THE CITIES ALLIANCE

VIETNAM

ENHANCING ACCESS OF THE URBAN POOR AND VULNERABLE GROUPS IN VIETNAM TO BASIC INFRASTRUCTURE AND SERVICES

TASK 4

DEVELOPMENT OF A DETAILED ACTION PLAN FOR A SELECTED CITY (CAN THO)

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PREFACE

The Government of Vietnam intends to continue to contribute to the alleviation of poverty in urban areas by ensuring better access to basic infrastructure and services and shelter to the urban poor, through a national program of pro-poor urban investments.

The Government has enlisted the support of the World Bank to prepare a pro-poor urban development project that would be an initial investment in the national program. The Cities Alliance is also providing support to Government through the preparation of a series of studies entitled "Enhancing Access of the Urban Poor and Vulnerable Groups in Vietnam to Basic Infrastructure and Housing".

This particular study is the fourth in the series - "The Development of a Detailed Action Plan for a Selected City (Can Tho)". It draws on the first three studies "Assessment of Constraints Faced by the Urban Poor in Housing and Infrastructure", "Review of Recent and On-going Urban Upgrading Programmes and Comparison with International Best Practices" and, "Development of a National Strategy on Scaling up Programmes and Providing Better Housing and Services for the Urban poor" and applies the lessons learnt to the situation in Can Tho City.

A first draft of this report was presented and discussed in 3 Regional Workshops in March 2002, in which representatives of provincial and local governments participated. The recommendations made in this Final Report have been guided by the findings of the regional workshops.

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1. CAN THO CITY POPULATION, HOUSING AND INFRASTRUCTURE

1.1 Can Tho City Description

Can Tho City is situated in Can Tho Province on the southern bank of the Hau River on the National Route 1. It is adjoining O Mon District of Can Tho Province in the north, Chau Thanh District in the south and west and Binh Minh District of Vinh Long Province in the east.

It has a physical area of 143.48 sq.km and a 1999 census population of 332,035. Administratively, it is made up of 15 Phuongs (Wards) and 7 Communes. Since 1992 it has been classified as a city of category 2.

1.2 Sources of Information

In this part of the report, there are three main sources of information. Firstly, information available from the Provincial or Can Tho City People's Committee Offices. Secondly information taken from the mapping survey carried out in September 2001, covering 25 identified low income communities in 11 Phuongs, within Can Tho City. The survey covered a population of 11,884 in 2,332 households. Thirdly, information was collected from the offices of five Phuongs, with a total population of 82,888 and 14,511 households. In addition, some information from the Feasibility Study for the Waste Water System of the Central Area of Can Tho City has been used.

The following were the criteria used for identifying the low income communities (LICS):-

(a) The L.I.C. area would not be limited by administration boundaries, should contain more than 20 households, have a total area greater than 800 m2, contain more than 30% of temporary houses.

(b) Each household should have one or more of the following criteria:
- monthly income below 150,000 VND per capita
- average housing space per capita below 6m2
- no private electric meter
- no private water supply meter
- lacks of connection to city's drainage systems.
- no adequate private WC
- access to earth footpath less than 2m wide.

The information was collected from five Phuongs as follows:-

- Two Phuongs in the centre of Can Tho City: An Hoi and Thoi Binh
- Two Phuongs adjacent to the centre : Hung Loi and Hung Phu
- One Phuong that has been involved in the UNDP/UNCHS project and has a large spatial plan for infrastructure improvement and site development: Xuan Khanh.

All the information obtained from the Phuongs was through direct interviews with local officers and from their official signed reports, together with random limited sampling of local people.

1.3 Population

TABLE 1.3

1999 Census Figures for Population, Area and Density by Ward and Commune

No	Name of Phuong or Commune	Population (1999 Census)	Area (km2)	Density (pp ha)	Remarks
	Phuongs				
1	An Cu	19,993	0.610	327.65	LIC
2	An Hoa	22,714	1.780	127.61	LIC
3	An Lac	13,853	0.466	297.27	LIC
4	An Hoi	9,654	0.335	288.18	LIC+Phuong (City centre)
5	An Nghiep	9,583	0.351	273.41	LIC
6	An Phu	12,231	0.493	248.42	LIC
7	An Thoi	20,481	10.220	20.04	LIC
8	Cai Khe	23,159	6.668	34.73	LIC
9	Hung Loi	22,413	3.415	65.63	LIC+Phuong (Next to centre)
10	Thoi Binh	15,592	0.530	294.41	LIC+Phuong (City centre)
11	Xuan Khanh	23,947	2.089	114.63	LIC+Phuong (New development area)
12	Tra Noc	13,145	12.777	10.29	
13	Binh Thuy	15,003	6.019	24.93	
14	Tan An	8,950	0.553	161.84	
15	Hung Phu	16,304	7.526	21.66	Phuong (Next to centre)
	Communes				
16	Long Hoa	13,066	13.951	9.37	
17	Thoi An Dong	9,154	11.676	7.84	
18	Giai Xuan	14,096	18.914	7.45	
19	Ong Tuyen	12,850	14.136	9.09	
20	An Binh	18,279	11.932	15.32	
21	My Khanh	9,669	10.370	9.32	
22	Hung Thanh	7,899	8.672	9.11	
	TOTALS	332,035	143.479	23.11	(Average density)

