

# 3

## **Metropolization and the Ecological Crisis: Precarious Settlements in Ho Chi Minh City, Viet Nam**

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It has been established that the rapid growth of precarious settlements, the deterioration of technical infrastructure, and water pollution are interconnected. The present study aims to supply political decision makers and community leaders with the tools and information they require to confront the problems arising from the ongoing metropolization of Ho Chi Minh City (HCMC). The study's main concern is to find alternative ways of upgrading the urban environment, protecting natural resources, and contributing to the development of the most disadvantaged members of the community.

An interdisciplinary and participatory approach, based primarily on the concept of research action, was chosen to reach these objectives. It integrates the various disciplines necessary to evaluate the urban environment (environmental studies, engineering, social studies) and sought to make its results operational by involving players from the public and private sectors, and the population, at different stages of the project.

The study, which may be viewed as an observation, intervention or mediation tool, conducts its analysis at three levels:

- at the regional level, using statistical data to convey the socioeconomic, demographic and technological dynamics of urban and metropolitan development;

- at the metropolitan level, analysing the socioeconomic and environmental impact of the vast canal development projects set up by the metropolitan government; and
- at the local level, evaluating small-scale community projects for the rehabilitation of precarious settlements.

From a theoretical point of view, these objectives are largely based on the concept of sustainable development. Applied to urban development in the large metropolitan centres in the South, and in HCMC in particular, such an approach gives rise to five major considerations, which have to be adapted to the Vietnamese context.

- The dynamics of metropolization are generated by the economic and demographic interdependence of urban networks and rural areas. Resulting migrations foster the extension of urban poverty and precarious settlements.
- A deteriorated environment is generally the result of urban growth that the authorities cannot cope with or control. Water, air and soil pollution threaten the urban ecosystem and may have negative repercussions on the population's health and productivity.
- Urban environmental problems can only be resolved by concerted action between the various players. This requires setting up participatory communication and decision networks capable of integrating the economic and social aspects of environmental development.
- In an attempt to mitigate the lack of an adequate urban infrastructure, the people who live in these precarious settlements have developed certain social practices, and come up with informal and alternative urban development strategies. These ought to be integrated within the relevant official policies.
- A prudent environmental management policy is a prerequisite for sustainable urban development—but it is not enough. All who deal with urban issues in their line of work, including the authorities in charge of metropolitan development, must be trained in order to acquire the necessary competence and tools.

The study results show that although the metropolization of HCMC has had positive results for a large part of the population, it has also had a negative impact on the environment and on the poorest members of the community. The problem of precarious settlements thus combines two fundamental urban issues: widening poverty, and environmental risk resulting from a lack of infrastructure.

Although limiting the social and environmental repercussions of urban growth is bound to require sustainable urban development projects involving large-scale operations, they should also—and above all—include targeted and concerted action at the local level. These must be preceded and prepared by an interdisciplinary, participatory and educational process addressing all urban players.

### **The Metropolization of Ho Chi Minh City: Great Potential and Risks to Overcome**

The development of HCMC must be viewed in the context of the recent evolution of other countries and metropolitan centres in Southeast Asia. In spite of their geographic, linguistic, cultural and political diversity, they share a number of characteristics.

Southeast Asian societies, often called “hydraulic” due to their mastery of water, have experienced a demographic explosion as a result of the development of intensive agriculture (Ruscio 1989). As of the middle of the twentieth century, the high population density in rural areas gave rise to an exodus to the cities and to a sharp growth of the major urban agglomerations.

In spite of the disparity between living standards in the region, economic policies implemented by the various countries tend to resemble one another. Claiming very different ideological backgrounds, the countries of Southeast Asia have gradually rallied around a common model of economic development, based on export industries. Due in part to Japan, this model was initiated as of the 1950s by the first generation of newly industrialized countries (NICs)—Hong Kong, South Korea, Taiwan Province of China, Singapore—and by the second NIC generation—Indonesia, Thailand, Malaysia—as of the 1970s. In spite of different dynamics of accumulation, this model has generated extremely high levels of economic growth since the 1970s, primarily in the largest urban centres (Richer 1999). Although its economic performance was not affected by the strong worldwide recession of the 1980s, it should be noted that this model was shaken in 1997 during the so-called Asian crisis (Maurer 1998).

