

**ENVIRONMENTAL POLLUTION SITUATION  
AND INDUSTRIAL RELOCATION PROGRAM IN HO CHI MINH CITY**

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**1. Overview of HCMC environmental situation**

Ho Chi Minh city (HCMC) is one of the largest economical and population center of Vietnam. According to statistical figure of the year 2001, within 25 years. HCMC population has increased from 2.5 millions in 1975 to more than 5.2 millions in 2001 (HCMC Statistical Book. 2001). In practice. the actual population could be more than 6 millions as a large amount of habitant were not registered with the local government. The average population density is 2.865 pers/km<sup>2</sup>.

The total area of HCMC is 2.093 km<sup>2</sup>. including 22 districts in which. 17 urban districts and 5 rural districts. However. the urban districts just occupy a small area about 450km<sup>2</sup>; the rest belongs to rural districts. Table 1 shows the distribution of area and population in each district.

**Table 1      Distribution of area and population of Ho Chi Minh City**

No.	District	Area (km <sup>2</sup> )	Population	No. of Environmental Management Offical (pers)
1	District 1	7.73	227,805	1
2	District 2	49.74	108,497	1
3	District 3	4.92	223,897	1
4	District 4	4.18	197,583	1
5	District 5	4.27	210,989	3
6	District 6	7.19	262,379	1
7	District 7	35.69	117,149	1
8	District 8	19.18	341,913	2
9	District 9	114.00	156,647	1
10	District 10	5.72	245,904	2
11	District 11	5.14	244,189	1
12	District 12	52.78	193,224	2
13	Binh Thanh District	20.76	407,758	1
14	Go Vap District	19.74	245,420	2
15	Phu Nhuan District	4.88	184,482	1
16	Tan Binh District	38.45	634,995	2
17	Thu Duc District	47.74	223,866	1
18	Binh Chanh District	304.57	365,580	1
19	Cu Chi District	434.50	255,844	2
20	Hoc Mon District	109.18	210,358	1
21	Nha Be District	100.41	66,586	1
22	Can Gio District	704.22	60,389	1
<b>Total</b>		<b>2095.01</b>	<b>5,285,454</b>	<b>30</b>

*(Source: HCMC Statistical Year Book, 2001)*

The industrialization and urbanization of HCMC has increased rapidly for many years ago. In 70s and 80s of the 20<sup>th</sup> century, most of the small enterprises have established in residential areas. From 1990s up to now, the city has established and build-up successfully Izs and EZs. At this present, HCMC has 13 IZs and EZs with 700 enterprises approximately are in operation. In addition, there are nearly 30,000 enterprises located scattered in city area and causing serious pollution for the city environment.

The city infrastructure such as water drainage and road system that have build up from 19<sup>th</sup> century are outdated and overload. Many of city areas are facing with the problem of flooding during rainy season and traffic congestion in break hours. Many of unplanned residential areas have developped without infrastructure system such as drainage, water supply system. As a consequence, ground-water is being polluted and over-exploited at critical level.

Wastewater of the city is mostly untreated, flowing into digesters and discharge to drainage system and open canals. Besides that, a large amount of solid waste were thrown by poor consciouness people that increase pollution situation and prevent the streams causing flood in residential areas and road system. The canal system plays the role not only for rain- water discharge, but also for wastewater discharge. As predicted, the volume of wastewater in 2010 will be double with the present volume, i.e approximately 1.2 million m<sup>3</sup>/day.

Solid wastes collect over 5,000 ton/day, in which 4,500 ton/day of domestic waste, 800 ton/day of construction waste and medical waste 10 ton/day approximately. In 2010, the domestic waste is predicted about 8,000 ton/day, double with the current amount at this present. At this moment, with such amount of solid waste, the municipal government has got difficulties in environmental management and pollution treatment, especially with leachate treatment. Industrial and toxic wastes are uncollected and untreated safely.

Air pollution problem of HCMC is caused by exhaust gas from means of transportation and industrial production activities. The registered quantity of motobike in HCMC is more than 2 millions with average increasing rate is 13%. There is a fact that HCMC used to have traffic jams in break hours and accumulating the air pollution of the city more and more. The enterprises located in residential areas discharge toxic air, polluted wastewater and noise exceeding the environmental standards that effect to community' s health.