Note: LIC - areas covered by the survey of 25 low income communities.
Phuong - detailed information obtained from Phuong offices

1.4 Households

TABLE 1.4

Can Tho City Population and Household Projections

Year	Population	Source	Households	Average house-hold size	Source
1976	237,000	Can Tho Province			
1986	277,000	Can Tho Province			
1995	(318,000)	Can Tho City	63,605	5.01	Can Tho City
1996	314,000	Can Tho Province			
1997	319,000	Can Tho Province			
1998	324,000	Can Tho Province			
1999	332,000	Official Census			
2000	337,000	Can Tho Province	83,866	4.02	Can Tho City
2005	430,000	Provincial Socio-Economic and Spatial Plan Projection	107,500	4.00	Can Tho City
2010	550,000	Provincial Socio-Economic and Spatial Plan Projection	183,000	3.01	Can Tho City
2020	1,000,000	Provincial Socio-Economic and Spatial Plan Projection	330,000	3.03	Can Tho City

The 11 Phuongs from which the 25 LICs were selected had a total population of 193,620, a total number of households of 40,609 and an average household size of 4.77. Within the 25 LICs, the population was 11,884, the number of households 2,332 and the average household size was 5.1. Information obtained from the five Phuongs indicated a total population of 82,888, the number of households 14,511 and an average household size of 5.71.

Although it may be expected that in the 25 LICs the average population size is higher that that for the whole Phuong (poorer people often have larger families than better of people), the large average household size in the five selected Phuongs may be because unregistered families have not been included in the household count, but are included in the total population.

1.5 Urban Poor Population

Using the official definition of urban poor households, i.e. those with a per capita income of below 150,000 dong per month, in 2000 Can Tho City Statistics Department estimated that there were 1,703 poor households, representing 2.37% of the total number of households in the city. This

assumes that the total number of households is 71,856, which is lower than estimates from other sources. The differences *may* be accounted for by non registered households.

The survey of Low Income Communities identified 2,332 households, which met their criteria with a total population of 11,884. However, there are many more households living without access to basic services and in housing that is not constructed of permanent materials. Although these households may not fall within the economic definition of "poor", they still have inadequate living conditions in terms of quality of housing and access to basic services. The majority of households living in these conditions are unlikely to have incomes substantially above the official poverty criteria. For example, it is estimated by Can Tho City officials that in 2000, 27% of the housing stock was "temporary" and an additional 17% had a thatched roof. Internal estimates put the percentage of "temporary" houses as high as 51%.

The poor, or nearly poor households in Can Tho City live in all the Phuongs and Communes. They are concentrated in "marginal" land, which is found to be undesirable by better off households, such as land along the banks of rivers, canals and open drainage channels. In many cases, families have built their houses over the water courses. Other groups of urban poor or nearly poor houses are found away from the main roads, along small alleys and in areas which are subject to seasonal flooding. There are also small groups of poor or nearly poor households scattered among better off households, especially in the city centre areas.

1.6 Quality of Housing

Housing is officially divided into six categories, to describe its quality. These are as follows:-

TABLE 1.6.1

Quality of Housing Definitions

TYPE OF HOUSE	EXPECTED LIFE	LOAD BEARING STRUCTURE	WALLS	ROOF	FLOORS
villa		concrete	concrete / brick	concrete/tile, heat/sound insulated	unlimited/and at least 2 rooms /floor
1st grade	>80	concrete	concrete / brick	concrete/tile, heat insulated	unlimited
2nd grade	>70	concrete	concrete / brick	concrete/ tile/ fibrocement	unlimited
3rd grade	>40	concrete+ brick	brick	tile / fibrocement	max 2 floors
4th grade	>30	wood/brick	brick	tile / fibrocement	
temporary		wood/bamboo	thatch/earth	thatch	

From the survey of 25 LICs, only 1% of the houses were in grades 1 or 2, 72% were in grades 3 or 4 and 27% were classified as "temporary".

TABLE 1.6.2

Households and Quality of Housing by Phuong and Commune

No	Name of Phuong or Commune	Official Households	Houses Grade 1-2	Houses Grade 3	Houses Grade 4	Houses Temporary	No House
	Phuong						
1	An Cu	4,320	803	2,364	706	445	2
2	An Hoa	5,059	601	3,064	563	831	0
3	An Lac	2,666	369	1,786	304	206	1
4	An Hoi	2,047	445	1,301	165	136	0
5	An Nghiep	1,954	330	1,137	160	327	0
6	An Phu	2,641	550	1,558	221	312	0
7	An Thoi	4,621	404	2,499	855	863	0
8	Cai Khe	4,779	604	2,213	998	963	1
9	Hung Loi	4,808	961	2,85	911	851	0
10	Thoi Binh	3,162	510	1,863	373	414	2
11	Xuan Khanh	4,919	1,072	2,444	982	421	0
12	Tra Noc	3,131	240	1,479	464	948	0
13	Binh Thuy	3,414	265	1,586	880	683	0
14	Tan An	1,778	712	904	102	56	4
15	Hung Phu	3,211	140	856	822	1,391	2
	Commune						
16	Long Hoa	2,667	83	706	620	1,258	0
17	Thoi An Dong	1,885	50	386	225	1,224	0
18	Giai Xuan	2,907	28	504	506	1,867	2
19	Long Tuyen	2,702	98	617	624	1,363	0
20	An Binh	3,902	182	1,248	636	1,836	0
21	My Khanh	2,018	18	338	383	1,279	0
22	Hung Thanh	1,604	9	370	408	817	0
	TOTALS	70,195	8,474	31,308	11,908	18,491	14
	Percentage		12%	45%	17%	26%	

The above table based on figures from Can Tho City Statistics Department, shows that 43% of the existing housing stock was classified as Grade 4 or Temporary.