The economic success of a number of Southeast Asian countries led to a gradual levelling out of their ideological differences. The Association of Southeast Asian Nations (ASEAN) has become a major focus in the region, promoting an Asian liberalism of sorts, based on joint cultural values such as order, harmony, tolerance and syncretism, but also on traditional social hierarchies and power

structures. However, these supposedly Asian values tend, above all, to extend economic freedom and promote what is sometimes described as “moneytheism”, without paying too much attention to democratic constraints or the respect for human rights (Cassen 1995).

Viewed from the point of view of spatial planning, the metropolization of the region boils down to the preferential development of one or two major centres at the expense of other towns in the urban network. These dominant metropolitan centres develop a cumulative dynamic that leads to increased agglomeration, generating and stimulating economic and demographic growth (Bassand et al. 1996).

Although the Southeast Asian metropolitan centres provide a favourable ground for the production of wealth, they also give rise to exclusion and growing social inequality. A fringe of the population loses access to the resource redistribution system, and faces ever more precarious living conditions, with no other choice than to crowd the precarious settlements characterized by a lack of infrastructure and public services (Pernia 1992; Goldblum 1988).

Finally, due to the intensive exploitation of non-renewable resources, and above all to inadequate technical installations and networks, these metropolitan centres are often threatened by such severe deterioration of their urban environment, that ecosystems are no longer able to purify themselves (Pernia 1992).

Rooted in a tradition of trade, and a past shaped by a hundred years of colonialism and wars of independence, the process of metropolization of HCMC seems to have stepped up over the past 15 years. In 1986, the Vietnamese authorities decided to take the necessary steps to transform the country’s socialist economy into a liberal economy with a “socialist bent”. Although the reform programme called *Doi Moi* (renewal), principally aims to make the country less isolated internationally and to open it up to capitalist principles, its other objective is to improve living standards for a population weakened by years of hardship (de Vienne 1994).

This programme of controlled economic liberalization and the progressive rollback of state intervention has led to renewed economic growth, at an annual rate of often more than 8 per cent since 1992. However, since the two major metropolitan centres—HCMC and Hanoi—are the prime beneficiaries of this growth, they are subject to a massive influx of migrants from the rural regions.

Inspired both by the Chinese reform programme begun in 1979, and by the precepts of Asian liberalism, the policy of renewal has a

limited political scope, and in fact tends to reinforce the current power structure and the political and administrative establishment. Converted to the market economy, the public sector continues to be a determining element of the system, all the more since it still enjoys preferential treatment (EIU 1998).

HCMC's economic boom has highlighted certain of the regime's shortcomings, in this case the collusion between the economy and politics. The *nouveaux riches* who flaunt their wealth are mostly members of a new elite, the so-called "red capitalists". An even more dangerous phenomenon is corruption, which is infecting most sectors. Fraud, bribery and smuggling are becoming sadly commonplace (Do Thai Dong 1994; D'Monte 2000).

Faced by these problems, the population finds a certain relief in consumerism, a trend clearly visible in the evolution of household expenditure. Consumer habits are changing rapidly, with more money spent on transport, leisure and clothes. Between 1990 and 1998, the number of households that owned motor vehicles, televisions, tape recorders or other electrical appliances more than doubled. Consenting victims of the consumer society—young people—are discovering the joys of letting their hair hang down, and spending their leisure time on beer, karaoke and motorcycles (Wust 2001).

Although economic growth has improved material conditions for a considerable part of the urban population, there is no denying that the renewal policy is painful for those who are least favoured, and continues to crowd some out of the mainstream. The expansion of the informal economy, coupled with the abolition of free education, free health, and other public services, has polarized the economy. The number of poor is falling, but the living conditions of those who stay poor are deteriorating. The main indicators used to establish their profile are: low and unstable income from informal activities; inadequate education or training or none; irregular and precarious housing; lack of infrastructure and equipment; debt; and a high incidence of health problems. It is therefore not surprising that in certain cases, adapting to social change means adopting deviant forms of social behaviour, such as drugs abuse and prostitution (Bond et al. 1999; Do Thai Dong 1994).

These exclusion mechanisms, reinforced by the rural exodus, lead to the development of an unplanned urban habitat, in which the most deprived survive. These precarious settlements often spring up on the outskirts of the city, or in vacant lots in the city centre, mostly alongside canals or in other areas that are subject to flooding.

The environment too is affected by metropolization. Few investments have been made in recent years to maintain or adapt the infrastructure to metropolitan demographic growth. Obviously, the shortcomings that affect the water supply, drainage, and wastewater evacuation, but also solid waste disposal, are most alarming in these precarious areas (Bassand et al. 1996).

