



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

METROPOLITAN MANILA DEVELOPMENT AUTHORITY (MMDA)
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH)
THE REPUBLIC OF THE PHILIPPINES

THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METROPOLITAN MANILA, REPUBLIC OF THE PHILIPPINES

FINAL REPORT SUPPORTING REPORT *Volume II*



MARCH 2005

PACIFIC CONSULTANTS INTERNATIONAL
NIKKEN CONSULTANTS, INC



G E
J R
05-025

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

METROPOLITAN MANILA DEVELOPMENT AUTHORITY (MMDA)
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH)
THE REPUBLIC OF THE PHILIPPINES

**THE STUDY ON
DRAINAGE IMPROVEMENT
IN THE CORE AREA
OF METROPOLITAN MANILA,
REPUBLIC OF THE PHILIPPINES**

**FINAL REPORT
SUPPORTING REPORT
*Volume II***

MARCH 2005

PACIFIC CONSULTANTS INTERNATIONAL
NIKKEN CONSULTANTS, INC

Foreign Currency Exchange Rates Applied in the Study

Currency	Exchange Rate/USD
Philippine Peso (Php)	55.0
Japanese Yen (JPY)	110.0

(Rate as of July, 2004)

TABLE OF CONTENTS

Supporting Report (Volume I)

A. Database

B. Meteorology and Hydrology

C. Flood and Inundation

D. Mathematical Model and Simulation

E. Drainage Facility Plan

F. Preliminary Design

G. Cost Estimation

H. Economic Evaluation

Supporting Report (Volume II)

I. Social Issues

J. Public Participation

K. Environment (IEE and EIA)

L. Solid Waste Survey on Esteros

M. Guideline for Drainage Improvement

N. Workshop / Seminar

Supporting Report (Volume III)

O. Experiment at Pilot Barangays

I. SOCIAL ISSUES

TABLE OF CONTENTS

	<u>Page</u>
I.1 Social Profiles of Study Area	I - 1
I.1.1 Administrative Hierarchy and Metropolitan Manila	I - 1
I.1.2 Population and Household	I - 4
I.1.3 Household Economy	I - 13
I.1.4 Poverty	I - 13
I.1.5 Literacy, Education and Information.....	I - 15
I.1.6 Public Health.....	I - 17
I.1.7 Solid Waste Management.....	I - 22
I.1.8 Other Social Services Related to Drainage Improvement.....	I - 22
I.2 Informal Settlers.....	I - 23
I.2.1 Definition of Informal Settlers	I - 23
I.2.2 Number of Informal Settlers in Metro Manila	I - 23
I.2.3 Number of Informal Settlers along Esteros Surveyed by DPWH.....	I - 23
I.2.4 Numbers of Buildings within Esteros based on Analysis of Aerial Photograph.....	I - 24
I.2.5 Actual Counting of Number of Families within Estero de Tripa de Gallina.....	I - 29
I.3 Social Surveys.....	I - 30
I.3.1 General	I - 30
I.3.2 House-to-House Survey	I - 31
I.3.3 Findings from the Key Informants Survey.....	I - 41
I.3.4 Results of the Mail Survey	I - 47
I.4 Social Framework of Resettlement	I - 57
I.4.1 Legal Framework of Resettlement	I - 57
I.4.2 Institutional Framework and Roles of the Concerned Government Agencies	I - 58
I.4.3 Resettlement Procedures	I - 68
I.4.4 Current Practice in the Philippines.....	I - 71
I.4.5 Past Experiences on Resettlement Operation.....	I - 72
I.4.6 Problem Points	I - 73
I.4.7 Guidelines for Social Framework of Resettlement	I - 75
I.4.8 Basic Model for Resettlement Site and Necessary Assistance.....	I - 79
I.4.9 Recommendations	I - 84
I.4.10 Cost for Resettlement.....	I - 86
I.4.11 Present Situations of Resettlement Sites	I - 87
 ANNEX I.1	 SUMMARY RESULTS OF SOCIAL SURVEY
 ANNEX I.2	 RESETTLEMENT LAW

LIST OF TABLES

	<u>Page</u>
Table I.1.1 Number of Barangay in the Study Area	I - 2
Table I.1.2 Population Ranking of Urban Agglomerations in East Asia & South-East Asia, 2000.....	I - 4
Table I.1.3 Population, 2000 / 1995 / 1990	I - 5
Table I.1.4 Population and Household Number, 2000	I - 6
Table I.1.5 Population Density in Study Area, 2000 (City boundary basis)	I - 7
Table I.1.6 Population Density in Study Area, 2000 (Barangay boundary basis)	I - 7
Table I.1.7 Household Size by City and Municipality	I - 9
Table I.1.8 Types of Building and House by City and Municipality.....	I - 10
Table I.1.9 Tenure Status of the Lot.....	I - 10
Table I.1.10 Floor Area of the Housing Unit.....	I - 11
Table I.1.11 Construction Materials of the Outer Walls.....	I - 11
Table I.1.12 Construction Year of Buildings / Housing	I - 12
Table I.1.13 State of Repair.....	I - 12
Table I.1.14 Number of Families by Income Level.....	I - 13
Table I.1.15 Number of Families Below Php 80,000 Income Level	I - 14
Table I.1.16 Dependency Ratio, 1995	I - 14
Table I.1.17 Literacy Rate	I - 15
Table I.1.18 Educational Attainment of People in the Study Area, Year 2000.....	I - 16
Table I.1.19 Main Sources of Water Supply for Drinking, and/or Cooking by City and Municipality	I - 18
Table I.1.20 Main Sources of Water Supply for Laundry and/or Bathing by City and Municipality	I - 18
Table I.1.21 Types of Toilet Facilities of Households	I - 19
Table I.1.22 Top Ten Leading Causes of Morbidity	I - 20
Table I.1.23 Top Ten Leading Causes of Mortality	I - 21
Table I.2.1 Number of Households and Number of Informal Settlers, 2002.....	I - 23
Table I.2.2 Number of Buildings within Esteros (1/2)	I - 25
Table I.2.2 Number of Buildings within Esteros (2/2)	I - 26
Table I.3.1 Roofing Material	I - 35
Table I.3.2 Walling Materials.....	I - 36
Table I.3.3 Perception on Flood Mitigation by Proximity to Estero	I - 38
Table I.3.4 Number of Questionnaires Delivered and Retrieved.....	I - 47
Table I.3.5 Sense of Degrading Environment.....	I - 48
Table I.3.6 Willingness of Financial Contribution	I - 48
Table I.3.7 Practicing Separate Disposal.....	I - 49
Table I.3.8 Availability of Collection Services	I - 49
Table I.3.9 Frequency of the Collection Services.....	I - 50
Table I.3.10 Government Assistance.....	I - 50
Table I.3.11 Informal Settlers Relocation.....	I - 51
Table I.3.12 Summary of the Mail Survey Results.....	I - 52
Table I.4.1 Responsibilities for Resettlement Operation.....	I - 70

LIST OF FIGURES

	<u>Page</u>
Figure I.1.1	Population Growth I - 5
Figure I.1.2	Population Growth Ratio..... I - 5
Figure I.1.3	Population Density by Barangay I - 8
Figure I.2.1	Channel Section..... I - 27
Figure I.2.2	Encroachment within Esteros I - 28
Figure I.4.1	DPWH-Infrastructure Right of Way and Resettlement Project Management Office..... I - 59
Figure I.4.2	HUDCC Council Members I - 63
Figure I.4.3	HUDCC Organizational Chart I - 64
Figure I.4.4	National Housing Authority I - 65
Figure I.4.5	Inter-Agency Committee..... I - 77
Figure I.4.6	Proposed Projects for Settlement Site I - 83

I.1 SOCIAL PROFILES OF STUDY AREA

I.1.1 ADMINISTRATIVE HIERARCHY AND METROPOLITAN MANILA

The Philippines consists of 16 regions, 79 provinces and 114 chartered cities and 1,496 municipalities spread across its 7,017 islands. The city of Manila locates in the “National Capital Region (NCR)”.

NCR is also called as “Metropolitan Manila”, defined as a capital area consisting of 16 cities and 1 municipality (as of June 2004) covering a land area of 616 km² and accounting for approximately 0.2% of the country’s total land area.¹

Cities and municipalities are also called LGUs (local government units), and administratively divided into district, then, into zones and into “*barangays*”. Barangays are the smallest administrative units. There are 41,939 barangays in the Philippines and about 4%, or 1,694 barangays are in Metropolitan Manila. (Census 2000)¹ The City of Manila, for example, is divided into 6 districts, and each district is composed of about 10 to more zones, totalling 99 zones. Each zone has several to more than 20 barangays. Each barangay is given numbers from 1 up to 897. Similarly, Pasay city is divided into 2 districts and 20 zones, then into 201 barangays. The administrative division of the city of Makati is slightly different. The city is divided into 2 districts, then divided into 32 barangays and each barangay is given names instead of the numbers.

The Local Government Code (LGC), or Republic Act 7160, of 1991 devolved governance from the national government to LGUs (i.e. cities and municipalities), and mandates the LGUs to provide efficient and effective governance and promote general welfare within their respective territorial jurisdictions. With the passage of the LGC, several functions were devolved from the national government to the LGUs including, but not limited to, the provision of basic health services, land use planning, environmental management, agricultural development, and livelihood support development. In addition to these increased decentralization, the participation of NGOs and People’s Organizations (POs) in the planning, implementation and monitoring of LGU-led projects relatively increased.

(1) Barangays in the Area of Master Plan Study

The Study Area (73.4 km²) covers the core area or 12% of Metropolitan Manila, consists of the following six LGUs ² :

- Caloocan
- Manila
- Quezon
- Pasay
- Makati
- Taguig

Table I.1.1 Number of Barangay in the Study Area

	Metropolitan Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig
Study Area (Master Plan)	1,199	119	848	18	190	22	2
Total Area	1,694	188	897	142	201	33	18

Source: Census 2000, NSO

(2) Organization of Barangay Office

Each barangay is headed by a barangay captain (*punong barangay*) who is elected by barangay people. The barangay captain leads the barangay council (*sangguniang barangay*) composed of seven barangay councillors (*kagawad*) and Youth Council (*Sangguniang Kabataan, or SK*) Chairman. There is also a barangay secretary and a barangay treasurer. The Youth Council composed of the SK Chairman and SK Councillors directs the youth-oriented activities in the barangay.

The barangay captain, councillors and Youth Council members are elected officials. They may run for office for three consecutive terms (one term = 3 years). The secretary and treasurer are appointed.

(3) Tasks and Responsibility of Barangay Captain

Tasks and responsibilities of barangay captain, as mandated by the Local Government Code of 1991, are as follows:

- i) Ensure the delivery of the following basic services [Sec. 17 (B-1-i to viii) and Sec. 389];
agricultural support services, i.e., planting materials, distribution system, farm produce collection and buying stations;
health and social services, i.e., barangay health and day care center;
services and facilities related to hygiene and sanitation, beautification and solid waste collection and disposal;
katarungang pambarangay program (barangay justice program);
barangay roads and bridges and water supply systems;
infrastructure facilities, i.e., multi-purpose hall and pavement, plaza, sports center;
information and reading center; and
satellite or public market.
- ii) Chair the barangay development council and implement the barangay development plan, projects and activities [Sec. 107; EO 309, Series of 1987];
- iii) Prepare barangay budget [Sec. 331];
- iv) Maintain peace and order, and organize and lead an emergency group during emergency or calamity [Sec. 389];
- v) Enforce pollution control and environmental protection laws [Sec. 389; DILG MC 94-66 dated 25 April 1994];
- vi) Supervise the Sangguniang Kabataan [Sec. 389 (B-11)];

vii) Conduct annual Palarong Barangay (barangay games) [Sec. 389-13], organize and chair the barangay physical fitness and sports development council [EO 63 and 64 both dated March 1, 1993];

viii) Organize community brigades and barangay tanods (watch) [Sec. 389; EO 309, Series of 1987];

Other tasks and responsibilities of barangay captains pursuant to presidential directives and department memorandum and circulars pertinent to the Study are found in the following:

Social Reform Agenda (SRA) – Presidential Proclamation 548, dated March 6, 1995, Presidential Memorandum Order 213, dated June 17, 1994; and Administrator Order 194, dated May 30, 1995):

as a barangay lead convenor, coordinate implementation of the convergence policy through the city development council or any multi-sectoral body created by the barangay;

institutionalize the minimum basic needs (MBN) strategy/approach for the entire barangay, and use the MBN survey for planning and implementation of poverty reduction program;

establish an MBN information system to be updated at least once a year at the beginning of the year;

prioritize basic needs in local plans to meet MBN targets/requirements as a take-off point to alleviate poverty. The MBNs shall be the core of poverty alleviation plans;

set up mechanisms to forge cooperation among flagship champions and support agencies/entities with the basic sectors and partners in civil society at the barangay level;

set poverty reduction targets;

maintain barangay health center and provide services and facilities related to general hygiene; provide access to sanitary toilets;

provide/allocate budgetary requirements to implement SRA/MBN;

work closely with the concerned convergence lead agencies to ensure the delivery of the following basic reform commitments:

peace and order/public safety (DILG); and

institution building and effective participation in governance (DILG)

maintain day care centers;

assist the families in ensuring that no domestic violence take place;

encourage and enhance participation of non-government organizations (NGOs), people's organizations or associations among constituents to participate in community development;

ensure involvement of NGOs and POs present in the convergence areas in monitoring and evaluation activities;

spearhead data gathering and mobilization of barangay volunteers;

prioritize MBNs and take action on identified urgent needs that can be addressed;

ensure that the activities are prioritized to address MBNs;

ensure that MBN projects and programs are integrated in the barangay development plan;

submit MBN reports to the municipal/city government;

monitor regularly the achievement of MBNs of families;

provide financial counterpart/logistical support in all phases of SRA/MBN operationalization; and

disseminate feedback information to the community in general.

Human Ecology and Security (HES)– (Memorandum from the president dated June 17, 1995; DILG MC 95-94, July 10, 1995; and DILG MC 95-130 dated August 30, 1995):

review and revise development plan to respond to identified HES concerns of the barangay;
advocate and enforce the use of environment-friendly technologies such as bio-farming, composting, waste recycling and the like;
prevent practices that are harmful to the environment such as smoke-belching, industrial pollution, toxic waste dumping, illegal fishing and other similar practices;
incorporate the objectives of the women in development in the barangay development plan;
prepare a separate plan to support HES concerns;
generate from other possible sources funds to further support HES programs and projects;
provide an effective LGU-NGO partnership;
provide for a continuing dialogue and consultations with barangay-based NGAs/NGOs/POs for a common HES-related framework and agenda; and
submit monthly accomplishment report to the municipal/city mayor within the first week of the month immediately following the end of the quarter.

Clean and Green – (Presidential Memorandum Order 187, S. 1993 and DILG MC 95-111, August 10, 1995; Executive Order 100, June 14, 1993; Executive Order 118 dated August 12, 1993; and DILG MC 94-27, February 17, 1994):

formulate and implement a barangay cleanliness drive in support of the clean and green program of the municipality/city; and
participate in the nationwide urban greening, through adopt-a-street/park program.

I.1.2 POPULATION AND HOUSEHOLD

(1) Population Concentration on Metropolitan Manila

The Philippines is experiencing rapid population growth, and today's number of 76.5 million people is forecasted to reach 104.5 million people by the year 2025 even in low assumption. Metropolitan Manila is the largest, most densely populated and most economically advanced urban centre in the country. Not surprisingly it is facing a range of environmental problems and issues similar to those being experienced in other mega cities. Among the mega cities in south-east Asia, Metropolitan Manila is one of the highly populated cities.

Based on the latest Population Census in 2000 conducted by the National Statistics Office, Metropolitan Manila had a total population of 9,932,560.³ The top three LGUs in terms of total population are Quezon City, Manila City, and Caloocan City.

1	Tokyo	26,444
2	Changhai	12,887
3	Jakarta	11,018
4	Osaka	11,013
5	Metro Manila	10,870
6	Beijing	10,839
7	Seoul	9,888
8	Tianjin	9,156
9	Bangkok	7,281
10	Hong Kong	6,927

Table I.1.2

Population Ranking of Urban Agglomerations in East Asia & South-East Asia, 2000

Source:
<http://www.un.org/esa/population/publications/wup1999/WUP99CH6.pdf>,
United Nations

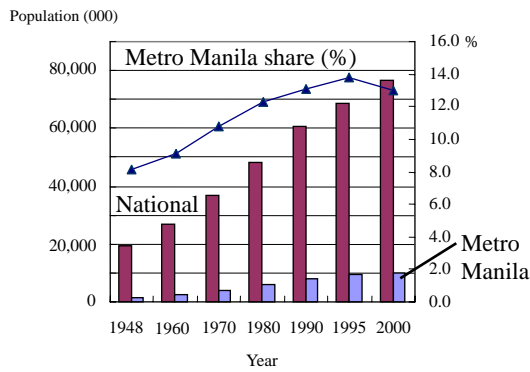


Figure I.1.1 Population Growth

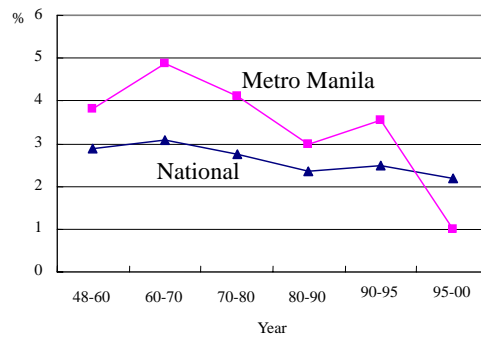


Figure I.1.2 Population Growth Ratio

Sources: Philippine Institute for Development Studies
MMEIRS database, 2003

The figure above *I.1.1* shows population growth of Metropolitan Manila. Comparing the share of the population of Metropolitan Manila to that of the national, it was only 8% of the total population in 1948 but it shared almost 14% of the total population in 2000 due to the rapid centralization and urbanization that started in the 1980s.⁴

It can be interpreted from the figure above *I.1.2* that annual population growth of Metropolitan Manila was always higher by 1% to 2% than national growth ratio, except for the years of 1995 to 2000. Annual population growth decreased in 1995 to 2000 to 1% from 3.5% in 1990 to 1995.

(2) Suburban Sprawl in Study Area

While the population in Metropolitan Manila continues to grow, the Study Area as the core area of Metropolitan Manila shows different trends recently. Although populations of Caloocan, Quezon and Taguig have kept growing, that of Makati has stopped, and Manila and Pasay populations have started to decline after 1995. This trend is regarded as suburban sprawl phenomenon in the surrounding area of Metropolitan Manila.

Table I.1.3 Population, 2000 / 1995 / 1990

LGU	Population			Population Growth	
	2000	1995	1990	95-00	90-95
NCR(Metropolitan Manila)	9,906,048	9,454,040	7,948,402	0.94%	3.53%
City of Manila	1,581,082	1,654,761	1,601,234	-0.91%	0.66%
City of Makati	444,867	484,176	453,170	-1.68%	1.33%
Caloocan City	1,177,604	1,023,159	763,415	2.85%	6.03%
Pasay City	354,908	408,610	368,366	-2.78%	2.10%
Quezon city	2,173,831	1,989,419	1,669,776	1.79%	3.57%
Taguig City	467,375	381,350	266,637	4.15%	7.42%

Source: MMEIRS, National Statistics Office, 2002, compiled by JICA Study Team

In 2000, total population and household population in the cities and municipality which includes the Study Area is 6.16 million and 6.20 million, so that 40,000 people live in hotels, motels, dormitories, hospitals, welfare institutions, refugee camps and other institutional living quarters.

Table I.1.4 Population and Household Number, 2000

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Area (km ²)	597.8	53.1	41.3	165.3	17.7	32.0	27.5	336.9
Total Population	9,932,560	1,177,604	1,581,082	2,173,831	354,908	444,867	467,375	6,204,667
Household Population	9,862,978	1,174,673	1,568,092	2,158,367	353,798	442,144	462,591	6,159,667
Number of Households	2,132,989	249,567	333,547	480,624	78,180	98,225	102,723	1,342,866

Source: Report No. 1-M Population by Province, City/Municipality and Barangay, National Capital Region Census 2000, NSO

Data of residential area: MMEIRS database

Note : Total of 6 cities includes outside area across border of Study Area.

(3) High Population Density in Study Area

Population density of Metropolitan Manila is 16,615/km² in year 2000, far exceeding the national average of 226/km². Congestion is more evident in the study area. The following table shows that population density of LGUs in Study Area exceeds the average of Metropolitan Manila except Quezon City and City of Makati.

Table I.1.5 Population Density in Study Area, 2000 (City boundary basis)

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Total Area (km ²)	597.8	53.1	41.3	165.3	17.7	32.0	27.5	336.9
Population Density (Pop./km ²)	16,615	22,177	38,283	13,181	20,051	13,902	16,996	18,417
HH Population Density	16,499	22,122	37,968	13,057	19,989	13,817	16,822	18,283
Residential Area (km ²)	295.3	36.0	15.4	77.2	5.5	15.1	13.0	162.2
HH Pop. Density per Residential Area (Pop./km ²)	41,391	32,646	102,017	27,942	64,253	29,236	35,573	48,611
Number of Households	2,132,989	249,567	333,547	480,624	78,180	98,225	102,723	1,342,866
HH Density (No. of HH/km ²)	3,568	4,700	8,076	2,908	4,417	3,070	3,735	3,986

Source: Report No. 1-M Population by Province, National Capital Region Census 2000, NSO

Data of residential area: MMEIRS database

Note : HH = Household

Total of 6 LGUs includes outside area across border of Study Area.

Density of household people of Metropolitan Manila is 16,499/km². The Density of household people in Manila, Caloocan and Pasay is about 38,000, 22,000 and 20,000/ km², respectively. On the other hand, Quezon and Makati have lower density of household population than average of Metropolitan Manila. This distribution pattern of density of household number looks same as that of population. Density of household number in Manila, Caloocan and Pasay is higher than Metropolitan Manila average (3,600 HH/km²), i.e., 8,100, 4,700 and 4,400/km², respectively, and Quezon and Makati have lower density of household numbers.

(4) Population Density by Barangay

The following table and figure show population density by barangay. The most congested barangay recorded 723,954 persons /km². Not only this area but also a much highly dense area is seen in the Study Area. As shown in the figure, very high population density barangays are generally located very close to esteros.

Table I.1.6 Population Density in Study Area, 2000 (Barangay boundary basis)

	The Densest Area
Manila	723,954 /km ² (Barangay 123)
Makati	64,025 /km ² (Barangay Kasilawan)
Caloocan	226,009 /km ² (Barangay 20)
Pasay	242,638 /km ² (Barangay 61)
Quezon	51,864 /km ² (Barangay Sto. Niño)
Taguig	22,379 /km ² (Barangay Western Bicutan)
Metropolitan Manila	16,117 /km ² Average
Philippine	226 /km ² Average

Source: Census data of National Statistics Office, GIS Database compiled by JICA Study Team

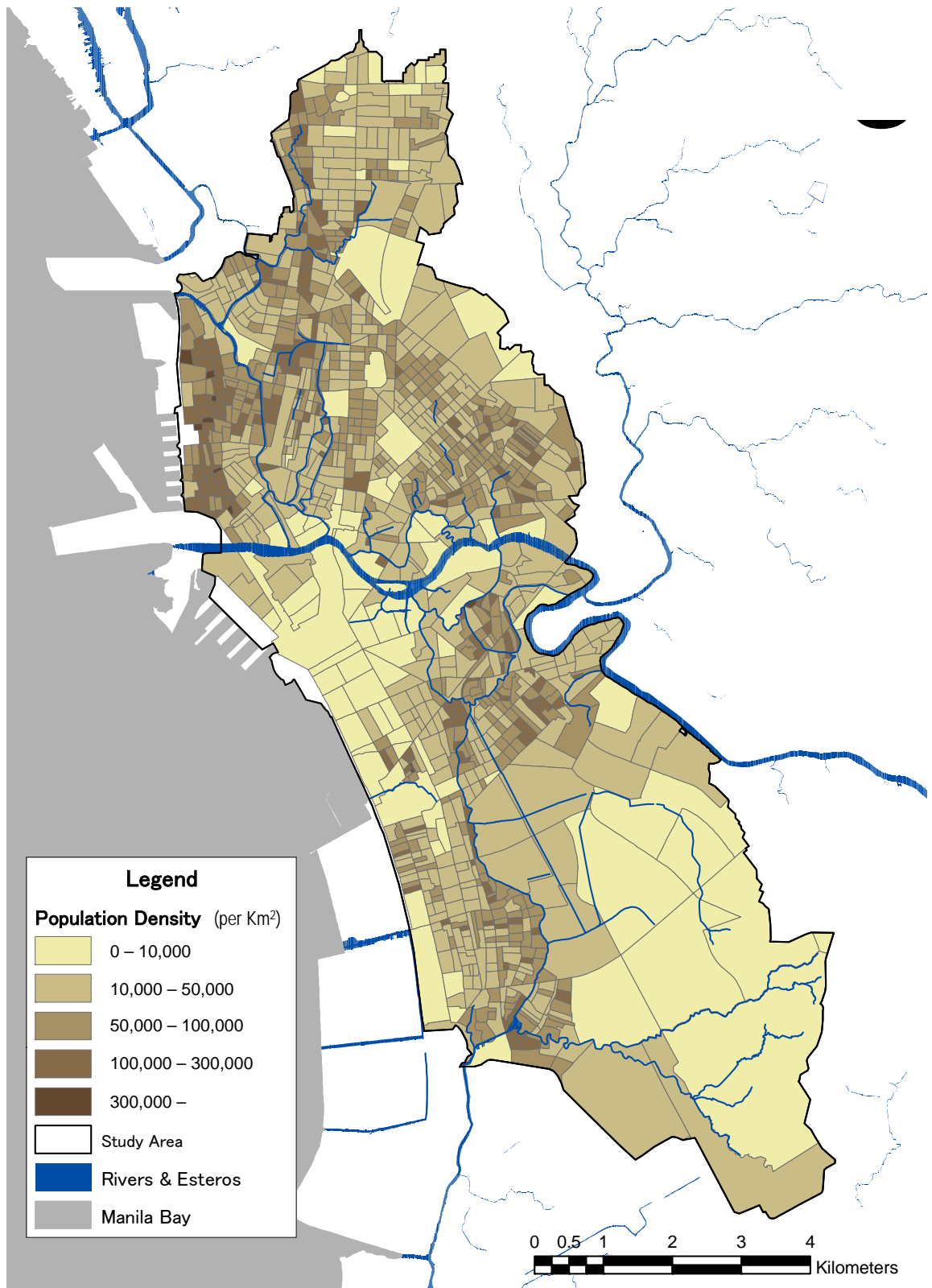


Figure I.1.3 Population Density by Barangay

(5) Household

Household size in cities in Study Area is shown in below. Household size ranges from 4.50 to 4.71, and there is no large difference. It is 4.57 on average. And compared with the Metropolitan Manila, household size in cities in Study Area is smaller.

Table I.1.7 Household Size by City and Municipality

	Metropolitan Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	6 LGUs Average
Average of HH Size	4.62	4.71	4.70	4.49	4.53	4.50	4.50	4.57

Source: Public Use File for NCR, Population and Housing Census, NSO

(6) Types of House & Building Materials

Outline of building conditions is shown in *Table I.1.8* to *Table I.1.13*. Based on the data of NSO, more than 50% of buildings are classified as “single house”, followed by “multi-unit residential” in the cities in Study Area.

Tenure status of the buildings classified as “owned/being amortized” and “rented” are dominant. Classification of “rent free without consent of owner”, that is, informal settlers still accounts for 8.9% in the Study area.

Some 49% of floor space of housing units range from less than 10m² and less than 30m² and 78% units are less than 50m². There is no significant difference among the cities. However, in terms of construction building materials, “concrete/brick/stone materials” is highest in Caloocan, Quezon, Makati and Taguig, which are lower density cities of household population per residential area. In other cities, Manila and Pasay, dominant materials are combination of “concrete/brick/stone” and “half concrete/brick/stone/ and half wood”.

40% of buildings were constructed in the 1990s. Buildings in the city of Manila are a little older compared with other LGUs. For instance, 15% of buildings in the city of Manila were constructed in the 1970s. On the other hand, 40% of buildings were constructed 15 years ago in other LGUs, however, 75% of them require repair.

Table I.1.8 Types of Building and House by City and Municipality

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Single house	1,238,280 58.1 %	155,474 62.3%	163,158 48.9%	272,835 56.8%	41,802 53.5%	44,961 43.2%	62,714 61.1%	740,944 54.9%
Duplex	186,016 8.7%	23,280 9.3%	22,271 6.7%	40,674 8.5%	5,703 7.3%	9,081 8.7%	12,327 12.0%	113,336 8.4%
Multi-unit residential	653,114 30.6%	64,303 25.8%	137,093 41.1%	152,806 31.8%	28,863 36.9%	47,219 45.4%	26,250 25.6%	456,534 33.9%
Commercial/Indu strial/Agricultural	13,672 0.6%	1,746 0.7%	3,665 1.1%	2,840 0.6%	521 0.7%	502 0.5%	262 0.3%	9,536 0.7%
Institutional /Living quarters	1,397 0.1%	87 0.0%	303 0.1%	355 0.1%	146 0.2%	147 0.1%	32 0.0%	1,070 0.1%
Other housing unit	7,010 0.3%	340 0.1%	2,378 0.7%	2,458 0.5%	306 0.4%	374 0.4%	31 0.0%	5,887 0.4%
Not Reported	33,500 1.6%	4,337 1.7%	4,679 1.4%	8,656 1.8%	839 1.1%	1,697 1.4%	1107 1.1%	21,315 1.6%
Total	2,132,989 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

Source: Public Use File for NCR, Population and Housing Census, NSO

Table I.1.9 Tenure Status of the Lot

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Owned/being Amortized	860,389 20.7%	119,970 48.1%	112,363 33.7%	174,500 36.3%	24,774 31.7%	37,058 35.6%	48,521 47.2%	517,186 38.3%
Rented	627,972 15.1%	63,673 25.5%	126,018 37.8%	121,160 25.2%	31,443 40.2%	37,453 36.0%	31,873 31.0%	411,620 30.5%
Rent-free with Consent of Owner	276,039 6.6%	28,875 11.6%	40,627 12.2%	62,976 13.1%	10,854 13.9%	14,429 13.9%	11,768 11.5%	169,529 12.6%
Rent-free without Consent of Owner	171,233 4.1%	15,824 6.3%	18,992 5.7%	73,901 15.4%	3,954 5.1%	4,313 4.1%	2,991 2.9%	119,975 8.9%
Not Reported	94,753 2.3%	10,974 4.4%	15,621 4.7%	25,491 5.3%	2,711 3.5%	5,139 4.9%	2,900 2.8%	62,836 4.7%
Not Applicable	102,603 2.5%	10,251 4.1%	19,926 6.0%	22,596 4.7%	4,444 5.7%	5,589 5.4%	4,670 4.5%	67,476 5.0%
Total	4163255 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

Source: Public Use File for NCR, Population and Housing Census, NSO

Table I.1.10 Floor Area of the Housing Unit

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Less than 10 sq. m.	247,954 11.6%	27,308 10.9%	50,976 15.3%	54,414 11.3%	10,786 13.8%	10,892 10.5%	10,370 10.1%	164,746 12.2%
10 - 19 sq. m.	382,752 17.9%	44,828 18.0%	62,713 18.8%	84,988 17.7%	16,878 21.6%	16,903 16.3%	19,595 19.1%	245,905 18.2%
20 - 29 sq. m.	399,929 18.7%	46,939 18.8%	58,111 17.4%	85,928 17.9%	15,809 20.2%	17,806 17.1%	21,353 20.8%	245,946 18.2%
30 - 49 sq. m.	399,672 18.7%	53,921 21.6%	60,979 18.3%	84,567 17.6%	14,443 18.5%	18,782 18.1%	21,839 21.3%	254,531 18.9%
50 - 69 sq. m.	226,896 10.6%	29,366 11.8%	35,846 10.7%	50,366 10.5%	7,581 9.7%	11,416 11.0%	11,627 11.3%	146,202 10.8%
70 - 89 sq. m.	115,946 5.4%	14,224 5.7%	17,497 5.2%	24,724 5.1%	3,444 4.4%	5,463 5.3%	5,450 5.3%	70,802 5.2%
90 - 119 sq. m.	90,552 4.2%	10,754 4.3%	14,687 4.4%	19,677 4.1%	2,518 3.2%	4,814 4.6%	4,635 4.5%	57,085 4.2%
120 - 149 sq. m.	59,400 2.8%	5,478 2.2%	8,742 2.6%	14,795 3.1%	1,463 1.9%	3,293 3.2%	2,126 2.1%	35,897 2.7%
150 - 199 sq. m.	41,725 2.0%	2,899 1.2%	5,416 1.6%	10,450 2.2%	918 1.2%	2,841 2.7%	1,402 1.4%	23,926 1.8%
200 sq. m. and over	84,330 4.0%	3,690 1.5%	5,363 1.6%	28,391 5.9%	1,527 2.0%	6,985 6.7%	1,385 1.3%	47,341 3.5%
Not Reported	83,833 4.0%	10,160 4.1%	13,217 4.0%	22,324 4.6%	2,813 3.6%	4,786 4.6%	2,941 2.9%	56,241 4.2%
Total	2,132,989 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

Source: Public Use File for NCR, Population and Housing Census, NSO

Table I.1.11 Construction Materials of the Outer Walls

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Concrete/brick/ stone	928,409 43.5%	128,716 51.6%	95,951 28.8%	220,431 45.9%	26,816 34.3%	48,795 46.9%	56,904 55.4%	577,613 42.8%
Wood	401,474 18.8%	32,438 13.0%	82,785 24.8%	72,140 15.0%	16,474 21.1%	15,494 14.9%	16,245 15.8%	235,576 17.5%
Half concrete/brick/ Stone/half Wood	685,882 32.2%	74,381 29.8%	140,512 42.1%	156,412 32.5%	31,633 40.5%	34,050 32.7%	24,219 23.6%	461,207 34.2%
Galvanized iron/ Aluminum	18,240 0.9%	2,295 0.9%	2,103 0.6%	5,531 1.2%	516 0.7%	479 0.5%	1,076 1.0%	12,000 0.9%
Bamboo/sawali/ Cogon/Nipa	3,669 0.2%	747 0.3%	124 0.0%	764 0.2%	30 0.0%	59 0.1%	319 0.3%	2,043 0.2%
Asbestos	846 0.0%	143 0.1%	79 0.0%	224 0.0%	11 0.0%	16 0.0%	27 0.0%	500 0.0%
Glass	1,128 0.1%	81 0.0%	91 0.0%	278 0.1%	52 0.1%	86 0.1%	43 0.0%	631 0.0%
Makeshift/salvaged /Improvised Materials	42,944 2.0%	4,197 1.7%	5,439 1.6%	11,842 2.5%	1,388 1.8%	2,668 2.6%	2,006 2.0%	27,540 2.0%
Others	1,108 0.1%	360 0.1%	132 0.0%	225 0.0%	50 0.1%	94 0.1%	16 0.0%	877 0.1%
No walls	2,744 0.1%	291 0.1%	473 0.1%	662 0.1%	128 0.2%	188 0.2%	118 0.1%	1,860 0.1%
Not Reported	46,545 2.2%	5,918 2.4%	5,858 1.8%	12,115 2.5%	1,082 1.4%	2,052 2.0%	1,750 1.7%	28,775 2.1%
Total	2,132,989 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

Source: Public Use File for NCR, Population and Housing Census, NSO

Table I.1.12 Construction Year of Buildings / Housing

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
2000	17,114 0.8%	2,541 1.0%	1,600 0.5%	3,728 0.8%	352 0.5%	699 0.7%	1,355 1.3%	10,275 0.8%
1999	52,713 2.5%	7,573 3.0%	4,814 1.4%	11,685 2.4%	1,457 1.9%	1,993 1.9%	3,667 3.6%	31,189 2.3%
1998	56,969 2.7%	8,136 3.3%	5,081 1.5%	12,563 2.6%	1,527 2.0%	2,849 2.7%	4,102 4.0%	34,258 2.5%
1997	61,795 2.9%	9,252 3.7%	5,206 1.6%	14,565 3.0%	1,252 1.6%	3,141 3.0%	3,689 3.6%	37,105 2.8%
1996	83,137 3.9%	11,978 4.8%	6,932 2.1%	20,118 4.2%	1,719 2.2%	2,233 2.1%	5,615 5.5%	48,595 3.6%
1991-1995	390,569 18.3%	58,870 23.6%	35,290 10.6%	95,978 20.0%	8,254 10.6%	12,586 12.1%	25,947 25.3%	236,925 17.6%
1981-1990	551,829 25.9%	72,784 29.2%	60,837 18.2%	127,603 26.5%	19,048 24.4%	23,347 22.5%	31,053 30.2%	334,672 24.8%
1971-1980	309,254 14.5%	23,774 9.5%	49,640 14.9%	71,905 15.0%	14,073 18.0%	15,917 15.3%	13,166 12.8%	188,475 14.0%
1961-1970	177,817 8.3%	15,916 6.4%	42,752 12.8%	35,198 7.3%	9,689 12.4%	13,754 13.2%	4,281 4.2%	121,590 9.0%
1960 or earlier	192,543 9.0%	15,992 6.4%	72,635 21.8%	31,195 6.5%	10,418 13.3%	13,599 13.1%	2,258 2.2%	146,097 10.8%
Not Applicable	6,328 0.3%	286 0.1%	2,084 0.6%	2,236 0.5%	284 0.4%	326 0.3%	30 0.0%	5,246 0.4%
Don't Know	179,439 8.4%	15,923 6.4%	39,922 12.0%	37,395 7.8%	8,776 11.2%	11,438 11.0%	5,729 5.6%	119,183 8.8%
Not Reported	53,482 2.5%	6,542 2.6%	6,754 2.0%	16,455 3.4%	1,331 1.7%	2,099 2.0%	1,831 1.8%	35,012 2.6%
Total	2,132,989 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

Source: Public Use File for NCR, Population and Housing Census, NSO

Table I.1.13 State of Repair

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Needs no Repair / minor repair	1,615,925 75.8%	178,437 71.5%	241,058 72.3%	364,207 75.8%	61,845 79.1%	83,914 80.7%	82,281 80.1%	1,011,742 75.0%
Needs Major Repair	374,967 17.6%	42,573 17.1%	74,850 22.4%	84,079 17.5%	12,880 16.5%	14,448 13.9%	13,194 12.8%	242,024 17.9%
Dilapidated/ Condemned	19,231 0.9%	1,956 0.8%	4,592 1.4%	4,881 1.0%	594 0.8%	1,129 1.1%	528 0.5%	13,680 1.0%
Under Renovation/ Being Repaired	14,524 0.7%	2,672 1.1%	2,010 0.6%	2,837 0.6%	651 0.8%	947 0.9%	843 0.8%	9,960 0.7%
Under construction	12,659 0.6%	2,605 1.0%	1,140 0.3%	2,605 0.5%	346 0.4%	493 0.5%	1,238 1.2%	8,427 0.6%
Unfinished Construction	37,527 1.8%	13,030 5.2%	2,309 0.7%	8,223 1.7%	530 0.7%	794 0.8%	2,715 2.6%	27,601 2.0%
Not Reported	58,156 2.7%	8,294 3.3%	7,588 2.3%	13,792 2.9%	1,334 1.7%	2,256 2.2%	1,924 1.9%	35,188 2.6%
Total	2,132,989 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

Source: Public Use File for NCR, Population and Housing Census, NSO

I.1.3 HOUSEHOLD ECONOMY

Table I.1.14 shows household income in the cities in Study Area. According to NSO data, 50% of households in the area, excluding Caloocan, have annual incomes ranging from Php 150,000 to less than Php 500,000. Household income of Makati is higher than those of other cities and municipality, with 80% of its total households earning more than Php 150,000 a year.