The table shows the official households in each Phuong by their grade of housing. The numbers of households are lower than those from other sources as they probably only represent the officially registered households.

The Housing and Construction Board of Can Tho City, estimated that in 1999, there were 64,863 houses within Can Tho City. Out of these, 10.18% were considered "well built" (Grades 1 or 2), 38.14% were "Half well built" (Grades 3 or 4) and 51.68% considered as "temporary".

1.7 Housing Space Per Person

In the 25 LICs the average housing space per person was 9.88 sq.m. Official figures for Can Tho City as a whole exclude all temporary and Grade 4 houses. On this basis the average housing space per person was estimated to be only 6.04 sq.m. in 2000.

1.8 Access to Services and Infrastructure

The information on access to services and infrastructure is limited at the city level. The main sources of information are from a survey of 25 low income communities in 11 Phuongs and information from four Phuong offices.

- **Water Supply**

70% of households in the LICs have access to their own metered water supply. The remaining 30% either share meters (22%), use wells, river water or rain water or purchase water from water vendors.

- **Sanitation**

From the 25 LICs, 69% of the households have their own toilets. In four of the Phuongs for which detailed information is available, 68% of the households have toilets which connect to a septic tank, although in most cases this does not provide the level of treatment normally associated with a conventional septic tank. The remainder have toilets which directly empty into fish ponds or rivers. 28% of the households use public or shared toilets.

- **Electricity Connections and Street Lighting**

67% of the households in the 25 LICs have their own electricity meter and 31% share electricity meters with other households. The remainder have access to a generator or do not have electricity.

In the five Phuongs for which detailed information is available, there are a total of 312 alleys. 58% of the alleys have street lights.

- **Quality of Access Alleys**

In the five Phuongs for which detailed information is available 19% do not have hard surfaces and 9% are very narrow.

- **Areas Subject to Flooding**

Details of areas subject to seasonal flooding are not available but 21% of the alleys in the five selected Phuongs were subjected to regular flooding.

- **Drainage Systems**

Can Tho has a combined drainage system with both storm water, effluent from septic tanks and waste water draining into the system. In the 25 LIC areas 44% of the households are connected to a drainage system, and the remainder of the households waste water drains away on the surface or to alley drains. In the four Phuongs for which detailed information is available, only 34% of the households have connections to a drainage system, with 50% of the households disposing of their waste water into rivers and ponds.

- **Garbage Disposal**

In the 25 LICs, 57% of the households either cannot pay for garbage collection or do not feel that it is important. In the five Phuongs for which details are available, 28% of the households do not have their garbage collected.

1.9 Housing Production

Accurate figures for housing production have been very difficult to obtain, due to the fact that many houses are constructed without building permission.

To illustrate the problem, the following is an extracted paragraph from the speech of the Director of the Provincial Department of Construction in a workshop about Planning and Plan Management Works in 1993-2000, held April-2001:-

"In the year 2000, 688 housing permissions (new houses) have been released in the whole province. Through inspections of 478 building sites, there are only 289 under permission – with 218 built as in permission and 71 built NOT as in the permission, the remaining 198 did not have any permission".

The officers from the city's committee office estimate that there will be an increasing rate of about 20% newly housing space to be built every year based on recent years' experiences.

The officers in the Housing and Construction Board (Can Tho city's committee), who had the role of managing building processes in the charged area for the local government, estimated that in last five years, there were around 4 –5000 permissions released for house repairing (2500 – 3500) and newly buildings (1200-1500). The figures are estimates because before 2000, there were two official government's organizations that could release the permission in the same urban area, the Provincial Department of Construction, and the Housing and Construction Board of local committee. Sometimes if the permission cannot be obtained from one office it is later obtained from the other.

By the interpolation based on the fact that there were only 20 –25 % of construction works with permission, they estimate the figures of around 10 – 20,000 houses were built or repaired during that period.

It is estimated that about 1,200 houses are built each year that should have had official permission, but this excludes Grade 4 and temporary houses.

1.10 Housing Ownership

There is no recorded information on housing ownership patterns but unofficial sources estimate that 20% of the housing stock is owned by the government, 70% by private individuals and 10% is rental housing.

2. URBAN POVERTY IN CAN THO CITY

2.1 The Urban Poor in Can Tho City

The Cities Alliance Study Task 1, "Housing and Infrastructure - Constraints that the Urban Poor Have to Face in Can Tho City and Ho Chi Minh City" identified the key issues of urban poverty in both cities.

Using the definition of the Ministry of Labour, War Invalids and Social Affairs (MOLISA) applicable from 1 January 2001, poor households in urban areas were defined as those with an average per person income of 150,000 Vietnam Dong per month. Using this definition, Can Tho City had 1,703 poor households, representing 2.37% of the official total of permanently resident households.