In view of the “miracle” of economic growth, the authorities view the poor who live in these areas as the “downside” of the urbanization process. In HCMC, the growth of precarious settlements and the deterioration of the environment are closely linked to water. Other regions of the world frequently have to contend with a water shortage, but south Viet Nam has to deal with the opposite problem. Managing this vital resource, available in excess, is Viet Nam’s crucial problem.

### **Water and Precarious Settlements: Between Emergency Solutions and Planning**

The development of precarious settlements in HCMC vividly exemplifies certain aspects of social exclusion, much like the evolution of the infrastructure and of technical services.

For several years the supply of drinking water has lagged behind the demand. Water is abundant, but the water supply system is inadequate. The water pumping and purification stations in Tan Hiep, Thu Duc and Hoc Mon produce over one million cubic metres of water, enough to meet the needs of just two thirds of the population. The situation is further aggravated by leakage, which is estimated at nearly 40 per cent. Not only are there chronic water shortages, but only a part of the population is linked to the public water supply system. The poorest have to resort to groundwater (already existing or newly drilled wells), hook up to the water supply system illegally, or buy water from vendors who sell it at a higher price due to the investments and profits they make (Bolay 2000).

In the precarious settlements on the city outskirts or in the centre of town, the water supply depends on a self-built network, and private old or newly drilled wells. The use of groundwater compensates the shortcomings of the public water supply, and HCMC is experiencing an alarming rise in the exploitation of the phreatic table. Not only does this shift the limit of saline intrusion; the aquifers are also threatened by surface pollution.

The water purification situation is hardly better. HCMC is divided into four large catchment areas, each of which has its own

drainage system. Only a portion of the waste and rainwater is collected by the sewers that cover a mere 70 per cent of the total surface of the city's districts. From these, the wastewater flows directly into the main canals of HCMC. Each day, 360,000 cubic metres of domestic wastewater, and approximately 110,000 cubic metres of heavily polluted industrial wastewater, are fed directly into the canals, with the rest collected in septic tanks and by the few industrial sewage purification stations

The self-purifying capacity of the metropolitan waterways is severely overcharged, and their level of pollution is rising dramatically. Metal and other organic pollutants content is high, and only anaerobic biological processes are possible.

Finally, the canals are growing increasingly stagnant, which reduces their drainage capacity and causes flooding in the precarious areas located in topographically unfavourable conditions. Again, the absence or poor state of repair of infrastructure networks contributes to the deterioration of the environment and of living conditions (Bassand et al. 2000).

Depressed residential areas are also caused by social and economic exclusion. Most inhabitants have informal jobs in the neighbourhood, in self-employed or salaried positions, or as day workers. Activities are highly specialized and segregated along gender lines: work in the construction and transport industries is mainly the men's domain, whereas women work principally in trade and the crafts. In view of the instability of these jobs and low pay, many workers have to take a second job to ensure a relatively steady income (Thai Thi Ngoc Du 1996).

Since their access to supply sources and commercial markets may be severely limited, certain informal workers are forced to join outsourcing networks, which link bosses to subcontractors, wholesalers to retail dealers. Some informal workers can only survive by staying "under the wings" of a firm that provides them with guaranteed raw materials and customers.

The precarious and promiscuous conditions in which the population lives also condition the form and nature of social relationships between individuals. The family is still the hub of the community, often functioning as a type of social security or mutual credit fund. Besides the enlarged family, households are bound up in mutual assistance networks that function principally among neighbours. Such neighbourly relations often assume the shape of service exchange or other, more material forms of aid.

In parallel to these horizontal relations, households enter into vertical protection networks operating according to a Mafia-like logic. To find a job or obtain an administrative favour, people look for backing by a protector, an influential person apt to defend their interests and get them what they need. These are often small entrepreneurs or local political or administrative leaders.

Generally speaking, the various social relations that the households establish in their neighbourhood aim to ensure their integration in the urban environment. They are often of paramount importance for the survival of the poorest families (Wust 2001). Obviously, the habitat also reflects the poverty of its inhabitants, and the precarious conditions under which they live. Being a shantytown variant of the shophouse,<sup>1</sup> this form of precarious housing usually has just one level, with direct access from the street to its principal part, in which the inhabitants both live and work. The rear part of the shophouse contains the utilities (kitchen, sanitary installations). The ground surface available per head is often less than 5 square metres (Bassand et al. 1996).