Table I.1.14 Number of Families by Income Level

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig & Pateros
Under P 10,000	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
10,000 – 19,999	1,167 0.1%	952 0.4%	0 0.0%	0 0.0%	215 0.2%	0 0.0%	0 0.0%
20,000 – 29,000	2,108 0.1%	861 0.3%	0 0.0%	0 0.0%	0 0.0%	0 0.0%	0 0.0%
30,000 – 39,999	5,831 0.3%	0 0.0%	649 0.2%	1,504 0.3%	0 0.0%	0 0.0%	552 0.5%
40,000 – 49,999	13,996 0.6%	5,069 2.0%	3,817 1.2%	0 0.0%	0 0.0%	225 0.2%	552 0.5%
50,000 – 59,999	24,360 1.1%	2,740 1.1%	6,661 2.0%	2,052 0.5%	829 0.9%	266 0.3%	552 0.5%
60,000 – 79,999	93,551 4.3%	11,484 4.6%	16,534 5.0%	15,704 3.5%	2,804 3.1%	2,604 2.5%	5,724 5.0%
80,000 – 99,999	170,395 7.8%	31,664 12.6%	25,902 7.9%	26,322 5.8%	5,362 6.0%	3,160 3.1%	8,186 7.1%
100,000 – 149,999	444,698 20.3%	62,742 25.0%	58,155 17.6%	82,427 18.3%	19,072 21.4%	14,724 14.3%	20,746 18.1%
150,000 – 249,999	645,254 29.5%	74,893 29.9%	98,116 29.8%	120,667 26.8%	27,590 31.0%	23,384 22.8%	45,026 39.2%
250,000 – 499,999	533,683 24.4%	44,455 17.7%	87,202 26.5%	127,433 28.3%	26,321 29.5%	33,095 32.2%	25,959 22.6%
500,000 over	253,631 11.6%	15,991 6.4%	32,603 9.9%	74,033 16.4%	6,891 7.7%	25,227 24.6%	7,493 6.5%
Total	2,188,674 100%	250,851 100v	329,639 100%	450,142 100%	89,084 100%	102,685 100%	114,790 100%

Source: Family Income and Expenditures Survey 2000, NSO

Note: Upper column: number of families, Lower column: %

Data of Taguig city is not available. Income of Taguig city is combined with Pateros in source data

I.1.4 POVERTY

The 2000 Metro Manila poverty threshold set by the National Economic Development Authority is Php 15,678 per capita per year. At an average size of families in Metro Manila of 4.62 and the Study area's 4.57, the estimated family poverty thresholds are Php 72,432.36 and Php 71,678 per annum, respectively. These poverty thresholds are within the family income range of Php 80,000 and below. As a matter of estimating the quantity of poverty, this can be represented by the number of families in this income bracket.

As shown in the Table I.1.15 below, about 6% of the total number of families in the Study area are within the poverty threshold and constitute about 58% of Metro Manila's total. Among the six LGUs of the Study area, Manila and Caloocan have the most number of families in the poverty threshold income level at 21,000 and 28,000, respectively, or about 8.5% of their respective total number of families. Makati has the least in both number and percentage.

Table I.1.15 Number of Families Below Php 80,000 Income Level

	Number of Families		
	Total	Below 80,000	
		Number	% of Total
Caloocan	250,851	21,106	8.41
Manila	329,639	27,661	8.39
Quezon	450,142	19,260	4.28
Pasay	89,084	3,633	4.08
Makati	102,685	3,095	3.01
Taguig	114,790	7,380	6.43
Sub-Total of 6 LGUs	1,337,191	82,135	6.14
Total Metro.Manila	2,188,674	141,013	6.44

Source: 2000 FIES and NEDA

According to the 2000 FIES, about 50% - 60% of the families in the Study area and, in fact, in the whole of Metro Manila, derive income from salaries and wages. Entrepreneurial activity is source of income for about 20%. All told, employment and dependency are indicators of poverty in addition to the amount of actual income received by families. According to the household survey conducted under this study, 55% of families depend on only one income earner. The table below shows a sense of income dependency in the Study area and in the whole of Metro Manila in 1995. Average dependency in the Study area as it is in Metro Manila is 2.7, which means that about two other persons are dependent on the income of one employed person. The actual dependency ratio could even be much higher considering that employed persons data presented in the *Table I.1.16* below includes all those that were employed anytime during the past year immediately preceding the census year.

Table I.1.16 Dependency Ratio, 1995

	Population			
	Total	Employed		Dependency Ratio
		Number	% of Total	
Metro.Manila	9,454,040	3,458,643	36.58%	2.73
Caloocan	1,023,159	343,313	33.55%	2.98
Manila	1,654,761	602,581	36.41%	2.75
Quezon	1,989,419	755,292	37.97%	2.63
Pasay	408,610	153,866	37.66%	2.66
Makati	484,176	198,464	40.99%	2.44
Taguig	381,350	133,775	35.08%	2.85
Total of 6 LGUs	5,941,475	2,187,291	36.81%	2.72

Source: Basic Data from 1995 Census, NCR

Socio-economic profiles contained in the Comprehensive Land Use Plans of the Study area's LGUs show that unemployment rate could be around more than 10% to about 20% of the labor force. The lowest unemployment rate is in Makati while the highest is in the cities of Manila and Caloocan.

I.1.5 LITERACY, EDUCATION AND INFORMATION

(1) Literacy

Literacy rate of Caloocan and Makati is shown in *Table I.1.17*. There are different samples of estimation of literacy rate: Caloocan's samples are 6 years old and over and those of Makati range from 10 and 64 years old. Simple literacy rate (the ability to read and write a simple message in any language or dialect) is almost 99%. Functional literacy rate (possessing both simple literacy and numerical skills) is 92% and 94%, slightly smaller than simple literacy rate. It can be said, therefore, that most people can read dissemination documents.

Table I.1.17 Literacy Rate

	Caloocan ^{*1} (1994)	Makati ^{*2} (1994)
Simple Literacy Rate (%)	98.8	99.3
Functional Literacy Rate (%)	92.4	93.6

Source: *1: Caloocan Medium Term Development Plan 2000-2005

*2: Makati Comprehensive Land Use Plan 2000

Note: Samples for literacy rate of Caloocan are ages 6 years and over, and Makati, 10 -64 years old.

(2) Education

The Philippine formal educational system consists of three main levels; elementary, high school and college education. Other categories are pre-school for children to prepare them for the formal schooling, vocational education for people with adequate literacy to learn skills for employment and other purposes and post-graduate education for people who have completed tertiary education and would like to pursue higher learning through acquisition of masters and doctorate degrees.

Table I.1.18 shows the educational attainment of people in the study area in 2000. The number of people under the category 'no grade completed' gives a confirmation of the area's literacy rate estimated to be within 98% to 99%. Likewise, the number of people who attained elementary to post-graduate levels of education confirms a functional literacy rate of about 95% to 96% as stated in the socio-economic profiles of the LGUs in the area. Although the six LGUs have almost similar educational attainment profile, by comparison, Makati City has a relatively more well educated population with a much bigger portion of the total population attaining college level and post graduate level of education.

Table I.1.18 Educational Attainment of People in the Study Area, Year 2000

	Total	No Grade Completed	Pre-School	Elementary	High School	Post Secondary	College Level and Above	Not Reported
Caloocan	1,022,431	26,612	25,910	285,683	373,923	50,738	204,299	55,266
	100%	3%	3%	28%	37%	5%	20%	5%
Manila	1,390,467	30,981	29,434	328,351	480,834	86,894	370,095	63,878
	100%	2%	2%	24%	35%	6%	27%	5%
Pasay	311,486	5,358	7,352	70,970	112,157	20,176	83,600	11,873
	100%	2%	2%	23%	36%	6%	27%	4%
Quezon	1,899,053	38,723	47,552	468,483	616,117	120,860	475,332	131,986
	100%	2%	3%	25%	32%	6%	25%	7%
Taguig	400,438	9,812	9,903	106,135	155,614	20,638	84,324	14,012
	100%	2%	2%	27%	39%	5%	21%	3%
Makati	417,913	6,361	10,642	84,664	136,362	29,457	129,214	21,213
	100%	2%	3%	20%	33%	7%	31%	5%
Total	5,441,793	117,847	130,793	1,344,287	1,875,009	328,763	1,346,865	298,228
% of Total	100%	2%	2%	25%	34%	6%	25%	5%

Source: 2000 Census, National Statistics Office

(3) Information

A large majority of the population is functionally literate, meaning able to communicate (receive and send message) through reading and writing. It is an indication that information through various media can be understood and passed on.

Being part of the country's capital region, host to prime central business districts, the Study area enjoys the adequacy of information via tri-media. There are 15 major daily newspapers, 10 broadsheets and 5 tabloids. In addition, several magazines and comics are regularly published monthly, bi-monthly or weekly. Broadsheets are more popularly read among college-educated people while tabloids are more common among elementary and high school level people since most tabloid news articles are written in Filipino language in contrast to broadsheets whose articles are mostly written in English language. Radio broadcasts are facilitated by 31 AM stations and 25 FM stations. In addition, there are 23 television (TV) stations and 69 cable TV (CATV) networks, which enable subscribers to view TV channels in many countries, such as CNN, BBC, NHK, Bloomberg and ESPN. Local TV broadcast 16 to 24 hours daily while CATV is in operation 24-hours daily.

Radio broadcast and TV are probably the most popular medium of information flow in both affluent and poor segments of the population. Most private cars and public utility vehicles such as taxicabs, jeepneys and buses have radio sets. TV sets are commodities commonly seen in affluent, middle class and poor dwellings. Ownership of TV sets in shanties around squatters areas are very observable through TV antennas standing on the rooftops. In squatter areas, even people who do not own TV sets are able to access TV broadcasts through neighbors. Neighborhood watching of TV programs in convenience stores are common sight in the slums.

I.1.6 PUBLIC HEALTH

(1) Water Supply

Main sources of water supply for drinking and/or cooking and laundry and/or bathing are shown in *Tables I.1.19* and *Table I.1.20*. Ratio of main water sources for drinking and/or cooking and laundry and/or bathing are almost the same so that same water resources are used for drinking and/or cooking and laundry and/or bathing. For this dual-purpose main water sources, “own use faucet of community water system” accounts for more than 50% of households in the Study area excluding Taguig. One-third of households in Taguig use shared tubed and piped deep well with other neighbors. Next main water source of Taguig is shared faucet of community water system (20%).

Table I.1.19 Main Sources of Water Supply for Drinking, and/or Cooking by City and Municipality

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Own use Faucet, Community water system	1,083,072 50.8%	111,247 44.6%	210,142 63.0%	264,477 55.0%	44,487 56.9%	65,148 62.7%	18,502 18.0%	1,797,075 51.6%
Shared faucet, Community water system	518,091 24.3%	58,618 23.5%	91,326 27.4%	114,730 23.9%	26,728 34.2%	26,742 25.7%	20,107 19.6%	856,342 24.6%
Own use, tubed/piped/ deep well	84,776 4.0%	12,136 4.9%	3,899 1.2%	17,173 3.6%	1,330 1.7%	1,562 1.5%	9,690 9.4%	130,566 3.8%
Shared Tubed/Piped Deep Well	206,709 9.7%	34,646 13.9%	5,521 1.7%	55,806 11.6%	1,898 2.4%	4,267 4.1%	30,857 30.0%	339,704 9.8%
Tubed/Piped Shallow well	13,057 0.6%	2,640 1.1%	712 0.2%	3,012 0.6%	75 0.1%	135 0.1%	1,218 1.2%	20,849 0.6%
Dug well	13,049 0.6%	2,512 1.0%	438 0.1%	4,838 1.0%	188 0.2%	79 0.1%	1,326 1.3%	22,430 0.6%
Spring, lake, river, rain etc.	3,629 0.2%	429 0.2%	707 0.2%	453 0.1%	464 0.6%	55 0.1%	152 0.1%	5,889 0.2%
Peddler	135,205 6.3%	19,514 7.8%	9,394 2.8%	6,284 1.3%	1,025 1.3%	2,802 2.7%	17,100 16.6%	191,324 5.5%
Bottled water	27,603 1.3%	2,241 0.9%	1,823 0.5%	3,414 0.7%	689 0.9%	1,999 1.9%	1,566 1.5%	39,335 1.1%
Others	47,798 2.2%	5,584 2.2%	9,585 2.9%	10,437 2.2%	1,296 1.7%	1,192 1.1%	2,205 2.1%	78,097 2.2%
Total Household	2,132,989 100.0%	249,567 100.0%	333,547 100.0%	480,624 100.0%	78,180 100.0%	103,981 100.0%	102,723 100.0%	3,481,611 100.0%

Source: 2000 Census, National Statistics Office

Table I.1.20 Main Sources of Water Supply for Laundry and/or Bathing by City and Municipality

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Own use Faucet, Community water system	1,099,356 51.5%	113,078 45.3%	210,558 63.1%	266,546 55.5%	44,557 57.0%	66,210 63.7%	18,692 18.2%	719,641 53.4%
Shared faucet, Community water system	515,796 24.2%	58,827 23.6%	92,505 27.7%	113,391 23.6%	26,753 34.2%	26,291 25.3%	18,724 18.2%	336,491 25.0%
Own use, tubed/piped/ deep well	95,664 4.5%	13,347 5.3%	4,300 1.3%	17,766 3.7%	1,605 2.1%	1,939 1.9%	12,922 12.6%	51,879 3.8%
Shared Tubed/Piped Deep Well	226,662 10.6%	34,548 13.8%	6,789 2.0%	57,864 12.0%	3,156 4.0%	6,496 6.2%	34,380 33.5%	143,233 10.6%
Tubed/Piped Shallow well	17,278 0.8%	2,879 1.2%	780 0.2%	3,481 0.7%	376 0.5%	228 0.2%	2,716 2.6%	10,460 0.8%
Dug well	18,396 0.9%	3,473 1.4%	754 0.2%	6,214 1.3%	450 0.6%	101 0.1%	1,797 1.7%	12,789 0.9%
Spring, lake, river, rain etc.	4,507 0.2%	869 0.3%	626 0.2%	206 0.0%	41 0.1%	12 0.0%	323 0.3%	2,077 0.2%
Peddler	112,699 5.3%	17,527 7.0%	9,117 2.7%	5,215 1.1%	151 0.2%	1,722 1.7%	11,113 10.8%	44,845 3.3%
Others	42,631 2.0%	5,019 2.0%	8,118 2.4%	9,941 2.1%	1,091 1.4%	982 0.9%	2,056 2.0%	27,207 2.0%
Total Household	2,132,989 100.0%	249,567 100.0%	333,547 100.0%	480,624 100.0%	78,180 100.0%	103,981 100.0%	102,723 100.0%	1,348,622 100.0%

Source: 2000 Census, National Statistics Office

(2) Toilet Facilities

Types of toilet facilities of households are shown in *Table I.1.21*. Major type of toilet facility is “water sealed, sewer/septic tank, used exclusively by households”. It accounts for almost 70% of households excluding Taguig. In Taguig, the above classification accounts for only 55%. This shared percentage is smaller compared with other cities. Other classification, “water sealed, other depository, used exclusively by households”, also shared 20% of households.

Table I.1.21 Types of Toilet Facilities of Households

	Metro. Manila	Caloocan	Manila	Quezon	Pasay	Makati	Taguig	Total of 6 LGUs
Water sealed, sewer/septic tank, used exclusively by households	1,446,920 67.8%	175,023 70.1%	228,207 68.4%	326,826 68.0%	51,478 65.8%	76,841 73.9%	56,640 55.1%	915,015 67.8%
Water sealed, sewer/septic tank, shared with other households	351,752 16.5%	37,916 15.2%	66,695 20.0%	81,722 17.0%	19,214 24.6%	18,426 17.7%	13,599 13.2%	237,572 17.6%
Water sealed, other depository, used exclusively by households	154,459 7.2%	20,877 8.4%	8,755 2.6%	35,835 7.5%	3,014 3.9%	3,752 3.6%	20,919 20.4%	93,152 6.9%
Water sealed, other depository, shared with other households	96,313 4.5%	8,819 3.5%	10,616 3.2%	27,349 5.7%	2,455 3.1%	2,560 2.5%	7,913 7.7%	59,712 4.4%
Closed pit	23,183 1.1%	2,067 0.8%	2,575 0.8%	4,545 0.9%	367 0.5%	488 0.5%	1,688 1.6%	11,730 0.9%
Open pit	13,717 0.6%	1,221 0.5%	2,859 0.9%	1,147 0.2%	943 1.2%	418 0.4%	737 0.7%	7,325 0.5%
Others (Pail System)	25,356 1.2%	2,654 1.1%	5,047 1.5%	2,362 0.5%	372 0.5%	596 0.6%	798 0.8%	11,829 0.9%
none	21,289 1.0%	990 0.4%	8,793 2.6%	838 0.2%	337 0.4%	900 0.9%	429 0.4%	12,287 0.9%
Total	2,132,989 100%	249,567 100%	333,547 100%	480,624 100%	78,180 100%	103,981 100%	102,723 100%	1,348,622 100%

(3) Morbidity

The top ten leading causes of morbidity and mortality by LGUs in Study Area are shown in *Table I.1.22 and I.1.23*. The common causes of morbidity in the LGUs in Study Area are bronchitis and pneumonia, followed by diarrhea, hypertension, dengue fever, pulmonary tuberculosis and dermatological conditions.

Very common causes of mortality are pneumonia, hypertension and cancer. Especially pneumonia and hypertension are prevalent in five out of the six LGUs.

Table I.1.22 Top Ten Leading Causes of Morbidity

Caloocan (2003)	Manila (1999)	Quezon (2001)
1. Bronchitis	1. Diarrhea	1. Upper Respiratory Tract Infection, URTI
2. Diarrhea	2. Bronchitis	2. Pneumonia
3. Influenza	3. Pneumonia	3. Dental Caries
4. Pneumonia	4. Tuberculosis, all forms	4. Acute Gastroenteritis
5. TB, Respiratory	5. Diseases of Heart	5. Parasitism
6. Acute Upper Respiratory Infection, AURI	6. Measles	6. Pulmonary Tuberculosis
7. Hypertension	7. Mumps	7. Hypertension
8. Chickenpox	8. Cancer	8. Dengue Hemorrhagic Fever
9. Mumps	9. Chickenpox	9. Bronchitis
10. Measles	10. Dengue Fever	10. Bronchial Asthma
Pasay (1996-2000)	Makati (1996)	Taguig (2002)
1. Dermatologic	1. URI	1. Upper Respiratory Tract Infection, URTI
2. EENT	2. Pneumonia	2. Bronchitis
3. Nutritional Deficiency	3. Dermatitis	3. Skin Diseases
4. Respiratory	4. Diarrhea	4. Pneumonia
5. Gastro-Intestinal	5. Bronchitis	5. Diarrhea
6. Genito-urinary	6. Hypertensive Disease	6. Parasitism
7. Musculo-Skeletal Condition	7. Influenza	7. Hypertension
8. Pulmonary Tuberculosis	8. Parasitism	8. UTI
9. Other Acute Viral Illness	9. Renal Disease	9. Anemia
10. Other Infectious Diseases	10. TB (Pulmonary)	10. Influenza

Source: Caloocan Economic Development
 Manila Socio-Physical Profile
 Quezon City Comprehensive Land Use Plan
 Pasay Comprehensive Land Use Plan
 Makati Comprehensive Land Use Plan
 Taguig Comprehensive Land Use Plan

Table I.1.23 Top Ten Leading Causes of Mortality

Caloocan (1998)	Manila (1999)	Quezon (2001)
1. Coronary Artery Disease	1. Diseases of the heart	1. Pneumonia
2. Pneumonia	2. Pneumonia	2. Myocardial Infarction
3. Hypertensive V.D.	3. Cancer	3. Cancer (all forms)
4. Cancer	4. TB Respiratory	4. Pulmonary Tuberculosis
5. Tuberculosis	5. Cerebro-Vascular Diseases	5. Hypertension
6. Accidents	6. Sepsis	6. Cerebro Vascular Accident
7. Diarrheal Disease	7. Hypertensive	7. Coronary Artery Disease
8. Bronchial Asthma	8. Premature births	8. Cardiovascular Disease
9. Acute Renal Failure	9. UPI	9. Sepsis
10. Diabetes Mellitus	10. Homicide	10. Diabetes Mellitus
Pasay (1996-2000)	Makati (1996)	Taguig (1999)
1. Diseases of the Heart	1. Cardiovascular Disease	1. Myocardial Infarction
2. Vascular Diseases	2. Hypertensive Disease	2. CVA
3. Pneumonia	3. Neoplasm, Malignant	2. Bronchopneumonia
4. Cancer	4. Pneumonia	4. TB (Pulmonary)
5. Accidents	5. Accident	5. Cancer (all forms)
6. TB (all forms)	6. Sepsis	6. Hypertension
7. Hypertension	7. TB (Pulmonary)	7. Congestive Heart Failure
8. Septicemia	8. Premature births	7. Senility
9. Unknown/ undetermined	9. Diabetic Nephropathy	9. Acute Pancreatic Disease
10. Diabetes	10. Liver Disease	-
11. Bronchial Asthma	-	-

Source: Caloocan Economic Development
 Manila Socio-Physical Profile
 Quezon City Comprehensive Land Use Plan
 Pasay Comprehensive Land Use Plan
 Makati Comprehensive Land Use Plan
 Taguig Comprehensive Land Use Plan

I.1.7 SOLID WASTE MANAGEMENT

Since the decentralization/localization policy of the government, function/responsibility of collection of solid waste was transferred from the MMDA to local government units. After this localization, the present mandate of MMDA is focused on only the management of landfill site.

Although LGUs are in charge of collection of solid waste management basically, each LGU is outsourcing most of the activities (to collect / to bring to disposal site / to collect for recycling & reuse) to private companies except a small part of direct management. In addition, barangays are also in charge of collection of solid waste at the locations and roads that are inaccessible to garbage trucks.

I.1.8 OTHER SOCIAL SERVICES RELATED TO DRAINAGE IMPROVEMENT

In the past projects on river development/rehabilitation, water resource management, drainage and sewerage projects in Metropolitan Manila, issues on informal settlers have been closely related and come up in the discussion and implementation because their houses / structures and the garbage / human waste discharged by them affect the capacity and water flow and cause pollution.

Under the coordination of HUDCC (Housing and Urban Development Coordinating Council), shelter development and related programs such as mortgage scheme and community-based programs have been implemented by NHA (National Housing Authority), NHMFC (National Home Mortgage Finance Corporation), HDMF (Home Development Mutual Fund), HIGC (Home Insurance Guaranty Corporation), and financial agencies such as DBP (Development Bank of Philippines).

The DSWD (Department of Social Welfare and Development) is also assisting the urban poor by providing social welfare programs. The CIDSS (Comprehensive and Integrated Delivery of Social Services) is a presidential flagship and the department's major pro-poor program. The CIDSS seeks to empower targeted families and communities to enable them to meet the minimum basic needs (MBNs). During the localization and for continuity of the program, CIDSS has been implemented in cooperation with LGUs and NGOs. Among the CIDSS' programs are Ahon Bata sa Lansangan (facility for Street Children) Project and Sagip Kalinga (Save and Care) Project, which serve street children and street dwellers.

While population in Metropolitan Manila has dramatically increased, control and regulation of urban developments have not caught up. Because coherent land use plans have not been implemented, urban infrastructure development often lagged behind and increase of depressed residents caused the environmental degradation. Though the government is putting a priority onto the poverty alleviation in urban areas, the pressure of population growth seems to blot out the measures of the authorities.

I.2 INFORMAL SETTLERS

I.2.1 DEFINITION OF INFORMAL SETTLERS

There is no clear definition for “Informal Settlers” in RA No. 7279, but only “New Squatters”. The definition of “New Squatters” is “Individuals or groups who occupy land without the express consent of landowner”.

However, there are many so-called “informal settlers” who have been given temporary permission to stay, who are in the process of obtaining approval from municipality to stay by submitting documents, or who have already been given land titles to stay on public land, for example, within 3 meters along an estero. Accordingly, it is difficult to draw a clear line between who are informal settlers and who are not informal settlers.

I.2.2 NUMBER OF INFORMAL SETTLERS IN METRO MANILA

According to the UN-Habitat report, informal settlements can be found in 526 communities, accounting for some 2.54 million located in all the cities and municipalities of Metropolitan Manila. Data available on informal settlers are currently surveyed in terms of the number of informal settlers, as derived from surveys conducted by the Housing and Urban Development Coordinating Council (HUDCC).

Table I.2.1 Number of Households and Number of Informal Settlers, 2002

	Total Households	Depressed HHs (Informal Settlers)	% of Total
City of Manila	333,547	99,549	29.8
Quezon City	480,624	169,490	35.2
Caloocan City	249,567	67,292	26.9
Makati City	98,225	27,024	27.5
Pasay City	78,180	57,436	73.4
Municipality of Taguig	102,723	21,931	21.3

Source: HUDCC unpublished report, 2002,
Urban Slums Reports: The case of Manila, Philippines, UN-Habitat, 2003

I.2.3 NUMBER OF INFORMAL SETTLERS ALONG ESTEROS SURVEYED BY DPWH

According to the survey conducted by DPWH on October 28, 2003, the informal settlers who have been identified as encroaching in and along esteros of high priority areas within the core area are as follows:

I. Estero Clearing (2002 Priority Areas)	
Estero de Valencia	279 families
Estero de San Miguel	336 families
Estero de Aviles	200 families
Estero de Kabulusan	300 families
North and South Antipolo	280 families
	<u>1,395 families</u>

II. Other Esteros for Clearing Manila

Estero de Santibanez	151 families
----------------------	--------------

Estero de Magdalena	858 families
Estero de San Lazaro	650 families
Estero de la Reina	350 families
Estero de Paco	1,160 families
Estero de Binondo	360 families
	<u>3,529 families</u>
<u>Pasay</u>	
Maricaban Creek	<u>1,854 families</u>

Grand Total: **6,778** families

The esteros covered by the above survey are only those that DPWH considered as priority esteros. There are many more esteros existing within the core area. Accordingly, the total number of the informal settlers within and along esteros in the core area shall be far larger than that.

I.2.4 NUMBERS OF BUILDINGS WITHIN ESTEROS BASED ON ANALYSIS OF AERIAL PHOTOGRAPH

(1) Methodology

In the course of the present study, the following analysis was made to find out the numbers of buildings that are constructed within the esteros.

The aerial photographs used for the analysis were taken in the year 2003 for MMEIRS. The scale used is 1: 10,000.

Firstly, each estero was divided into certain segments and were given code numbers, such as NE01**, SE10**. Then, based on the surveyed cross-section data of esteros and field visit, the original widths of each estero and edges of the esteros were delineated on the photo. Individual buildings within esteros were recognized and were counted when these were clearly identified. Dense areas of buildings within esteros were also marked on the photo and these areas were calculated. All process was executed on computer. AUTOCAD and ArcView were utilized for the analysis.

In order to make a basis of density of buildings in dense areas, 116 dense areas were actually observed. Based on those observations, the density of house buildings in dense areas was estimated. The average density of the sample areas was used to estimate the number of buildings in the dense areas. The average density was estimated at 0.064 buldings/m².

(2) Results

According to the above analysis made by the Study Team, the estimated total buildings intruding into esteros in the core area is about 2,100. The numbers of buildings in each segment of esteros are summarized in *Table I.2.2*. Definition of section code of esteros is shown in *Figure I.2.1*. *Figure I.2.2* shows spatial distribution of percentages of encroachment in esteros. The percentage of encroachment is expressed based on area occupied by buildings in esteros.

(3) Limitation of Analysis

It should be noted that the structures that are not visible from the air were not included in the count, because aerial photograph was used for the analysis. For example, the structures intruding under bridges were not identified in the analysis.