However, these figures did not include temporarily resident households and those staying in the city without a resident permit. It is likely that households living in poor housing conditions, officially defined as "temporary houses" and those living in Grade 4 houses may contain substantial numbers of households who are "near poor", as identified in Cities Alliance Study Task 3 - "Enhancing Access of the Urban Poor and Vulnerable Groups in Vietnam to Basic Infrastructure and Housing". These are households that in the past may have qualified as "poor households" but are currently not poor. However, they have many of the characteristics of poor households, such as low and unstable incomes, lack of security of tenure, few valuable assets and a large number of dependents. They are therefore extremely vulnerable to incidents such as illness and loss of employment that can easily take them back into "official" poverty.

Households without access to the basic services of water supply, sanitation and drainage and who live on marginal land, such as land subject to frequent flooding and on the banks of rivers, ponds and drainage channels are likely to represent many "poor" and "near poor" households.

Statistics from Can Tho City stated that out of 70,195 official households, 26% lived in temporary houses and 17% in Grade 4 houses. Unofficial figures for temporary houses were as high as 51%. Sample surveys indicated that about 30% of the houses did not have access to their own sanitation facilities. It is therefore likely that officially "poor" households and those that are "near poor" may represent 25-30% of the officially resident households and those living in the city on a temporary basis without official registration.

2.2 Difficulties Faced by the Urban Poor

The Task 1 study identified some of the difficulties faced by poor and nearly poor households in Can Tho City from the point of view of the households. These were as follows:

- Insufficient income to meet daily needs
- Unstable occupations, temporary employment and therefore low and fluctuating incomes
- Houses that do not provide adequate protection from the elements, allow the penetration of rain water and are subject to flooding
- Only being able to occupy rental housing due to in sufficient financial resources to purchase land use rights and obtain official building occupancy certificates
- Not enough money to pay for medical treatment
- Not enough money to pay for school fees
- Borrowing money for emergencies as well as for daily needs and being unable to pay back loans
- Poor health, contributed to by insanitary living and poor environmental conditions
- Inadequate food and clothing

The opinions of city managers and cadres at the phuong and commune level were similar but in addition they identified the following problems:

- Narrow lanes made of earth or rubble
- Lack of sanitation facilities
- Low skill levels
- Children from poor families having to work
- Difficulties of obtaining loans from banks due to complicated procedures
- Lack of money to pay for water and electricity connections

2.3 Constraints Related to Housing and Infrastructure

In terms of constraints specifically related to housing and infrastructure, priorities were to develop economic activities which would enable households to build up savings and take out small loans which would enable them to undertake incremental house improvements. Importance was placed on improvements to the basic structure and to the roof and walls, improvements in the quality of flooring and raising floor levels to prevent flooding. The construction of a toilet and the purchase of water and electricity connections were also high priorities as well as access to drainage systems. Most households were also aware of the environmental and health problems created by a lack of garbage collection.

Lack of building occupancy and land use registration certificates, household registration and birth registration were major constraints especially in terms of accessing basic services, sending children to school, accessing public health facilities and obtaining loans from official sources.

3. KEY POLICY ISSUES

The Cities Alliance Study Task 3 - "Enhancing Access of the Urban Poor and Vulnerable Groups in Vietnam to Basic Infrastructure and Housing", identified a series of pro-poor urban policy imperatives, which are also relevant for the situation in Can Tho City.

3.1 Improved Information Base to Develop Pro-poor Urban Policy

There is a need to improve understanding of the extent and characteristics of urban poverty and those vulnerable to poverty, taking into account migrants and those without official registration in the city. The report identified three categories, extremely poor households, poor households and nearly poor households. In addition to groups of poor households, Can Tho City, like many other cities in Vietnam has substantial numbers of households in these categories, scattered in very small groups amongst better off households. These "scattered" poor households are not usually included in poor household identification surveys. They may have potentially better access to infrastructure services such as roads and footpaths, water supply, drainage and electricity, but often lack connections to service networks and have housing in poor condition.

3.2 Community Involvement in the Selection of Service Standards

The use of a costed matrix of basic infrastructure and services is one of the tools that can be used to assist communities in the selection of appropriate and affordable service levels. Community contributions, in cash or labour, are often sought in the provision and maintenance of services. There is a need to take into account the limited financial capacity of urban poor households, and while they should be expected to pay user charges, they should not be put in the position of having to pay more for the provision and maintenance of services than better off families. Resources that households contribute towards the provision of common services, means that there is less money available for the costs of individual connections and "on-plot" upgrading such as the construction of sanitation facilities and house improvements. When calculating community contributions both on and off plot investments should be included.

The upgrading of common services, together with the improvements in security of tenure are a major incentive for households to make improvements to their own houses and the amount invested in on plot improvements in considerably enhanced if small loans are available.

3.3 Integrating the Needs of the Urban Poor into Master Plans and Detailed Area Plans

The City Master Plan for spatial development and Detailed Area Plans tend to apply planning standards and designs that do not take into account either the existing situation or the future needs of the urban poor. They require stronger links to the socio-economic development plans, and where existing, environmental strategies.