Houses are usually produced and built by the inhabitants themselves, of wood, sheet metal, haulm, or recycled building or other materials. They deteriorate rapidly, due to the inferior quality of the materials, as well as to the extreme tropical climate and the instability of the ground (Metzger 2000). Here again, living conditions deteriorate as a result of infrastructure shortage and technical services, and may lead to a health and hygiene crisis. Only a small proportion of houses is linked to the sewer system, and over half have no toilet facilities. They are regularly flooded when it rains, or even at high tide. Wastewater is not evacuated and stagnates in the streets. The situation is further aggravated by the fact that these areas rarely have a solid waste collection system.

Finally, the inhabitants usually do not dispose of any legal documents entitling them to land usage, property rights on their home, or even to reside where they do. Even though the authorities tend to be relatively tolerant, the inhabitants live in a state of permanent insecurity, and are perpetually at risk of being fined or even evicted, though this is rare (Wust 2001).

This type of precarious habitat is by no means new in HCMC, but it would seem that in recent years the phenomenon has been on

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<sup>1</sup> Shophouses are one of the most common forms of dwelling in Southeast Asia. It is based on the logic of urban densification. By dividing the ground into a long narrow plot, it maximizes the number of people who may benefit from direct access to the street.



the rise again. Though it may be difficult to measure its importance precisely, municipal authorities have registered 67,000 households living in what the population calls “*Nha o Chuot*” (rat holes), over one third of which have been built on the banks of the city’s canals. Over 10 per cent of the population appear to live under highly precarious conditions. On the other hand, these families live in such settlements as a result of the strategies they implement to survive and to become integrated in an urban environment. Although this type of housing may not always correspond to what they really want, it is perfectly well adapted to the way in which they live, and to their financial possibilities.

### **Cleaning up the Nhieu Loc-Thi Nghe Canal and Relocating the Population along its Banks**

Having grown more aware of problems relative to the deterioration of infrastructure networks and of precarious settlements in general, the municipal authorities are currently setting up far-reaching policies to clean up and rehabilitate HCMC. The Nhieu Loc-Thi Nghe canal project is the most important. It has been under way since 1995, and aims to clean up the bed of the canal, build wastewater purification stations, and move and relocate the population that lives on its banks.

By now, almost the entire population of approximately 40,000 people has been moved and partly relocated. The cleaning-up operations are currently in full swing, and have raised a number of questions. The environmental risks arising from the use or stockpiling of the mud dredged from the canal, which contains heavy metals and a number of organic micropollutants, will have to be assessed (Phuong et al. 1998). It also appears necessary to analyse the project’s hydrological repercussions. A study of the hydrological activities of a part of the canal seems to indicate that the measures taken might cause flooding in other residential areas (Bassand et al. 1996).

The “relocation” operation of the Nhieu Loc-Thi Nghe programme has been more stringently evaluated (Wust 2001). Although the programme generated some positive effects, it has had a number of perverse repercussions.

The relocation programme was based on a policy of state compensations and subsidies. Households that were moved received compensation for the loss of their old home, and were given the choice between two alternative forms of housing: state or individual.

Families have the possibility of buying a subsidized apartment in a state housing development located near the area from which they were evacuated. To facilitate this, the price of the apartments was also generously subsidized by the state. Families who received compensation that was less than the cost of the apartment are entitled to a zero interest loan, to be repaid over a period of 10 years. However, this alternative is not available to families without a residence permit<sup>2</sup> in HCMC, nor to those who rent housing.

The inhabitants may also find new housing themselves, and the authorities are encouraging them to settle on the outskirts of the city. Indeed, one of the priorities of settlement policy in HCMC is to reduce population density in the city centre, which in certain districts is almost 60,000 per square kilometre (Land and Housing Department 1995).

In practice however, the poorest households receive such small compensation that they have no access to state housing and have to fend for themselves. Again, the prices on the real estate and property market leave them no choice but to move to another precarious settlement, usually on the outskirts of the city. While this type of relocation makes it possible for people to find housing they can afford, it also requires them to find the resources they need to rebuild their social and economic networks. Moreover, it maintains or even aggravates housing insecurity and pushes them to settle in an insalubrious environment. They may very well see their living conditions deteriorate progressively and their housing situation grow unstable again, and in the longer run may become recurrent urban “nomads”.

The situation is less critical for families re-housed in the state developments. Although over half of them incur heavy debt in order to buy their apartment, they are relatively satisfied.

Their apartments are larger than their former homes, better equipped and with better sanitary facilities. However, the typology of such collective developments fosters their residential use to the detriment of an economic one, and the inhabitants complain that their access to the public space is impaired.