Table I.2.2 Number of Buildings within Esteros (1/2)

Waterway	Name	SECTION CODE	Length (m)	Area (m ²)	Total building and dense area (m ²)	Percent Covered	Estimated number of buildings within channel	Estimated number of buildings within channel per length (km ⁻¹)
NE01	Estero De Vitas	NE0101	830	49026	526	1	34	41
NE01	Estero De Vitas	NE0102	173	12045	0	0	0	0
NE01	Estero De Vitas	NE0103	951	35444	263	1	17	18
NE02	Estero De Sunog Apog/	NE0201	613	23495	0	0	0	0
NE02	Estero De Sunog Apog/	NE0202	1213	37084	533	1	37	31
NE02	Estero De Sunog Apog/	NE0203	275	3680	15	0	2	7
NE02	Estero De Sunog Apog/	NE0204	264	2306	298	13	26	98
NE02	Estero De Sunog Apog/	NE0205	820	3769	197	5	39	48
NE02	Estero De Sunog Apog/	NE0206	1092	459	19	4	3	3
NE02b1	Estero De Sunog Apog/	NE02b1	178	-	-	-	-	-
NE02b2	Estero De Sunog Apog/	NE02b2	499	-	-	-	-	-
NE03	Casili Creek	NE0301	901	4177	0	0	0	0
NE03	Casili Creek	NE0302	1474	5796	0	0	0	0
NE04	Estero Dela Reina	NE0400	171	-	-	-	-	-
NE04	Estero Dela Reina	NE0401	538	7789	0	0	0	0
NE04	Estero Dela Reina	NE0402	260	3518	0	0	0	0
NE04	Estero Dela Reina	NE0403	358	5551	0	0	0	0
NE04	Estero Dela Reina	NE0404	309	3194	187	6	12	39
NE04	Estero Dela Reina	NE0405	486	5718	45	1	3	6
NE04	Estero Dela Reina	NE0406	899	12613	1512	12	97	108
NE05	Estero De Binondo	NE0500	119	-	-	-	-	-
NE05	Estero De Binondo	NE0501	928	17541	0	0	0	0
NE06	Estero De Magdalena	NE0601	846	6272	182	3	12	14
NE06	Estero De Magdalena	NE0602	668	2576	365	14	23	34
NE07	Estero De San Lazaro	NE0701	1019	9516	490	5	31	30
NE07	Estero De San Lazaro	NE0702	176	1412	-	-	-	-
NE07	Estero De San Lazaro	NE0703	505	-	-	-	-	-
NE07	Estero De San Lazaro	NE0704	432	2030	-	-	-	-
NE07	Estero De San Lazaro	NE0705	708	1901	-	-	-	-
NE08	Estero De Kabulusan	NE0801	689	4100	72	2	5	7
NE09	South Antipolo Open Canal	NE0901	184	526	0	0	0	0
NE09	South Antipolo Open Canal	NE0902	368	1284	260	20	17	46
NE09	South Antipolo Open Canal	NE0903	276	755	654	87	42	152
NE10	North Antipolo Open Canal	NE1001	259	979	0	0	0	0
NE10	North Antipolo Open Canal	NE1002	522	1707	1492	87	95	182
NE11	Estero De Tutuban	NE1101	450	-	-	-	-	-
NE12	Estero De Quiapo	NE1200	209	-	-	-	-	-
NE12	Estero De Quiapo	NE1201	143	2566	67	3	4	28
NE12	Estero De Quiapo	NE1202	221	2769	161	6	10	45
NE12	Estero De Quiapo	NE1203	528	4973	75	2	5	9
NE13	Estero De San Sebastian	NE1301	382	3366	74	2	5	13
NE14	Estero De San Miguel/ Uli Uli	NE1401	639	2875	0	0	0	0
NE14	Estero De San Miguel/ Uli Uli	NE1402	706	4090	370	9	24	34
NE14	Estero De San Miguel/ Uli Uli	NE1403	1352	17264	350	2	22	16
NE15	Estero De Alix	NE1501	214	-	-	-	-	-
NE15	Estero De Alix	NE1502	273	-	-	-	-	-
NE15	Estero De Alix	NE1503	163	-	-	-	-	-
NE16	Estero De Aviles	NE1601	340	2792	0	0	0	0
NE17	Estero De Sampaloc I	NE1700	63	-	-	-	-	-
NE17	Estero De Sampaloc I	NE1701	124	1630	0	0	0	0
NE17	Estero De Sampaloc I	NE1702	537	4413	0	0	0	0
NE18	Estero De Sampaloc II	NE1801	518	2430	15	1	1	2
NE19	Estero De Calubcob	NE1901	337	2427	69	3	4	12
NE20	Estero De Valencia	NE2000	94	-	-	-	-	-
NE20	Estero De Valencia	NE2001	496	4685	907	19	58	117
NE20	Estero De Valencia	NE2002	641	4690	1125	24	72	112
Total (North Manila)							700	

Table I.2.2 Number of Buildings within Esteros (2/2)

Waterway	Name	SECTION CODE	Length (m)	Area (m ²)	Total building and dense area (m ²)	Percent Covered	Estimated number of buildings within channel	Estimated number of buildings within channel per length (km ⁻¹)
SE01	Estero De Provisor	SE0101	1018	20472	0	0	0	0
SE02	Estero De Tanque	SE0201	346	8282	0	0	0	0
SE03	Estero De Balete	SE0301	547	5353	169	3	11	20
SE04	Estero De Santebanez	SE0401	518	4246	56	1	4	8
SE05	Santa Clara Creek	SE0500	94	-	-	-	-	-
SE05	Santa Clara Creek	SE0501	487	2742	0	0	0	0
SE05	Santa Clara Creek	SE0502	905	3478	162	5	10	11
SE06	Estero De Paco	SE0600	127	-	-	-	-	-
SE06	Estero De Paco	SE0601	288	5482	3	0	1	3
SE06	Estero De Paco	SE0602	265	5498	0	0	0	0
SE06	Estero De Paco	SE0603	1220	16247	3261	20	209	171
SE06	Estero De Paco	SE0604	502	3699	1056	29	68	135
SE07	Estero De Concordia	SE0701	1081	12201	0	0	0	0
SE08	Estero De Pandacan	SE0800	351	5710	0	0	0	0
SE08	Estero De Pandacan	SE0801	854	7027	0	0	0	0
SE08	Estero De Pandacan	SE0802	710	8181	388	5	25	35
SE08	Estero De Pandacan	SE0803	362	2241	410	18	26	72
SE08	Estero De Pandacan	SE0804	292	2486	0	0	0	0
SE08	Estero De Pandacan	SE0805	1658	12179	5	0	1	1
SE08	Estero De Pandacan	SE0899	97	-	-	-	-	-
SE09	Estero de Tripa de Gallina	SE0900	92	-	-	-	-	-
SE09	Estero de Tripa de Gallina	SE0901	436	14846	32	0	1	2
SE09	Estero de Tripa de Gallina	SE0902	299	30481	233	1	20	67
SE09	Estero de Tripa de Gallina	SE0903	575	8025	1984	25	126	219
SE09	Estero de Tripa de Gallina	SE0904	610	7250	3449	48	168	275
SE09	Estero de Tripa de Gallina	SE0905	890	9743	1629	17	114	128
SE09	Estero de Tripa de Gallina	SE0906	215	2356	405	17	17	79
SE09	Estero de Tripa de Gallina	SE0907	132	1483	275	19	22	167
SE09	Estero de Tripa de Gallina	SE0908	281	2480	941	38	51	181
SE09	Estero de Tripa de Gallina	SE0909	356	2845	606	21	49	138
SE09	Estero de Tripa de Gallina	SE0910	538	4809	1918	40	131	243
SE09	Estero de Tripa de Gallina	SE0911	357	2722	812	30	50	140
SE09	Estero de Tripa de Gallina	SE0912	268	1671	43	3	9	34
SE09	Estero de Tripa de Gallina	SE0913	149	1267	26	2	8	54
SE09	Estero de Tripa de Gallina	SE0914	1060	9798	685	7	72	68
SE09	Estero de Tripa de Gallina	SE0915	131	1300	48	4	3	23
SE09	Estero de Tripa de Gallina	SE0916	317	2451	63	3	12	38
SE09	Estero de Tripa de Gallina	SE0917	930	6871	18	0	5	5
SE10	Perlita Creek	SE1001	922	2774	99	4	12	13
SE11	PNR Canal	SE1101	736	2324	31	1	6	8
SE11	PNR Canal	SE1102	310	935	8	1	1	3
SE11	PNR Canal	SE1103	1610	4817	1355	28	107	66
SE12	Calatagan Creek I	SE1201	759	2446	31	1	6	8
SE12	Calatagan Creek I	SE1202	955	3253	0	0	0	0
SE13	Calatagan Creek II	SE1301	611	4654	0	0	0	0
SE13	Calatagan Creek II	SE1302	389	2319	0	0	0	0
SE14	Calatagan Creek III	SE1401	1031	5579	0	0	0	0
SE14	Calatagan Creek III	SE1402	499	2001	0	0	0	0
SE14	Calatagan Creek III	SE1403	1024	3651	0	0	0	0
SE14b1	Calatagan Creek III	SE14b1	220	-	-	-	-	-
SE15	Zanzibar Creek	SE1501	329	-	-	-	-	-
SE16	Makati Diversion Channel I	SE1601	548	2948	0	0	0	0
SE16	Makati Diversion Channel I	SE1602	224	2079	521	25	43	192
SE16	Makati Diversion Channel I	SE1603	1009	5138	0	0	0	0
SE17	Makati Diverson Channel II	SE1701	646	4805	0	0	0	0
SE17	Makati Diverson Channel II	SE1702	836	1721	0	0	0	0
SE17	Makati Diverson Channel II	SE1703	551	4181	0	0	0	0
SE18	Dilain Creek/ Maricaban Creek	SE1801	102	-	-	-	-	-
SE18	Dilain Creek/ Maricaban Creek	SE1802	2155	25069	147	1	9	4
SE18	Dilain Creek/ Maricaban Creek	SE1803	478	3960	0	0	0	0
SE18	Dilain Creek/ Maricaban Creek	SE1804	478	2769	239	9	15	31
SE18	Dilain Creek/ Maricaban Creek	SE1805	3081	-	-	-	-	-
SE18b1	Dilain Creek/ Maricaban Creek	SE18b1	987	-	-	-	-	-
SE18b2	Dilain Creek/ Maricaban Creek	SE18b2	395	-	-	-	-	-
SE19	Maricaban Creek II	SE1901	767	11760	0	0	0	0
SE19	Maricaban Creek II	SE1902	3482	-	-	-	-	-
SE19b1	Maricaban Creek II	SE19b1	1080	-	-	-	-	-
SE19b2	Maricaban Creek II	SE19b2	1253	-	-	-	-	-
SE19b3	Maricaban Creek II	SE19b3	242	-	-	-	-	-
SE20	Estero de San Antonio Abad	SE2001	366	1168	0	0	0	0
SE20	Estero de San Antonio Abad	SE2002	613	2038	0	0	0	0
SE20	Estero de San Antonio Abad	SE2003	757	3901	0	0	0	0
SE21	Libertad Channel	SE2100	177	-	-	-	-	-
SE21	Libertad Channel	SE2101	914	-	-	-	-	-
SE21	Libertad Channel	SE2102	1691	-	-	-	-	-
SE21b1	Libertad Channel	SE21b1	2486	-	-	-	-	-
SE21b2	Libertad Channel	SE21b2	716	-	-	-	-	-
SE22	Sto Ni- Creek	SE2201	168	-	-	-	-	-
SE99	Paranaque	SE9901	2002	-	-	-	-	-
Total (South Manila)							1412	

Channel Sections

Legend

- ⊗ Large Pumping Station
- ⊙ Small Pumping Station
- ⊕ Independent Floodgate
- ⊗ Trash Screen
- ✓ Control Wall
- ⊗ Control Gate
- ~ Estero
- Drainage Main
- ▭ Study Area

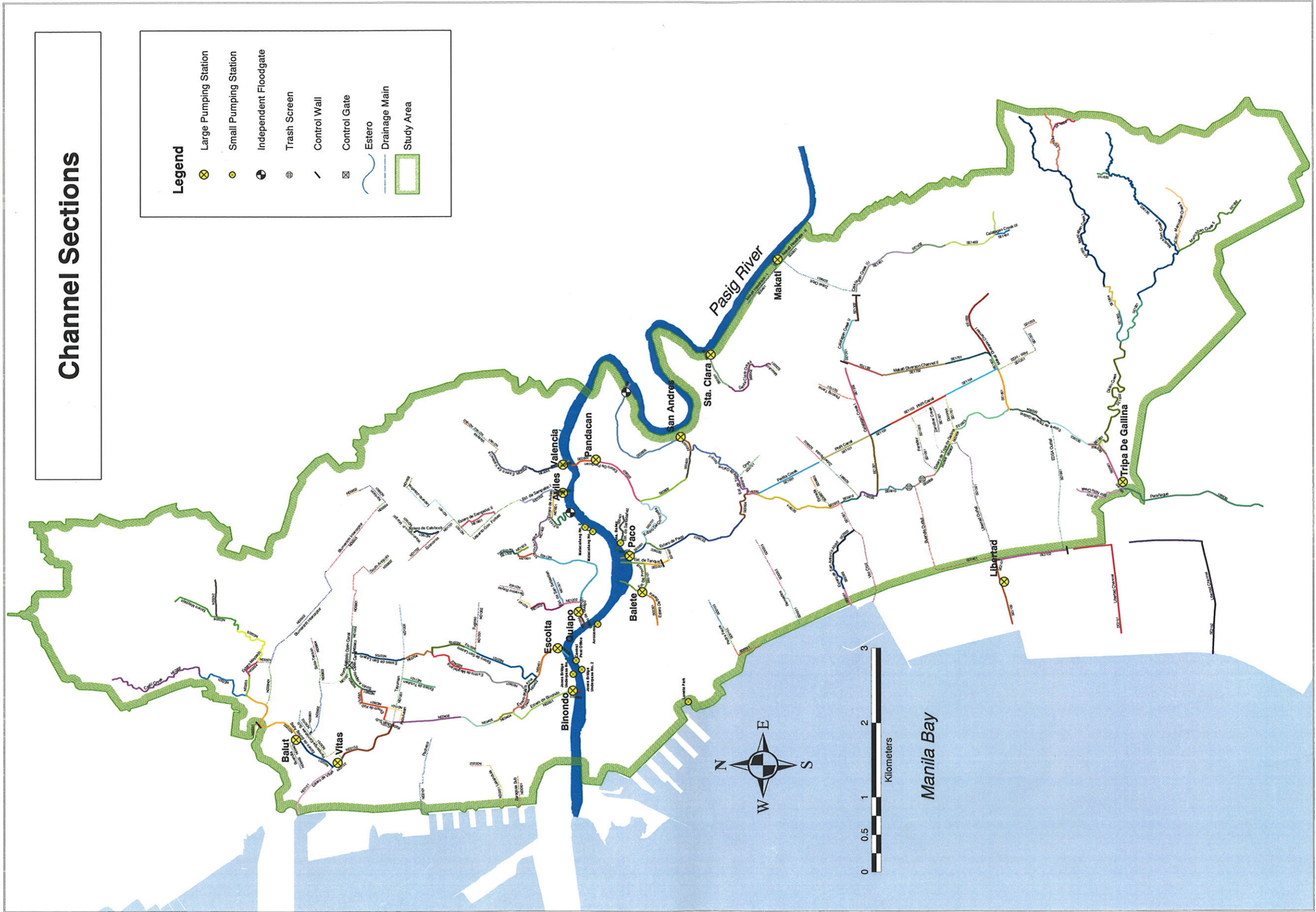


Figure I.2.1 Channel Sections

Existing Condition of Encroachment in Esteros

Legend

Percent of Encroachment in Estero (Area)

- 0 - 5
- 6 - 10
- 11 - 30
- 31 - 50
- 51 - 100

Large Pumping Station
 Small Pumping Station
 Independent Floodgate
 Trash Screen
 Control Wall
 Control Gate
 Major Road
 Railroad
 Drainage Main
 Study Area
 City Boundary

Note: Each channel division is labeled with the estimated number of buildings encroaching in that area. Channels without labels were not observed.

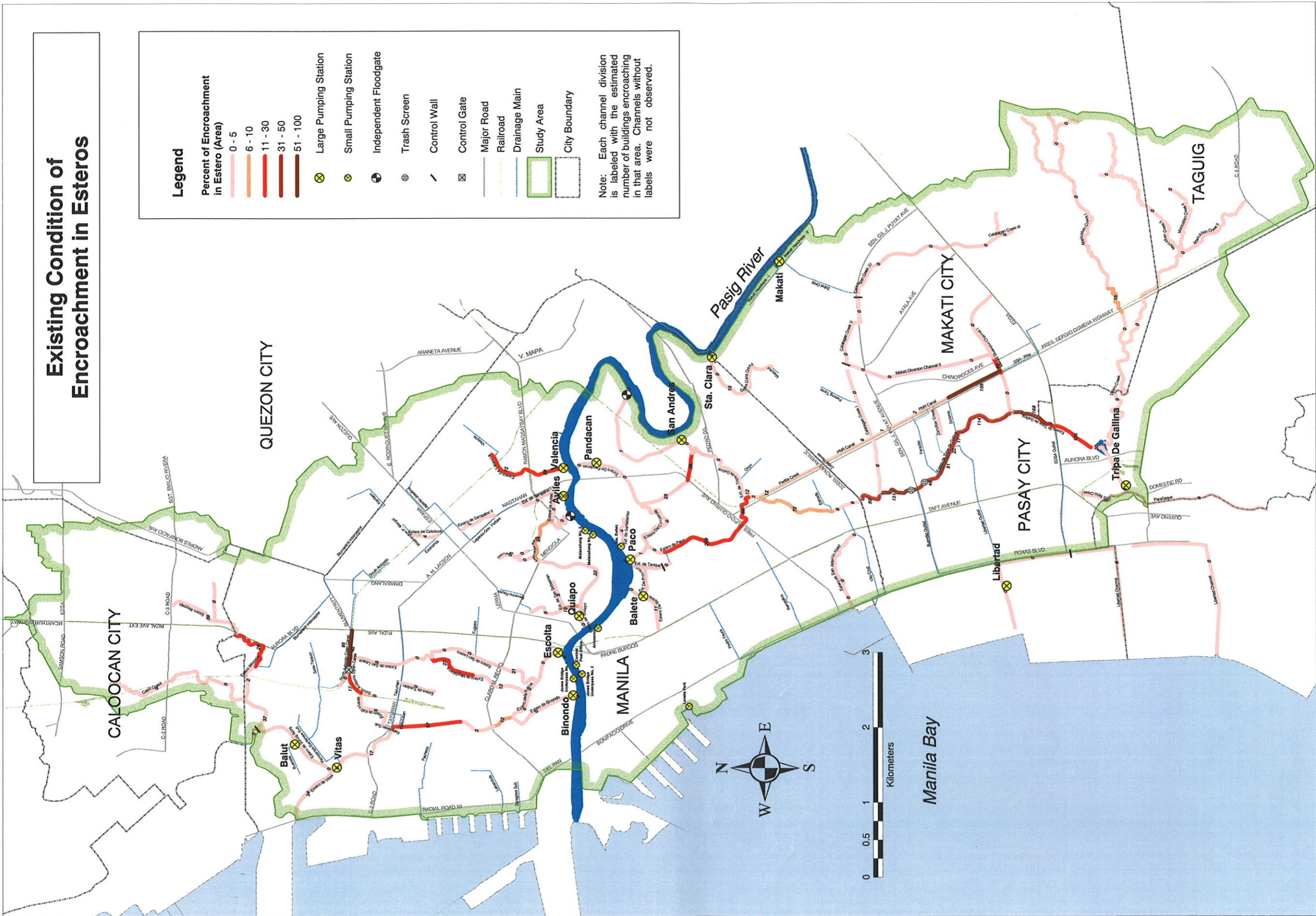


Figure I.2.2 Encroachment within Esteros

(4) Estimation of Number of Families within Esteros

In the case of KAMANAVA Area Flood Control and Drainage System Improvement Project, the number of families was calculated by multiplying the number of buildings by 3. However, the result of this calculation is considered a little high comparing the result of actual counting of the number of structures and families along Tripa de Gallina or from the experiences of visiting various informal settler areas and listening to opinions of the concerned people; thus a multiplier of 2.8 was used. The result of the above conversion calculation yielded 6,000 as the approximate number of families living in the buildings in total.

Some of the clustered areas of buildings that are within the esterros are shown below with approximate numbers of families:

Estero de la Reina	310 families
Estero de Magdalena	100 families
Estero de Valencia	360 families
Estero de Sunog Apog/Maypajo	300 families
Estero de Pandacan	145 families
Open Canal of South and North Antipolo	430 families
Estero de Tripa de Gallina (total)	2,400 families
PNR Canal	320 families

Note: The results for only representative esterros are shown.

Again, the above estimation is calculated only for the numbers of families whose buildings are encroaching into esterros. Thus, if structures along esterros on the public lands, which is within three meters area, are included, the numbers shall be far larger than the above.

I.2.5 ACTUAL COUNTING OF NUMBER OF FAMILIES WITHIN ESTERO DE TRIPA DE GALLINA

Actual counting of the number of families whose buildings are encroaching into Estero de Tripa de Gallina on both the Pasay side and Makati side was made with the assistance of Barangays along the estero. The results are as follows: 1,745 families in 17 Barangays in Pasay side and 483 families in three Barangays in Makati side, for a total of 2,328 families. The Manila side of the Tripa de Gallina has not been counted yet.

Further, the city official in charge of resettlement of Pasay City estimates the number of the informal settlers in and along Tripa de Gallina in the Pasay City area who have to be relocated as 3,000 families.

I.3 SOCIAL SURVEYS

I.3.1 GENERAL

Three different kinds of social surveys were carried out in the Study in the core area of Metro Mania as follows:

- 1) House-to-house survey to the people living near waterways, namely esteros and creeks, and the people living in flood-prone areas. The number of samples is 542 households from 78 different barangays along esteros and in flood-prone areas, of which, 398 informal settler households are included. They are selected from the poor families, middle, and some rich families.

The main purposes of the house-to-house survey are to find out the actual socio-economic conditions of those people, their perception on flood and waterways or drainage, and to find out their manner of garbage disposal.

- 2) Key Informants survey to informants of concerned barangays in the core area. The informants may be barangay officials, responsible people of different organizations, or teachers or priests/pastors. The survey was conducted by the use of prepared questionnaires.

The purpose of the Key Informants' survey is mostly to verify the responses that are given by the individual household interviewed by the house-to-house survey, and to analyze the situations more objectively.

- 3) Mail survey to various organizations, institutes and business establishments by selecting more than 100 samples basically from estero and creek areas and flood-prone areas. However, in consideration of limited availability of mail services, the actual survey was carried out by hand delivery of questionnaires and pickup of the accomplished forms. Samples include schools, hospitals, clinics, government offices, banks, big private companies, small businesses, transportation concerns, NGOs and small industries.

I.3.2 HOUSE-TO-HOUSE SURVEY

The house-to-house survey in the core areas of Metro Manila has been conducted to obtain a general profile of the core areas focusing on the four key factors as follows:

- Esteros,
- Informal settlers,
- Floods and
- Garbage.

The cities covered were Manila, Makati, Pasay that are the major core area, and three others: the cities of Caloocan and Quezon, and the municipality of Taguig (presently the city of Taguig) where some part of the city or municipality are located within the core area were included.

(1) Objectives of the Survey

The main objectives of this survey are:

- a. To collect information on the living conditions, environmental condition, people's experience and perception on flood, and the situation of solid waste in the identified esteros and flood-prone barangays in the core areas.
- b. To analyze the information collected from the field survey which will serve as basis of the formulation of strategic plans for the improvement of the existing drainage systems and solid waste management.

(2) Methodology of Survey and Sampling

The survey was conducted in the method of face-to-face, or house-to-house interview, by the use of questionnaire prepared beforehand. The questionnaire was composed of a wide range of items: Language/ethnicity, religion, household composition, income, occupation, flood-related question, people's perception on flood, on informal settlers, garbage collection, etc.

Samples were selected based on the aforementioned key factors. First selection was made from the barangays where informal settlers are clustered in and along esteros and where garbage tends to be accumulated, i.e., Estero de Tripa de Gallina, one of the most important and problematic esteros, which flows through the cities of Manila, Makati and Pasay. The second selection was from another important and problematic area, Estero de Maypajo and its tributaries, from Manila City to Caloocan City. Also, samples were taken from some other esteros within the core area.

Other major groups of samples were selected from flood-prone areas, mainly from Sampaloc area of Manila City and P-Santos area of Pasay City.

The total number of samples selected from the cities of Manila, Makati, Pasay, Caloocan, and Quezon and the municipality of Taguig is 542 households, from 78 barangays along the selected esteros and various flood-prone areas, of which, 144 households are formal settlers and 398 households are informal settlers. In the case of barangays along esteros, the further criteria for selection were set: within the following distances: 25 meters, 50 meters, and 100 meters away from estero, to find out the perception of the people about esteros, throwing garbage into esteros and on floods.

Initially, the selection was made as planned in the Inception Report, that is, a total of 500 samples from 30 barangays, of which, some 150 samples are from informal settlers' households. However,

as the survey went on, it was realized that not only the esteros of problem points, but also, the inclusion of the barangays of upper stream of the garbage accumulation points and down stream is essential. Accordingly, samples were taken from many more barangays than the originally intended 30 barangays.

Similarly, the number of the sampling of the informal settlers was largely increased than the original 150, and the ratio of samples of the informal and formal settlers was reversed. The reasons for this are as follows: First, with the permission from barangay captains, and accompanied by barangay officials, the visit to informal settlers' households was not so difficult as it was considered earlier; second, the collection of more information on informal settlers, if possible, may be important for the Study because of scarcity of existing information on informal settlers.

Note: Strictly speaking, the definition of a family and a household differs. A family often includes blood relations; a household is basically a husband and a wife with a child or children. But in many cultures these two words are used interchangeably in daily life. Thus, these two words are also used interchangeably in this survey without a rigid distinction.

(3) Results of the House-to House Survey

The following are the major findings of the surveys conducted in the Study. The tables of summary results are presented in *Annex I.1*.

Although there are answers that cannot be taken all as truth, the results as a whole reveal some picture of the surveyed people in general.

1) Characteristics of Respondents

A general profile of the respondents is presented below.

A-1 Ratio by sex

Of the total respondents of 542, female is 64.6% and male is 35.4%. There are almost twice as many female as male respondents because normally more females tend to stay at home during the day than males who are normally out for work.

A-2 Marital Status and Age Distribution

Respondents by marital status are as follows: married 385, single 106, widows or widowers 39, and separated 12. The largest age group of the respondents come from age group between 20 years to 30 years old, 28.2%; followed by the group 31 to 40 years, 27.1%; then 41 to 50, 24.9%.

To the category of "single" respondents belong mostly those who came to Manila in search of job leaving their families in the province, and those relatively young males who became independent separating from their families.

A-3 Religion

Of the surveyed families, Catholics occupy 91%, "born again" 5%, and Iglesia ni Kristo 2%. There are a small percentage of Protestants (1%) and Muslims (0.7%).

A-4 Ethnic Affiliation and Language

Of the 542 families, 56.3% are Tagalog-speaking, some 18% Bisaya and 7% Ilokanos who

are from the northern part of Luzon. Muslim/Lumad from the Mindanao area and Ibanag are about 3% all together. This shows that the Philippines is not a mono-cultural country.

2) Responses to Questions (Household Basis)

B-1 Number of Children

An average number of children of the surveyed families are about 3.04 children. The average of formal settler families is some 2.97 children per family while the average of the informal settlers is slightly higher, 3.07 children. The mean of the total families is 2 children, i.e. 114 families or 28%. However, there are also families with no children. The largest numbers of children are; 9 children 4 families, 10 children 4 families, 11 children 1 family and 12 children 1 family.

B-2 Household Size

Average household size of the total surveyed families is about 4.75 persons; the average of the formal and informal settler families is about 4.81 persons and 4.71 persons, respectively. This may look rather smaller than generally considered, but there are 106 single families within survey samples, and about 22% of the total families, i.e. 20.8% formal settler families and 22.1% informal settler families are without children. Also, the families with 1 child occupy 18% of the total family numbers. Existence of all these families seems to reduce the size of the household.

B-3 Educational Attainment

The Philippines is well known for high education of its citizens, and the survey results reveal this tendency. More than half of the surveyed husbands and wives have reached high school level or higher. Informal settlers are generally considered and actually presented as the people with no education. However, the survey results tell that only 1 out of 286 informal settler husbands have no education. Some 63% of the informal settler husbands have high school level education and 16% have even college education. Similarly, 57% of the wives of informal settler households have high school education, and some 16% have college level education. The fact that informal settlers have significant level of education indicates that they have potential as resources to contribute to society, not simply a liability to the society. Formal settlers enjoy a slightly higher level education.

B-4 On Residence - Length of Stay

Many of the formal and informal settlers have been staying at their present barangay between one and five years. In the case of informal settlers, more than 20% of them have been living in the place more than 10 years, 17%, longer than 16 years, and over 7%, more than 20 years.

B-5 Willingness to Move, If Asked by the Government (People's Opinion)

Only a few will accept if the government asked them to move. Of the 542 respondents, only 80 (15%) answered "yes, we will move, if asked to move". This means 85% of the answers were "no". Among the formal settlers, hardly 10% said they were willing, but some 16% of the informal settlers stated that they would move.

B-6 Why Move?

Of the 15 families who said they were willing to accept relocation, 5 gave the reason of job opportunity and 7 said that they have relatives living in other places. The biggest reason for the informal settlers to move is that they have relatives in some other places (about 50%), followed by seeking job opportunity (35%).

B-7 Conditions to be Satisfied to Agree to Move (People's Opinion)

Only informal settlers were asked about the minimum requirements that should be satisfied for them to agree to move. Majority (57%) answered "a house and lot provided with water and electricity". But 26% mentioned a house and lot as minimum conditions. This indicates that approximately 81% of the surveyed informal settlers are hoping to acquire a house and lot. The requirement for job opportunity ranks 16%. The request for accessibility is mentioned in only 2 cases.

B-8 Occupation and Income

a. Household Income

About 56% of the surveyed households have at least one breadwinner; 33% have double income sources. These ratios are almost the same as the ratios of income sources of informal settler households. Approximately 52% of the formal settler families have only one income source, but nearly 12% of families have three income sources. There are no families that answered "unemployed" or "no income earner".

b. Type of Occupation

In average, 53% of the total households are working as salaried men/women, while 28% are engaged in small businesses such as sari-sari stores, or "buy and sell". A comparison of formal and informal households shows that 60% of the former and 50% of the latter are salary-income earners. Although the level of income between the two is not largely different, the combined rates of small business and service of the informal settlers occupy nearly 48% but formal settlers' are less than 35%.

Out of 398 households of informal settlers, 22 households have more than 3 income earners, but in case of formal settlers, only 5 families have more than 3 sources. This suggests that informal settlers are spreading their income sources more widely than formal settlers, may be to secure their income.

In addition, about 17% (93 families) of the 542 households state that they have still some other income sources.

B-9 Estimated Monthly Income

A very rough calculation reveals that an average income of the entire families seems to be slightly more than Php 6,000 per month. The average of the formal settlers' is about Php 7,300, and an average of informal settlers is some Php 4,900. The mean of the surveyed families as a whole falls in the category of between Php 1,000 and Php 4,999. The mean of the formal settlers is in the category of between Php 5,000 and Php 9,999 (about 40% of the formal settler), and for informal settlers, between Php 1,000 and 4,999 (about 47%).

This may look considerably low compared with the information of the National Statistics Office’s survey in the year 2000, which indicates that the poverty thresholds set by the National Economic Development Authority (NEDA) is about Php 72,430 per family per annum.

When converted into monthly income, it is slightly over Php 6,000/mth. According to NEDA, the upper limit of the income level is set at Php 80,000; when converted into monthly income, it is some Php 6,666.

It is quite difficult to come up with an average monthly income per family from this survey result because respondents were asked their income by category (not the exact amount), due to people’s tendency to avoid giving their true incomes.

The rough estimations were made by taking 3 to 4 major categories where large numbers of respondents fall, multiplying the numbers of answers with the mean of each category, and divided by the number of categories.

B-10 Is Income Sufficient?

On the question of sufficiency of household income to meet their monthly needs, more than half (51.5%) of 542 families answered “Yes”, which means that half of the households are not able to meet their necessities. On the other hand, about 58% of the formal settlers answered that their incomes satisfy the household needs. And only some 46% of the informal settler families said that they have sufficient incomes to support their families.

B-11 How Do You Make Ends Meet?

This question was posed to find out how those families who do not earn sufficient income are coping with their financial problems, and 85% of 277 households said they borrow from relatives, friends and other sources. The same answers were given by the formal settlers (90%) and by the informal settlers (83%).

B-12 Housing

a. Roofing Materials

As can be seen below, majority of roofing material of the houses (521 out of 542 families) are made of galvanized iron sheets for both formal settlers and informal settlers.

Table I.3.1 Roofing Material

a. Roofing materials	542	Total	144	Formal	398	Informal
Galvanized Iron Sheet	521	96.1%	140	97.2%	381	95.7%
Plywood	17	3.1	3	2.1	14	3.5
Cement	4	0.7	1	0.7	3	0.8

b. Walling Material

Majority of walls of formal settlers’ houses are made of permanent types of material such as cement or block. But nearly 43% of the informal settlers also use a permanent type of walling material.

Table I.3.2 Walling Materials

b. Walling material	542	Total	144	Formal	398	Informal
Cement/block	251	46.3%	82	56.9%	169	42.5%
Plywood	151	27.9	24	16.7	127	31.9
Wood	30	5.5	9	6.3	21	5.3
Galvanized Iron Sheet	7	1.3	-	0.0	7	1.8
Others	103	19.0	29	20.1	74	18.6

This indicates that the houses of informal settlers are not necessarily made of galvanized iron sheets, plywood and cardboard, although the use of plywood for walling is higher with the informal settler houses.

B-13 Ownership of the House

The survey reveals that more than half of the families surveyed are not house owners, both formal and informal settlers. More than 26% of the formal settlers stated that they are “free occupants”. However, this does not mean they are informal settlers. Free occupants are those families who do not pay any rental charges or loans anymore.

Nearly 40% of the informal settlers pay rent (Php 500 or around in many cases) to the house owners.

B-14 Ownership of the Land

Regarding the question of land ownership, nearly 42% of the formal settlers are “free occupants”. As explained above, this does not mean those formal settlers are “informal”, but only they are not obliged to pay for the land.

It must be noted that about 18% of the “informal settlers” own the land. From key informants survey and hearing from other people, it was found that a considerable number of informal settlers who occupy public lands have been given, or are in the process of being given the permission from barangays or municipalities to stay. This fact may explain the landownership of the informal settlers as mentioned elsewhere in this report.

B-15 Floor Space

The means of the floor spaces for both formal and informal settlers are between 20 and 30m² that consists about 42% of the surveyed families. Of which, 39% of the formal settler families and 46% of the informal settler families live in the above space.

While more than 26% of the informal settlers live in the floor space of less than 20m², a significant number of formal settlers (17%) also live in the same small space. This shall suggest the scarcity and, therefore, high cost of housing in Metro Manila.

However, it was found that almost 10% of the informal settlers live in the house where the floor space is between 70 and 100m².

B-16 Lot Area

In terms of lot area, similarly, the highest percentages of both formal settlers and informal settlers fall in the category of 20 to 30m², the formal settlers about 29% and the informal settlers 42%.

The survey results show that 7 informal settler families occupy the lot of more than 200m² while 4 families of formal settlers occupy the lot of the same size. There is some doubt

about the lot of more than 100 or 200m² occupied by so-called “informal settlers”, as to how it is possible to occupy such a large area of public land.

B-17 Number of Rooms

Many of the surveyed families live in one-room houses. About 69% of the 398 families of informal settlers live in one room and another 24% of the families live in 2-room houses. One-room and two-room categories together make almost 93% of the total families, that is, in the cases of informal settlers, while a majority of the families live in either one room houses or two-room houses. If compared with the number of children that informal settlers have - 2 to 4 children families consist of nearly 50% of the surveyed families – it is clear that the informal settlers live in a congested condition. Even more than 44% of the formal settler families do live in one-room houses.

Here again, there are about 3% of informal settlers who live in houses with 4 or 5 rooms. Because nearly 5% of the informal settlers live in the lots of 100m² to more than 200m², these may be the families who live in the houses with 4 or more than 5 rooms.

B-18 Type of Toilets

The most popular type of toilet is “water sealed type” that has a pit buried in the ground and water is seeped into under soil. Approximately 83% of the informal settlers and 75% of the formal settlers use this type of toilet.

There are 25 families who answered “anywhere”; hole in the ground or use river among the informal settlers. Four families among the formal settlers even answered “anywhere”, and 3 families to “river”.

It is considered, however, that the actual number of the informal settlers who use esteros as toilets is far larger than the actual responses given. From observation, key informants survey and hearing from various organizations, and from the way the houses of informal settlers are built, it is easily understandable that such are the cases.

3) Perception on Environment

Conservation of environment is one of the major issues on drainage improvement. Here are the results of the people’s perception on environment.

C-1 Has Environment Worsened (People’s Perception)

Out of 542 samples, 426 respondents answered that the environment surrounding them has changed for the last 10 years, with 64% of them saying that the environment has changed for the worse, while 34% say it has become better.