The spatial plans should allow for incremental improvement of existing low income areas as a step-by-step approach to achieving city level planning standards and pro poor service provision.

3.4 Resettlement

Resettlement is often seen as the city's solution to the problem of slums and insanitary housing conditions. International experience has clearly demonstrated that relocation is expensive and that incremental improvement of existing poor housing areas is a much more cost effective solution. Experience elsewhere has also shown that where relocation schemes do take place, poor families often do not move to the relocation site, or if they do, they do not permanently settle

there. Many go back to other slum areas, sometimes living in even worse conditions than before due to the economic disruption cause by the process of relocation.

The reasons for this are many. The purchase price of land use rights on the relocation site can be beyond the affordability of poor families and they are not able to pay for the cost of constructing a new house, especially when city wide minimum building standards are applied. This problem is especially acute for those who do not have building occupancy and land use certificates or construction permits, when the amount of compensation is very small. Social and economic disruption further adds to the burden placed on poor families, where relocation areas are far from sources of employment and income earning opportunities, and education and health facilities are not provided on the relocation site. The cost of new documentation such as registration papers and even the incidental costs of changing schools place additional financial burdens on the families.

Poor people depend on being near better off people to sell their goods and services and relocation sites with predominantly poor families, place those who are resettled at a further disadvantage. In the process of relocation, families who are renting and those who lack formal registration are often not eligible for a relocation plot and are left to find alternative accommodation by themselves.

In some cases, resettlement is necessary, for example, where families are living in areas that are dangerous to their health and safety. Areas which are frequently flooded and where there is no solution to this problem, where there is gross overcrowding or the provision of even minimal basic services are impossible, are examples. In such cases, relocation sites need to be identified that take into account families locational priorities and affordability in terms of the cost of land use rights and housing on the new site.

3.5 Sustainability Through Effective Operation and Maintenance Mechanisms

An important "cost" component is the cost of operation and maintenance and these costs should be incorporated into the community level services decision making process. The cost of a physical asset is the cost of its construction plus the cost of maintenance over its useful life. Responsibilities of the community and the local authority need to be defined in terms of operation and maintenance, so that there is a reasonable level of community involvement but at the same time the local authority assumes an appropriate level of responsibility.

3.6 Security of Tenure

A lack of building occupancy and land use certificates creates problems of security of tenure as well as difficulties in accessing services. These problems are even greater for households who do not have formal registration in the city. As a result, households have to pay high prices for unofficial access to basic services such as water supply and electricity. Lack of official documentation is also a major constraint for households who have some funds available, to make improvements in their own housing conditions.

3.7 Links to Primary and Secondary Infrastructure Networks

Efficient provision of the basic networks for drainage and sewerage, water supply and electricity depend on catchment areas and supply zones. This is particularly critical for drainage and sewerage systems which depend on maximising the use of natural falls and the existing systems of ponds and streams, whose holding capacity is critical to minimising flooding at times of heavy seasonal rains. In Can Tho there is the additional factor of the rise and fall of tides, which places an additional burden on the holding capacity of ponds and streams. It is therefore essential that the upgrading of under serviced urban poor areas is done as an integral part of city level networks. Linked to this, is the need for an incremental provision of services, so that initially the

coverage is as wide as possible, but with the possibility of an increase in standards over a period of time.

3.8 Supply of Adequate and Affordable Housing

Although in the past, many cities had benefited from large public and workers' housing programmes, current estimates indicate that about 75% of all new housing is now constructed by individuals either through self building or using small contractors. Estimates indicate that over 90% of house construction is self-financed. The public sector is still building some houses and apartments for low income families on a for sale basis but focuses on social housing for veterans, invalids and charity houses, as well as some housing for relocated families.

Lack of formal credit for the purchase or improving of existing houses and the construction of new houses is a major constraint in the increase and improvement of the housing stock. Most households depend on funds from their extended family, an option that is not available to many poor families.

An increase in the overall number of houses and a qualitative improvement in existing houses are key factors in the reduction of slum areas and in the prevention of new slum areas being developed. Appropriate interventions, including small, short term loans for incremental improvements as well as longer term loans for new housing construction are essential components in improving the possibility of peoples' upward mobility in the housing market.

3.9 Human Resource Capacity

The process of urban upgrading is complex and requires sets of skills that are not readily available at the city level. It requires the development of strong partnerships between provincial and city levels officials, between officials at the phuong and group level and most important of all with the communities and the mass organisations. There is relatively little capacity in participatory planning and community motivation that is essential for successful urban upgrading programmes. Developing these skills and an ability for different groups to work together is therefore a pre-requisite.

3.10 Pro-poor and Urban Upgrading Strategies

Pro-poor urban upgrading strategies will not directly address many of the fundamental problems faced by poor families, but they will make a substantial contribution towards helping families address some of their basic needs. Long term improvements in employment and livelihood opportunities depend on the city's economic development. However, if people have better housing conditions, better access to services, live in a healthier environment, have improved security of tenure and a more formal status in the city, then they are in a much stronger position to solve many of their other problems.

Upgrading preserves and enhances past investments, especially in housing, and the process of upgrading can create opportunities for acquiring new skills and employment opportunities. The process can facilitate upward mobility in the housing market and create stronger links to the city's social and economic systems and infrastructure networks. One of the key components, is not only the provision of basic services in areas where poor people live, but insuring that they have access to those services. It is of paramount importance that households physically and financially can have access to the improved services.