One may also observe that relocation has led to a partial deterioration of family structures and mutual assistance networks. Families “restructure”, and neighbourhood relationships become

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<sup>2</sup> In 1975 the Vietnamese authorities introduced a policy of resident control, the particular aim of which was to limit migration to the towns. Those rural migrants who settle in towns without prior permission have their access to public services restricted by the authorities.

less close. For many households, learning to live in a collective housing development gives rise to conflict, usually caused by issues of hygiene or noise. Although certain families enjoy the new-found intimacy of this type of habitat, others miss the intense social life that characterizes precarious settlements.

Repercussions on household budgets are generally negative, with housing costs for these heavily indebted families ranging from an average of 4 to 30 per cent of their expenditure. After relocation, a considerable number of these informal workers find it difficult to continue their previous economic activity, not only because they have to go further to their workplace or may lose their job, but because the whole economic network may be affected. Over one third of the families experience a drop in income. Consequently, many are no longer able to pay their housing expenses, and incur new debt.

Barely two years after the re-housing operation, over one fourth of the families relocated by the state have already sold their apartment. This enables them to stabilize their shaky economic situation, and to benefit from indirect state subsidies, since the state sells these apartments at below the market price. To the extent that over one third of the families who still live in the development wish to leave, one may expect new migratory flows.

A significant proportion of the families that sell their flat move to precarious settlements on the outskirts of the city. Unhygienic and unstable though they may be, they seem best adapted to what the poorest families need to integrate socially and economically.

The Nhieu Loc-Thi Nghe Canal relocation programme has again shown how difficult it is to find a solution to the housing requirements of the poorest members of the community. Alongside the selective integration of the population re-housed through the state programme, one may observe the growing gentrification of these developments. Households that encounter financial difficulties are forced to sell their flat, and are supplanted by families that are better off. The programme not only gives rise to the exclusion and impoverishment of a part of the evacuated population, it also generates new precarious settlement areas.

### **Community Projects in Precarious Settlements**

Community development programmes, based on the inhabitants' own evaluation of their residential environment, have been launched in HCMC with a view to assessing alternative approaches to the development of precarious settlements. The objective is to start up a

dynamic community process in which the inhabitants themselves address the problems they consider the most urgent. The objective is twofold: to deal with the most urgent issues with the means “at hand”, and to prove that the population is apt to organize itself and take necessary action.

The various projects (garbage collection, environmental education, community credits, housing rehabilitation) have made it possible to set up innovative practices relative to urban organization management (participation, bottom-up approach). They have also demonstrated that local projects for the rehabilitation of precarious settlements in HCMC are both feasible and effective. Over and above developing community dynamics, however, this approach offers a new model of urban development management, based on participation and exchange between concerned players.

Projects of this type should be seen as realistic alternatives to certain large-scale urban development projects, which propose systematic re-housing instead of the rehabilitation of precarious settlements. But, such community actions have shown that an innovative approach requires a considerable effort to render both those in charge of urban development, and the population at large, more sensitive to, and aware of, what is at stake for the environment, and educate them on relevant issues (Bolay and Thai Thi Ngoc Du 1999).

These experimental actions took place in two areas: sub-district (ward) 15 in Binh Thanh district (SD15/BT) and sub-district 10 in district 8 (SD10/D8). Both are lowland neighbourhoods, surrounded by two canals. Most people there are poor and can afford neither new housing nor the rehabilitation of what housing they already have, which in fact causes precarious settlements to expand. Most houses do not have toilets. The use of public toilets on the canals is widespread, and household waste is discharged directly into the canals. The population’s education level is low, and people are largely unaware of, and insensitive to, environmental protection issues.

The following principles guided the project actions.

- A participatory self-help model, with which people are already familiar through the savings and credit groups with loan rotation, was used. Instead of income generation from the current city-wide system, this project pursues new objectives: improved housing and environmental protection.
- Professional social workers and community developers assist people by showing them how to put their own potential to

work. These professionals facilitate meetings and discussions between inhabitants, in which they identify their needs and show that they are capable of introducing feasible alternatives. As a matter of fact, since the financial backing for the project from HCMC's Environmental Committee (ENCO) is very modest, there was actually no realistic alternative to this option.

- The project is launched with a small group and consolidated before expanding to include other groups. The first group's success is meant to arouse the curiosity of neighbours, who wish to be part of the project too. In this way, people's awareness is raised and they are more strongly committed to the activity they identify and develop. This approach represents the very opposite of the traditional mass communication campaigns which aim to cover all relevant issues in a programme run along top-down lines.