C-2 Reasons of Environmental Changes

The respondents think the reasons for environmental change is brought about primarily by overpopulation (35%), followed by pollution (27%). About 21% think the cause of the environmental change as “too much garbage”.

C-3 Sickesses

From the key informants’ survey, it is known that cases of water-borne diseases or general infectious diseases are not to a degree of particular concern. But there are cases of

water-borne diseases after floods subsided.

C-4 Type of Disease

A total of 101 out of 542 families answered that some family member was afflicted by a water-borne disease last year. Many of these symptoms appear after floods. Reported were cases of diarrhea (62), typhoid fever (29), cholera (5), malaria (2) and others (3). One of the most serious diseases that occurs post-flood time, and that often people mentioned, “leptospirosis,” which is caused by rat’s urine was not reported in this survey.

4) On Flood

D-1 Flood Experience

The samples were selected from flood-prone areas and non-flood areas. Some of the areas along esteros are also flood areas. Of the 401 samples of the flood-prone areas, 350 families responded that they experienced floods. Also, of the 141 families in the non-flood areas, 30 responded they experienced floods. Of those who experienced floods about 11% say the flooding always happened when it rained and nearly 30% said this happened “frequently”.

D-2 Damages Suffered

Of 380 families who suffered damages by flood occurrences, 37 families suffered human damages and 19 suffered material damages. More than half of the families responded they suffered both human and material damages. However, the types of injuries were not asked. One-third of them did not suffer any damages.

D-3 Take Preventive Measures

All families who have flood experiences are taking precaution to mitigate flood damages. A great majority of them (94%) are moving important items to safer places; some are wrapping valuables with plastics, and some others are moving to safer places.

D-4 Flood Could be Mitigated (People’s Perception)

Approximately one third of the respondents think that the floods can be reduced. Almost 83% of the formal settlers and some 73% of informal settlers have this opinion. Particularly in the flood-prone areas, 82% of 170 families think that floods can be reduced, if not eliminated.

No notable pattern depending on differences in distance from estero could be found. Only the people of flood-prone areas tend to think more strongly that floods can be mitigated.

Table I.3.3 Perception on Flood Mitigation by Proximity to Estero

Proximity Answer	Total		Formal Settlers		Informal Settlers	
	Yes	No	Yes	No	Yes	No
Within 25 meters	73%	27%	81%	19%	71%	29%
Within 50 meters	74%	26%	78%	22%	71%	29%
Within 100 meters	70%	30%	75%	25%	70%	30%
Flood Prone Areas	82%	18%				

D-5 Most Important Causes of the Flooding (People's Perception)

The major cause of the flooding according to the surveyed families is “too much garbage in esteros” (62%), followed by “low elevation of the area” (14%), and “narrowed drainage capacity” (14%).

The responses suggest that the people are already aware of the problem. They know that if people will just stop throwing garbage into esteros one of the major problems of floods will be reduced.

5) On Garbage

This question was posed to find out if there is some correlation between availability of garbage collection services and garbage dumping to esteros.

E-1 Garbage Thrown into Esteros

To the question if they know that throwing garbage into esteros is one of the major causes of flooding, 93% of the 542 samples answered that they are aware. Only 22 said that they did not know.

E-2 Availability of Garbage Collection Services

It was found that very high rates of collection services are being provided in the Metro Manila area. This situation coincides with the results of the mail survey as well as the key informant survey. Although it is known that collection trucks are not coming into narrow streets where many informal settlers tend to live, services are available if only everyone would carry their garbage a little further.

Of 542 families, 97% responded that garbage collection services are available around them (97.9% of the formal settlers and 96.7% of the informal settlers). Those who answered “no” were 3 formal settler and 13 informal settler families.

The comparison of the three cities of the core area on the availability of collection services shows that the highest is Manila City where the availability is 99.5%. The lowest is Pasay City (94.5%) with 8 families saying that collection services are not available.

E-3 Who Is Responsible for Collection?

A majority of surveyed families (74%) answered that the responsible organization of garbage collection services is city or municipality; 18% and 7% said it is the responsibility of the barangay and private companies, respectively.

E-4 Frequency of Collection

On garbage collection services, availability of the services and frequency of the services are two important issues. From other surveys it is found that daily collection services are being practiced in many areas of Metro Manila. The rates of daily services are a little lower in this house-to-house survey, yet more than half of the families are receiving services every day.

As shown in the following figures, among the families who said the collection services are available, about 70% and 83% receive daily collection in Manila and Pasay, respectively. All of the families in Makati City who answered that the services are available enjoy daily

collection services. However, 9.7% of surveyed Manila families stated that the collection trucks come only seldom.

Considering the availability of collection services shown above, the reasons that a tremendous amount of garbage thrown into esteros may not be necessarily lack of collection services, but rather, lack of people's awareness of conserving the environment or keeping the waterways clean.

E-5 What Would You Do If No Collection Services Are Available?

Six out of 16 families who answered this question responded that they would just throw garbage into esteros. Others stated that they would burn them or make compost. (These answers may only be partial, because some garbage cannot be burned or be made compost.)

E-6 Law to Prohibit Throwing Garbage

A total of 136 families out of the 144 formal settler families said that they are aware of the law prohibiting throwing garbage anywhere including esteros; more than 93% knew the existence of the law, while nearly 81% of 398 informal settlers said they know the law.

E-7 Law to Reduce the Amount of Garbage

To the question of whether they know by law they have to try to reduce the amount of garbage, 85% of the formal settlers and 81% of the informal settlers answered "yes".

6) Willingness of Participating in a Pilot Project

The survey revealed a willingness on the part of the people to participate in a pilot project that brings some economic gains for them. There are very few people who said they would join "just to help"; 6% of the formal settlers and 7% of the informal settlers expressed their interests in participating in the pilot project "just to help".

I.3.3 FINDINGS FROM THE KEY INFORMANTS SURVEY

Interviews were conducted in some selected barangays along esteros or creeks of possible problem areas, or barangays of flood-prone areas. Interviewees included chairpersons of visited barangays, barangay officials, secretaries, and a teacher.

Some of the visited barangays are as follows: barangays in Tondo area along an estero or flooding areas, the barangays with large concentration of informal settlers along railroad track of Antipolo and the barangays in Sampaloc area, Estero de San Lazaro and Estero de Maypajo in Manila City; the barangay of Pio del Pilar in Makati City where informal settlers are heavily concentrated along the PNR tracks and a creek (the people in the barangay call it “Pimidina Creek”); the barangays along Estero de Tripa de Gallina and Maricaban Creek in Pasay City and Western Bicutan in the municipality of Taguig were visited as well; a barangay in Caloocan City where another large concentration of informal settlers is seen along Estero de Maypajo.

The following are major findings from the above survey.

(1) Flood Conditions

1) Frequency and extent of the floods

Most barangays say that when heavy rains come they still experience frequent floods, in some barangays, every time. However, many say that the extent of floodwater is largely reduced compared with several years ago. The water may come up to knee depth or up to ankle level, but some part of Sampaloc or Pio del Pilar water may come up to chest level when rain is heavy. In Tondo area where the effects of high tide are strong, topographically lower areas inevitably face serious flooding, particularly when high tide and heavy rains come together.

Only few cases of overflow of esteros or creeks are reported. In many areas they say that floodwaters come from underground, that is, from clogging drainages. The problem is, many say, the capacity of drainages is reduced due to clogging by garbage or silt, or either the size of drainage pipes is too small to absorb water. And they say, narrowed waterways due to vastly increased population and housing structures that encroach into esteros. Various informants complain that drainage pipes had been installed more than 20 years ago when the population and the number of households of the area were much smaller.

2) Duration of the floods

Although the frequency of floods is very high, the duration of inundation is not long. The water subsides only in 20 to 30 minutes in some places, or water goes in half a day in many cases. The water stays one day in some other places, but it is very rare that the floods last more than one day except for the cases where heavy rains continue.

3) People’s behavior and perception towards the floods

The people in the flood-prone areas in general accept the floods as natural events or take them as a matter of course even though a considerable number of people frequently suffer water damages. They are, that is, adapted to frequent floods.

As a precaution, the substructures of many houses in the flood-prone areas are elevated, and the people generally put valuables in rooms upstairs, or move their appliances and furniture before water level increases. But those who do not have a second floor room or who live in small houses where no spaces are available to evacuate their belongings suffer damages. However, many people take the water damages as something to just shrug off, saying they

“only get wet.”

Bigger problems are that people are unable to report to work on time, or children cannot reach their schools; small businesses, such as food stands or food sellers particularly lose business opportunities while a business like Pedi cabs can make more money during floods because people are not willing to walk in the water.

(2) Sickness and Diseases after Floods

Various cases of sickness and diseases after the occurrences of floods are reported. Although the number of cases is not many, some of them are said to be quite serious. Common sickness and diseases that are directly affected by contaminated water are diarrhea, dysentery, tetanus, some kind of skin disease and cholera. One of the most dangerous diseases reported is leptospirosis that is caused by the urine of rats. People say this disease can often develop to a very serious condition.

Cases of malaria and dengue are also reported. These mosquito-borne diseases are not directly caused by the contaminated water. The problem is these mosquitoes breed in the stagnant water after most of floodwaters subsided, and they spread the disease, yet, not to the extent of “prevalent.”

The respondents state that fatalities from those diseases are rather rare.

(3) On Informal Settlers

Informal settlers are mostly concentrated along waterways and some of the railroad tracks. A majority of barangays visited by the survey team and the barangays where informal settlers clustered state that the existence of the informal settlers is very disturbing, and think they should be relocated. The major reasons for disturbance are that they throw garbage into esteros and creeks, or on the streets, and contaminate the surrounding environment. In addition, according to the informants, many informal settlers are drug dealers, prostitutes, some kind of gangsters, and gamblers who give negative influences upon other residents in the area. Almost all respondents think that informal settlers particularly lack discipline, and thus, they should be educated.

1) Housing and hygiene

The houses of informal settlers look generally very poor. Particularly the houses along railroad tracks tend to be built by poorer materials such as, plywood, cardboard, galvanized iron (zinc), cloth, vinyl cloth or plastic sheets. The houses, in which the people have lived for a long time, often more than 20 years from generation to generation, look poor and filthy from outside, but inside of the house they often have a TV set, refrigerator, electric fans, cupboard, tables, and sofas.

A number of houses of informal settlers, reportedly, have no toilet. If they have, the toilets are generally built directly on the waterways, or if not, they are built in the way that human waste directly flows into waterways through pipes.

2) Educational level

The education of informal settlers is generally limited. However, most children are attending public elementary schools and high school; and some are even in government colleges where school fees are free.

3) Government services

Government services to informal settler areas are generally not provided. Accordingly, in many cases, they get free use of electricity and water by illegally connecting electric wires to formal settlers' wires, and cutting water pipelines of formal settlers and connecting them to their own houses. Because of their manner of "free use" of government services from formal settlers, troubles with their neighbors who have the burden of paying for the cost of using the services are reported.

4) Relationship between neighboring formal settlers

Except for one barangay, all other barangays state that the relationship between the informal settlers and formal settlers remains generally in good terms. In many barangays the informal settlers join the activities of residing barangay, sometimes very actively.

(4) Maintenance and Cleaning of Esteros and Drainages

Almost all barangays are aware of who is (or supposed to be) maintaining the esteros and drainages. Most of them answered MMDA. Only two barangays answered that the city government is the responsible body. However, as for the cleaning of esteros and drainages, they said that MMDA cleans only once a year before the coming of rainy season, and that because of unsatisfactory frequency of cleaning, many barangays complain of the clogged drainage system causing floods. Some informants stated that their barangay use their own funds to clean the drainage.

(5) Garbage Collection

1) Availability and frequency of garbage collection services

Except for the municipality of Taguig, most barangays answered that a garbage collection truck comes every morning some time between 6 a.m. and 8 a.m. Some barangay complains of the small capacity of the collection truck that cannot carry all the garbage disposed of by the people. And almost all barangays state that the collection vehicle comes only up to main roads, but not to narrow streets. They say that this is one of the reasons that the people near a waterway, particularly the informal settlers who live along or on the waterway, either an estero or a creek, throw their garbage into the waterway.

2) Practice of separate collection

A majority of barangays say they are practicing separate collection, but some say their constituents do not necessarily follow the rule.

3) Reasons for throwing garbage into waterways

To the question of "why do people throw garbage into waterways?" the answers are that the people, especially informal settlers lack discipline, or they are just lazy.

For cleaning and garbage collection of narrow streets, many barangays assign own people to collect garbage in a small cart and sweep barangay roads, but it is troublesome for some people to catch the cart, or in some cases people miss the time of their passing. Then, it is reported, that they tend to dispose of the garbage into the waterway nearby rather than leave it in front of their own house.

(6) Some of the Barangays with Informal Settlers and Remarks to be Noted

Interviews with some of the important barangays along esteros, creeks or railroad tracks where clusters of informal settlers are living are introduced below.

1) Barangay of Sitio 3, Western Bicutan, Municipality of Taguig (Maricaban Creek)

Sitio 3 is facing a part of Maricaban Creek. Only about 10 meters of the creek show the surface. Other parts are already underneath of houses of informal settlers or open space where no houses are built on the flow banks. Behind this small area is a part of the Nutrition Center of the Philippines premises. The other side bank of the creek is Makati City. On both sides of banks no “maintenance road” of three meters is kept. It is understood that this small area used to flood when rains come, about knee high or sometimes chest level. But in late 2003 or early part of 2004, the municipality constructed a concrete fence along the edge of the creek in between the houses of informal settlers.

An official of Sitio 3 states that there are 150 “former” informal settler households against about 315 formal settler households. The land where those informal settlers built their houses is a public land, but houses are situated right on the edge or over the creek. Nevertheless, the barangay considers them as no longer “informal”, because they have filed a request for approval of land title to the municipality with all required documents. The barangay states that 94% of the so-called informal settlers made the request.

The barangay has another concentration of informal settlers along PNR track, but the official states that they are scheduled to be relocated to some resettlement site by a project funded by JBIC.

2) Barangay 152, Zone 16, Pasay City (Estero de Tripa de Gallina)

This is one of the barangays facing Estero de Tripa de Gallina. The chairwoman of the barangay explains that some 70 to 80 informal settler households live within her barangay and another 250 households or so recently came to the area from Makati City displaced by a fire.

The informal settlers who settled down on the public land along the estero have started to move in from way back, probably some time in the 1950s. The environmental problem is the garbage in the estero, she reports. The estero is filled with all kinds of garbage – kitchen waste, papers, and plastic items, and she complains although this is not a flooding area, the estero is so dirty and smells bad.

3) Barangay 35/33, Maypajo, Caloocan (Estero de Maypajo)

Barangay 33 is one of the barangays that have a huge number of informal settlers along its estero. According to the barangay officials, the barangay has more than 8,000 households of which some three-fourths are informal settlers. Many of them are living along the Estero de Maypajo. These informal settlers have been given the right to stay where they are now by the city government because it is public land. For the time being, the barangay says, the informal settlers have only a right to stay, but if they pay the required amount of money to the city, they will be able to obtain the land title.

The houses of these informal settlers are built on the edge of the estero and no maintenance road of three meters is kept. The estero was, it is understood, rehabilitated a few years ago but is now filled with all sorts of garbage. They say that, with high tides, the streets are always flooded and when high tide and heavy rain come together, the estero overflows.

Small creeks with running water and open ditches with stagnant water are running along and around the houses in the area close to the estero, but those creeks and ditches are all filled with garbage and filthy water, emitting terrible odor around.

4) Barangay Pio del Pilar, Sitio 3, Makati (PNR Canal leading to the Estero de Tripa de Gallina)

Barangay Pio del Pilar, Sitio 3, holds about 1,000 informal settlers households out of a population of approximately 40,000 to 50,000 in total. Most of the informal settlers in this barangay live along PNR. This is also a constant flooding area. A barangay official reports that with every rain the area gets flooded, generally to about knee high but sometimes to the chest level.

The informal settlers in this area have started to live there almost 100 years ago when the railroad tracks had been constructed, and some of them have lived there from generation to generation.

Some of them, those who live on the southern part of the railroad, are given permission by the PNR to live there, at least temporarily, and therefore they are disciplined, the barangay official explains. But the other half of households has no permission and their behavior is very negative.

Many of the informal settlers are not accepted, he says, in any relocation sites because they are “repeaters”. The government now has a registration system for relocation because of the problems of repeaters and “professional squatters”. Accordingly, those who repeat the unlawful act of requests for resettlement are not accepted.

5) Barangay 331, Zone 33, District III, Manila (Estero de San Lazaro) and Barangay 256

There are only few informal settlers within Barangay 331 along the estero. However, at the time of the visit by the Study Team, the surface of the estero on both side of the bridge was completely covered with all kinds of garbage and it was mistakenly understood as a dry dumping site rather than an estero. But this is not a flooding area.

The barangay chairman blames the garbage as the act of the people on the other side of bank. The middle of the estero is an administrative division of barangays as well as the division of Districts II and III. According to the chairman of Barangay 331, their people clean this side of the estero, but the people of the other bank and barangays do not clean, and throw garbage.

The barangay on the other side of bank, Barangay 256, admits that informal settlers in their barangay throw garbage into the estero, but there are some 15 informal settler households only. The barangay official complains that they should be relocated to somewhere, but she knows those informal settlers have no place to move because they are repeaters. They moved to a new resettlement site about five years ago, but they came back to the same place after selling their new house in the site.

Here is something to consider: Only 15 families cannot fill the estero with garbage so quickly. The garbage likely comes from some upper areas.

6) Barangay 224, Zone 21, District II, Manila (New and Old Antipolo Creek)

It seems that locals call a part of Antipolo Creek as Old Antipolo, and the other half as New Antipolo. In Barangay 224, some 300 informal settler households out of a total of 600 households live along the railroad track and over the creek. The creek water appears only a few meters, and a row of houses is built over the creek.

The barangay chairwoman enacts a very strict rule for the barangay such as a curfew of from

10 p.m. to 4 a.m., and assigns 4 creek-sweepers everyday and declares the barangay as a drug-free barangay. However, the creek is completely filled with garbage.

The informal settlers in the barangay are not given any permission to stay at the present place, but the chairwoman states that they are willing to move if the government will prepare a relocation site with basic infrastructure according to the established guidelines.

7) Barangay 195, Zone 17, District II, Manila (Estero de Maypajo)

Along the Estero de Maypajo on the north bank are Barangays 195 and 194. Barangay 195 has about 2,000 informal settler households according to a barangay official. (This may include the informal settlers in Barangay 194.)

The houses are built in about three rows from the edge of the estero, and those houses on the edge of the bank and may be the second row too are the houses of informal settlers, while the row of houses on the street (Trinidad) are houses of formal settlers, but all of them are tightly adjoining each other. In between the houses small paths are running through for the people to move around. The row of houses continues from the streets of Narra to Juan Luna. The paths to each house are very narrow and hazardous, and a person can hardly walk through, but the houses are furnished with all types of furniture and electric appliances such as, sofas, tables, a cupboard, TV sets, refrigerators, and electric fans. Many houses have also a basement, a second or even a third floor. No formal government services, water or electricity, are provided, but it seems they all use them freely.

The barangay secretary says many of those people have been living here for a long time, even before the Marcos regime. However, in case of this area, nobody has any kind of permission to stay. It is understood the people are, at least some, willing to move out if the government will arrange a relocation site with appropriate preparation.

The south side of the estero belongs to Barangay 202 where no informal settlers live. But the edge of the stream bank is encroached by houses or buildings of formal settlers.

I.3.4 RESULTS OF THE MAIL SURVEY

As already explained in the previous section, the mail survey was actually done by hand delivering the questionnaire to appropriate establishments by the Study Team and also retrieved by the same Team.

The required number of survey samples was 100. The selected establishments included schools, hospitals, clinics, churches, government offices, factories, large businesses, small businesses, and transportation concerns. By the time of the first Progress Report, there were still 6 samples not retrieved. This time, all 100 samples are available, and the calculations of all items have been accordingly corrected.

Only five samples from one barangay were selected in the case of the municipality of Taguig because it is judged that other barangays are likely out of the Study's scope.

The detailed results are found at the last part of this section. Number of questions delivered and retrieved is listed in *Table I.3.4*.

Table I.3.4 Number of Questionnaires Delivered and Retrieved

Cities Delivered	Number Delivered	Number Retrieved
Manila City	35 samples	34 samples
Pasay City	25 samples	21 samples
Makati City	21 samples	17 samples
Caloocan City	11 samples	11 samples
Quezon City	12 samples	12 samples
Taguig Municipality	5 samples	5 samples
Total delivered/Retrieved	109 samples	100 samples

Source: JICA Study Team Survey

(1) Some of the Important Questions and Responses by Each City

The following are the survey results on environment, financial contribution, separate disposal of garbage, and on informal settlers regarding the drainage improvement in the core area of Metro Manila.

The second column of the table includes those who did not give any answer, stated "no comment", the question is not applicable to the respondent, or answered, "It depends".

1) Is Environment Degrading?

This question is intended to determine if people in general or establishments in general feel that the environment around them are deteriorating in recent years, and if so, in what way. More detailed answers are found at the last part of this section.

It was found that about 90% of the surveyed establishments feel that environment is degrading. One of the major reasons given by them is that rivers (esteros) are filled with garbage.

Table I.3.5 Sense of Degrading Environment

Questions	No answer/ No comment/ N/A, Depends	Yes	No	Total No. of Answer	Percentage of “Yes”
1. Is environment around you degrading?					
Manila City	-	26	8	34	76%
Pasay City	-	20	1	21	95
Makati City	-	12	5	17	71
Caloocan City	-	10	1	11	91
Quezon City	-	11	1	12	92
Taguig Municipality	-	5	-	5	100

2) Are You Willing to Provide Financial Contribution?

The second question is on whether the establishments are willing or able to provide financial assistance in case the Study requires such a contribution to carry out some campaign or activities for the improvement of environment.

Table I.3.6 Willingness of Financial Contribution

Questions	No answer/ No comment/ N/A, Depends	Yes	No	Total No. of Answers	Percentage of “Yes”
2. Can you make a financial contribution?					
Manila City	13	11	10	34	32%
Pasay City	7	7	7	21	33
Makati City	4	6	7	17	35
Caloocan City	4	3	4	11	27
Quezon City	4	4	4	12	33
Taguig Municipality	1	4	-	5	80

Only some 32% of the establishments responded “yes” excluding Taguig. Many of them answered either a “no comment” or “depends”, and some others stated that they are doing own activities with own budget. In fact, almost 80% of the respondents stated that their establishment is participating in some activity to conserve environment.

3) Are You Practicing Separate Disposal of Garbage?

It is understood that garbage disposal is one of the large problems of the present situation of drainage systems and esteros. The survey includes the questions of whether people and establishments in general are aware of and/ or practice separate disposal, and simultaneously the availability of collection services and their frequency.

As the following table shows, in the case of Manila, more than half of the establishments do not practice separate disposal while in Makati and Caloocan most of the surveyed establishments separate the garbage.

Table I.3.7 Practicing Separate Disposal

Questions	No answer/ No comment/ N/A, Depends	Yes	No	Total No. of Answer	Percentage of “Yes”
3. Practicing a separate disposal of garbage?					
Manila City	3	13	18	34	38%
Pasay City	1	10	10	21	48
Makati City	-	15	2	17	88
Caloocan City	2	9	-	11	82
Quezon City	2	7	3	12	58
Taguig Municipality	-	4	1	5	80

4) Are Collection Services Available?

Whether collection services are available is considered the key factor of throwing garbage into esteros or on streets. Thus, this is vital information that the Study Team needs to know.

Table I.3.8 Availability of Collection Services

Questions	No answer/ No comment/ N/A, Depends	Yes	No	Total No. of Answer	Percentage of “Yes”
Manila City	-	32	2*	34	94%
Pasay City	2	18	1	21	86
Makati City	1	13	3**	17	76
Caloocan City	1	10	-	11	91
Quezon City	-	12	-	12	100
Taguig Municipality	-	4	1	5	80

* These two establishments are factories. One says it has own collection system.

** One of them is a factory, one is an elementary school, and the other one is a horse race corporation, which has its own collection and recycling system.

The interview survey to key informants revealed that no collection truck come into small streets and this is one of the reasons that people throw garbage into esteros or leave them on streets. However, in cases of various establishments, only very few of them clearly answered, “No collection services from the city available”. Almost all cases of “no” are factories or special types of business that have own collection system except one, which is an elementary school.

5) How Many Times per Week do the Collection Trucks Come?

Although collection services are available, the question of how often the collection is generally made is also an important factor of the people’s behavior of garbage disposal.

The following table indicates substantial areas of each city are provided with daily collection services. The collection services of Pasay City and, probably, Taguig may be facing more problems.

Table I.3.9 Frequency of the Collection Services

Questions	No answer/ No comment/ N/A, Depends	Everyday	Two/ Three Times	Once	Total No. of Answer	Percentage of Everyday
Manila City	3	24	4	1	32	75%
Pasay City	4	7	7	1	19	37
Makati City	2	7	4	1	14	50
Caloocan City	2	7	1	-	10	70
Quezon City	-	9	3	-	12	75
Taguig Municipality	-	2	2	-	4	50

6) Is Government Assistance Satisfactory?

The question is if the surveyed establishments feel that there is sufficient government, either the central or local government, assistance for the improvement of environment or flood damages.

As seen from the table below, a majority of establishments feel more government assistance must be provided. They think that the problems of environmental degradation and improvement of drainage systems are the responsibility of governments.

Table I.3.10 Government Assistance

Questions	No answer/ No comment/ N/A, Depends	Yes	No	Total No. of Answer	Percentage of "Yes"
Manila City	2	29	3	34	85%
Pasay City	2	18	1	21	86
Makati City	3	11	3	17	85
Caloocan City	2	9	-	11	82
Quezon City	1	10	1	12	83
Taguig Municipality	-	5	-	5	100

Some of the answers in "no" include the responses that said, "The governments are doing sufficiently".

7) Should Informal Settlers be Relocated?

The presence of informal settlers in various areas, largely on public lands, is one of the most serious headaches of local governments. Also, many people complain of them of throwing garbage in esteros and on streets causing contamination of environment. The table below gives an idea on the thoughts of establishments in general on the question of relocating informal settlers.

High percentages of the surveyed establishments think that informal settlers should be relocated. Those who responded "no" are two religious affiliations and one government concern with the reasons that relocation of informal settlers would not solve the problems of floods or drainage, and that there are no appropriate places to relocate them, or relocation causes tremendous problems for the people and the government as well.

Table I.3.11 Informal Settlers Relocation

Questions	No answer/ No comment/ N/A, Depends	Yes	No	Total No. of Answer	Percentage of “Yes”
Manila City	4	29	1	34	85%
Pasay City	2	17	2	21	81
Makati City	2	15	-	17	88
Caloocan City	2	9	-	11	82
Quezon City	-	12	-	12	100
Taguig Municipality	-	5	-	5	100

(2) Outline of the Overall Summary

The overall summary of the findings is described in *Table I.3.12*.

The bases of calculations are made on the total number of responses excluding the “not applicable” cases. The percentages are rounded after decimal point. N/A indicates “not applicable” and “no answer”.

Table I.3.12 Summary of the Mail Survey Results

Questions/Categories	No. of Answers	Yes	No	N/A*	%of Yes	Remarks
Q 1. Is environment degrading?	100	86	14		86%	*include “no answer” and “not applicable”
Q 2. In what ways becoming bad?	87			10		Multiple answers
a. Streets are becoming dirty	57				66%	The base of the percentages is 84 samples.
b. Smells bad	37				43	
c. Exhaust gas from vehicles	50				58	
d. Frequent occurrence of floods	50				58	
e. Green areas/trees are reducing	43				50	
f. Noise is increasing	39				45	
g. Informal settlers increasing	46				53	
h. Rivers/esteros filled with garbage	66				76	
i. Other	14				17	
Q 3. What is (are) the causes?	91			9		
a. Increase in population	64				70%	The percentages are based on the answers given, 91 samples.
b. Increase in vehicles	59				65	
c. People dump garbage wherever	75				82	
d. Increase of informal settlers	56				62	
e. Lack of government services	50				55	
f. People don't observe laws/rules	56				62	
g. Other	13				14	
Q 4. Do you participate in activities for environmental conservation?	97	80	17	3	82%	
Q 5. What type of activities?	80	74	-	6		Multiple answers
a. Participate in cleaning of streets		63			80	The base of percentage 80 samples.
b. Green planting		29			36	
c. Offer financial assistance		15			19	
d. Other		23			29	
Q 6. Willing to participate in the activities planned by our Project?	100	70	19	5	74%	
Q7. Willing to provide financial assistance if required by the Project?	94	35	27	32	37%	
Q 8. Practicing separate disposal?	94	57	33	4	61%	
Q 9. Do you recycle garbage?	69	44	25	6/25	56%	The base is 69 samples
Q10. Recycle what kinds of garbage?	42			57		37 samples answered
a. Papers/paper products		37			88%	
b. Plastic products		22			52	
d. Glasses/bottles		23			55	
e. Aluminum cans/metals		12			29	
f. Others		7			17	
Q 11. Do you sell any of them?	88	24	62	8/2	27%	The base is 88 samples
Q 12. Collection services available?	94	89	5	6	95%	
Q 13. How often the truck comes?	84			18		The base is 84 samples
a. Every morning		59			70%	
b. Once a week		4			5%	
c. Twice a week		9			10%	
d. Three times a week		10			12%	

e. Other		2			2%	
Q 14. Can floods be controlled?	98	91	7	2	93%	
Q 15. How they can be controlled?	93			7		Multiple answers
a. Improve/rehabilitate riverbanks estero banks		64			69%	The base samples are 93
b. Dredge rivers/esteros		60			65	
c. Clean garbage in rivers/esteros		78			84	
d. Improve drainage systems		83			92	
e. People stop dumping garbage		76			82	
f. Relocate informal settlers		62			67	
g.Improve garbage collection system		57			61	
h. Others		7			8	
Q 16. Ever suffered flood damages?	95	58	37	5	61%	
Q 17. How many times suffered?	58			5		Based on 58 samples
a. Once		5			9%	who answered.
b. Twice		6			10	
c. Three times		6			10	
d. Every time when flood occurs		38			66	
e. Other		1		2	2	
Q18. Taking precaution against floods?	80	68	12	20	85%	Based on 80 samples who responded.
Q 19. What were critical losses due to flood?	83			17		Multiple answers
a. Direct economic losses		43			52%	
b. Employees were unable to report to the office		62			75	
c. Cleaning up of our office requires time and money		27			33	
d. Others		9			11	
Q20. What types of infrastructure or services are suspended due to floods?	85			15		Multiple answers. Based on 85 samples.
a. Electricity		49			58%	
b. Drinking water		28			33	
c. Telephone		18			21	
d. Road are impassable		70			82	
e. Transportation are suspended		50			59	
f. Other		2			2	
Q 21. Should government assist more for the improvement of environment and reduction of floods?	95	83	8	4	87%	6 responded as the government is doing satisfactorily
Q22. Is flood control a very urgent matter (need immediate measure?)	98	82	11	5	84%	
Q23.Is flood control a very important matter (degree of importance)?	94	73	11	10	78%	
Q24. Informal settlers should be relocated?	96			4		Multiple answers
a. They should be relocated		85			89%	
b. No need to be relocated			5		5%	
c. Of other opinion				6	6%	

Q25. What are the good ways to stop People dumping garbage in esteros?	96			4		Multiple answers
a. Inform them of the problems caused by dumping of garbage		75			78%	
b. Communicate to them that dumping garbage is against law		64			67	
c. Take some measure to deter dumping in esteros/streets		71			74	
d. Provide frequent and appropriate services		75			78	
e. Enforce the law if ever found dumping garbage into esteros		76			79	
f. Any other opinions		15			16	

Source: JICA Study Team Mail Survey Results

Here again, some of the important questions and answers are once more discussed below.

1) On Environment

Out of 100 surveyed establishments, 86% answered that the environment surrounding them is deteriorating.

A-1 Ways Environment is degrading

To the question in what ways the environment is degrading, the answers often selected were garbage in rivers and esteros, followed by dirty streets (plural answers allowed).

A-2 Causes of the Degradation

As the causes of the environmental degradation, many of the establishments pointed out “dumping of garbage wherever”, followed by increase in population (plural answers allowed.)

A-3 Collection Services

For the availability of collection services, 89% of the establishments say that services are available, but 5 establishments stated that no collection services are provided. As mentioned in the breakdown by city, many of the “no” answers come from some types of factory that use own collection services.

Of the 84 respondents who answered the question on how often garbage is collected a week, a majority (71%) said every morning, 12% said three times a week, and 10% said twice a week.

2) On Flood

B-1 Can Floods be controlled?

About 91% of the surveyed establishments think flooding can be controlled. The following are the ways they think this could be done (answers can be plural).

Eighty-three out of 93 establishments gave the answer, “Yes, floods can be controlled.” Other popular choices were to clean the garbage in rivers and esteros and people to stop dumping garbage (into rivers/esteros).

B-2 Types of Infrastructure and Services Suspended by Floods

The biggest problems the people or establishments face due to occurrences of floods are, first, roads become impassable (and employees are unable to report to their offices), the next is suspension of various transportation services and interruption of electricity.

B-3 Is Flood Control Very Urgent?

The question is intended to find out if the respondents think flood control is a very urgent matter and something has to be done immediately about it. Of the 98 respondents who answered the question, 83 feel that immediate measures have to be taken.

B-4 Is Flood Control Very Important?

Out of 94 responses, 73 feel that flood control is very important.

3) Informal Settlers

One of the very important issues of this study is the existence of a great number of informal settlers. What should be done with them is the key for the improvement of drainage systems.

As can be seen in the table, a great majority of the establishments or the people responsible of the surveyed establishments believe that the informal settlers should be relocated.

However, a considerable number of the respondents provided some comments on the relocation. Many wrote that the most important issue of the relocation is to provide sufficient livelihood for them, so that the relocated people can stay where they are resettled.

4) How to Stop Dumping of Garbage

The garbage throwing into esteros is one of the most serious problems of deteriorating capacity of drainage systems. People are well aware of this fact. Here a question is posed to ask their opinions on what would be a good way for people to stop dumping garbage into esteros.

The highest number of the answers was “Communicate them to stop dumping”, that is thoroughly talks with them about the dumping problem, followed by the similar answer of “Inform them of the problems”. Also, pointed out was “Provide them (with) appropriate (collection) services”. Similarly there are opinions of “Take (necessary) measures to deter (such activity)” and “(Practice) strict implementation of the law”. Many are saying to enforce the law to stop illegal dumping.

(3) Remarks

Some of the comments given by various respondents but not shown in the table are given below.

A considerable number of respondents commented that the many problems they are facing now, particularly the garbage in esteros and rivers, are basically brought about by lack of discipline of residents, largely of informal settlers. Clogging of drainage systems is, however, due to low capacity of drainage systems that, they say, is obsolete by now.

On garbage dumping into esteros, many suggest the necessity of strict enforcement of law for

those who violate it.

Question No. 3 – What are the causes of the problems mentioned in Question 2?

Increase in industrial and domestic waste.

Some esteros are no longer dredged.

All the problems are caused by lack of education and discipline.