## **2. Pollution control through Relocation Program in HCMC**

The contradiction between industrial development and environmental pollution in HCMC has been becoming a big challenge for the city in the integration and sound development process.

In the HCMC area, there are over 30,000 industries and small-scale industries with more than 480,000 workers. These industries produce a big quantity of goods, obtaining 1/3 industrial production value in the whole country. Besides the achievements the industry branch contributes to the city, environmental pollution issues due to industrial activities are more and more seriously. In the resident centralized main areas such as District 5, 6, 11, Tan Binh District and the districts located around the city centre such as District 8, 9, Thu Duc District, District 12, etc., environmental pollution situation is very serious.

In technological aspect, generally, a minority of industries is modern, and the rest is average and obsolete. In addition, investment level for environmental protection is still low, industrial activities and small – scale industrial activities have been polluting the environment in many aspects such as air pollution, surface water and underground water pollution, smoke and dust pollution, and noise, etc.

Since the National Environmental Protection Law was promulgated, the city government has steered to carry out pollution overcoming programs as follows:

- The Pollution Situation Survey Program, which was carried out from 1993 – 1996. The program carried out concrete surveys and measured pollution level in 265 industries. The survey program issued “Black Book” including 87 industries having pollution levels, which exceed many times if compared to the permitted limits.
- The Cleaner Production Program is carried out by United Nations Industrial Development Organization (UNIDO) and funded by SIDA.
- The Revolving Fund and Industrial Pollution Reduction Program from a loan of The Asian Development Bank (ADB).
- The low cost and modernizing company support program to create competition and promote export (by Promoting fund for company supporting need).
- Carried out policies in planning branches, constructing concentrated industrial zones, relocating industrial structure in accordance with urban development plan in the city, etc.

The policy of implementing industrial relocation contributes not only to reduce environmental pollution but also to renovate technology and equipment of industries. Industrial relocation in HCMC also contributes to relocate residential areas, changes industrial structure and labour structure in the suburbs and renovates urban areas in HCMC.

Up to now, however, all whole city has 3,000 polluting industries including over 1,200 polluting industries must be relocated by the surveys. In which, 14 heavy polluting production fields need to be concentrated to settle such as chemicals, tannery, bleaching and dyeing, products made from rubber, wood processing, paper, food processing, etc.

Before the current environmental pollution situation, HCMC Committee of the Party, HCMC People’s Committee steered that it is pressing and necessary to carry out the program of industrial relocation to concentration zones and surrounding areas. This program carried out from the early 2002 and basically finished at the end of 2004. The main purpose of this program is to carry out 3 tasks, which are pressing and necessary at the same time :

1. Defining objects causing environmental pollution and objects need to be relocated;
  2. Planning industrial zones and new areas where the polluting industries can move to;
  3. Carrying out support policies for relocation of industries.
- Objects causing environmental pollution are industries causing environmental pollution levels exceeding permitted standards defined by criteria promulgated by Ministry of Science, Technology and Environment. In these cases, locations and

equipment/technologies, land use as well as social – economic benefits of industries are carefully considered.

- Regarding to planning industrial zones, HCMC has been concentrating to hasten the process of compensation and clearance, investment and construction 14 concentrated industrial zones and groups of small scale industries in districts. At present, HCMC has been promoting activities : investment and construction of industrial zones serving industrial relocation such as Hiep Phuoc Industrial Zone; extension of Le Minh Xuan Industrial Zone, Tan Tao Industrial Zone, Vinh Loc Industrial Zone; re-planning of Tan Phu Trung Industrial Zone, An Ha Industrial Zone (IZ); construction of groups of industries and small scale industries in districts, etc.
- Regarding to carrying out the support policies, the City promulgated Decisions no. 78, 80, 81 and 08, stipulating objects, which are given the support policies when relocation and the other support policies such as : Acceptance of function changes of industries, selling properties and obsolete equipment in order to create new investment capital to industrial zones, exemptions of land use fees, taxes, subsidies for interest rates, training support and labour settlement, etc. Especially, paying more attention of support policies for investors constructing industrial zones to serve the industrial relocation program for facilities such as centralized waste water treatment plant, transport facilities and public facilities serving staff and workers of relocated industries : kindergartens, medical stations.