Some activities, exemplary of a participatory and innovative approach to local urban management, deserve a mention. The first has to do with credits for building private toilets.

City authorities set up new projects for cleaning up the canals and doing away with the present facilities on their banks since 1996. District 8 and sub-district 10 had to comply, and have started tearing down the existing public facilities. Since there is no land available on which to build public toilets, the only alternative is to build private ones.

Although most people would like to have a private toilet, most lack the funds to build one. The community worker held several meetings with the population to help them organize savings and credit groups. Public authorities contributed a modest amount to the programme, which provides households with a complementary credit to cover the cost of building toilets. The role of the community worker, in this case, is to encourage households to allocate a part of their savings to this purpose. The fact that the population has to make an effort increases its sense of responsibility.

Six months into the project, eight households had built a toilet with their own savings and the financial backing of the credit group; all the loans had been totally reimbursed. Group evaluation sessions with the community worker were held; all participants expressed their satisfaction with this improvement in their housing conditions. Their example is now being followed by neighbours who want to organize their own credit group.

The credit group meets regularly to discuss its activities relative to the toilet construction project. As a result, its members are growing

more aware of the need to protect their immediate environment, and are more convinced that they can contribute to this goal. They reported that the sewers are clogged by all kinds of waste, even human faeces, and asked the community workers to help them set up a sewer drainage system and new infrastructures. They are ready to participate in the project and pay for it. By the end of 2000 (when the project terminated), the microcredit had helped households to build 321 private toilets, with a rotating capital of just \$2,500. This led to sewer drainage.

The neighbourhood group wanted to employ workers to build new sewers. It mobilized young people in the neighbourhood to clean existing sewers, and collected money from concerned households to cover the costs. Alongside the community workers, the EPFL (Federal Institute of Technology in Lausanne, Switzerland) provided on-the-spot technical assistance in hydrology. This kind of co-operation demonstrates the usefulness of working in an interdisciplinary team, and highlights the connection between the population, practitioners and technicians. During the cleaning-up campaign, the area's residents saw how hard the young people were working as a result of certain other people's irresponsible attitude toward their immediate environment. They grew more committed to protecting not only the new sewers but also their environment, and decided to equip the sewers with metal grids to prevent waste from entering.

The effect of this action was that now other neighbourhoods are asking the community worker to help them clean up their sewers, using the participatory model.

In sub-district 15, the attention focused on the need for new public facilities. Sub-district 15 lies to the northeast of HCMC, next to the Nhieu Loc-Thi Nghe canal, which runs through five central urban districts. Squatters have occupied the banks, and part of the canal itself, for many years, and have used the public toilets on the canal and discharged all kinds of waste into it. The canal is also contaminated by sewers from all over the city, and has progressively become very polluted. Since 1993, the municipal authorities have implemented a squatter clearance project.

Precarious housing in sub-district 15/BT has been cleared since mid-1996, and the operation is due to continue. A number of toilets on the canal were destroyed in these operations. The district authorities replaced them with public toilets newly built on solid ground. However, since water was unavailable, they were still closed many months after construction. When we launched a survey of

people's opinions and needs, the residents of the area suggested that water be supplied and the toilets made operational. The hydrologists in the research team were put in charge of selecting a location for a well and drilling it. The community worker facilitated neighbourhood meetings to discuss regulations for managing the toilets, and to come to an understanding. A woman from the neighbourhood declared she would assume management, and an agreement concerning the cost of using the toilets and of the water from the well was reached. The research project contributed only technical assistance, funds for drilling the well, and a small sum to help run the operation in the initial stages.

The project ought to finance itself in the longer term. After six months, the public toilets and well are being used more and more by the population in the neighbourhood and residents no longer use the canal for these purposes.

In the same neighbourhood, a credit fund was set up to facilitate garbage collection. Garbage was simply not collected in this area in the past, since inadequate access makes it impossible for public works employees to reach squatter areas. The community worker suggested a discussion of this problem as a means of contributing to the "Do Not Litter" city campaign launched in 1995. The research project should provide people with a small credit for housing and environmental improvement. As a result of the discussion, it was agreed that this credit should be granted to households who were ready to collect garbage in the neighbourhood.

The collector got a credit for the purchase of a garbage-cart, and the residents had to agree to pay him \$0.50 a month, the usual rate throughout HCMC. Six months later, the garbage collector had reimbursed the credit, and he and his family now own the cart, and thus have a livelihood.

