confrontations with the problems of the environment and its degradation, poor people declare themselves "less concerned" about environment in this respect, the distance between poor and rich is higher in Ho Chi Minh City than in Hanoi.

Poor people are also those who have the least proposals to be made. The difference of awareness between poor and rich is to be related to a lower education level of the first ones. It is inside close suburban zones that people declare themselves the most concerned by environment—those where environmental problems are the most often felt (lack of infrastructures, nearness to industrial parks, problems of urban transports...).

## CONCLUSION AND PROPOSALS

The very big differences of living setting and urban environment according to living standards are highlighted. The most worrisome domains in urban environment are identified in the household environment (housing quality, water supply, water pollution, waste water discharge, domestic garbage, energy use, transportation means...), and in the surrounding environment (location of the house, infrastructures, quality of roads, pavement congestion, floods, air pollution, noise, security...).

Numerous solutions are proposed by the people themselves about their actual environmental problems, among which the most frequent are the modernization of the waste water discharge and treatment system, the modernization of the garbage collection and the need for awareness campaigns.

The fundamental role of road traffic in the air pollution is admitted, but the solution of developing collective public transports is still not sufficiently mentioned. The floods occurring more and more frequently in each of both cities and making the headlines of newspapers would deserve to be approached in a specific way.

At the same time, the fundamental role of education is brought out, as well for the awareness of the problems as for the capacity to propose solutions. This is confirmed by the fact that women—in average, less educated—are much more numerous than men to be "without opinion". In spite of an increasing awareness of the population, a specific effort in the field of education about environmental issues is needed. Hanoi seems to have taken an advance on Ho Chi Minh City in this domain.

District maps of Hanoi and Ho Chi Minh City in 2007  
(except Soc Son district in Hanoi, Cu Chi and Can Gio districts in HCMC)

### Household environment and living standards

Nobody will be surprised by the fact that living environment of households improves with living standards: it is so with the housing quality (type of construction, equipment of the rooms, surface), as with the access to water, the discharge of waste water or still the waste management (with in this last case, the exception of Hanoi), the transportation means, but also the location of the house.

The proportion of households having tap water inside their house increases with living standards in both cities. But in this respect the situation is better in Hanoi (with a more frequent access to drinking water in the house and lesser differences between rich and poor) than in Ho Chi Minh City.

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### Environment of the surrounding areas and living standards

The poor live more frequently than the rich near factories or in frequently flooded zones, where land is obviously less expensive.

The air quality is considered much worse by the inhabitants of Hanoi than by those of Ho Chi Minh City, probably not because pollution would be superior, but because the population is more concentrated near the city centre. Moreover the poor being more scattered in suburbs—in zones with lower densities and in zones that remained rural—declare themselves less disturbed by the bad quality of the air and by the noise, contrary to what could be expected.

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