The city government also agreed with Ministries, Branches, General Corporations, districts to define and issue a list of environmental polluting industries, issuing a list of 14 fields, which are polluting and are not granted for their continuous business licenses or new investment permits in the residential concentrating areas.

As soon as the early 2002, the city government organized to carry out pilot relocation of 10 main industries in order to be able to improve and perfect the support policies for industrial relocation.

In the period of 2003 – 2004, the city government concentrates on:

- Supplement, complete policies encouraging industrial relocation;
- Disseminate detailed plans of industrial zones, industrial groups, trade villages (home craft and small scale industries) beside or in concentrated industrial zones.
- Issue a list of industries, which must be relocated with schedule for relocation so that the public can participate in control activities.
- Guide procedures of industrial relocation:
  - + Guide industries implementing relocation to prepare an investment project for relocation and look for a new site.
  - + Guide industries, which need to treat environmental pollution issues at sites to prepare a project of environmental pollution treatment.
  - + Enhance information exchanges, close cooperation with authorities and industries. Disseminate representing cases. Launch campaigns of awareness raising to positively impact the program in according to the plan.

- + Organize to carry out the pilot program of wastewater fee collection for industries.
  - + Approve decentralized administration for environmental management activities in IZs for IZ Units.
  - + Set up program of operation with Departments, districts to enhance control, monitoring of implementing environmental protection requirements according to the regulations.
- Regarding to costs for implementation of industrial relocation program, it is implemented according to the guideline “Both the State and industries have responsibilities”. Apart from industry – own capital, loans, the city government withdraws approximately VND 200 billion per year from the budget for compensation for interest rates industries must to pay when carrying out relocation and implementing environmental pollution reduction at sites if these cases appropriate to industrial plans in HCMC area.
  - Regarding to framework of organization and management for the program of environmental pollution reduction and industrial relocation to centralized IZs and surroundings. The city government established the Steering Unit including one head (Vice Chairman of HCMC PC has responsibilities for industrial activities), one standing deputy head (Deputy Director of Department of Industry), one deputy head and some other members including leadership of Departments : Department of Science, Technology and Environment, Department of Planning and Investment, Department of Finance, Department of Planning and Architecture, Department of Agriculture and Rural Development, Department of Land and housing, Department of Construction, HCMC Security Office, HCMC Investment Fund for Urban Development (HIFU), Export Processing & Industrial Zones Unit, Tax Office, and the representatives of 22 districts, the representatives of Ministry of Industry, Ministry of Science, Technology and Environment, Ministry of Construction, etc.
  - **After being actively carried out for nearly 2 years, the program has achieved some good results as follows:**
    - Approved for over 1,000 industries having relocation plans (in which, 93 units will relocate in 2003);
    - 126 units have relocated;
    - 56 units have changed their products and over 1,800 units have overcome their environmental pollution issues at sites;
    - According to the first inventory, units relocating to the IZs have newly invested approximately VND 1,000 billion, including approximately VND 600 billion for basic construction and VND 400 billion for equipment, technology and recruited thousands of new labours.

The program has created synchronous and united changes amongst departments, levels, units of companies and local authorities, especially companies in awareness, significance of the objectives and implementation plan for the industrial relocation program. Along with production development and job settlement for labours, social responsibilities and the public awareness of responsibilities for environmental protection have been strengthened and raise higher and higher. The city government has carried out solutions of propagation

and training, economic as well as enforcement to ensure carrying out successfully the program of environmental pollution reduction and industrial relocation to centralized IZs and surroundings.

Hoping that the leadership of the Party executive committee and the city government, implementation efforts of departments and districts and especially companies adding support – consultancy – assistance of international organizations as well as experiences in settlement of environmental pollution issues of the friendly cities will help HCMC in the early period of integration and sound development.