These are just a few examples illustrating various possibilities of developing such community initiatives. Of course, a lot of questions subsist. In view of the ways in which the different levels of intervention for sustainable urban development interact, the following considerations concerning the significance of local action are essential to understanding its nature and assessing its impact on:

- the perception of environmental problems;
- the ability to view them within the larger context of urban policies; and
- the effectiveness of community initiatives for improving the living conditions of the poorest of the urban poor.

In this sense, some of the most significant conclusions to be drawn from the current project are the following.

- The local level is best suited to interdisciplinary research action. Thanks to its small scale and still extant social ties, the neighbourhood provides a space that facilitates integration between researchers, urban development professionals and inhabitants.
- Simple and specific examples, as those of small individual credit grants, enable researchers and professionals to demonstrate and document the links between public metropolitan policies (for example, financing social habitat and community infrastructure) and local action.
- For an urban approach centred on local development to be innovative, it must from the start, i.e., from the stages of problem identification and project elaboration, be based on the voluntary participation of the population; this requires a gradual educational process of the population and public authorities.
- Community development in urban areas that promotes a bottom-up approach to environmental problems often has to contend with administrative demands which tend to advocate massive, rapid and visible solutions without worrying too much about their sustainability.
- In view of the demands imposed by a participatory approach and of the time it takes to mobilize communities involved in the process, consultations between the various urban development players should be held, involving community representatives, technicians and public officials. Training is a great means of overcoming divisions.
- This method helps us define specific actions to improve the living environment. It is also an instrument with which to reinforce community competence in various areas, to empower people, to lead us from a social assistance approach to an awareness of what is at stake in urban development, and to achieve full participation by the population.
- The last, though by no means the least, important aspect of participatory implementation of local urban development projects and active rehabilitation by the population of its environment, is a financial one: a more stringent definition of priorities and intervention methods helps reduce costs, and direct monitoring by the citizens of their own investments in terms of time, energy and money helps avoid abuse.



### **Conclusion: Toward Sustainable Metropolization of Ho Chi Minh City**

The growing density and expansion of the metropolitan HCMC area have reached a critical stage. We have highlighted the positive socioeconomic effects of metropolization in Viet Nam, as well as the negative impact of this phenomenon on the urban environment, and the most deprived segments of the population. The problem of precarious settlements lies exactly at the intersection between increasing areas bedevilled by insecurity and poverty, and the environmental risks resulting from a lack of urban infrastructure and growing water pollution. Today it is absolutely necessary to reconsider the urban development of HCMC with a more attentive eye to the social and environmental constraints development brings with it. To this end, the municipal government must launch a large-scale sustainable urban project to improve living conditions for the poorest members of society, and preserve the environment, for this and future generations. The realization of this project will of course include certain major operations. In parallel, it should above all focus on targeted and co-ordinated actions at a local level.

Having implemented a number of major urban development projects over 10 years, the municipal authorities of HCMC are increasingly aware of the importance of social factors for a project's long-term success. Consequently, when it comes to improving housing conditions for the poor, political authorities increasingly agree to reduce eviction and relocation measures. This is a considerable step in the right direction. Policies on housing for low-income groups and efficient mechanisms with which to apply these policies still have to be defined, however, especially since this is an important aspect of housing strategy in HCMC. With this objective in mind, municipal authorities are currently negotiating a co-operative project with the World Bank, which aims to improve housing conditions and the infrastructure in precarious settlements. The implementation of the project will focus on participation by the population and other urban players.

To switch from a top-down approach, based on instructions and orders, to a bottom-up approach that accounts for the needs and capacities of the population and of other urban players, political decision makers will have to rethink and refocus. Even this will not ensure a successful transition, however. Urban development professionals need to be better educated. Many experiences from HCMC show clearly that training in the social sciences and social

work in general (community development workers and other practitioners) is indispensable to the successful implementation of activities at the local level, from the awareness-raising and capacity-reinforcing stages onwards.

A transdisciplinary approach, in the form of stepped-up exchange between researchers in various scientific disciplines, is also essential to understanding and evaluating the effects of metropolization. Similarly, only a concerted process between different metropolitan players (political, economic, spatial planning professionals, the population) will make it possible to set up a large-scale sustainable urban development project for HCMC. Public authorities should equitably account for the demands—both voiced and latent—of the most disadvantaged urban inhabitants. Interfaces between bottom-up and top-down socio-political dynamics must be multiplied in order to entrench local democracy as a habitual social practice. A participatory process of this kind requires, furthermore, that all urban players be made aware of, and educated about, environmental issues.