4. HOUSING FINANCE AND LEGAL FRAMEWORK

4.1 Sources and Cost of Housing Finance

This information was obtained from a limited sample in low income areas plus visits to banks.

Only a small proportion of low income families can have enough savings to pay for the construction or repair of their houses. Most of them inherit the real-estate from parents or relatives or they purchased it from having a good business or earnings in the past. Some may receive money from relatives who are living abroad and a few have winning lottery tickets.

Otherwise they do not consider improving their house where they may be only living temporarily. Uncertainty about their future is because of lack of official documentation and also because they may be affected by the implementation of spatial planning proposals, such as new roads or road widening schemes. Poor people find it difficult to obtain information about such proposals.

There is still another source of finance for low income families who are determined to build a better house in a legal way This is a popular but risky game know as *"choi hui"* (this means "associated playing"). This is a traditional kind of small group credit where people "bid" to purchase the money in circulation from the group and the difference between the bid price and the amount in circulation is, in effect, the interest.

There are only a few people who get loans from the bank, but this is not popular due to difficulties with the paper work, the small sums available and the short duration of the loan.

In emergencies, other resort to money lenders with interest rates varying from 2% to as high as 30% per month, depending on the security offered.

TABLE 4.1.1

Loans from Banks for House Repair and Construction

BANK	PURPOSE	REQUIRED DEPOSIT/DOCS	QUANTITY	MAX VND	INTEREST (% per month)	RE-PAYMENT	NOTES
Asia Commercial Bank	Housing repair reconstruction	Land use right/ real estate possession licenses + official residence certificate	70% value	70,000,000	0.7	13 -36 months	
	Buying a new house				variable	13-84 months	Longer for teacher , up to 120 months
Housing Development Bank	Housing repair reconstruction	Land use right, Construction license	70% value		0.8 -0.9	up to 60 months	
Bank for Poor People	Multipurpose	Small sum - guarantee from local government large sum - same as above	70% value		0.7 - 1	Various	Based on the introduction by local government

4.2 Land Use Right/House Occupancy Certificate

- **General Requirements**

The most important requirement for issue of these certificates is possession of proper land title. In addition, dues have to be paid before the completion of the paper work.

There will be one or more of following duties to be paid:

- Land Use Right Tax; if the possession papers are unsatisfactory
- Land Purpose Changing Tax; , or if there is a changing of land use, (these taxes are 0-20-40-100 % of the official land value (*))
- Annual Land Use Tax: Based on actual use of the real estate, regardless of legality. *(In Can-Tho's urban area, the actual annual land tax for year 2001 is around 570 VND to 2150 VND/ m2)*
- Land User Transfer Tax: if there is a name change of a registered user, 4% of the official value is assessed (*)
- Registration Tax, 1% on official value (*)
- Miscellaneous fees for document completion.

Note:

- *(*) Nominal land value is defined by existing values as determined by official decision of provincial government at the time of application.*

There are a few technical papers to be included such as boundary drawings and construction blueprints. If the land and building are located away from a restricted location (i.e. approved spatial plan, historical sites, exclusive purpose land, military region…), there are no requirements about physical or technical criteria.
In cases where there is violation of approved areas, or certain parts of the buildings violate current construction requirements, but predate the permit, these cases can be granted with detailed notice about those violations in the granted certificate and must be amended at the time of the next renovation. If these conditions are not met the certificate will be invalid when there is an official Land Eviction Decision released from the government and compensation will not be payable.

Only in the issue of Building Construction Permits do people need to comply with construction technical requirements. The minimum requirement for surface area (40m2) is only applicable for new construction permission, not in granting of land use rights or building occupancy certificates.

- **Land Use Rights/House Possessions Certificate**

Provision of Government Office Procedures and Responsibilities on Land Use Rights / House Possession Certificate granting within urban site of Can-Tho. (Decision No 55/2000/ QD.UB, dated Aug 24, 2000)

Required documents:

A - Ownership

a). Registration Application Form,
b). Official related documents (original copies) or report about the original of the land,
c). Report declaring the original of the real estate ownership, in case there are no considered valid ownership documents.
d). Bill for annual real estate tax (original copy), on the year of application (full area billed).

B - Technical

e). Technical and verification documents about the area's property, borders, and geographic position (original copy).
f). Existing house blueprint (if available and requested for Combined Land Use Right & House Occupancy Certificate).

Existing ownership documents considered valid:

A. According to section 3.2 of Government Decision No 17/1999/ND dated Mar-29-1999, either one of these documents is valid for granting land use permits:

a). Decision to release public lands (for rent, transfer…) by authorized government agencies according to regulations about land administration;
b). All land-releasing documents issued by authorized government agencies implementing land use policies including the Democratic-Republic of Viet Nam (DRV), Provisional Revolutionary Government of Republic of South Viet Nam (PRG), Socialist Republic of Viet Nam (SRV) by which the beneficiaries had continuously used the land to present.
c). Temporary certificate for land use right issued by authorized government agencies, or has been registered in cadastral register without dispute to date.
d). Documents issued by previous regime's authorized organizations by which the beneficiaries had continuously used the land without dispute to date.
e). Documents about inheritance, gifts which have been approved by local governments without dispute to date.
f). Valid judgments of the People's Court or valid Decision for Land Dispute Settlement by authorized government agencies.
g). Releasing documents for "house of gratitude" (built for war invalids or martyrs' families).
h). Documents of land/house trading reviewed by local government as a non disputed area and approved by district/city level of government.