Question No. 5 – What are critical losses due to floods?

Damages to equipment and documents.

Traffic and difficulty of getting home from office.

Damage to engine and brake of a vehicle.

Dirty water of drainage causes sickness and diseases.

Question No. 10-2 – How to control floods?

Need the construction of river dikes.

Need drainage covers that cannot be stolen easily to prevent clogging.

Question No. 14-1 – Should informal settlers be relocated?

They have to go back to their provinces.

The government should be strict on this matter.

Question No. 15-1 – What is a good way to stop dumping garbage into esteros?

Construct fencing block along esteros

Have “check points” near esteros and assign some people and pay them well.

Try to guard esteros as much as possible to prevent informal settlers from coming back.

People should be informed on how to minimize the generation and dumping of garbage.

The government should discourage the use of plastic bags.

Provide more dumping station so that people can throw their garbage

Provide accessible and adequate garbage cans in areas.

Jail them if ever found dumping garbage in esteros.

Barangay officials should prevent (all) settlers along esteros.

Other comments:

Each barangay needs to have an “Environmental Program”, “Solid Waste Management” and “Environmental Conservation Campaign” led by local government providing financial support to give incentive.

Discipline and government implementation on areas that need help are the main solution to the problems.

Cleanest barangays should be acknowledged and given incentive.

Relocate informal settlers and give them livelihood project.

I.4 SOCIAL FRAMEWORK OF RESETTLEMENT

This section shall present the results of the study on Social Framework of Resettlement, which covers the legal basis and institutional framework of resettlement, resettlement procedures and framework. Also, discusses the problem points of the procedures and actual resettlement operation, and some suggestions and recommendations to improve the facing situation.

I.4.1 LEGAL FRAMEWORK OF RESETTLEMENT

The legal base for resettlement of affected persons or families is stipulated in first, the Constitution of the Republic and in Republic Act No. 7279. Also, other related laws are listed below.

(1) Bill of Rights of the Constitution

The overall objective of the Resettlement Policy should be derived from the Bill of Rights of the Constitution of the Republic of the Philippines.

- Article III, Section I: No person shall be deprived of life, liberty, or property without due process of law, nor shall any person be denied equal protection of the law.
- Article II, Section 9: Private property shall not be taken for public use without just compensation.

(2) Urban Development and Housing Act of 1992 (UDHA) – Republic Act No. 7279

All resettlement operation has to be carried out according to the stipulations of above Republic Act. The details of the Act are introduced in the aforementioned section of this report.

1) President's Executive Order No. 71, issued March 25, 1993

Devolving the powers of the Housing and Land Use Regulatory Board to approve subdivision plans to Cities and Municipalities pursuant to Republic Act No. 7160, otherwise known as the Local Government Code of 1991.

2) Department of Finance, Local Finance Circular No. 3-92, issued September 11, 1992

Guidelines for Equitable Land Valuation for Socialized Housing pursuant to Sec. 13 of RA No. 7279 "Valuation of Lands for Socialized Housing", "An Act to provide for Comprehensive and Continuing Urban Development and Housing Program, Establishing the Mechanism for its Implementation and for Other Purposes", (Issued to all Regional Directors of the Bureau of Local Government Finance and Bureau of Internal Revenue of the Department of Finance; Provincial, City and Municipality)

3) Bureau of Internal Revenue, Revenue Regulations No. 9-93, issued March 4, 1993

Provides tax incentives to Government-owned and Controlled Corporations and Local Government Units as well as Private Sector Participating in Socialized Housing and Community Mortgage Program. (Issued to All Internal Revenue Offices and Others Concerned).

4) Congress of the Philippines (House Bill No. 34310 and Senate Bill No. 234)

"An Act to provide for a Comprehensive and Continuing Urban Development and Housing Program, establish the Mechanism for its Implementation, and for Other Purposes."

5) Policy Guidelines for the Implementation of the Resettlement Assistance Program to Local Government Units, NHA Memorandum Circular No. 1070

Pursuant to the Board Resolution No. 3039 dated September 30, 1994, this Circular is hereby

issued governing the Policy Guidelines for the Implementation of the Resettlement Assistance Program to Local Government Units.

I.4.2 INSTITUTIONAL FRAMEWORK AND ROLES OF THE CONCERNED GOVERNMENT AGENCIES

Various government agencies shall assist, coordinate, monitor, oversee and/or observe the operation of resettlement according to their powers and responsibilities. Such government agencies are listed below along with their roles and functions. Those agencies shall, in addition to their respective existing powers and functions, render assistance for the task for Republic Act No. 7279, and perform the following:

(1) Local Government Units (LGUs)

In the process of resettlement of settlers, the responsibilities of sending and receiving LGUs are varied and quite important.

1) Sending LGU

The sending LGUs, assisted by concerned government agencies, have to be involved throughout processes of resettlement operation until the relocation of all families have completed.

- Establish communication and rapport with recognized resident community leaders.
- Meet the affected families and explain the need to relocate families, procedures and guidelines on relocation and resettlement, schedule of the census and tagging, etc.
- Physical survey to determine the boundary of the land to be cleared of squatters, tagging the houses, preparation of household list, conduct of actual census, preparation of a masterlist for pre-qualification, issuance of 30-day notice.
- The LGU, with the cooperation of government agencies, hold consultation meetings, preparation of required documents for affected families.
- Observe and monitor dismantling of the houses, and eviction of the families from original places.

2) Receiving LGU

Major responsibilities of the receiving LGUs are, assisted by concerned government agencies, to prepare the resettlement sites beforehand, and to provide various social services after the relocation of resettled families. Also, the Department of Social Welfare and Development regional offices in the municipalities are to provide livelihood assistance to the relocatees.

(2) Task Force Team on Relocation and Resettlement/Action Team

Immediately after a decision was made to implement a project, which involves relocation of affected people, the Implementing Body shall form a Task Force Team to handle the situation. In the case of DPWH, a Project Office in Manggahan, AORSF (Action Office of Resettled Squatter Families) is informed of the project to assist in social preparation for the affected people or communities, when the project needs assistance. *Figure I.4.1* shows DPWH IROW-PMO for the organization.

**DPWH
Infrastructure Right of Way and Resettlement Project
Management Office
(IROW-PMO)**

(Simplified Organizational Chart)

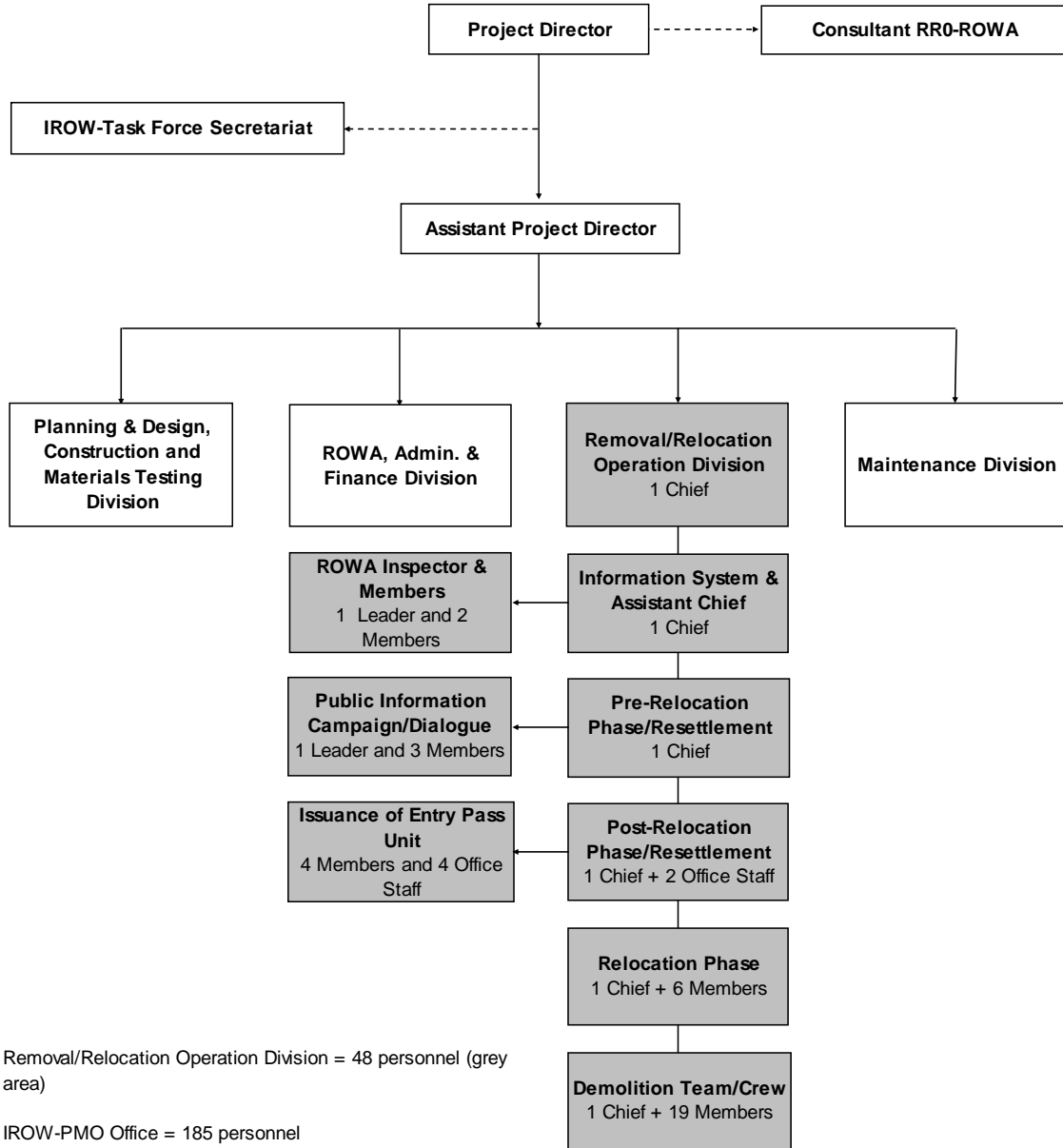


Figure I.4.1 DPWH-Infrastructure Right of Way and Resettlement Project Management Office

(3) Inter-Agency Committee

The Implementing Body shall also inform concerned government agencies to form an Inter-Agency Committee to prepare for the relocation of the affected people. The member agencies of the Committee are generally composed of the Implementing Body and agencies as follows:

- LGU (Local Government Unit)
- HUDCC (Housing and Urban Development Coordinating Council)
- NHA (National Housing Authority)
- NAPC (National Anti-Poverty Commission)
- PCUP (Presidential Commission for the Urban Poor)
- DSWD (Department of Social Welfare and Development)
- CHR (Commission on Human Rights)
- DOH (Department of Health)
- DECS (Department of Education, Culture and Sports) and
- MMDA/DPWH

The tasks of HUDCC, NAPC, PCUP and CHR of the Inter-Agency Committee are varied as specified by RA No. 7279. However, the tasks of these four agencies are more of a coordinating, monitoring, observing or supervising nature. While the tasks of the Implementing Body, LGU, DSWD, NHA, DOH and DECS are to provide actual assistance of a different kind depending on each one's responsibility. The details of some of the government agencies are explained below.

(4) Key Housing Agencies

Among various tasks related to resettlement, key housing agencies such as HUDCC and NHA play major roles for the provision of socialized housing and other assistance, or monitoring and supervising the entire operation.

HUDCC shall, through the key housing agencies, provide local government units with necessary support such as:

- a.** Formulation of standards and guidelines as well as providing technical support in the preparation of town and land use plan;
- b.** Assistance in obtaining funds and other resources needed in urban development and housing programs in their areas of responsibilities.

NHA	Upon request of LGUs, provides technical and other forms of assistance in the implementation of their respective urban development and housing programs with the objective augmenting and enhancing local government capabilities in the provision of housing.
NHMFC	Provides/administers community mortgage program (Regulations #9-93 Section 2.e) (Sec. 40.c)
HLURB	Prepares guidelines for the inventory and identification of sites for socialized housing and provides training and technical assistance in the conduct of inventory. (Sec. 5-5.2. “Guidelines for inventory and identification of land and sites for socialized housing)
HGC	Shall design an appropriate guarantee scheme to encourage financial institutions to go into direct lending for housing (Section 40.d)

(5) Key Finance Agencies

SSS	Provides housing loans to the employees of private corporation/offices.
HDMF	Popularly known as the Pag-IBIG fund. Assist with the development of saving schemes for home acquisition by private and government employees.
GSIS	Provides housing loans to government employees.

(6) Supporting Agencies

The agencies listed below are regular members of the Inter-Agency Committee for resettlement. Organizational details of some of the responsible agencies are given below.

1) Regular Members of Inter-Agency Commission for Resettlement

NAPC	The highest government body of assisting the poor chaired by the President of the Republic. The jurisdiction of this Commission is nationwide while PCUP covers only urban poor.
PCUP	Basically coordinating agency in resettlement operation. The Commission oversees that the affected people who shall be relocated receive appropriate assistance and support, and that they are equally and justly treated. The jurisdiction of the Commission is limited to the urban areas.
DSWD	The department provides food assistance to the affected families. The MSWD (Municipal Social Welfare and Development Office) shall assist relocatees' livelihood by providing skill training or assist improvement of their living conditions, or sometimes some financial assistance.
DOH	Provides health services in the sending and receiving LGUs.
DECS	Provides assistance in ensuring relocatees are able to receive education for their children.
CHR	Coordinates, monitors and oversees that the rights of the affected people are duly respected and that they receive fair and just treatments.

2) Assisting Agency

PNP (Philippine National Police)	Assists LGUs to keep peace and order. The national police shall be present at the demolition sites when demolition is conducted.
---	--

(7) Government Agencies and their Organizations

The organization and functions of major government agencies that are responsible for the resettlement process are listed below.

1) Housing and Urban Development Coordinating Council (HUDCC)

The HUDCC is established directly under the Office of the President, and the highest body of the governmental structure in the Housing and Urban Development issues. *Figure I.4.2* shows HUDCC Council Members.

a) Organization and Structure

The internal organization is structured as follows: Chairman, Vice Chairman, Secretary-General, and two Deputy Secretary-General as shown in *Figure I.4.3*.

Under the Deputy Secretary-General for Policies, Plans and Programs, there are two groups. One group is for Planning, Policy Formulation and Review; the other group is for Attached Agencies Coordination, Monitoring and Evaluation.

b) Organization of the Council

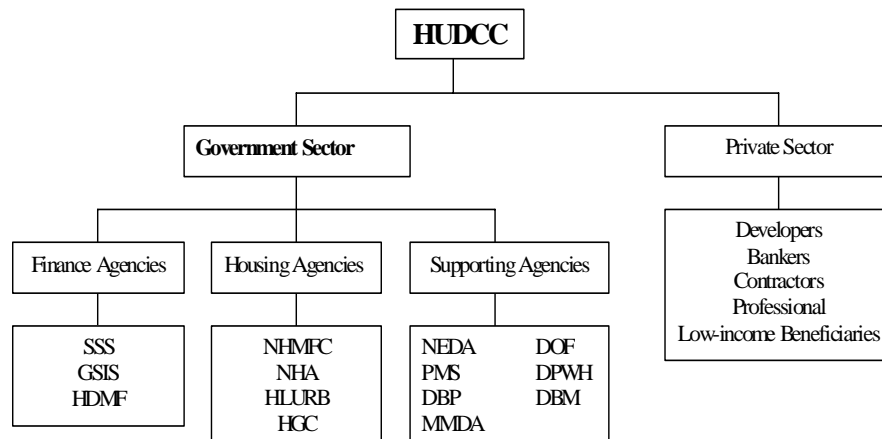
The Council is composed of several government sectors:

- Key Finance Agencies: SSS, HDMF, GSIS
- Key Housing Agencies: NHMFC, NHA, HLURB, HGC
- Support Agencies: NEDA, DOF, DPWH, DBM, PMS, DBP, MMDA
- Private Sector: Representatives from Developers, bankers, contractors, professionals and/or low-income beneficiaries.

Also five governmental subsidiary agencies come under this Council:

- National Home Mortgage Finance Corporation (NHMFC)
- National Housing Authority (NHA)
- Home Development Mutual Fund (HDMF)
- Housing and Land Use Regulatory Board (HLURB)
- Home Guaranty Corporation (HGC).

HUDCC COUNCIL MEMBERS



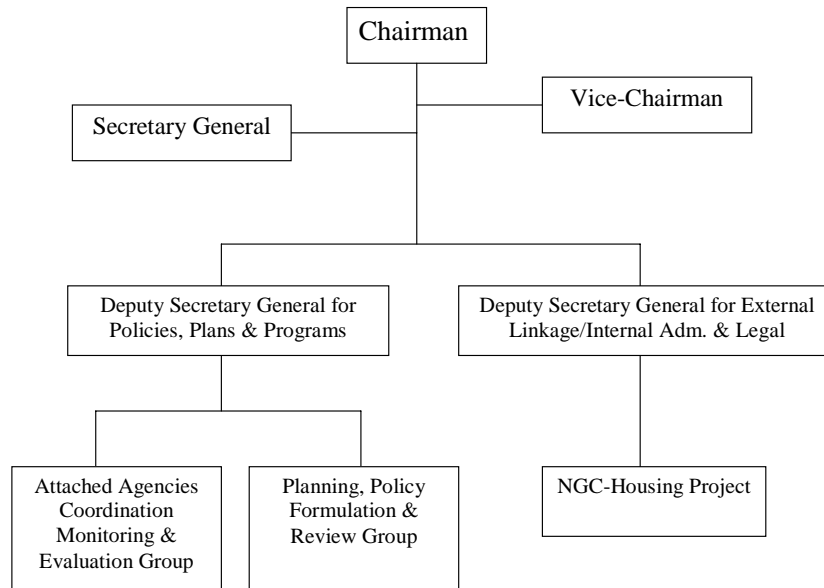
Source: HUDCC, June 2004

- SSS – Social Security System
- GSIS – Government Service Insurance System
- HDMF – Home Development Mutual Fund
- NHMFC – National Home Mortgage Finance Corporation
- NHA –National Housing Authority
- HLURB – Housing and Land Use Regulatory Board
- HGC – Home Guaranty Corporation
- NEDA – National Economic Development Authority
- PMS – Presidential Management Staff
- DBP – Development Bank of the Philippines
- MMDA – Metropolitan Manila Development Authority
- DOF – Department of Finance
- DPWH – Department of Public Works And Highways
- DBM – Department of Budget and Management

Figure I.4.2 HUDCC Council Members

HUDCC ORGANIZATIONAL CHART

(Simplified)



Source: HUDCC, June 2004

Figure I.4.3 HUDCC Organizational Chart

c) Role and Function in Resettlement Process

Republic Act 7279, Urban Development and Housing Act of 1992, which is the sole and the most important guideline for resettlement, was prepared by the HUDCC in 1992. All resettlement activities have to be prepared in accordance with the above Act.

The Council is basically a policy making and coordinating agency to provide guidance to other government agencies and the private sector concerned in regards to housing and urban development.

2) National Housing Authority (NHA)

NHA is the sole government agency engaged in direct shelter production. The NHA focuses its efforts in providing housing assistance to the lowest 30% of urban income earners.

a) Organization and Structure

NHA is one of the four affiliated agencies under HUDCC. Board of Directors is at the top of the organization, supported by one General Manager and Assistant General Managers. The Local Government Project Group, which handles resettlement, comes directly under the top management. *Figure I.4.4* shows organization chart of National Housing Authority.

b) Role and Function in Resettlement Process

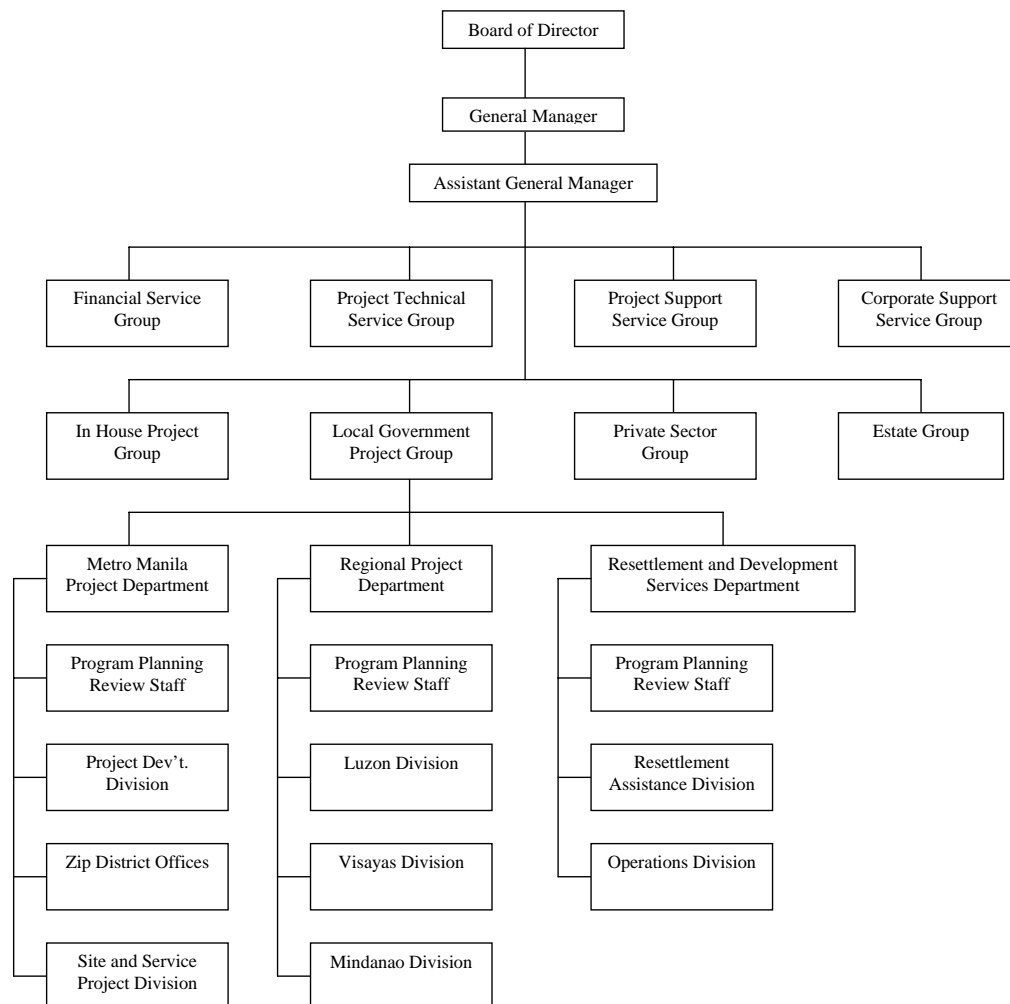
A major task of the NHA in the process of resettlement of informal settlers is to qualify or disqualify the affected families upon receipt of a masterlist submitted by the sending LGUs. NHA shall confirm through their registration record whether the families on the masterlist are

eligible for socialized housing of NHA. Those who are already on the registration record as having been awarded a house before shall be disqualified.

Another important task of the NHA is livelihood assistance to the relocatees by providing skill training or improving their living conditions in cooperation with DSWD or MSWD office.

NHA shall also provide technical and other forms of assistance to LGUs, upon request, in the implementation of their respective urban development and housing programs. NHA adopts a policy of providing assistance to LGUs in pursuit of their Housing Program, particularly in the area of providing Resettlement Sites. The Resettlement Program shall be implemented as a joint undertaking with the LGUs, where a participating LGU shall contribute land and/or funds for development. LGUs shall likewise take full responsibility in maintenance and operations of resettlement sites.

NATIONAL HOUSING AUTHORITY
(Simplified Organizational Chart)



Source: NHA, June 2004

Figure I.4.4 National Housing Authority

3) National Anti-Poverty Commission (NAPC)

NAPC is one of the important government agencies that steps into the Inter-Agency Committee when a project is decided, and when resettlement of affected people becomes necessary. The jurisdiction of this commission is nationwide, unlike the other commission for poor people, PCUP, which covers only the urban areas of the country.

a) Organization and Structure

The President of the Republic chairs the NAPC. The Commission is composed of two sectors. The President is assisted by two Vice Chairpersons. One is Vice Chairperson for the government sector and the other is Vice Chairperson for the Basic Sector.

The NAPC is composed of 23 government sector components, such as Department of Agriculture, Department of Health, National Youth Commission, and/or presidents of the four local government leagues. It is also composed of basic sector component, which comprises 14 different sectors, such as Children, Cooperatives, Non-government organizations and/or women's groups.

b) Role and Function

NAPC acts as the “coordinating and advisory body” that exercises oversight functions in the implementation of Social Reform Agenda (SRA) and ensures that is incorporated into the formulation of the national regional, sub-regional and local development plans.

The Commission operates on the principle and strategy of institutionalizing the basic sector and NGO participation in the social reform agenda management cycle for the entire country.

The Commission also develops and promotes microfinance through the establishment of the People's Development Trust Fund (PDTF) nationwide, strengthening of the People's Credit and Finance Corporation as the forerunner for microfinance services and encouraging private and government financial institutions to open a special window for microfinance.

4) Presidential Commission for the Urban Poor (PCUP)

This Commission is established directly under the Presidential Office. PCUP is one of the subsidiary organizations under the NAPC that is chaired by the President.

a) Organization and Structure

The PCUP is chaired by a person who is directly appointed by the President, and four commissioners who are responsible for each area of Luzon, Visayas, Mindanao and NCR. PCUP is basically a coordinating agency for social preparation in connection with resettlement of affected people and receiving LGU.

Although PCUP is a government agency, one of the important functions of the Commission is to act as a facilitator between the government and the urban poor, and accredits the urban poor to organize themselves in associations.

b) PCUP's role in the Resettlement Process

1) As soon as a project is decided, the executing or implementing body shall inform all the government agencies concerned who are mentioned in RA No. 7279, and some other agencies considered as appropriate. As a coordinating body, PCUP plays an important role among

government agencies.

2) PCUP carries out settlers' needs assessment, offers consultation and or confirms that affected people are duly assisted in coordination with the implementing body and other government agencies so that social acceptability is enhanced.

3) PCUP states that no demolition shall be executed now without PCUP's compliance and its compliance certificate.

I.4.3 RESETTLEMENT PROCEDURES

RA No. 7279 stipulates in detail the procedures of resettlement process, and responsibilities of each government agency and local government units. Some important parts of the Act are introduced next.

(1) Resettlement Procedures Under RA No. 7279

All resettlement activities for national projects have to be carried out according to the **Urban Development and Housing Act of 1992 (UDHA) – Republic Act No. 7279**. This is known as “the Bible for Resettlement Operation” in the Philippines.

The following Implementing Rules and Regulations of the Act stipulate the procedures of resettlement operation in detail:

“IMPLEMENTING RULES AND REGULATIONS TO ENSURE THE OBSERVANCE OF PROPER AND HUMANE RELOCATION AND RESETTLEMENT PROCEDURES MANDATED BY THE URBAN DEVELOPMENT AND HOUSING ACT OF 1992.”

Section 3 of the Act explains the flow of the resettlement activities as follows:

SECTION 3. GUIDELINES FOR IMPLEMENTATION – The following procedures and guidelines on relocation operation shall be strictly observed by the Local Government Unit (LGU) or government agency authorized to demolish.

I. Pre-Relocation Phase

- a. Identification of Resettlement Site (Preparation of the site)
- b. Pre-Census (Identify affected structures/families)
- c. Census (Conduct census on all affected families)
- d. Issuance of 30-Day Notice (Issue the notice to all affected families to clear the area)
- e. Consultation Proper (The families are consulted by various groups)
- f. Inter-Agency Meetings/Coordination (Meetings to support relocation)
- g. Completion of Relocation Documents/Requirements (The affected families prepare required document for qualification of award for socialized housing)

II. Relocation Phase

- a. Preparation Before the Dismantling of Structures (Various documents are required for dismantling)
- b. Dismantling of Structures/Movement of Families (Demolition of structures being monitored/observed by various agencies)
- c. Issuance of Entry Passes (Entry passes to relocation site are issued)
- d. Loading and Transporting (Those qualified families are provided with transportation services and moved to relocation site)
- e. Monitoring and Documentation (LGU or government agencies observe the operation and confirm the documents)
- f. Welcome and Reception
- g. Processing of Documents and Lot Assignment (Upon arrival, a lot shall be assigned to each family)
- h. Transfer to Assigned Lot (Families can move in to the assigned lot)

III. Post Relocation Phase

- a. Place of Origin (The areas where cleared have to be immediately kept appropriately so that no occupation by informal settlers occurs again)
- b. Resettlement Site (Receiving LGU has to provide appropriate social services; livelihood assistance must be made available)

The details of the important clauses extracted from the Act are attached to the last part of this report as, *Annex I.2 “Urban Development and Housing Act of 1992 (UDHA) – Republic Act No. 7279”*.

The followings are definition of terms and abbreviations used in the Act

Cut-off Date – The date of commencement of the census of affected persons within the project area boundaries. Persons not covered in the census are not eligible for claims for compensation.

Socialized housing – Refers to housing programs and projects covering houses and lots or homelots only undertaken by the Government or the private sector for the underprivileged and homeless citizens which shall include sites and services, development, long-term financing, liberalized terms on interest payments and such other benefits in accordance with the provisions of this Act.

Summary Eviction – Refers to the immediate dismantling of new illegal structures by the local government units or government agency authorized to demolish in coordination with the affected urban poor organization without providing the structure owner(s) any benefits of the Urban Development and Housing Program.

Professional Squatters – Refers to individuals or groups who occupy lands without the express consent of the landowner and who have sufficient income for legitimate housing. The term shall also apply to persons, who have previously been awarded homelots or housing units by the Government but who sold, leased, transferred... and settled illegally in the same place or in another urban area and non-bonafide occupants... intruders of lands reserved for socialized housing. The term shall not apply to individuals or groups, who simply rent land and housing from professional squatters or squatting syndicates.

Squatting Syndicates - Refers to groups of persons engaged in the illegal business of squatter housing for profit or gain.

New Squatters - Refers to individuals or groups, who occupy land without the express consent of landowner after March 26, 1992. Their structure shall be dismantled and appropriate charges shall be filed against them by the proper authorities if they refuse to vacate the premises.

Demolition – Refers to the dismantling by LGU, or any legally authorized agency of government of all structures within the premises subject for clearing.

Eviction – Refers to the removal of persons and their belongings from a subject building/structure or area, or both, in accordance with law.

Table I.4.1 shows responsibilities for resettlement operation for all responsible agencies and their roles.

Table I.4.1 Responsibilities for Resettlement Operation

Resettlement Operation Flow	Implementing Body DPWH/MMDA	Concerned Government Agencies											Affected Families			
		HUDCC	NHA	NAPC	PCUP	DSWD	DOH	DECS	PNP	(Rec) LGU	(Sed) LGU	NGO		HLURB	Barangay	
I. Pre-Relocation Phase																
1. Identification of Resettlement Site	○	○											○			
2. Pre-census	○	○														○
a. Completion of data requirements	○	○														○
b. Community relation operation	○	○		○												○
3. Census	○	○														○
a. Physical survey	○	○														○
b. Tagging	○	○														○
c. Mapping and Household Listing	○	○														○
d. Actual census	○	○														○
e. Census data evaluation/masterlist preparation	○	○														○
f. Census Committee	○	○														○
g. Information drive on resettlement site	○	○								○						○
4. Issuance of 30-day Notice	○	○							○							○
a. Notice placing	○	○														○
5. Consultation Proper	○	○		○												○
a. Consulting meetings with affected families on demolition, their option of moving etc.				○												○
b. Needs assessment and agree/disagreed points																
6. Inter-agency Meetings/Coordination	○	○														○
a. Resettlement site	○	○														○
b. Relocation/demolition team	○	○														○
c. Logistic requirements	○	○														○
d. Security																○
e. Food subsidy/back to province policy																○
f. Medical assistance																○
g. Relocation documentation	○	○														○
7. Completion of Relocation Documentation	○	○														○
8. Voluntary Relocation and Resettlement	○	○														○
II. Relocation Phase																
1. Preparation before the Dismantling of Structure	○	○														
2. Dismantling of Structure/Movement of Families	○	○														
a. Actual dismantling and requirement	○	○														
b. PNP's role																
c. Presence of government agencies	○	○														
3. Issuance of Entry Passes	○	○														
4. Loading and Transporting families/belongings	○	○														
5. Monitoring and Documentation	○	○														
6. Processing of Documents and Lot Assignment	* ○ △	○														
7. Transfer of Assigned Lot	* ○ △	○														
III. Post Relocation Phase																
1. Resettlement site																
a. Strengthening of organized community based structures		○														
b. Promote general well-being of resettled families		○														
c. Generate employment and income opportunities		○														

I.4.4 CURRENT PRACTICE IN THE PHILIPPINES

(1) Land and House

Basically, provision of a socialized housing in a resettlement site for the affected families and move them to the site is the best mitigation for the families to be relocated.

The socialized housing is generally the sized of some 20m² to 30m² with the lot of about 30m² to 40m². Some people and communities join the government CMP (Community Mortgage Program) that provides the settlers with an easier way of renting or purchasing the socialized housing, and provides as well various kind of assistance including skill training.

Normally, the repayment period of the amortization is 25 years and the families shall pay some Php 600 to Php 900 per month depending on the type and size of the house each family has acquired, but there are different types of arrangements.

Upon completion of the repayment, the lot and the house become their own and the title shall be given to the family. Until that, the families shall be given a provisional certificate.

According to RA No. 7279, lands for socialized housing are normally acquired by the LGU in coordination with NHA, or NHA in coordination with the LGU. But in some cases, the implementing body, in coordination with the LGU or concerned government agency, acquires the necessary land and prepares for socialized housing. However, a circular issued by NHA indicates that when the recipient LGU does not have sufficient resource NHA shall bear a part of the necessary cost.

(2) Assistance Other than Socialized Housing

1) Compensation for structure

In cases where socialized housing have been provided, the relocated families are not entitled to financial assistance by the practice of the Philippines, except for the qualified families whose structures are made of permanent type of materials. The formal settler families are entitled to receive compensation for the structures.

2) Lump sum money

In cases no houses are available, lump sum money of the minimum salary x 60 days or 30 days in cases, or larger amount occasionally, and sometimes less, shall be paid per family depending on the financial situation of the implementing body or NHA.

3) Free transportation

For the families who opt to go back to their original province, free transportation for the family and belongings is given by generally the implementing body or executing body. Also, the families who move to a new resettlement site may be given free transportation to the relocation site.

4) Food assistance

The affected families who are relocated shall normally receive food provision of a few days to some time one week from DSWD. The duration of food provision, again, differs depending on the project or implementing or executing body.