## References

- Bassand, M., Jean-Claude Bolay, Antonio Cunha et al.  
*Développement durable, métropolisation et pollutions des ressources naturelles à Ho Chi Minh Ville, Vietnam*, Ecole Polytechnique Fédérale de Lausanne (EPFL)–ENCO, Lausanne and Ho Chi Minh City, 1996.
- Bassand, M., Thai Thi Ngoc Du, J. Tarradellas, A. Cunha and J.-C. Bolay (eds.)  
*Métropolisation, crise écologique et développement durable: L'eau et l'habitat précaire à Ho Chi Minh City, Vietnam*, Presses Polytechniques et Universitaires Romandes (PPUR), Lausanne, 2000.
- Bolay, J.-C.  
"Ho Chi Minh Ville, sous la pression du réel", *Polyrama*, N° 114, EPFL, Lausanne, 2000.
- Bolay, J.-C. and Thai Thi Ngoc Du  
"Sustainable development, urbanization and environmental risks: The priority of local actions in Ho Chi Minh City, Vietnam", *Journal of Urban Technology*, Vol. 6, No. 2, 1999, pp. 65–85.
- Bond, Tim et al.  
*Poverty in Ho Chi Minh City: Results of Participatory Poverty Assessments in Three Districts*, Save The Children, Hanoi, 1999.
- Cassen, B.  
"Du bon usage des 'valeurs asiatiques': Un concept sur mesure né à Singapour et à Kuala-Lumpur", *Le Monde Diplomatique*, August 1995, p. 2.
- De Vienne, M.-S.  
*L'économie du Viet-Nam (1955–1995)*, CHEAM, Paris, 1994.
- D'Monte, D.  
"Corruption, safety and environmental hazard in Asian societies", *Economic and Political Weekly*, Vol. 35, No. 33, 2000, pp. 2959–2968.
- Do Thai Dong  
"Economie de marché et transformations sociales au Vietnam", *Alternatives Sud*, Vol. 1, No. 2, 1994, pp. 121–134.
- Economist Intelligence Unit (EIU)  
*Vietnam, Country profile 1998–1999*, EIU, London, 1998.
- Goldblum, C.  
*Métropoles de l'Asie du Sud-Est: Stratégies urbaines et politiques du logement*, L'Harmattan, Paris, 1988.
- Land and Housing Department (HCMC)  
*Housing in Ho Chi Minh City*, LHD, Ho Chi Minh City, 1995.
- Maurer, J.-L.  
"Etat fort, développement et crise de modernisation en Asie", in M. Hufty (ed.), *La Pensée Comptable: Etat, Néolibéralisme, Nouvelle Gestion Publique*, PUF–IUED, Paris-Geneva, 1998.

- Metzger, R.  
*Sustainable Slum Upgrading. Architectural Analysis of the Slum Housing in Ward 15, Ho Chi Minh City*, Rapport de recherche No. 134, IREC-EPFL, Lausanne, 2000.
- Pernia, E.M.  
"Southeast Asia", in R. Stren, R. White and J. Whitney (eds.), *Sustainable Cities. Urbanization and the Environment in International Perspective*, Westview Press, Boulder, CO, 1992.
- Phuong, PK, C.P.N. Son, J.J. Sauvain and J. Tarradellas  
"Contamination by PCB's, DDT's and heavy metals in sediments of Ho Chi Minh city's canals, Vietnam", *Bulletin of Environmental Contamination and Toxicology*, No. 60, 1998, pp. 347-354.
- Richer, P. (ed.)  
*Crises en Asie du Sud-Est*, Presses de Sciences Po, Paris, 1999.
- Ruscio, A. (ed.)  
*Viet Nam: L'Histoire, la Terre, les Hommes*, L'Harmattan, Paris, 1989.
- Ton That Nguyen Thiem  
"Modernisme, modernité, modernisation: itinéraire de la société civile au Vietnam", *Transitions*, Vol. 37, No. 1, 1996, pp. 165-198.
- Wust, S.  
*Métropolisation, Habitat Précaire et Relogement Forcé: Entre Phénomènes d'Exclusion et Tactiques Populaires d'Intégration. Le cas du canal Nhieu Loc-Thi Nghe à Ho Chi Minh City, Vietnam*, Ph.D. Thesis, EPFL, Lausanne.