Note:
(a) The owner does not bear the duty of Land Use Right if he/she has one of the above documents.

B. In case the owner has none of above documents,

He/she needs to write a report claiming the original deed of the land attached with any available appropriated title deeds, reviewed by a local Land Register Council and approved by the Chairman of the local government People's Committee (Phuong level).

If the land is located in an approved spatial planning area without any accompanying legal papers, no certificate will be issued.

C. The Land Register Council,

Local officers in Phuong level organize a Council for Land Registration. This Council organizes the land registration procedures within the Phuong area. The members are: Phuong's Deputy Chairman, officers from Land Administration and Tax Boards, representatives from the People's Council, Homeland Front…and there will be community group's representative of the concerned area to be invited as temporary member.

The most important condition which involves many of the decisions of the Land Register Council and the local Chairman when there is a dispute. Without any legal papers, the owner used to face risks of controversy with neighbours; the authorized Council and Committee try not to be

involved in such controversy. They used to not approve these claims which might lead to endless arguments.
The chairman takes legal responsibility about Land Use Beginning Date Definition due to its relation to the duty of Land Use Right Tax.

In this case, the owner used to have to face a risk of a high rate duty of Land Use Tax. For example:

- If the beneficiary continuously used the land before the date of December 18, 1980 (release date of the 1980 Constitution) there would be no duty of land use.
- If the beneficiary continuously used the land from December 18, 1980 to before October 15, 1993 (the valid date of 1993 Land Law) there would be a duty of 20% of the official land price.
- If the beneficiary continuously used the land after October 15, 1993, he/she must pay a duty of 100% of the official land price.
- If the real estate purchase was approved by Phuong level of local government but there were no original ownership papers, the rate might be 40%.

Note:
(a) This duty can be put on deposit as long as the land user remains unchanged, but this needs to be approved an a case by case basis. The duty must be completed when there is a Land User Changing procedure or a Construction Permit is granted..
(b) In practicel, there may be different validations for a single existing document which lead to very different duty rates.

4.3 Housing Standards and Construction Permits

The following information was obtained from Can Tho City's Housing and Construction Board and the City's Committee officers:

There are a number of documents that are required for a Construction Permit to be issued. These include documents relating to land use rights and house ownership as well as supporting technical drawings.

These are as follows:-

- **Required documents:**

The licensee must prepare documents made up of:

A - Ownership documents:

- An application form
- A copy of considered valid land use right / house possession certificate (see below)

B - Technical drawings :

- A copy of map of the area
- Blueprint copy of ground level design, scale 1/200-1/500
- Blueprint copy of floors, front view and sections, scale 1/100
- Blueprint copy of scale 1/100 -- 1/200 for foundation, and its vertical section by scale 1/50 , including scale 1/100 -1/200 storm water drainage, sewerage, power line, water supply diagram.
- 9x12cm photograph of existing construction and its surroundings.

- **Existing ownership documents considered valid for granting a Construction Permit:**

a)- Certificate of Land Use Right issued by authorized government agencies (Land Administration head department)
b)- Certificate of House Occupancy and Land Use Right issued by authorized government agencies.
c)- Decision of land releasing for housing purpose (for rent, transfer…) of authorized government agencies according to regulations of land administration;
d)- All land-releasing documents issued by authorized government agencies for housing purposes implementing policies at various timing dates for the government of Democratic-Republic of Viet Nam, Provisional Revolutionary Government of South Viet Nam, Socialist Republic of Viet Nam by which the beneficiaries had continuously used to present.
e)- Temporary certificate for land use right issued by authorized government's organizations, or register in cadastral register and without dispute.
f)- Documents issued by authorized previous regime's organizations by which the beneficiaries had continuously used the land to date without dispute.
g)- Documents about inheritance, gifts, etc… which had been approved by local governments and without dispute.
h)- Valid judgment of the People's Court or valid Decision for Land Dispute Settlement by authorized government agencies.
i)- Documents of land/house trading reviewed by local government as a non dispute area and approved by district/city level of government.
j)- Occupancy documents referring to state-owned houses/land selling/releasing to individual in which the land price had been included.

- **In cases where no valid document is available**

A licensee's report about the origin of the area must be reviewed by the local Phuong's level government verifying that there are no disputes and approved by the district/city level government committee prior to the application for Construction Permit.

- **Timetable for procedures**

The application form is released within not more than 30 days after the receipt of the application. Beyond that period, the owner can begin his building works without the license by writing a note to the local government.

- **Permission for Land Use Purpose Changing before granting the Construction Permit**

If the licensee wants the construction permit for an area where the land use purpose was not for housing, (i.e. agriculture, forestry, aquaculture, salt marsh…) he/she needs permission from authorized government agencies to change the purpose of using into housing purpose first.