The families who have no title, or the families who fall on the category of RA No. 7279 as exclusion from government assistance, that is, the families who built their houses on the

public lands after March 1992, are often not eligible for any compensation for, such as house, business, or mental suffering by the practice of the Philippines. RA No. 7279 prohibits “construction of illegal structure on “danger areas,” and stipulates that “eviction and demolition of such illegal structures **without compensation.**”

5) Exclusion of “Professional Squatters” and Members of “Squatting Syndicates”

RA No. 7279 repeatedly and clearly stipulates the exclusion of “professional squatters” and members of “squatting syndicates” from the provision of socialized housing and government assistance. Some of returnees go back to the original places simply because they are unable to continue their life as they cannot find an appropriate job in the vicinity of the resettlement area. But in other cases, it is said that there are “professional squatters” who move from one place to another to obtain houses at any possible areas to get multiple houses and rent out or sell them to others. It is also said that, in some other cases, there are members of squatter syndicates who are doing business by obtained socialized housing. Those families are excluded from any kind of government assistance in some projects.

I.4.5 PAST EXPERIENCES ON RESETTLEMENT OPERATION

There are examples of resettlement operations that were not followed by the stipulations of RA No. 7279 in the past, where affected people were relocated in the relocation sites not prepared for people to live normally. The cases of resettlement operation of unprepared resettlement shall be introduced.

(1) Resettlement Site in Norzagaray

The resettlement site of Norzagaray is located in the north of the Metro Manila area, adjoining the municipality of San Jose del Monte. The population of the municipality of Moraga is some 92,000. The resettlement sites are away from the center of the Municipality, about 15 minutes by vehicle. The site has two groups of resettlers, FVR-Friendship Village I, FVR-Friendship Village II. The relocatees of this site came from several government projects between 1994 and 1997. The total housing units are nearly 3,500.

Phase I: The first group of the resettlers, about 500 families came from Tondo area due to a road-widening project.

Phase II: The second groups of settlers were moved from Santa Mesa, Tondo and Pandacan areas due to a project of railways.

Phase III: The last groups of families, which are approximately 2,000 families, were also relocated from Tondo, Pandacan, and Santa Ana, San Andres, and Pasay due to constructions of esteros, road widening and construction of a flyover.

At the very beginning of relocation, the site was not prepared to receive the settlers yet. Some houses had no door, no windows and not even a roof, but only three walls on three sides. Needless to mention, the site was not provided with water or electricity. The mayor had to deliver drinking water to the settlers by a water wagon every day. The settlers said that water and electricity became available in 2001 only upon a request made by the settlers and negotiation with the assistance of local government.

It was understood that the resettlement of the earlier cases of this site had some complicated

political involvement, and as a result the people were relocated to the site where no preparation was sufficiently made. Not only were the sufferings of the settlers great but also the burden of the receiving municipality was heavy.

Some report explains that a cement factory was introduced as part of livelihood, but it is understood that one factory is closed. The settlers complained of lack of job opportunity. DSWD regional office assisted with livelihood skill training, but this was done without due preparation, and the training did not help the settlers.

(2) Resettlement Site of Carmona GMA (General Mariano Alvarez)

In the case of Carmona resettlement site, which is presently called GMA, in Cavite, was created by President Marcos. At the time of first resettlement, the present town was a part of the municipality of Carmona. It is nowadays considered one of the most successful cases of resettlement with a population of some 150,000. The site is relatively close to the Metro Manila area, approximately one and a half hours by vehicle, and now it has developed access roads. The municipality looks quite well developed.

However, when the first groups of people were relocated to the site the area was simple bare land that had been provided by almost nothing. Only the ground works had been done by the Army Engineering Corps, and roads were constructed by NHA. The site did not have houses, water, electricity, school, or health clinic. They were forced to relocate by the order of the President at the time.

Presently, there are only a very few people who know the situation of the early stage of relocation in the municipality, but an official who worked for the site at the time stated that it was not a place where people can have a normal life, but the people were barely surviving day by day.

The town became independent, separating from the municipality of Carmona in 1991 and named as the municipality of GMA.

I.4.6 PROBLEM POINTS

The problem points of the Social Framework of Resettlement may be seen in its institutional framework mostly in the application of RA No. 7279. The stipulations of the Act are carefully prepared even into details. However, when it comes to implementation, there are too many variations, and the application is different project by project depending on the policies of the implementing/executing body, concerned government agencies, or availability of financial resources. The result is unequal treatment of the affected people and families.

Some of the major problems are pointed out below.

(1) Whereabouts of the Political Will and Responsibility

Had the stipulation of RA No. 7279 been properly carried out in the past by each responsible LGU, the informal settlers of this magnitude would not have settled in public lands as can be seen today. The Act specifies that *“when person or entities occupy danger areas such as esteros ...eviction or demolition may be allowed”* and clarifies the responsibility of LGUs as that, *“the barangay, municipal or city government units shall prevent the construction of any kind of illegal dwelling units or structures within their respective localities.”*

However, responsible officials of LGUs in the study area expressed that the relocation of informal

settlers in and along esteros is the responsibility of national governments such as MMDA or DPWH because the management of esteros is their responsibility.

On the other hand, MMDA or DPWH considers the relocation of informal settlers on the danger areas or public lands is the responsibility of each LGU as stipulated by the Act.

The growing number of informal settlers seems to be largely left alone by the reluctant attitude of LGUs to enforce the Act.

(2) Lack of National Standards

Due to lack of rigid national standards on application or implementation of the above Act, the assistance given to the affected people in various projects, at the time of relocation and resettlement, have been considerably different. Some groups of families were given better assistance than some others who were not lucky enough to enjoy the same degree and types of assistance.

Examples:

- There are cases in which many informal settlers have been removed without any government assistance for the reason that they were violators of laws.
- There are cases in which the affected families received the disturbance fee of “minimum salary x 60 days”.
- There are cases in which the affected families can receive the disturbance fee of “minimum salary x 30 days”.
- Many informal settlers have received socialized housing, but many others have not received it simply because the houses were not available.
(The basic policy of the government for relocating informal settlers by a project is to provide them with socialized housing.
- In various cases many affected families have been disqualified for provision of socialized housing or denied any government assistance for the reason that their structures had been constructed after March 1992.
- Some informal settlers who had been relocated have received thorough livelihood skill training and even provided with job opportunity, but many others were not provided at all.
- There is a recent case in which each affected family is reportedly receiving Php50,000 for the reason that those families have to be moved by a presidential order, but NHA has no time to find a site.

(3) Lack of Resettlement Sites

The policy of NHA who is basically responsible for providing socialized housing to the poorest 30% of the families who do not own a house is to award socialized houses, particularly in cases that informal settlers have to be relocated by projects. All concerned agencies are well aware of the necessity of resettlement sites. Lack of resettlement sites has created the situations in the past wherein the government resorted to the payment in lump sum instead of providing a lot and low cost socialized housing.

(4) Ineffective Solutions

As explained in the previous section, in many cases affected people were simply given a lump sum, say, minimum salary x 30 or 60 days, and they had to move out, or had been evicted without any kind of assistance because those people were occupying public lands or danger areas without express consent. Also, there are cases of those who agreed to go back to their original places

accepting the policy of “back to province”, as an option for relocation.

This method may be much easier and economical for the government because many government agencies do not have to work long and hard hours preparing various matters requiring a large amount of financial resources. With lump sum payment, government may be able to save time and money for; looking for resettlement sites, developing land, construction of socialized housing, and for provision of post-relocation training and livelihood programs, etc.

What will be possible outcome of these cases? Have they successfully settled down in houses in legal land as formal settlers?

It is not proven how effective the above methods are. Most likely, those who were given money but had not been given any assistance may have settled down on public lands elsewhere. Also, there are no reports to tell what is happening to those who went back to province.

(5) Insufficient Social Preparation

The most important component of resettlement is understood as social preparation. This means that, on the part of resettlers, the people receive thorough public consultation and hearing so that they well understand the meaning of relocation, the anticipated problems and difficulties they might face, and they have time to ready themselves to move. Preparedness of the proponent LGU means that the LGU provide a full explanation to the project affected people, why they have to move, or along with NHA and project proponent prepare resettlement site, and assist conduct of census and in other various tasks for preparation of relocation. The accepting LGU, on the other hand, is to prepare to support the incoming settlers, assisting them with post-relocation livelihood or for improvement of their living conditions.

In many cases, although some officials of LGUs and barangays were informed and consulted, the people who are directly affected were not sufficiently informed and they have no idea where they stand. In some other cases, the affected people thus interrupt project activities.

I.4.7 GUIDELINES FOR SOCIAL FRAMEWORK OF RESETTLEMENT

In consideration of RA No. 7279, the guidelines for its implementation and standards of JICA and international funding agencies, some suggestions are presented below as guidelines for the preparation and operation of resettlement for the project affected people who have to be relocated from the present location by the projects.

Points of discussion are focused mainly on:

- Clarification of application of RA No. 7279,
- Standardization of the policy and application of procedure among government agencies, and
- Intensification of communication and assistance to the people for resettlement.

(1) Definition of “Informal Settlers”

“Informal Settlers” who have been formerly called “squatters” are the individuals or groups who occupy land without the express consent of the landowner. In This particular Study the “informal settlers” are mainly the individuals or groups who occupy public lands, specifically in and along esteros where construction of any structures is prohibited by laws.

(2) Land Acquisition and Resettlement Site

In acquiring the land and developing it, the concerned government agencies have to clearly explain the purpose of the land use not only to some group of LGUs, but more importantly, have to thoroughly explain and obtain the acceptance of the people and communities surrounding the intended resettlement site. This is essential for resettlers who come in to unfamiliar neighborhood and environment, and who may need assistance of the neighboring people for many reasons.

It is basically the responsibility of NHA to acquire and develop the land for underprivileged families of the lowest 30% of income level that includes many of informal settlers, and prepare socialized housing in coordination with LGUs, or LGUs in coordination with NHA. However, in some cases, it is the task of implementing bodies to find the land and develop it in coordination with NHA, LGUs and the concerned government agencies.

All concerned agencies and LGUs must make utmost efforts to prepare relocation sites for the project affected people, and have to avoid the payment of lump sum money for the reason that there are no appropriate relocation sites.

(3) Upon Project Decision

Immediately after the implementation of a project is decided, it is required that the implementing body informs various agencies concerned.

1) Formation of Task Force Team

In the case that the Task Force Team has to perform the part of public communication with the project affected families, sufficient manpower must be assigned, because the Team members are basically assigned to work for the civil construction sector of the project, and because the public relations require extra time and painstaking energy.

2) Notification to Concerned Government Agencies and Others

There are suggestions among project implementing bodies that the Committee should play a more active role in assisting the affected people.

Also, establishment of a permanent organization that is neutral and that is accessible for everyone besides the Project Task Force field office is recommended for the reason that an inter-agency committee is not easily accessible to the project affected people.

As soon as a project implementation is decided, the Task Force Team is required to inform of the project to the concerned government agencies if the project requires the assistance of these agencies, and set up an inter-agency committee. The information is sent to the sending LGU of the project affected people by the project as well.

The inter-agency committee is, however, basically a coordination, monitoring or supervisory organization.

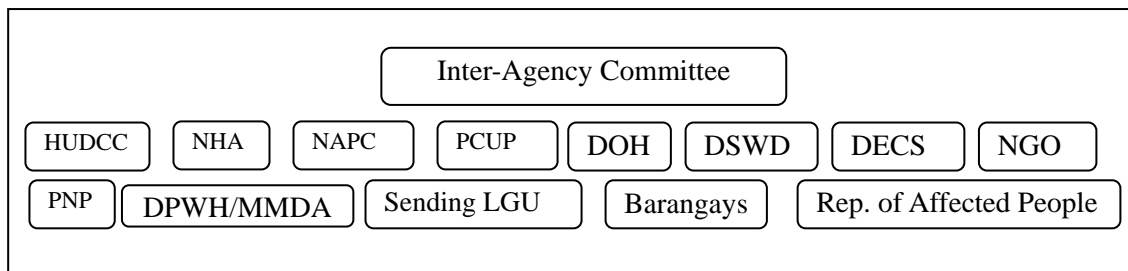


Figure I.4.5 Inter-Agency Committee

(3) Tagging and Pre-Census

If government agencies are concerned about the increase of informal settlers, it is suggested that after a project decision, the resettlement operation action has to be hastened in order not to allow the encroachment of the area by “professional squatters” and “squatter syndicates”.

It is also recommended that once the area has been firmly decided, the tagging operation must be immediately started at the earliest possible time, and **only one tagging** must be done in the area by allocating sufficient manpower. The implementing body has to carefully plan the way to maintain one time tagging.

Further, the implementing body and sending LGU with the concerned government agencies have to clearly announce and stress to the public the one tagging to be done, and that there will be no more tagging for the project afterward.

In the past, tagging has been done multiple times in various cases, segment by segment, as the project progressed due to the magnitude of the project area. If it is known that more than one tagging will go on, the chances for “professional squatters” and “squatter syndicates” to encroach will be great.

(4) Notification, Explanation and Consultation

The communication with and consultation for the affected people must be more intensive and frequent than existing level in order that the people truly understand the purposes of the project, the reasons they have to move, what assistance they are eligible for, who will assist, what will happen in the resettlement site, what are the conditions required to be qualified for awarding of a socialized house, what are the obligations of the people, etc.

RA No. 7279 requires the LGU or concerned agency to undertake the establishment of communication and rapport with recognized resident community leaders. It is important that the implementing body communicate with the affected people directly after the LGU is notified of the project, and after the LGU informed the affected barangays of the project.

The same organization that was suggested in the previous section to be established, a third party organization, may be able to play an important role in this regard.

Upon project decision, the LGU will be immediately notified. Only after the notification to the LGU reached barangay level will the implementing body or the concerned government agencies be able to directly talk with the project affected people.

The guidelines of JICA and international funding agencies are particularly concerned about all

people including informal settlers being treated equally, and the conditions and requirements of all families to be well considered.

(6) Preparation of Masterlist and Qualification Process

There must be rigid and clear national standards to qualify the affected families, or disqualify them. The policy of NHA to include the informal settler families whose structures were built after the year 1992 is well taken although this policy contradicts RA No. 7279 because exclusion of a great many families from the government assistance is not accepted by the guidelines of JICA and international funding agencies.

Also, suggested is a method to draw a line on the length of stay at the present location as part of qualification, like a family must have stayed at the present structure more than 2 years, or 5 years, to be approved as qualified families.

If all families who happen to be residing in the project area at the time of cut-off date would be qualified regardless of the period they have lived in the place, whether one week or ten years, accumulation of informal settlers to the project area is apparent.

However, some of the policies of NHA, such as, to include “professional squatters” and members of “squatter syndicates” for the awarding of socialized housing for the reason that it is difficult to validate such information, may require reconsideration. There are many ways to prove their status.

After the tagging a house-to-house census for the tagged houses is conducted, and based on the census, a master list shall be prepared by the affected barangay to be submitted to NHA for qualification decision.

The existing practice of the NHA’s qualification/disqualification process is done by only referring to the registration list of NHA. The list of NHA contains the people who have been awarded socialized housing in the past. Regardless of the clause of RA No. 7279 to exclude the structures that have been built after 1992, NHA shall award the houses to the families who built their houses after 1992 as long as the families had not been awarded a socialized housing previously. Neither shall NHA exclude possible “professional squatters” or members of “squatter syndicates” for the reason that it is difficult to confirm such status of professionals or syndicate members.

Presently, awarding of houses and providing financial assistance depend on the availability of resources, but the standard is not laid out by a law.

This method casts a question of equality and fairness. Those who are lucky to be in a project with abundant budget are able to receive a lot with a low-cost house, or financial assistance by a project of the same agency, but those who are not lucky cannot receive any.

(7) Avoidance of Summary Eviction

In view of the on going Philippine law, the use of “Summary Eviction” is not illegal, but not accepted by international standards. Neither JICA, nor the JBIC, ADB, World Bank tolerates the summary eviction without any assistance. Every effort should be made to avoid executing “summary eviction”.

(8) Relocation

Actual relocation must be carefully carried out. Preparation of the resettlement site must be confirmed before relocating the people by the implementing body, LGU and inter-agency

committee. Infrastructure such as roads, sewerage, electricity or water systems must all be properly completed and serviceable; a school and health clinic has to be also available.

RA No. 7279, Article V – Socialized Housing, Section 21 stipulates that potable water, power and electricity, sewerage facilities, solid waste disposal system, access to primary roads, etc. shall be provided by the LGU or NHA in cooperation with the private developers and concerned agencies.

In the past, in many sites, the resettlers have been moved to the site where no appropriate preparation was made. Finding a half completed site, the resettlers tried to return to the place where they came from in some cases. Lack of preparedness and lack of eagerness of the government make people feel they were betrayed.

(9) Post Relocation Services/Livelihood Programs

Widely understood, but still not sufficient yet, is the livelihood programs. There is no exceptionally effective ways to provide such programs but only patience and commitment are required together with schemes of different kinds.

Additional manpower should be assigned by all means, and more various programs should be tried. Some of the suggestions for livelihood program and projects are indicated in *Section I.4.8*.

I.4.8 BASIC MODEL FOR RESETTLEMENT SITE AND NECESSARY ASSISTANCE

The following is an example of a model resettlement site prepared in view of RA No. 7279 and reviewing the past resettlement cases.

(1) Land and House

The first requirement of relocation of people is acquisition of resettlement site. Thus, following the above mentioned practice, a resettlement site has to be found and developed with the coordination of the sending LGU, receiving LGU, NHA and the implementing or executing body of the project. The resettlement site is not need to be one large area, but it could be a few divided areas if the acquisition of lands requires so.

Needless to say, the site should not be too far from the Metro Manila area, unless a large number of employment opportunities exist in the surrounding areas. Hopefully, within about one hour of commuting time, or one hour and a half may still be an acceptable range.

The size of the lot may be approximately 40m² and the house some 25 to 30m², and additional space of 30% of housing area is required as roads and public areas. The public area includes roads, areas for a multi-purpose hall, park, play-ground for children, church or market place, etc.

(2) Infrastructure

Republic Act No. 7279 stipulates that the socialized housing offered to resettlers have to be provided with roads, sewerage, water, electricity, health clinic, school and various types of amenity such as a church, market and youth center, etc. to a degree that the resettlers are able to have a reasonably comfortable life.

Development of the infrastructure in the new site is the responsibility of NHA or implementing body.

Following the above requirement, the site should be provided with access roads, sewerage, electricity, water, a clinic, elementary school and other structures which are required for life of the relocatees before the implementation of actual relocation.

(3) Social Services

The recipient LGU also must provide all the necessary social services to the resettled people, health services, allocation of teachers and class lessons. Normally regional office of the DSWD shall assist in providing such services.

(4) Post-Relocation Assistance

Provision of sufficient support after actual relocation is the key to whether or not the settlers stay at the place where they were relocated. Along with the provision of various skills training for livelihood that truly help increase their income and secure their economic stability, improvement of their life in general is important issue of the people to establish in the new site.

Such assistances are generally given by NHA and DSWD regional offices. However, the people themselves also have to take initiative in organizing and formulating programs of their own to improve their situation.

The following are suggestions what to and how to provide such services:

1) People as Resource

In this regard, an important approach is to treat the informal settlers as resources, but not simply as liability. Efforts have to be made to communicate with them, encourage them, lead them and let them find their dreams, let them think about what they need to realize their dreams, and how to go about acquiring what they want. They should be the ones who plan projects to improve their life by creating job opportunities themselves. Thus, planned projects must be aimed at sustainable and self-reliant communities.

2) Appropriate Skill Training

The skill trainings given to the new settlers have to be the type that suit the need of labor market and contribute to the increase of household income.

It is recommended to have consultation with experts as to what types of skill trainings are truly useful for the people, or what type of industries can be invited for the area. Upon careful study and analysis, the needs of the people and the community may be assured.

3) Need for Committed Assistance and People's Participation

Participation and assistance of the initial stage by the recipient LGU, that is regional office of DSWD, and NHA, who are the responsible government agencies for this undertaking is required, but further assistance by a permanent third party organization composed of specialists of social welfare, sociological, anthropological or communication backgrounds is desirable. The post relocation assistance should be of a solid and long-term type so that the people can feel secured.

(5) Transportation

Many resettlers who have a job in Metro Manila most likely keep their jobs after the relocation to a new site. Therefore, there must be some means to commute between the work places and the new site. In one case in the past, HUDCC attempted to arrange a considerable number of buses to transport the new settlers. Such arrangements have to be made before resettlement.

Recipient LGU has to assist to bring in some means of transportation such as jeepneys or buses because such arrangements require approval of LGU and government offices.

Also, the commuters who have jobs in Metro Manila and the students who attend colleges in Metro Manila are entitled to receive bus passes for one year by the practice here. Such services should be secured.

(6) Prevention of Returnees

One of the difficult problems of resettlement is the large number of returnees and repeaters who are recipients of socialized housing but later sell or rent out the house, and go back to public land or to their original places.

1) “Professional Squatters” and members of “Squatter Syndicates”

According to the interviews with the related agencies such as NHA, PCUP, MMDA, DPWH, HUDCC and barangay captains, there exist many “professional squatters” and members of “squatter syndicates”.

Although the guidelines of JICA and international funding agencies, including of JBIC, express that all affected people must be treated equally, those two cases, “professional squatters” and members of “squatter syndicates”, may be excluded from the award of housing if proved so and if possible, because many of the repeaters could be from these categories. However, the decision for “professional squatters” and members of “squatter syndicates” should be done through a careful and fair procedure.

It should be emphasized that to prevent the increase of such returnees, careful and thoughtful resettlement plan including appropriate plan for developing new life for resettles at resettlement site should be prepared.

2) Provision or Creation of Job Opportunities

It is widely recognized that the most important aspect of the resettlement issue is to provide job opportunities for the relocatees. But this is also one of the most difficult points to achieve. Although skill training can be given relatively easily, to create job opportunities is a different matter.

Not only the traditional kinds of skill training but also efforts must be made by the concerned agencies to include the training to suit the job markets of urbanized, industrialized and information society.

3) Formulation of Own Projects

The first step is that the people have to organize themselves because it is difficult to seek any assistance individually. Then, discuss among the members about their problems, their hopes, or what they want, followed by discussions about possible solutions. From this process it may be possible for them to formulate projects. In this manner, they may be able to create own job opportunities. This process however, requires some assistance from outside experts who are specialized for social development besides the assistance of DSWD, NHA, and/or LGUs.

4) Keep Earned Resources within the Community

The next important point is to find the way to keep the scarce resources that they earned from outside of their community within the community. The earned resources by community

members can be capital of other members of community by going around in the community. Small businesses are recommended in this regard.

5) Make the Site Attractive and Creation of Bonding

By the same token, if the new site is an enjoyable place to live, people will try to stay in the place. But if the place is not an attractive place to draw the people, the people will not stay there.

Here again, the organized people must think themselves how they can make their place attractive so that every body will want to stay there.

6) Projects to Improve Living Environment

A sketch of what will be suitable for the new settlement site to improve their living environment with their own initiative with external assistance is given in *Figure I.4.6*. First, skill training comes, and then actual building of each structure follows. The skill training courses should be consisted of a little lecture, a simple theory, and practice.

Each project shall require thorough skill training, so that by the time the people completed these projects, they will learn sufficient skills to be able to “sell” their learned skills in labor market, or to be able to engage in their own business.

7) Required Classes and Skill Training

- Building construction skills
 - Carpentry
 - Plumbing
 - Electrician
 - Plastering
 - Interior decoration (basic)
- Beautification skills
 - Basic plant biology
 - Tree planting/flower planting
 - Gardening
- Managerial skills
 - Management of the site
 - Kindergarten teachers
 - Peace and order training
 - Fire fighting training
 - Management of cooperative/people’s organization
- Related skills
 - Accounting
 - Computer operation

8) Self-Reliant Community

The above activities are aiming at three important effects. The first is to create own jobs, and the second is to generate a sense of collectiveness and bonding and the third is to improve own living environment.

The initial cost may come from the LGU or other sources, but the people have to think of a way to maintain all these facilities and organizations themselves.

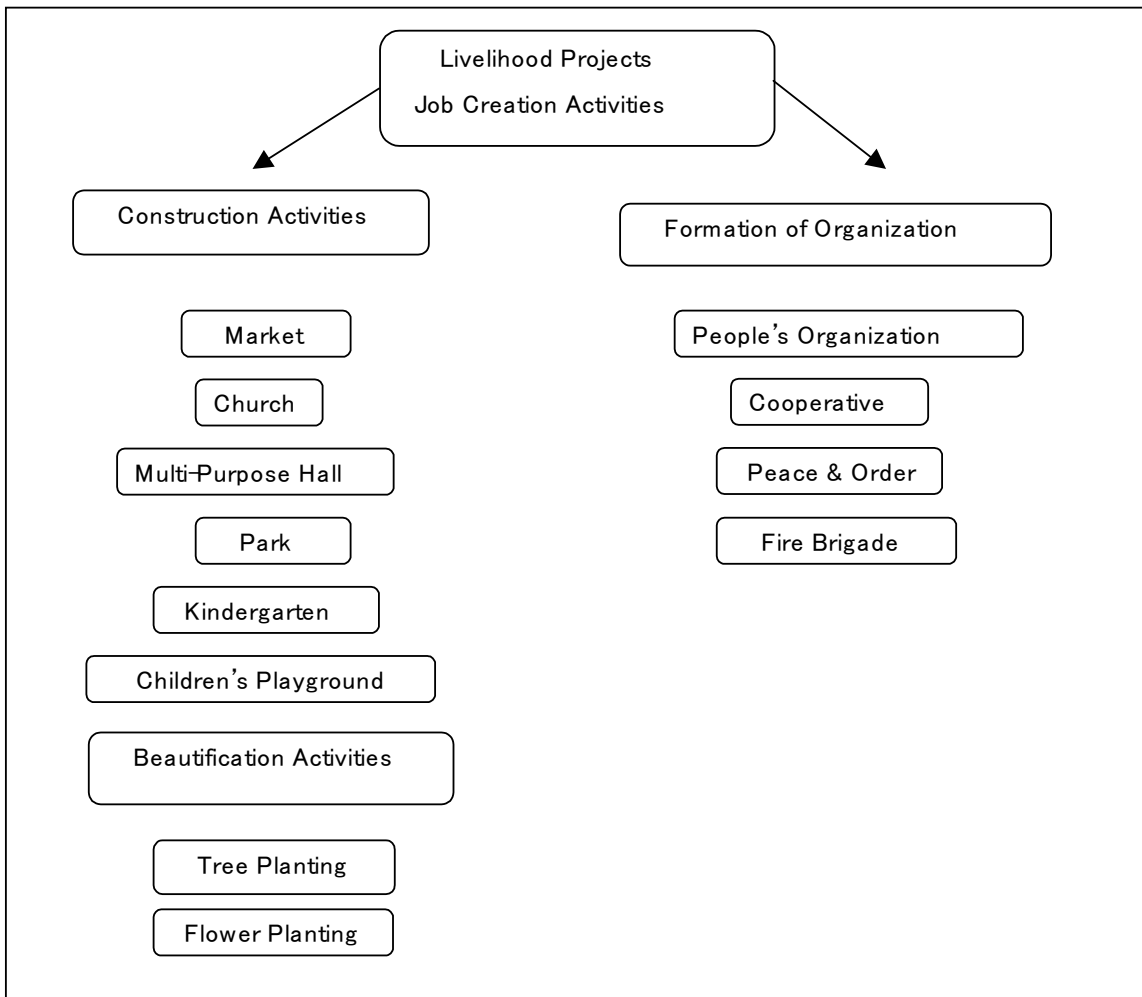


Figure I.4.6 Proposed Projects for Settlement Site

I.4.9 RECOMMENDATIONS

In consideration of the existing problems discussed in the previous section, recommendations shall be presented herewith as follows. Government agencies and LGUs are well aware of the problems pointed out here thus these recommendations are not necessarily new to concerned government agencies and LGUs or any other organizations, but these are still the suggestions that have to be seriously reconsidered once more and reconfirmed, and then attempts have to be made to improve the existing conditions.

(1) Avoidance of Unwilling Relocation

Every effort should be made to avoid unwilling relocation such as “summary eviction”.

(2) Participation of Affected People

The consultation for the affected people through the entire process of the project and their participation on creating better solution for relocation should be ensured. The qualified person who can treat social aspect properly should be assigned to follow up the participation process through the entire process of the project.

(3) Clarification of the Responsibility to Avoid Increasing Informal Settlers

In spite of the clear stipulation of the Act, the attitudes of both the concerned government agencies and concerned LGUs to try to escape the responsibility and look the other away while blaming one another in between, is one of the causes of the growing number of informal settlers. While two sides are blaming one another and not taking strict enforcement of the Act, there are good chances for informal settlers to prevail wherever possible.

It is time that both sides, the LGUs that have clusters of informal settlers and the concerned government implementing agencies with project proponents, to discuss over the matter to clarify who are responsible for what, and who are to implement the necessary measures. The implementation requires a strong political will and determination by all concerned.

(4) Establishment of Uniformed Standards in Application

Inconsistent application of the Act is or has been creating considerably unfair and unequal situations in the past for resettlement of informal settlers who were affected by projects as explained in the previous section. .

The amount of disturbance fees or eligibility of fees and award of socialized housing should not be different by agency or by project. Although the situation surrounding each project may vary and availability of financial resources may not be the same as well, a unified method of calculation should be applied. The differences, if any, should be based on the conditions surrounding PAP, for example, the number of family members, amount of income, occupational status, etc.

The way to confirm consistent application of RA No. 7279 and uniformed standards that are acceptable for international agencies has to be established by studying the past experiences of resettlement as to what is practical but the best application of the Act.

(5) Need of Resettlement Sites with Basic Infrastructure

One of the serious problems of relocation of informal settlers is lack of resettlement sites to relocate the project affected people.

Basically NHA is responsible for provision of low-cost housing. The “Resettlement Policy” of

DPWH is also proposing the provision of relocation sites for project affected urban informal settlers on public lands. If public lands are not available, NHA or LGU and implementing body may have to study the way to acquire private lands, as it is known that provision of resettlement sites with basic infrastructure, and socialized housing, is the responsibility of both national and local governments.

(6) Necessity of Monitoring

A separate third-party multi-partite monitoring team that can monitor the entire resettlement operation throughout the project life must be established at the initial stage of the project. The detail is shown in Resettlement Action Plan Guideline in *Chapter 5.6 of Main Report*.

(7) Use of Effective Methods

As discussed in the previous section, the policy of simply providing financial assistance instead of resettlement site and socialized housing, for the reason that they are not available, should be seriously reconsidered because:

1. Money can be consumed very quickly
2. If people come to know that financial assistance is provided, professional squatters and syndicates shall try to penetrate. Often it is difficult to detect or exclude them once they settle.

It seems that this method is creating more problems than solving the problems. The result is very clear as to what will happen if informal settlers are only asked to move from one place when they have no other place to go. Relocation of informal settlers must be looked from the viewpoint of how to resettle them to elsewhere so that they can stay in the place as normal citizens and maintain a decent life. It has to be a long-term or permanent solution.

In cases where no other method is available but have to resort to the payment of financial assistance, the concerned government agency (ies) must make sure with some document, such as a copy of contract, that the PAFs have a place to settle. Without such arrangement and assurance of a settling plan the government should not pay the financial assistance.

(8) Need for Follow-Up Studies

Should the government insist on applying the “back to province” policy, thorough follow-up studies are required as to what is happening to those who went back home to the province. If the outcomes are negative, they may have to find other policy, or improve the methods by analyzing the problem points.

(9) Consider the People as Resources

If the government’s measure is to chase the informal settlers from one place to another, it will create more problems than solve problems on informal settlers. It may be necessary for the concerned government agencies and all stakeholders to change their perception or understanding on informal settlers from one of being a liability to the government and society to one who could be resourceful assets and respectable citizens of society if properly treated, given opportunities and trained.

The above is a legitimate claim that has been proven by the experimental research of BEM (Barangay Environmental Management), which was conducted during this study by the Study Team (please refer to *Chapter 6 of Main Report* for details.).

The crucial point is the post-relocation livelihood programs and training. Place more emphasis

on the livelihood programs and training that are aimed at self-reliance.

- a. Communicate with the people by spending sufficient time and holding talks repeatedly
- b. Organize them in appropriate sizes to make them manageable
- c. Get ideas (dreams and goals of 3 years, 5 years or 10 years after) as to what they want to do with themselves and their community
- d. Think and plan together how to achieve their desires and goals
- e. Try to find the ways to finance such activities (hand out is not recommended except for special cases)
- f. Do not terminate the program or training half way – few weeks of training only is not sufficient. The aim should be to enable them to increase their income and become independent.
- g. Include the monitoring and follow ups in programs to examine the effects of the training.
- h. Recognize the importance of follow-up studies and their analysis to make the experiences useful for other cases

The above suggestion requires the assistance of public communication specialists or various kinds of social scientists who are specialized for the tasks.

There are discussions regarding why informal settlers who are violating laws get preferential assistance when there are many more poor people who do not receive similar assistance.

Such claims are reasonable. However, if the governments (the national and local) are willing to reduce, if not totally eliminate, those informal settlers, it is suggested that the governments, in cooperation with each other, try the above with firm political will.

I.4.10 COST FOR RESETTLEMENT

The following items should be included in a resettlement cost.

Land acquisition and site development
Construction of house
Pre-relocation activities
Relocation (actual moving of the settlers)
Assistance coverage (financial/food assistance)
Livelihood assistance (pre /post relocation)
Project management
Site management and monitoring
External monitoring and evaluation

In the case of “Pasig River Environmental Management and Rehabilitation Sector Development Program”, March 2000, the total cost requirement to relocate one family was estimated at about Php 210,000. This amount was confirmed with the NHA as the required resettlement cost per family.

The above estimated cost includes a parcel of lot and a completed house, plus all other necessary costs of entire relocation operation of a family, such as, pre-relocation activities, actual relocation, disturbance fees when applicable, assistance coverage, pre- or post relocation livelihood and skill trainings, project management and monitoring. It should be noted that the cost for land

acquisition is not included.

The calculation shall be: $\text{Php } 210,000 \times 5,500 = 1,155,000,000$

Accordingly, the total cost of relocating 5,500 families shall be approximately Php 1.16 billion excluding the cost for land acquisition.

I.4.11 PRESENT SITUATIONS OF RESETTLEMENT SITES

The provision of low cost socialized housing with lot is a mandate of NHA, and to provide such housing is a part of the Resettlement Policy of DPWH in dealing with the informal settlers who are required to be relocated by national projects.

The Study has emphasized in various occasions the necessity of removing the informal settlers whose structures are inside esteros/creeks, because such informal house buildings would be obstacles for dredging of channels. Therefore, eventually the people who live in such informal structures should be basically relocated. The Study clarified that removal of the encroached structures is a prerequisite condition for dredging of esteros/creeks.

The guidelines of international funding agencies and JICA for the treatment of project affected people (PAP) are all for equal treatment and provision of a lot and a house regardless of the legal status of each family.

In this regard, discussions between the Study Team and the concerned government agencies and the LGUs where those informal settlers are clustered have been going on about the availability of resettlement sites and their willingness to relocate the PAP to resettlement sites. The following are the latest information obtained on the above issue as of the middle of December 2004.

(1) Position of NHA

At the 3rd Steering Committee held on July 19, 2004, according to a suggestion from NHA the establishment of a Sub-Committee, which will deal with the issue of relocation of informal settlers and their resettlement site was decided, but the Sub-Committee has not been formed yet.

NHA had taken actions based on the Study and already has secured a candidate resettlement site in Rodriguez town (formerly Montalban) City, Rizal Province, but the funds for purchasing the land should come from the implementing agency.

Rodriguez was selected as a relocation site for "Pasig River Environmental Management and Rehabilitation Sector Development Program". Totally some 10,000 families have been relocated in this site as of the time of the Study. The total area of the site is about 58 ha and there is more room for receiving additional settlers. It is located along the Marikina River, which is about 27km from Manila city.

The site is already provided with a large elementary school, a high school, livelihood center, market place, clinic, and church. And a college will be constructed within a few years.

NHA is willing to shoulder their mandates stipulated by the RA No. 7279; development of the site, construction of social infrastructure, construction of socialized housing, pre-relocation and post-relocation preparations, identification of the affected families, coordination between sending and receiving LGUs and various other required tasks.

(2) Position of MMDA

A responsible official of MMDA has stated that, it is understood the position of MMDA for the time being is at the level of coordination.

(3) Barangays of Makati City

It was found that Makati City has decided last year in their five to ten year plan to relocate in the near future, but not immediate future, all informal settlers staying within the city. The city has already started preparing a resettlement site in Barangay Cembo with multi-storied apartment-type housing.

1) Barangay Palanan

The Barangay Chairman of Palanan has an idea to relocate the informal settlers along Estero de Tripa de Gallina to multi-storied apartment-type socialized housing also. His idea is to clear all the informal structures along the estero, maintain 3 meters legal easement areas on all along the estero from Barangay Palanan to Bangkal and build the houses behind the maintenance roads.

The Chairman is willing to propose his idea to the city in the future. However, the Chairman stated that the structures encroaching into esteros/creeks and the families who reside in such structures are not eligible for the socialized housing that the city or the barangay is attempting to construct. Only those informal settlers whose structures are built along the waterways in the 3 meters legal easement areas are entitled for the houses and lots.

That is to say, the informal settlers whose structures are built encroaching into the Estero de Tripa de Gallina have no place to go. They are not entitled for the socialized housing that the city or barangay will build in the future.

2) Barangay San Isidro

The Barangay Chairman of San Isidro stated that the informal settlers who live along the estero is not the responsibility of the barangay but of the national government, namely MMDA/DPWH, because these agencies are responsible for the management of the estero.

(4) Pasay City

The Mayor of Pasay City has expressed his willingness to take responsibility of relocating the informal settlers who live in the structures encroaching into Estero de Tripa de Gallina. The city has, he stated, already secured a site in Tanay town in Rizal Province.

The construction of an access road is already undergoing. It is understood that the site is available for about 3,000 families.

A majority of project affected families in Barangay 46 and some part of Barangay 43 are about to move out voluntarily to a relocation site in Malagasang, Province of Cavite, by the initiative of the Barangay captain.

(5) Manila City

The city of Manila is to conduct revalidation for informal settlers identified in the Master Plan according to the Technical Working Group Meeting held on January 11, 2005.

References

¹ As of June 2003, 2003 Philippine Statistical Year Book, National Statistical Coordination Board, p15-20

² To be precise, in addition to these six cities and municipality, just a small area on the outer edge of Parañaque city, Malabon city, and Navotas city are included in the Study Area.

³ National Statistics Office

⁴ MMDA-JICA, Earthquake Impact Reduction Study for Metropolitan Manila in the Republic of the Philippines, 2003

ANNEX I.1

SUMMARY RESULTS OF SOCIAL SURVEY

ANNEX I.1 SUMMARY RESULTS OF SOCIAL SURVEY

I. Characteristics of Respondents

No.	Questions/Description	Total	%	Remarks
1.	Gender of the Respondents	542		
.	Male adults	192	35.4%	
	Female adults	350	64.6%	
2.	Marital Status of the Respondents	542		
	Married	385	71%	
	Single	106	20	
	Widow/Widower	39	7	
	Separated	12	2	
3.	Religion	542		
	Catholic	494	91%	
	Born Again	26	5	
	Iglesia ni Kristo	11	2	
	Protestants	7	1	
	Islam	4	0.7	
4.	Ethnic Affiliation/Language	542		
	Tagalog	305	56.3%	
	Bisayan	99	18.3	
	Ilokano	40	7.4	
	Bicolano	37	6.8	
	Kapampangan	16	3.0	
	Muslim/Lumad	9	1.7	
	Ibanag	6	1.1	
	Mixed/others	30	5.5	

II. Responses to Questions

No.	Question/Description	Total Samples	%	Formal Settlers	%	Informal Settlers	%	Remarks
1.	Number of children	542		144		398		
	No children	118	22%	30	20.8	88	22.1	Out of total
	Families with children	424		114		310		
	1 child	76	18%	18	12.5	58	14.6	
	2 children	114	28	32	22.2	82	20.6	
	3 children	88	21	30	20.8	58	14.6	
	4 children	74	17	20	13.9	54	13.6	
	5 children	32	8	6	4.2	26	6.5	
	Others	40	9	8	5.6	32	8.0	
2.	Household Size	542		144		398		
	1 person	11	2%	2	1.4	9	2.3	
	2 persons	28	5	8	5.6	20	5.0	
	3 persons	81	15	21	14.6	60	15.1	
	4 persons	119	22	30	20.8	89	22.4	
	5 and above	303	56	83	57.6	220	55.3	

3.	Educational Attainment	Total	%	Formal	%	Informal	%	Remarks
	a. Husband	400		114		286		
	None	2	0.5	1	0.9	1	0.3	
	Elementary school	56	14	14	12.3	42	14.7	
	High school	233	58.2	52	45.6	181	63.3	
	Vocational	27	6.8	11	9.6	16	5.6	
	College/university	82	20.5	36	31.6	46	16.1	
	b. Wife	433		119		314		
	None	6		0		6	1.9	
	Elementary school	72	16.6	15	12.6	57	18.2	
	High school	239	55.2	60	50.4	179	57.0	
	Vocational	33	7.6	12	10.1	21	6.7	
	College/university	83	19.2	32	26.8	51	16.2	
4.	On Residence	Total	%	Formal	%	Informal	%	Remarks
	a. Lenth of Residence	542		144		398		
	1 – 5 years	230	42.4	47	32.6	183	46.0	
	6 – 10 years	134	24.7	34	23.6	100	25.1	
	11 – 15 years	77	14.2	31	21.5	46	11.6	
	16 – 20 years	56	10.3	16	11.1	40	10.1	
	20 years or more	45	8.3	16	11.1	29	7.3	
5.	Ever lived in other place?	542	219	144	56	398	163	“Yes” – 40%
6.	Are you willing to move?	542	80	144	15	398	65	“No” – 85%
7.	Reason for want to move	80	%	15	%	65	%	Only “yes”
	Seek for job opportunity	28	35%	5	33.3	23	35.4	
	Relatives are in other pla.	39	48.7	7	46.7	32	49.2	
	Others	13	16.3	3	20.0	10	15.4	
8.	Conditions need to be Satisfied	398					%	Informal settlers only
	Provided house & lot					104	26%	
	Provided house & lot plus water & electricity					228	57	
	Provided employment/ income souce					64	16	
	Accessible relocation site					2		
9.	Current Problems	542						
	No particular problems	15	3%					
	Insufficient income	235	43					
	Unemployment	131	24					
	Area is always flooded	70	13					
	Increase in bad things	38	7					
	Worsening of environmen	33	6					
	Lack of gov’t services	20	4					
10.	Occupation in Household	542		144		398		
	a. How many have jobs							
	1 person	302	56%	75	52.1	227	57.0	
	2 persons	178	33	47	32.6	131	32.9	
	3 persons	35	7	17	11.8	18	4.5	
	More than 3	27	5	5	3.5	22	5.5	
	b. What type of occupation	542		144		398		
	Salaried	286	53%	87	60.4	199	50.0	

	Small stores/selling	152	28	31	21.5	122	30.7	
	Service	87	16	19	13.2	68	17.1	
	Others	16	3	7	4.9	9	2.3	
	c. Major breadwinner	542						
	Husband	216	40%					
	Both parents	81	15					
	Wife	72	13					
	Son	32	6					
	Daughter	30	6					
	Male relative	30	6					
	Others	81	15					
	d. Other income source?	542	93					No - 449
11.	Estimated Monthly Income	542		144		398		
	Less than 1,000 pesos	23	4.2	3	2.1%	20	5%	
	1,000 – 4,999 pesos	222	41%	34	23.6	188	47.2	
	5,000 – 9,999 pesos	199	36.7	57	39.6	142	35.7	
	10,000 – 14,999 pesos	50	9.2	29	20.1	21	5.3	
	15,000 – 20,000	16	3.0	6	4.2	10	2.5	
	More than 20,000	32	5.9	15	10.4	17	4.3	
12.	Is your income sufficient?	542	49%		58.3%		45.5%	
13.	How do you meet	277		60		217		
	Borrow from relatives	132	47.6	36	60.0	96	44.2	
	Borrow from friends	59	21.3	11	18.3	48	22.1	
	Borrow from others	44	15.9	7	11.7	37	17.1	
	Use from saving	22	7.9	3	5.0	19	8.8	
	Others	20	7.2	3	5.0	17	7.8	
14.	Conditions of Houses							
	a. Roofing materials	542		144		398		
	Galvanized Iron Sheet	521	96.1	140	97.2	381	95.7	
	Plywood	17	3.1	3	2.1	14	3.5	
	Cement	4	0.7	1	0.7	3	0.8	
	b. Walling material	542		144		398		
	Cement/block	251	46.3	82	56.9	169	42.5	
	Plywood	151	27.9	24	16.7	127	31.9	
	Wood	30	5.5	9	6.3	21	5.3	
	Galvanized Iron Sheet	7	1.3	-	0.0	7	1.8	
	Others	103	19.0	29	20.1	74	18.6	
	c. Flooring Materials	542		144		398		
	Cement	407	75.1	116	80.6	291	73.1	
	Wood	112	20.1	22	15.3	90	22.6	
	Bamboo	11	2.0	2	1.4	9	2.3	
	Plywood	11	2.0	4	2.8	7	1.8	
	Others	1	0.2	-	0.0	1	0.3	
15.	Ownership of the House	542		144		398		
	Owner	195	36.0	65	45.1	130	32.7	
	Renting	197	36.3	41	28.5	156	39.2	
	Free occupants	150	27.7	38	26.4	112	28.1	
16.	Ownership of the Lot	542		144		398		
	Owner	112	20.7	41	28.5	71	17.8	
	Renting	194	35.8	43	29.9	151	37.9	

	Free-Occupants	236	43.5	60	41.7	176	44.2	
17.	Floor Space	542	%	144		398		
	10 – 19 sq.m	192	23.8	25	17.4	104	26.1	
	20 – 30	240	44.3	56	38.9	184	46.2	
	31 – 50	94	17.3	31	21.5	63	15.8	
	70 – 100	61	11.3	22	15.3	39	9.8	
	100 – 200	17	3.1	10	6.9	7	1.8	
	More than 200	1	.2	-	0.0	1	0.3	
18.	Lot Area	542	%	144		398		
	10 sq.m	133	24.5	26	18.1	107	26.9	
	20 – 30	206	38.0	41	28.5	165	41.5	
	30 – 50	98	18.1	35	24.3	63	15.8	
	70 – 100	65	12.0	21	14.6	44	11.1	
	100 – 200	29	5.4	17	11.8	12	3.0	
	200 – 500	11	2.0	4	2.8	7	1.8	
19.	Number of Rooms	542	%	144		398		
	Single room	338	62.4	64	44.4	274	68.8	
	2 rooms	152	28.0	57	39.6	95	23.9	
	3 rooms	35	6.5	17	11.8	18	4.5	
	4 rooms	9	1.7	4	2.8	5	1.3	
	More than 5	8	1.5	2	1.4	6	1.5	
20.	Type of Toilets	542	%	144		398		
	Water sealed type	439	81.0	108	75.0	331	83.2	
	Flush toilet	70	12.9	28	19.4	42	10.6	
	Anywhere	14	2.6	4	2.8	10	2.5	
	Hole in the Ground	11	2.0	1	0.7	10	2.5	
	River	8	1.5	3	2.1	5	1.3	

On Environment

21.	Changes in water for past 10 years (esteros/creeks)	Total	Yes	%	No	%	
	a. Change in environment						
	Change in water in last 10 Years	542	426	79%	116	21%	
	Change in sewerage	542	422	78	120	22	
	Change in air quality	542	267	49	275	51	
	b. How changed the water (those who said changed)	426					
	Changed to better		153	36%			
	Became worse		273	64			
	c. How changed the air (those who said changed)	267					
	Became better		66	25%			
	Became worse		201	75			
22.	Why changed environment	524					Responde nt's opinion
	Overpopulation		184	35%			
	Pollution		141	27			

	Too much garbage		109	21			
	Negligence		81	15			
	Others		9	2			
23.	Anybody got sick last year?	542	101		441		
24.	What were sicknesses	101					Only who said "Yes"
	Diarrhea		62				
	Typhoid fever		29				
	Cholera		5				
	Malaria		2				
	Others		3				

On Flood and garbage

No.	Questions	Total	Yes	Flood area	Yes	Non flood area	Yes	Remarks
25.	Experience of Flood in Last 5 years	542	380	401	350	141	30	
	a. Frequency	380		350		30		
	Seldom		231		209		122	
	Frequent		108		102		6	
	Always		41		39		2	
	b. Damages	380						
	Human injuries		37					
	Material damages		19					
	Human & Material		207					
	No damages		117					
	c. Any preventive measures	380						
	Move items to safe place		359					
	Wrap things in plastic		12					
	Move family to safe		9					
26.	Flood could be Mitigated?	542	411					No – 131
		Total	%	Formal	%	Informal	%	Remarks
27.	Where to dispose garbage	542						
	Designated point	358	66.1%	93	64.6	265	66.6	
	In front of house	140	25.8	47	32.6	93	23.4	
	Anywhere	20	3.7	2	1.4	18	4.5	
	Throw into estero	24	4.4	2	1.4	22	5.5	
28.	Causes of Flooding	542						
	Too much garbage in Esteros	337	62.2%					
	Low elevation of area	77	14.2					
	Narrowed drainage	76	14.0					
	Too much rain	37	6.8					
	Natural calamity	10	1.8					
	Others	5	.9					
29.	Garbage container	542						

	Plastic bag	450	83.0	123	85.4	327	82.2	
	Plastic container	61	11.3	13	9.0	48	12.1	
	Paper sack	31	5.7	8	5.6	23	5.8	
30.	Amount of garbage/week	542						
	1 big plastic bag	280	51.7%	69	47.9%	211	53.0	
	1 paper sack	253	46.7	72	50.0	181	45.5	
	1 small garbage container	6	1.1	2	1.4	4	1.0	
	1 big plastic container	3	.6	1	.7	2	.5	
31.	Throw garbage in estero	542	Yes	No				
	Do you know it's one of the causes of flooding		522 (93%)	22				
32.	Garbage Collection	Total	%	Formal	%	Informal	%	Remarks
	a. Availability of garbage collection	542		144		398		
	Yes, available	526	97.0	141	97.9	385	96.7	
	No, not available	16	3.0	3	2.1	13	3.3	
	b. Is somebody in barangay collect garbage	542	Yes	%	No			
	Caloocan city	63	58	92%	5			
	Makati city	95	93	97.9	2			
	Manila city	208	207	99.5	1			
	Pasay city	146	138	94.5	8			
	Quezon city	15	15	100	0			
	Municipality of Taguig	15	15	100	0			
33.	Who is responsible for collection	542		144		398		
	City/Municipality	389	74.0	108	76.6	281	73.0	
	Barangay	96	18.2	23	16.3	73	19.0	
	Private compay	41	7.7	10	7.1	31	8.0	
34.	Frequescy of collection	526		385		141		Total 542
	Not applicable/no answer	16		3		13		
	Daily	356	67.7	104	73.8	252	65.5	
	Once a week	68	12.9	9	6.4	59	15.3	
	Twice a week	30	5.7	5	3.5	25	6.5	
	Three times a week	42	8.0	12	8.5	30	7.8	
	Seldom/sometimes	30	5.7	11	7.8	19	4.9	
	By city	Calooc	Mak	Manila	Pas.	Taguig	Quez	
	Sample total number	58	93	207	138	15	15	
	Daily	5.2%	100%	70%	83.3	100%	0	
	Once a week	27.6	-	4.3	10.1	-	93.3	
	Twice a week	25.9	-	3.4	5.8	-	-	
	Three times a week	25.9	-	12.6	.7	-	-	
	Seldom/sometimes	15.6	-	9.7	-	-	7%	
35.	If nobody collects, what would you do	16						Only no collection
	Not applicable	526						
	Make compost	1		1		0		
	Throw into esteros	6		0		6		
	Burn them	9		2		7		
36.	Do you know there is a law	542	%	Formal	%	Informal		

	prohibiting throwing Garbage			144		398		
	Yes, we know	505	93.2	136	94.4	369	80.9	
	No, we don't	37	7.3	8	5.6	29	19.1	
37.	Are you aware the law to to reduce waste	542	%	Formal		Informal		
	Yes, we know	445	82.1	123	85.4	322	80.9	
	No, we don't	97	17.9	21	14.6	76	19.1	
38.	Willing to join a pilot project	542	%	Formal	%	Informal	%	
	Yes, if economic gains	161	29.7	31	21.5	130	32.7	
	Yes, if (financial) benefit	328	60.5	101	70.1	227	57.0	
	Yes, just to help	37	6.8	8	5.6	29	7.3	
	No, if no economic gain	16	3.0	4	2.8	12	3.0	

ANNEX I.2

RESETTLEMENT LAW

Annex I.2

Urban Development and Housing Act of 1992 (UDHA) Republic Act No. 7279

All resettlement activities have to be carried out according to the Republic Act, **Urban Development and Housing Act of 1992 (UDHA)–Republic Act No. 7279**. This is the so called “Bible for Resettlement” in the Philippines.

Some of the clauses that may directly affect the informal settlers, who may be affected by the project that shall be proposed by This Study as part of Urgent Project in the Master Plan, are quoted as follows.

“The objective of this Act is, it states, to provide decent shelter to the underprivileged and homeless citizens in urban areas and resettlement areas whose lives are generally marked by economic insecurities and whose occupancy on the land uncertain.

Pursuant to Section 9,12,14, 16 of the Act 7279, “Implementing Guidelines for the Acquisition, Valuation, Disposition and Utilization of Lands for Socialized Housing under Section 7.

SECTION 7 – Utilization and Disposition of the Land

1. Lands shall be disposed only to qualified Program Beneficiaries (The Qualified Beneficiaries are:)

- (a) must be a Filipino citizen
- (b) must be an underprivileged and homeless citizen, as defined in Section 3 of the Act.
- (c) must not own any real property whether in the urban or rural areas;
- (d) must not be a professional squatter or member of squatting syndicates”

The Act limits the sales and/or lease of the socialized housing to only qualified Program Beneficiaries as follows.

2. Qualified beneficiaries who are actual occupants of the land shall be given the right of first refusal.
3. No land for socialized housing, including improvements thereon, shall be sold,

alienated, conveyed, encumbered or leased by any beneficiary of this Program except to qualified Program Beneficiaries.

IMPLEMENTING RULES AND REGULATIONS TO ENSURE THE OBSERVANCE OF PROPER AND HUMANE RELOCATION AND RESETTLEMENT PROCEDURES

Pursuant to Article XII, Section 44 “Moratoriums on Eviction and Demolition” and Article VII, Section 28, entitled “Eviction and Demolition of Squatters” ...

The Implementing Rules and Regulations limit the application of the above as follows.
“These Implementing Rules and Regulations shall not apply to those squatters who constructed their structures after March 29, 1992, the effectivity date of RA 7279.”

SECTION 2. SCOPE OF APPLICATION – These Rules and Regulations shall apply to demolitions allowed under Sec. 28 of the Act.

SECTION 3. GUIDELINES FOR IMPLEMENTATION – Procedures

I. Pre-Relocation Phase

a. *Identification of Resettlement Site*

Negotiations and arrangements are finalized between the proponent LGU or government agency authorized to demolish and the recipient LGU on the resettlement site and their corresponding roles and responsibilities.

b. *Pre-Census*

1.0 Completion of Data Requirements

The LGU or government agency authorized to demolish shall ensure that the following documents are readily available prior to any conduct of demolition.

1.1 Certified Xerox Copy of Title

1.2 Tax Declaration or Tax Receipt

1.3 Location Plan or Vicinity Map showing the boundary illegal constructions

1.4 Pictures of the area (before operation)

1.5 Certification from LGU or other concerned agency that the area is

- included in the list of danger areas and subject for clearing, if applicable
- 1.6 Certification from LGU or concerned agency that the area is the site of an infrastructure project with available funding which shall commence within sixty (60) days after clearing of the said area, if applicable.
- 1.7 Copy of the Writ of the area is decided by the Court
- 1.8 Development plan of the property

2.0 Community Relations Operation

The LGU or concerned agency shall undertake the following.

- 2.1 Establish communication and rapport with recognized resident community leaders;
- 2.2 Meet the affected families to explain the following:
 - 2.2.1 the government's shelter program for the low and marginal income families including squatters
 - 2.2.2 the need to relocate families from danger areas and infrastructure project sites, or a writ of demolition if applicable.
 - 2.2.3 procedures and guidelines on relocation and resettlement
 - 2.2.4 objectives and schedule of the census and tagging operation
- 2.3 Introduce the project team and census enumerators to the Barangay Chairman and community leaders. The LGU or concerned government agency may request the National Housing to provide technical assistance in the conduct of the pre-location activities.

c. *Census*

1.0 Physical Survey

Using the location and vicinity map, title and technical description submitted, the LGU shall determine the physical boundary of the land to be cleared of squatters.

2.0 Tagging

The LGU shall attach the tag card with the corresponding number to every structure for identification, inventory and control of illegal construction. The LGU shall encourage participation of community leaders in this undertaking.

3.0 Mapping and Household Listing

In coordination with the community leaders, the LGU shall prepare a

preliminary listing of the names of owners/households of the affected houses/structures...

4.0 Actual Census

The LGU or concerned agency shall conduct house-to-house census to determine the actual number of occupants/households and their possible resettlement options, e.g., “Balik Probinsiya.” The LGU shall engage the assistance of community leaders in the conduct of the census...

5.0 Census Data Evaluation/Processing and Masterlist Preparation.

After the completion of census, the LGU or concerned agency shall evaluate the data gathered and determine qualified families for resettlement assistance based on approved criteria for beneficiary selection.

Subsequently, an initial masterlist of affected families shall be prepared by the proponent LGU or to the NHA for review and pre-qualification.

A final masterlist shall then be prepared by the duly authorized officials, a copy of which shall be posted in conspicuous places in the area.

6.0 A Census Committee ... shall be determined by the parties involved, shall be crated to investigate and evaluate all census claims and recommend an appropriate action to the LGU or concerned agency.

All qualified and disqualified families shall be individually informed.

A copy of the approved final masterlist shall be posted in public places.

7.0 Information Drive on Resettlement Site

The LGU and/or the government agency authorized to demolish shall meet the qualified families for resettlement to discuss the following, among others.

7.1 Facilities and services in the resettlement projects; and

7.2 Obligations and responsibilities of the affected families

d. *Issuance of 30-Day Notice*

1.0 A written notice shall be issued to the affected persons or entities by the LGU or government agency authorized to demolish together with the representative of the Presidential Commission for the Urban Poor.

It shall be served to and received by the addressee personally. Should the concerned person refuse to acknowledge the notice, the same shall be affixed conspicuously to the addressee's dwelling.

- 2.0 Posters no smaller than 2' x 3' are displayed conspicuously in the community such as public markets, barangay hall, plaza and the like.
- 3.0 The written notices and the posters must state the reason for demolition. ...”implementation of government infrastructure project,”
- 4.0 The actual date of demolition must not be earlier than thirty (30) days but not later than ninety (90) days after the notice has been issued.....
(certain days and times)
- 5.0 Should the announced demolition not take place within ninety (90) days, notice lapses, and a new notice must be serviced if demolition still needs to be undertaken.

e. *Consultation Proper*

- 1.0 The LGU or government agency authorized to demolish shall preside over the consultation meetings to be attended by the barangay chairman, the affected families and the landowners or their duly designated representatives. Officials or representatives of concerned agencies and the NGOs shall also be invited. The following shall be discussed:
 - 1.1 the necessity of the demolition;
 - 1.2 available options other than resettlement
 - 1.3 possible relocation sites – to include modes of payment, tenure, facilities and services thereat;
 - 1.4 advantages of voluntary dismantling
 - 1.5 dismantling and resettlement procedures;
 - 1.6 submission of requirements (family pictures, marriage contract, etc.)
 - 1.7 school accommodation of children;
 - 1.8 roles of agencies, such as
 - Department of Social Welfare and Development (DSWD)
 - The Philippine National Police (PNP)
 - Department of Education, Culture and Sports (DECS)
 - Department of Public Works and Highways (DPWH)
 - National Housing Authority (NHA)
 - Presidential Commission for the Urban Poor (PCUP)

Commission for Human Rights (CHR)

And other concerned agencies.

2.0 Consultation meetings will be held

3.0 The LGU or concerned government agency summarizes the points of agreement and disagreements arrived.....

4.0 Meetings shall be scheduling.

f. *Inter-agency Meetings/Coordination*

The LGU or government agency authorized to demolish shall convene an Inter-agency meeting discuss the details of the actual relocation operation and to ensure the support and assistance of the participating agencies.

The following requirements, among others, shall be ensured:

1.0 Resettlement Site – LGU or other authorized government agency

2.0 Relocation/Demolition Team – LGU or other authorized government agency

3.0 Other logistical requirements, such as trucks, tents, first aid and Communication facilities – LGU or other authorized agency

4.0 Security – PNP

5.0 Food subsidy/Balik Probinsiya (*Back to province*)

6.0 Medical Assistance – Department of Health

7.0 Relocation Documentation – LGU or other authorized government agency

g. *Completion of Relocation Documents/Requirements*

The LGU or government agency authorized to demolish shall ensure the completion of the following relocation documents/requirements by the affected families:

1.0 Family picture

2.0 Marriage Contract or Affidavit of Cohabitation

3.0 Other Identification Papers

h. *Voluntary Relocation and Resettlement*

To encourage voluntary relocation, resettlement lots, transportation and manpower assistance and other services shall be extended in advance to the volunteer families.

II. RELOCATION PHASE

a. *Preparation Before the Dismantling of Structures*

1.0 Confirmation of Actual Date of Relocation

The proponent LGU or government agency authorized to demolish shall issue notices of actual relocation to the affected families and shall furnish a copy of the rolling schedule, three (3) days before relocation, to the recipient LGU or the NHA.

2.0 Ensuring Availability of Resources and Necessary Documents

The LGU or government agency authorized to demolish shall review the documents and check the availability of resources/services as committed by the participating agencies.

b. *Dismantling of Structures/Movement of Families*

1.0 During the actual relocation, the LGU or government agency authorized to demolish shall:

1.1 Provide the necessary identification to all staff and crew involved in the Operation

1.2 Ensure that members of the PNP who are in proper uniform occupy the law enforcement and civil disturbance control, and do not participate in the physical dismantling of any structure

Other cautions to be taken, during the dismantling of the structure, such as cut electricity, handle the construction materials carefully so that materials can be used again, etc.

2.0 PCUP and CHR shall be present in the area to monitor and observe the actual operation

c. *Issuance of Entry Passes*

The LGU or authorized government agency shall ensure that all entry passes are prepared with the corresponding family pictures. The LGU or authorized agency shall prevent the tampering or illegal transfer of such entry passes.

d. *Loading and Transporting*

The LGU or government agency authorized to demolish shall ensure that:

1.0 Transportation vehicles shall have the necessary sign board displayed in front of the windshields for proper identification

2.0 The care with the vehicle of the transporting families belongings.

e. *Monitoring and Documentation*

The LGU or government agency authorized to demolish shall monitor and report on the relocation operation daily and weekly using the prescribed forms.

f. *Welcome and Reception*

g. *Processing of documents and Lot Assignment*

The resettlement project team shall:

1.0 Review and process the entry passes and other documents of the resettled families;

2.0 Assign lots to the families;

3.0 Assist the families in accomplishing the required forms

h. *Transfer to Assigned Lot*

The resettlement project team shall accompany the resettled families to their assigned lots:

III. POST RELOCATION PHASE

a. *Place of origin:*

b. *Resettlement Site*

1.0 Organized community-based structures shall be strengthened so as to facilitate the delivery of services in the site. The identified leaders with the assistance of the NGOs shall be trained and equipped with proper organizational skills and attitudes necessary to effectively manage the affairs of the community

2.0 To promote the general well-being of resettled families, adequate social services in health, nutrition, education, responsible parenthood, environmental sanitation, etc. shall be provided in the resettlement sites jointly or under the auspices of cooperating agencies such as, but limited to,

DECS, DOH, DSWDM and NGOs.

3.0 To generate employment and income opportunities for the resettled families, the resettlement project shall act as a conduit for the families to avail of manpower training and livelihood program through sustained networking and resource syndication activities.

SECTION 4. EVICTION AND DEMOLITION PURSUANT TO A COURT ORDER,

SECTION 5. ORGANIZATION – To ensure the smooth and effective implementation of all relocation and resettlement operations, the LGU or the government agency authorized to demolish shall create a Task Force on Relocation and Resettlement.

a. *Primary Responsibility*

The Task Force shall be primarily responsible for ensuring that these Implementing Rules and Regulations on the eviction of families and demolition structures are adhered to.

b. *Structure and Composition*

1.0 The City/Municipal Mayor or duly-designated representative of the concerned government agency authorized to demolish as Chairman;

2.0 The membership shall include the following:

- 2.1 Legal services group
- 2.2 Security group
- 2.3 Dismantling and Relocation group
- 2.4 Community relations group
- 2.5 Census and tagging group
- 2.6 Surveillance group

3.0 Action Teams shall be created by the Chairman for every relocation and resettlement operation to oversee/undertake actual eviction/relocation of families and dismantling of structure.

4.0 The Action Teams shall be composed of, but not limited to, the following:

- 4.1 City/Municipal Engineering/Building Official
- 4.2 Medical/Health Personnel
- 4.3 Dismantling Crew/Relocation Officer
- 4.4 Social Worker
- 4.5 Barangay Chairman
- 4.6 NGO Representative

SECTION 6. PENALTY CLAUSE

SECTION 7. VENUE FOR GRIEVANCE

**AN ACT TO PROVIDE FOR A COMPREHENSIVE AND CONTINUING
URBAN DEVELOPMENT AND HOUSING PROGRAM, ESTABLISH THE
MECHANISM FOR ITS IMPLEMENTATION, AND FOR OTHER
PURPOSE**

ARTICLE V – SOCIALIZED HOUSING

Section 15. Policy -

Socialized housing shall be the primary strategy in providing shelter for the underprivileged and homeless. However, if the tenurial arrangement in a particular socialized housing program is in the nature of leasehold or usufruct, the same shall be transitory and the beneficiaries must be encouraged to become independent from the Program within a given period of time, to be determined by the implementing agency concerned.

Section 16. Eligibility Criteria for Socialized Housing Program Beneficiaries.

To qualify for the socialized housing program, a beneficiary:

- a) Must be a Filipino citizen
- b) Must be an underprivileged and homeless citizen, as defined in Section 3 of This Act.
- c) Must not own any real property whether in the urban or rural areas:
- d) Must not be a professional squatter or a member of squatting syndicates.

Section 17. Registration of Socialized Housing Beneficiaries. HUDCC in coordination with the local government units, shall design a system for the registration of qualified Program beneficiaries in accordance with the Framework. The local government units, within one (1) year from the effectivity of this Act, shall identify and register all beneficiaries within their respective localities.

Section 21. Basic Services – Socialized housing or resettlement areas shall be provided by the local government unit or the National Housing Authority in cooperation with the private developers and concerned agencies with the following basic services and facilities.

- a) Potable water
- b) Power and electricity and an adequate power distribution system;
- c) Sewerage facilities and an efficient and adequate solid waste disposal system;
- d) Access to primary roads and transportation facilities

The provision of other basic services and facilities such as health, education, communication, security, recreation, relief and welfare shall be planned and shall be given priority for implementation by the local government unit and concerned agencies in cooperation with the private sector and the beneficiaries themselves.

Section 23. Participation of Beneficiaries – The local government units, in coordination with the Presidential Commission for Urban Poor and concerned

government agencies, shall afford Program beneficiaries or their duly designated representative an opportunity to be heard and participate in the decision-making process over matters involving the protection and promotion of their legitimate collective interests

They shall also be encouraged to organize themselves and undertake self-help cooperative housing and other livelihood activities.....

ARTICLE VII - URBAN RENEWAL AND RESETTLEMENT

Section 27. Action Against Professional Squatters and Squatting Syndicates – The local government units, in cooperation with the Philippine National Police, the Presidential Commission for the Urban Poor (PCUP), and the PCUP accredited urban poor organization in the area, shall adopt measures to identify and effectively curtail and nefarious and illegal activities of professional squatters and squatting syndicate.

Any person or group identified as such shall be summarily evicted and their dwellings or structures demolished, and shall be disqualified to avail of the benefits of the Program.

For purposes of this Act, professional squatters or members of squatting syndicates *shall be imposed the penalty of six (6) years imprisonment or a fine of not less than sixty thousand pesos (p60,000)*

Section 28. Eviction and Demolition – Eviction or demolition as a practice shall be discouraged. Eviction or demolition, however, may be allowed under the following situations:

- (a) When persons or entities occupy danger areas such as esteros, railroad tracks, garbage dumps, riverbanks, shorelines, waterways, and other public places such as sidewalks, roads, parks, and playgrounds;
- (b) When government infrastructure projects with available funding are about to be implemented;
- (c) When there is a court order for eviction and demolition

In the execution of eviction or demolition order involving underprivileged and homeless citizens, the following shall be mandatory:

- (1) Notice upon the affected persons or entities at least thirty (30) days prior to the date of eviction or demolition
- (2) Adequate consultations on the matter of resettlement with the duly designated representatives of the families to be resettled and the affected communities in the areas where they are to be relocated;
- (3) Presence of local government officials or their representatives during eviction or demolition;
- (4) Proper identification of all persons taking part in the demolition;
- (5) Execution of eviction or demolition only during regular office hours from Mondays to Fridays and during good weather, unless the affected families consent otherwise.

Section 29 – Resettlement – Within two (2) years from the effectivity of this Act, the local government units, in coordination with the National Housing Authority, shall implement the relocation and resettlement of persons living in danger areas such as esteros, railroad tracks, garbage dumps, riverbanks, shorelines, waterways and in other public places such as sidewalks, roads, parks and playgrounds. *The local government units, in coordination with the National Housing Authority, shall provide relocation or resettlement sites with basic services and facilities and access to employment and livelihood opportunities sufficient to meet the basic needs of the affected families.*

Section 30 – Prohibition against New Illegal Structure – It shall be unlawful for any persons to construct any structure in areas mentioned in the preceding section.

After the effectivity of this Act, the barangay, municipal or city government units shall prevent the construction of any kind of illegal dwelling units or structures within their respective localities. The head of any local government unit concerned who allows, abets or otherwise tolerates the construction of any structure in violation of this section *shall be liable to administrative sanctions under existing laws* and to penal sanctions provided for in this Act.

ARTICLE X - PROGRAM IMPLEMENTATION

Section 39. Role of Local Government Units – *The local government units shall be charged with the implementation of this Act* in their respective localities, in coordination with the Housing and Urban Development Coordinating Council, the

national housing agencies, the Presidential Commission for the Urban Poor, the private sector and other non-government organizations.

They shall prepare a comprehensive land use plan for their respective localities in accordance with the provisions of this Act.

Section 40. **Role of Government Housing Agency** – In addition to their respective existing powers and functions, and those provided for in this Act, the hereunder mentioned housing agencies shall perform the following:

(a) The **Housing and Urban Development Coordinating Council** shall, through the key housing agencies provide local government units with necessary support such as:

- (1) Formulation of standards and guidelines as well as providing technical support in the preparation of town and land use plans
- (2)
- (3) Assistance in obtaining funds and other resources needed in the urban development and housing programs in their areas of responsibility.

(b) **The National Housing Authority**, upon request of local government units, shall provide technical and other forms of assistance in the implementation of their respective urban development and housing programs with the objective augmenting and enhancing local government capabilities in the provision of housing benefits to their constituents.

(c) **The National Home Mortgage Finance Corporation** shall administer the Community Mortgage Program under this Act and promulgate rules and regulations necessary to carry out the provisions of this Act; and

(d) The Home Insurance Guaranty Corporation shall design an appropriate guarantee scheme to encourage financial institutions to go into direct lending for housing.

**THE DEPARTMENT OF INTERIOR AND LOCAL GOVERNMENT AND THE
HOUSING AND URBAN DEVELOPMENT COORDINATING COUNCIL
IMPLEMENTING RULES AND REGULATIONS
GOVERNING SUMMARY EVICTION**

SECTION 1 – DEFINITION OF TERMS (Refer to the last part)

SECTION 2 – COVERAGE – The following shall be subject for summary eviction:

1. New squatter families whose structures were built after the effectivity of RA7279, and;
2. Squatter families identified by the LGU in cooperation with Presidential Commission of Urban Poor (PCUP), Philippine National Police (PNP) and accredited Urban Poor Organization (UPO) as professional squatters or members of squatting syndicates as defined in the Act.

SECTION 3 – PROCEDURES AND GUIDELINES.

1. Pre-Requisite

1.1 The LGU or the concerned agency authorized to demolish thru their Task Forces on Relocation and Resettlement (TFRR) shall direct its Surveillance Team to conduct site inspection within 24 conducts upon of Of violation by squatter families. A written report on newly sighted illegal structure shall be prepared and signed by the team leader and any one representative of the UPO or PCUP, and which shall submitted to the TFRR for immediate action.

1.2 Notification of the summary eviction to PNP

1.3

2. Issuance of Summary Eviction and Notice

2.1 Sign by the Mayor of Summary Eviction

2.2 Time and date of Summary Eviction

2.3 Notice in triplicate copies

2.4 The notice shall be personal delivery to the squatter family, and the occupant or any adult member of this household shall be requested to acknowledge receipt of the notice. Should the person refuse to acknowledge the same shall be affixed conspicuously to the addressee's dwelling.

3. Implementation of Eviction Process

3.1 The eviction team shows duly signed document or authority to dismantle to the occupants

3.2 Actual Eviction

- a. If the dwelling unit/structure is closed or padlocked, the team shall cause the door to be opened forcibly in the presence of the Barangay representative.
- b. If the dwelling unit/structure is open, the eviction team will order the occupants to move out of the structure and remove their valuables and other belongings which they wish to remove and they shall be given one hour to do this.

- c. Persons who refuse to leave the structure to be dismantled shall be moved out by force. The Barangay official present shall be required to assist the dismantling team to perform this Act..... If only minors are left.....
- d. Whether the occupants voluntarily vacate or not, the Team leader will order the dismantling crew to remove all the occupants' belongings out of the premises.

3.3 Post-Eviction

- a. After the structure has been dismantled, the Team shall clear and secure the area and take measure to prevent re-entry of evicted occupants as well as any other intruders....
- b. The Team Leader of the TFRR shall prepare the eviction report which substantially recites the proceedings, the inventory of belongings removed and structures dismantled. The members of the Team shall sign this report as well as the Barangay Chairman to attest the manner in which the eviction was conducted and the accuracy of the inventory.

Approved, November 3, 1993" **Unquote.**

Note: Some important part or clauses **are emphasized by the use of bold or italic** letters by the writer of this report.

J. PUBLIC PARTICIPATION

TABLE OF CONTENTS

	<u>Page</u>
J.1 GENERAL	J - 1
J.2 METHODOLOGY	J - 1
J.2.1 Perception Interviews	J - 1
J.2.2 Focus group discussion	J - 1
J.2.3 Survey/Interview	J - 1
J.2.4 Experimental Study in the Organizing of the Barangay Environment Management Plan	J - 2
J.2.5 Social Acceptability in Environment Impact Assessment.....	J - 2
J.2.6 Workshops.....	J - 3
 ANNEX J.1 INFORMATION, EDUCATION AND COMMUNICATION PLAN	
 ANNEX J.2 IMPACTS AND MITIGATIONS OF AFFECTED COMMUNITIES	

J.1 GENERAL

Public participation in the DICAMM Project involved the stakeholders in the process of decision making assuring its sustainability upon implementation. The reality of the consequential negative impact of flooding, destruction of properties, illness and the grim future of their children have endeared the stakeholders to take upon themselves the responsibility to commit themselves in ways that will mitigate the negative impacts and improve their lives. Two groups of stakeholders were identified from the core city of North (Caloocan, Quezon City and Manila City) and South Manila (Pasay City, Makati City, and Taguig City). The 1st group was the Local Government concern officials, Non-government organizations, People Organizations, and the Academe; the 2nd group was made-up of the Barangay Chairmen and concern Councilors within the identified DICAMM priority areas in North and South Manila.

In other to motivate and encourage the stakeholders different strategies were used to keep their interest and commitment in the different phases of the project cycle, from Master Plan to Feasibility Study.

The following strategies were used to elicit public participation in the different phases of the study: (1) Perception interviews; (2) Focus Group Discussion; (3) Survey /Interview; (4) conduct of the experimental study for Barangay Environment Management; (5) Social Acceptability in the conduct of the Environment Impact Assessment; and, (6) three Barangay Cluster Workshop and five Public Enhancement workshops. The series of workshops fully informed the stakeholders of the progress of the project (data collection, survey, analysis; formulation of the Master Plan; selection of priority projects; conduct of feasibility study) and likewise shared their valuable inputs in the process.

J.2 METHODOLOGY

J.2.1 PERCEPTION INTERVIEWS

Face to face interpersonal technique of gathering information from the respondents beliefs and values as related to the present situation they were in and particularly their “world view.” Data generated from this process were used to determine the level of acceptability of the project. (See *Supporting Report I*)

J.2.2 FOCUS GROUP DISCUSSION

Used the interpersonal nominal group discussion as the participants deal with the specific concerns of their drainage and esteros, as well as the concern for the Solid Waste Management. Data from the process were used to validate data from the survey interview. (See *Supporting Report I*)

J.2.3 SURVEY/INTERVIEW

Used the random purposive sampling wherein the choice of respondents were specifically chosen according to the following: the general profile of the respondents such as: Demographic Characteristics; Family; Education; Condition of Life (migration/settlement history); Household Income and Employment; Living Condition – housing utilities; Environmental Situation; Public Health; Experience on Flood; Solid Waste Management (from source to collection); Perception on possible piloting of SWM. (See *Supporting Report I*)

J.2.4 EXPERIMENTAL STUDY IN THE ORGANIZING OF THE BARANGAY ENVIRONMENT MANAGEMENT PLAN

To find out if indeed we can facilitate an effective community-based participated Environment Management Plan, three Barangay Units were selected for the Experimental Research considered as typical and/or representative barangays in the Core Area of Metropolitan Manila (DICAMM), for the development of a model for Barangay Institutional System; Barangays 46, Pasay City (medium populated upper lower to lower middle class), Palanan, Makati City (minimal population lower middle to upper middle), and 195 City of Manila (densely populated lower lower to middle lower). Furthermore, selection was based on certain conditions such as the character of the people, and types of problems in the areas.

In this activity, the Experimental Research Study Team trained the BEMs (Barangay Environmental Managers) and the Team ESTERO (Environmental Strategic Task for Estero Renewal Organizing) through a series of workshops about the methods in the preparation of the Barangay Environmental Management Plan (BEMP). These included data gathering for the Barangay Profile (history, organizational structure, socio-economic conditions and environmental conditions); Strength, Weakness, Opportunities and Threats Analysis of the four focal points which were Information, Education and Communication; Solid Waste Management; Pollution control and Beautification. Based on the results of the S.W.O.T. analysis the Problem tree was drawn and likewise a corresponding solution tree. With these data information they have generated from their barangay, they prepared an implementation plan and a monitoring scheme.

Specific activities were developed according to the identified solutions of the problems with emphasis on the strategies they will employ as well as the corresponding laws and regulations of the city. (See *Supporting Report O*) Clearly observed in the study was the active participation of the identified BEM-ESTERO members. All of them indicated that this is the first time that they have experienced a process which encouraged them to develop their own strategies in dealing with their identified problems. The evaluation given them after the study clearly indicated that changes in their knowledge, attitude and practice have indeed resulted in changes within their barangays. They just hope that DPWH will continue their institutional support.

J.2.5 SOCIAL ACCEPTABILITY IN ENVIRONMENT IMPACT ASSESSMENT

Social Acceptability in Environment Impact Assessment was the process of making the stakeholders participate fully in the project from planning, implementation to monitoring. This was done within the project identified priority areas and the possible consequential beneficial and negative impacts that will have on their biophysical and socioeconomic environment within the project cycle. Likewise, assuring that mitigating and enhancement measures will be in place to sustain the stakeholders' quality of life now and the future of their children.

Participatory activities done were: (1) Scoping Workshop both in the North and South Manila. This activity was to level-up the stakeholders' perception of their present environmental problems, concerns and recommendations as related to the drainage, esteros and flooding; (2) Social Development Planning Workshop for the identified tagged relocatees. This process assured them that mitigating and enhancement measures are in place to sustain their quality of life now and the future of their children when they will be relocated. The SDP was done at the project site with the inter-agency committee facilitating the process, grouped as men, women, youth and elderly and contextualized within their resources. The inter-agency was convened to facilitate and respond to the concerns of the identified stakeholders made up of the proponent

(DPWH and MMDA) and concerned LGU, GOs, NGOs, and POs; NHA for housing infrastructure, DSWD for social and psychological preparation (for relocation R.A.7279), crisis management, credit and livelihood; DENR for environment and waste management; DOH for health, safety, sanitation and nutrition; DPWH & MMDA for funding and infrastructure, PNP for peace and order, DEPED for education and recreation, TESDA for skills training and placement Upon completion and presentation of the SDP, the stakeholders presented the results to the proponent. (See *Supporting Report K*)

J.2.6 WORKSHOPS

The Public participation workshops benefited the Local Government interagency, as it showed understanding of issues and obligations from their point of view. This incorporated local issues and concerns in the project planning process which would improve project bankability by showing to funding and financial institutions that participation procedures and guidelines have been followed. The process generated creative and locally appropriate solutions building good relations and trust with community leaders, the community, NGOs and the media. It has also created a more informed government decision making by incorporating the diverse opinions, values, and ideas and gaining the direct, immediate knowledge of environmental conditions from community members. Furthermore it has improved awareness of issues and increased public understanding of the DICAMM project and issues involved in decision making a precondition for functioning democratic system and public satisfaction and trust in government institutions. This then supplements scarce government monitoring, inspection, and enforcement resources, when they themselves act as the government's "eyes" and "ears" identifying and taking actions against environmental threats or violations of laws. Thus building a future of good relations and trust with community leaders, the general public, NGOs and the media.

(1) Workshop for the Enhancement of Public Participation (LGU, GO, NGO, PO & ACADEME)

1ST Workshop

Workshop Objectives:

- To understand and appreciate the project.
- To identify the concerns, problems/issues on drainage caused by clogged drainage and waterways (esteros), and
- To suggest recommendations to mitigate these problems.

Workshop Mechanic:

- Discuss with the members the concerns of the city related to drainage and its consequential effects (people & institutions). Likewise, give your recommendations to mitigate the problems/issues.
- Write the problems/ issues you perceive related to the concerns on the Meta cards, and stick them on the column under the identified concern. Also do this too under the column for recommendations (mitigation measures).
- Review the work your group has done and rearrange the problems/issues and the recommendations according to priority.
- After doing this, finalize the work by rewriting it on brown paper or acetate for presentation.
- Identify the person who is going to present the result of the discussion in the plenary

session.

- All sign the presentation

(See results of Public Participation Workshop-1 in *Supporting Report N*)

2nd Workshop

Workshop Objectives:

1. Discuss by group the present state of the structural, non-structural, and supporting measures for the drainage improvement of their area.
2. Propose and recommend structural, non-structural, and supporting measures to be incorporated in the preparation of the Master Plan and Feasibility Study for the drainage improvement project.
3. Present in a plenary session the proposed recommendations for structural, non-structural, and supporting measures.

The groupings were done by dividing the groups according to the cities within the study area. This was North Core Area, group A and B, this was made-up of Caloocan City, Quezon City and North Manila. The South Area was made-up of South Manila, Pasay City and the Municipality of Taguig, group C and D.

(See results of Public Participation Workshop-2 in *Supporting Report N*)

3rd Workshop

Workshop Rationale:

Base on the studies for the Master Plan for “Drainage Improvement in the Core Area of Metropolitan Manila”, public participation is crucial for the successful implementation of the project. Considering the project as technically sound, economically feasible and socially acceptable it becomes imperative for the affected cities to critically analyze the major factors that affect the sustainability of the proposed projects in the context of the affected people’s life-ways.

Workshop Objective:

To analyze the major factors (Solid Waste Management, Pollution, Beautification & Greening, and Information, Education and Communication) that influence the successful implementation of the project using the (S.W.O.T) STRENGTH, WEAKNESS, OPPORTUNITIES AND THREATS analysis.

(See results of Public Participation Workshop-3 in *Supporting Report N*)

4th Workshop

Workshop Rationale:

The success of the DICAMM Project relies on the active participation of the Local Government and the barangay residents who are directly and indirectly affected by the project. The interaction of the MMDA/DPWH with the Local Government Units, Government & Non-government Agencies thus becomes imperative in the preparation of the LGU OPERATION/ MAINTENANCE Guidelines for priority projects identified in the Master Plan for effective implementation and sustainability.

Workshop Objective:

To develop and prepare the LGU implementation Operation/ Maintenance guidelines for the DICAM priority projects.

(See results of Public Participation Workshop-4 in *Supporting Report N*)

5th Workshop**Workshop Rationale:**

The 5th workshop for the enhancement of public participation shall focus on the STRENGTHENING OF CAPABILITIES FOR SUSTAINABLE O&M based on the results of the 4th workshop (Guidelines for Operations and Maintenance). This shall be considered in drawing of the specific roles of the LGU, GO, PO and NGO in the implementation of the DICAMM project per city from pre-construction, construction and operation. Likewise, guidelines for the monitoring of the O&M shall be prepared to assure its effective implementation.

Workshop Objectives:

1. To review the results of the 4th workshop and classify the O&M as activities for pre-construction, construction and operation.
2. To identify the responsible specific LGU, GO, NGO & PO in the implementation of the O&M during the pre-construction, construction and operation of the DICAMM project.
3. To prepare the guidelines for the monitoring of the O&M implementation of the DICAMM Project

(See results of Public Participation Workshop-5 in *Supporting Report N*)

6th Workshop**Workshop Rationale:**

The Local Government Units, government and non-government agencies are mandated to consider programs and projects that are vital for the well-being of their constituents they serve. The DICAMM Project which responds to the flooding problem of the core cities of Manila, has been done to improve the life-ways of those directly affected as well as assuring them for a better environment for their children. Thus the integration of the DICAMM PROJECT into the LGU development plans and its implementation becomes imperative.

Workshop Objectives:

1. To update the participants of the status of the project.
2. To present the final draft of the DICAMM project.
3. To elicit reactions and comments from the participants.
4. To let the LGUs in coordination with the concern government and non-government agencies integrate the DICAMM project in the implementation of their Development Plan.

(See results of Public Participation Workshop-6 in *Supporting Report N*)

(2) Barangay Cluster Workshops (122 Barangays within the identified priority projects of the core study area)

The process facilitated the involvement of the Barangay stakeholders to actively participate in all phases of the study. Making them gain better understanding and knowledge about the environmental risks and impacts to which they, their families, and their communities are exposed thus increased their awareness of how decision making processes work: who makes decisions, on what basis (help communities to participate in the future, and helps the development of representational democracy). The process also fostered greater sense of community awareness, social cohesion, social responsibility which enabled and helped them to feel they can have a positive effect and influence on concrete conditions in their cities/community, thus ensured local relevance of decisions and policies considering that local knowledge and experience had been taken into account in project design and implementation.

1ST Barangay Cluster Workshop

Workshop Rationale:

Base on the studies for the Master Plan for “Drainage Improvement in the Core Area Of Metropolitan Manila”, public participation is crucial for the successful implementation of the project. Considering the project as technically sound, economically feasible and socially acceptable it becomes imperative for the affected cities to critically analyze the major factors that affect the sustainability of the proposed projects in the context of the affected people’s life-ways.

Workshop Objective:

To analyze the major factors (Solid Waste Management, Pollution, and Information, Education and Communication) that influences the successful implementation of the project using the (S.W.O.T) STRENGTH, WEAKNESS, OPPORTUNITIES AND THREATS analysis.

(See results of Barangay Cluster Workshop-1 in *Supporting Report N*)

2nd Barangay Cluster Workshop

Workshop Rationale:

The success of the DICAMM Project relies on the active participation of the Local Government and the barangay residents who are directly affected by the project. The interaction of the MMDA/DPWH with the Local Government Units, Government & Non-government Agencies thus becomes imperative in the preparation of the BARANGAY OPERATION/ MAINTENANCE Guidelines for priority projects identified in the Master Plan for effective implementation and sustainability.

Workshop Objective:

To develop and prepare the Barangay Implementation Operation/Maintenance guidelines for the DICAMM priority projects.

(See results of Barangay Cluster Workshop-2 in *Supporting Report N*)

3rd Barangay Cluster Workshop

Workshop Rationale:

The 3rd Barangay Cluster workshop for the enhancement of public participation shall focus on the STRENGTHENING OF CAPABILITIES FOR SUSTAINABLE O&M based on the results of the 2nd workshop (Guidelines for **Operations and Maintenance**). This shall be considered in drawing of the specific roles of the LGU, Barangay Kagawad, PO and NGO in the implementation of the DICAMM project per barangay (District) from pre-construction, construction and operation. Likewise, guidelines for the monitoring of the O&M shall be prepared to assure its effective implementation.

Workshop Objectives:

1. To review the results of the 2nd cluster workshop and classify the O&M as activities for pre-construction, construction and operation.
2. To identify the responsible Barangay LGU, Barangay Kagawad, NGO & PO in the implementation of the O&M during the pre-construction, construction and operation of the DICAMM project.
3. To prepare the guidelines for the monitoring of the O&M implementation of the DICAMM Project.

(See results of Barangay Cluster Workshop-3 in *Supporting Report N*)

ANNEX J.1

INFORMATION, EDUCATION AND COMMUNICATION PLAN

INFORMATION, EDUCATION AND COMMUNICATION PLAN for the Drainage Improvement in the Core Area of Metropolitan Manila

NEEDS	IMPLEMENTATION	COMMUNITY IMPLEMENTATION PLAN (Strategies)	GOVERNMENT/ NON-GOVERNMENT AGENCY SERVICES	PROONENT	COST ESTIMATE
<p>Informal and Formal Settlers Full Information about:</p> <ul style="list-style-type: none"> <input type="checkbox"/> The construction and operation of the drainage improvement and estero rehabilitation in the identified locations in the core area of Manila <input type="checkbox"/> The relocation of those who have encroached into the esteros <input type="checkbox"/> The consequential impacts on formal settlers residence <input type="checkbox"/> And the benefits of the Project on their Socio-cultural/economic and bio-physical environment of the affected residents as they address the major issues of: Solid Waste 	<p>Before project implementation</p>	<p>1. Consultations (These are face to face encounters where participants and facilitators of knowledge and skills develop strategies to respond to the needs of the communities in the context of what is appropriate for their capabilities and resources)</p> <ul style="list-style-type: none"> <input type="checkbox"/> Using the interpersonal approach DPWH/ MMDA Community Relations maintain regular consultations with the affected households for an open dialogue on the issues, problems and concerns related to the implementation and sustainability of the project. (Multi-partite Monitoring Team) <input type="checkbox"/> Group focus discussion for those identified for relocation shall be oriented on R.A.7279 Circular No.1070, Resettlement & Institutional Framework for Local Government Units, their rights and responsibilities. <input type="checkbox"/> Group discussion on the formal settlers residence which will be affected in the improvement of the drainage highlighting the legal processes of the right-of-way of government projects with the application of disturbance fee and equitable remuneration for property damage. <input type="checkbox"/> Workshops on Solid Waste Management, Beautification and Greening, Pollution control and Preparation of IEC materials 	<ol style="list-style-type: none"> 1. Philippine Information Agency Region NCR/ III 2. City Information Officers 3. LGU 4. AM Radio Stations patronized by the communities 5. ABS-CBN, GMA, ABC, NBC TV stations 	<p>DPWH and MMDA, Community, Relations Officer</p>	<p>Ph 5M</p>

NEEDS	IMPLEMENTATION	COMMUNITY IMPLEMENTATION PLAN (Strategies)	GOVERNMENT/ NON-GOVERNMENT AGENCY SERVICES	PROPONENT	COST ESTIMATE
<p>Management; Beautification and Greening; Pollution Control; and, Information, Communication and Information</p>		<p>2. Primer (print media) This strategy is effective in explaining in detail the subject matter, done in a simplified manner and in the language of the people. This strategy likewise, uses illustrations to further clarify the processes that are to be done.</p> <p>This shall contain:</p> <ul style="list-style-type: none"> <input type="checkbox"/> the project description, a graphic illustration about the present situation of the drainage and esteros and the factors i.e. solid waste, siltations and etc., that have contributed to the flooding and the project design that will mitigate the problem. <input type="checkbox"/> the major construction activities, <input type="checkbox"/> the Structural, supporting and non-structural measures for the successful implementation of the project. <input type="checkbox"/> location map that indicates the exact location of the major activities, <input type="checkbox"/> answers to questions frequently asked about the project. - The identified impacts and mitigations written in Filipino - On the Health and Safety measures related to the Construction and Operation of the Project - On Solid Waste Management R.A.7172 - On their role in maintaining and sustaining the project - If relocated, what is the process according to R.A.7279 - Circular No.1070, Resettlement & Institutional Framework for Local Government Units, their rights and responsibilities. - On the formal settlers residence which will be affected in the improvement of the drainage showing the legal processes of the right-of-way of government projects with the application of disturbance fee and equitable remuneration for property damage. 			

NEEDS	IMPLEMENTATION	COMMUNITY IMPLEMENTATION PLAN (Strategies)	GOVERNMENT/ NON-GOVERNMENT AGENCY SERVICES	PROPONENT	COST ESTIMATE
		<p>3. Posters and Wall Comics</p> <ul style="list-style-type: none"> □ A graphic illustration of the rationale of the project in the context of their experiences in relation to the dirty and smelly environment they are in due to the filthy esteros and the flooding due to clogged drainage. In like manner, the positive effect of the dredged and garbage free esteros and the de-clogged drainage, showing the improvement of the residents lives and the future of their children. □ Community-Based Solid Waste Management including information about R.A.7172 <p>4. Radio Spot promotions and Drama</p> <ul style="list-style-type: none"> □ Capitalizing on the negative impacts of the garbage in the esteros and the flooding due to clogged drainage in Filipino. In like manner, the positive effect of the dredged and garbage free esteros and the de-clogged drainage, showing the improvement of the residents lives and the future of their children. A simplified explanation about Community-based Solid Waste Management □ For relocates, orientation on R.A.7279 Circular No.1070, Resettlement & Institutional Framework for Local Government Units, their rights and responsibilities. □ The formal settlers residence which will be affected in the improvement of the drainage which will show the legal processes of the right-of-way of government projects with the application of disturbance fee and equitable remuneration for property damage. 			

ANNEX J.2

IMPACTS AND MITIGATIONS OF AFFECTED COMMUNITIES

**IMPACTS AND MITIGATIONS of affected communities
within the “THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METRO MANILA**

SITE/LOCATION	PHASE	Type & Degree of Impact	IMPACT	MITIGATIONS
<p>Informal settlers per Barangay that encroached into the <u>Estero Tripa de Gallina</u></p> <p>PASAY CITY Brgy. 165 - 300 Brgy. 163 - 10 Brgy. 162 - 100 Brgy. 158 - 3 Brgy. 157 - 76 Brgy. 144 - 70 Brgy. 137 - 150 Brgy. 135 - 150 Brgy. 134 - 60 Brgy. 132 - 50 Brgy. 128 - 5 Brgy. 65 - 100 Brgy. 54 - 57 Brgy. 51 - 118 Brgy. 46 - 106 Brgy. 43 - 85</p> <p>Total 1,745 families</p>	<p>PRE-CONSTRUCTION</p> <ul style="list-style-type: none"> o Dredging & declogging of estero 	<p>HIGH NEGATIVE</p>	<p>SOCIO-ECONOMIC</p> <ol style="list-style-type: none"> 1. Fear & insecurity: <ul style="list-style-type: none"> o for the loss of houses o Loss of livelihood 2. Doubts on the sincerity of the government regarding compensation and relocation. 3. Psychological effects on the affected families particularly the women, youth and the elderly as they anticipate the loss of their homes and livelihood. 4. The increase burden on the women in the maintenance and sustenance of the their families as they re-establish their life-ways 	<p>SOCIO-ECONOMIC</p> <ol style="list-style-type: none"> 1. Full scale intensified Information, Education & Communication The preparation of information materials about R.A. 7279 Circular No.1070, Resettlement & Institutional Framework for Local Government Units, highlighting the rights and responsibilities of the relocates. These are consultations, posters/ wall comics, primer and radio/t.v. spots. (DPWH-MMDA Information Office, & Sending Barangay) (DPWH-MMDA, sending & receiving LGU & Barangay Council) 2. The compensation and/or settlement of land, plants, house and disturbance fee shall be done with the affected families through legal means and equitable remuneration in accordance to R.A. 7279 (DPWH - IROW-PMO, City Assessors Office, & Barangay Captain) 3. Formation of a Social Development Plan prepared by the identified (tagged) men, women, youth & elderly relocatees facilitated by the INTER-AGENCY SOCIAL DEVELOPMENT COORDINATING COMMITTEE <p>a. Relocation Plan base on Memo Circular No.1070, Resettlement & Institutional Framework for Local Government Units</p> <ul style="list-style-type: none"> ➤ the relocation site must be a choice of two sites in consultation with the affected families
<p>MAKATI CITY Brgy. Bangkal - 86 Brgy. San Isidro - 120 Brgy. Palanan - 130</p> <p>Total 336 families</p>				

**IMPACTS AND MITIGATIONS of affected communities
within the “THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METRO MANILA**

SITE/LOCATION	PHASE	Type & Degree of Impact	IMPACT	MITIGATIONS
<p>Estero de Vitas Barangay 133 Zone 11 10 families</p> <p>Estero de Uli-Uli Barangay 639 90 families</p> <p><u>GRAND TOTAL 2,181</u></p>	<ul style="list-style-type: none"> o Heightening of estero wall o Small gate pump 			<ul style="list-style-type: none"> ➤ house style must be the choice of the family while choice of lot must be agreed upon by the families ➤ water and light system ➤ pave roads and drainage system ➤ multipurpose building ➤ communal farm lot ➤ waste management system <p>(DPWH-MMDA, NHA & receiving LGU)</p> <p>b. Alternative Livelihood & Credit Facilities. (DPWH-MMDA cooperation with the LGU, MSWD, Micro-financing NGO)</p> <p>c. Infrastructure development for health, education & welfare services (DPWH-MMDA in cooperation with the LGU, MOH, MSWD & DEPED)</p> <p>d. Social & recreational facilities (DPWH, MMDA with the cooperation of the LGU, NGO, MOH, MSWD & DEPED)</p> <p>4. Consultation and Negotiation with Land owners who have encroached into the esteros for equitable terms of purchase (DPWH-IROW-PMO, City Assessors Office & LGU)</p>

**IMPACTS AND MITIGATIONS of affected communities
within the “THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METRO MANILA**

SITE/LOCATION	PHASE	Type & Degree of Impact	IMPACT	MITIGATIONS
			<p>dysentery, skin infections, poisoning and others</p> <ul style="list-style-type: none"> □ Accidents in the construction and operation of the drainage improvement 	<p>accidents and to reduce noise pollution caused by the operation of the machines (DPWH-MMDA & Barangay)</p> <ul style="list-style-type: none"> ○ A community clinic shall be maintained with a health workers to respond to illness and accidents & likewise monitor the health situation of the populace (DPWH-MMDA & MOH) ○ Drainage Improvement, Health and Safety Education shall be introduced to the elementary curriculum within the core study area to educate the children on the proper attitude and behavior toward drainage improvement activities (DPWH-MMDA & DEPED)

**IMPACTS AND MITIGATIONS of affected communities
within the “THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METRO MANILA**

SITE/LOCATION	PHASE	Type & Degree of Impact	IMPACT	MITIGATIONS
NORTH MANILA <ul style="list-style-type: none"> o Hermosa-Benita st. Brgys. 178, 184, 200, 199, Extension of existing Blumentritt interceptor o Blumentritt o Interceptor- Brgys. 201, 202, 202a, 206, 208, 374, 373, 375, 378, 377, 379, 380, 372, 490, 492, 495, Remedial works of existing Interceptor o Quezon City Brgys.Paang Bundok, Salvacion o South Antipolo canal / Ipil st Brgys. 227, Additional work o South Antipolo canal along Laguna st. to Estero de Kabulusan Brgy.218 Additional B.C o Quiapo Brgy. 384, 647 Additional works of 	<p align="center">PRE CONSTRUCTION</p>	<p align="center">MEDIUM NEGATIVE</p>	<p align="center">SOCIO-ECONOMIC</p> <ul style="list-style-type: none"> o Fear of the anticipated disruption of social and economic (closing to traffic & construction) activities within the vicinity of the proposed project activities. o Doubts on the government’s sincerity in expropriating their lands that will be identified as part of the project. 	<p align="center">SOCIO-ECONOMIC</p> <ul style="list-style-type: none"> o Full scale intensified Information, Education & Communication <p>A media specialist in English and Tagalog language must prepare information materials about the pre-construction, construction, and operation of the drainage improvement project. These are interpersonal communicators, posters/wall comics, primer, radio spot promotions, and print ads. A community relations officer from the DPWH must be assigned to co-ordinate and plan these activities (DPWH-MMDA, LGU & Barangay Council)</p> <ul style="list-style-type: none"> o Consultation and Negotiation with Land owners who own the identified land for the project for legal and equitable terms of purchase (DPWH –IROW-PMO , City Assessors office & LGU)
	<p align="center">CONSTRUCTION</p>	<p align="center">HIGH NEGATIVE</p>	<p align="center">SOCIO-ECONOMIC</p> <ul style="list-style-type: none"> o Disruption of economic activities due to closure of roads resulting to reduced business opportunities o Restrained social mobility of people within the construction areas. 	<p align="center">SOCIO-ECONOMIC</p> <ul style="list-style-type: none"> o Information & Communication materials such as billboards, posters, radio/t.v. broadcast & interpersonal encounters to inform residents within the area as well as motorist of the on-going construction activities. o Intensified traffic management of MMDA & local Barangay Tanods (rerouting guides)to assure minimal disturbance.

**IMPACTS AND MITIGATIONS of affected communities
within the “THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METRO MANILA**

SITE/LOCATION	PHASE	Type & Degree of Impact	IMPACT	MITIGATIONS
secondary channel Quiapo pumping station ○ Severino Reyes Brgys. 391, 392, 396 Additional B.C ○ Along España Street Brgys.462, 468, 469,470, 397, 459,460 Extension of B.C ○ P. Margal to Kanlaon Manila: Brgys. 519, 520, 512 , Quezon City: Brgy. Sta. Teresita Extension of Margal D.M ○ Solis – Tecson Brgy.165-204 New B.C.			○ Traffic and human congestions in areas of construction activities	○ Road blocks within the construction areas to avoid untoward accidents. ○ Proper scheduling of construction activities shall be done to avoid traffic and human congestions during rush periods when students and office and offices respectively.
○ SOUTH ○ Makati Diversion Channel 1 Brgy. Bangkal, Additional B.C. ○ Faraday St. Barangay San Isidro Additional B.C. ○ Taguig Brgy.			<p style="text-align: center;">HEALTH AND SAFETY</p> <p>Health and safety during construction of the Drainage Improvement</p> □ The consequential effects of air pollutants (dust) causing upper respiratory illness □ The contamination of water causing gastrointestinal diseases, typhoid fever, dysentery, skin infections and others □ Poisoning due to toxic waste from drainage □ Diseases caused by foul smell from declogging activities	<p style="text-align: center;">HEALTH AND SAFETY</p> The establishment of the Multipartite Monitoring Team to monitor the air, water, the construction and operation of the Drainage Improvement Project according to DENR DAO 2003-30. This shall be composed of the PENRO, DPWH Environment Engineer & City chairperson for environment, representative men & women (DPWH, LGU & DENR) □ Schedule construction activities to minimize noise pollution and dust pollution.. □ Machines and equipment should be well maintained to minimize noise and fuel pollution. □ A community clinic shall be maintained with a health workers to respond to illness and accidents & likewise monitor the health situation of the populace (DPWH, LGU & MOH) □ Drainage Improvement, Health and Safety Education shall be added to the elementary curriculum to

**IMPACTS AND MITIGATIONS of affected communities
within the “THE STUDY ON DRAINAGE IMPROVEMENT IN THE CORE AREA OF METRO MANILA**

SITE/LOCATION	PHASE	Type & Degree of Impact	IMPACT	MITIGATIONS
<p>Western Bicutan Pasay Brgy. 183, 201 New Interceptor Maricaban Creek o Calatagan Creek, Brgy. San Antonio Improvement of Calatagan Creek o Zobel- Roxas Brgy. La Paz, Makati & San Andres , Manila Additional B.C. o Manila Brgy.660, 660 A Padre Burgos Street B.C. Manila Brgy.661 San Marcelino Bridge across</p>			<p><input type="checkbox"/> Accidents during declogging, dredging and construction</p> <p><input type="checkbox"/> Noise pollution during operation of machines and equipment</p>	<p>educate the children on the proper attitude and behaviour toward drainage improvement activities (DPWH, LGU & DEPED)</p>