- **Technical standards**

From a technical point of view, a Housing Construction Permit in Can-Tho city, especially those relevant for low income communities, can be released if the construction complies with the following minimum physical standards:

1. Complies with approved spatial plan regarding the area and its surroundings,
2. New house constructed on an empty plot must be larger than 40 m2.
3. In the case of repairing or rebuilding an existing house, the plot size can be 30 –40 m2, otherwise, the builder can construct at 3rd or 4th grade housing level only.

4. The house must have a standard toilet with drainage connected to a common sewerage system.
5. The construction must be guaranteed to not violate the electricity network.
6. Houses with up to 3 floors (one ground level + two stages) and the total floor surface area not over 200m2 can be self-designed by the owner if he wants to, and he will take responsibility for technical criteria of the stability and safety.
7. House with over 3 floors and floor over 200m2 can be self-designed but the design must be reviewed by an official approved design office.

Under the Building Code of Vietnam, there are more requirements for private housing construction permits relevant for low income communities such as:

1. Must not be located in restricted area (historical site, landscape, infrastructure protection zone…)
2. Must be connected with road on which ambulance and fire fighting vehicles can go through.
3. Safety and sanitary: no flooding, pollution, combustion, traffic accident factors.
4. Minimum size: at least 3.3m x 12m of dimension (40m2 of area).
5. Surface level code must be complied with approved regional spatial plan to be sure the drainage is free flowing from the building to city's common sewerage system.
6. No main construction extruding in front of the building below the level of 3.5m height. Over 3.5m, there are proportional allowances based on the width of the street in front
7. The height of the building is proportional limited by the width of the road in front, and is determined in approved regional detailed spatial plan.
8. Minimum distance from household-voltage electric line to the building is 0.75m

People do not always need to grant an official Building Occupancy/Land Use Right certificate prior to granting a Construction Permit. They can repair or rebuild their existing building by existing considered legal documents combined with technical drawings as follow:

In practice, very few people living in low income communities apply for Construction Permits, because it is difficult (and costly) for them to obtain the necessary documents and in practice they face very few, if any penalties for carry out small house construction without a Construction Permit. Even houses built without permits on wide streets only have to pay small penalties (5,000-10,000 VND per square meter for Grade 2-4 Housing) for "unauthorised" construction.

5. INSTITUTIONAL ASSESSMENT

5.1 Community Structures and Organisations Involved in Community Based Programmes

The following information is based on a survey conducted in the five selected phuongs.

TABLE 5.1.1

Unions/Associations/Community Groups Involved in Community Based Programmes

PHUONG	INVOLVED ORGANIZATION					
	INITIAL IDEA	CONSULT	INSPECT	MAINTAIN	BUDGET	MANPOWER
AN HOI	A,B,C,D,F, G,**H**	A,B,C,D,F, G,**H**	A,B,C,D,F, G,**H**	A,B,C,D,F,G,**H**	D,F,**H**	A,B,C,D,F,**H**
HUNG LOI	A,B,C,D,F,**H**	A,B,C,D,F,**H**	A,B,C,D,F	C,D,F	A,B,C,D,F	A,B,C,D,F,**H**
HUNG PHU	A,**H**	A	A,B	A,**H**		A,B,C,D,E, F,**H**
THOI BINH		A,B,C,F	A,B,C,F,**H**	**H**	**H**	**H**
XUAN KHANH	A,**H**	A,D,F,G,**H**	A,F,**H**	**H**	J , **H**	**H**

NOTE	ABBREVIATIONS
A	HOMELAND FRONT (MAT TRAN TO QUOC)
B	YOUTH UNION (DOAN THANH NIEN)
C	WOMEN'S UNION (HOI PHU NU)
D	RED CROSS ASSOCIATION (HOI CHU THAP DO)
E	FARMER ASSOCIATION (HOI NONG DAN)
F	VETERAN ASSOCIATION (HOI CUU CHIEN BINH)
G	AGED PEOPLE ASSOCIATION (HOI NGUOI CAO TUOI)
H	LOCAL COMMUNITY , COOPERATIVE LABOUR GROUPS (TO LAO DONG HOP TAC)
J	LOCAL GOVERNMENT

Although the above information comes mainly from local Phuong officers, many associations are involved in public works. Most of the processes needed support from the local people. Communities were involved in the planning and designing of the schemes. Local people provided manpower, undertook consultancy and inspected the works, as well as maintenance. There were financial contributions from the community, as well as from Unions and Associations but there was also a dependence on financial support from the local government.

However, in a sample of discussions with the communities, it was felt that in practice, proposals were not fully discussed with them and that in reality the communities were asked to participate in schemes that were initiated by officials rather than the community members themselves. They described the associations and unions as doing "spirit enhancing" and the local government doing the management. There were differing points of view on this topic, depending on who was being asked the questions.

5.2 Community Based Approaches to Shelter Improvement and Infrastructure Service Provision

There were two main groups of projects that involved genuine community planning:-

5.2.(a) UNDP/UNCHS Project (VIE/ 97/ 008) Support to Secondary Cities

This had three main components:-

- Credit project for "clean WC building"
- Community Based Project for Improving the Local Sewerage System
- Women's Group Saving through Garment Production

From information collected from Xuan Khan Phuong, where the UNDP/UNCHS project was considered to be most successful, a "bottom up" approach was adopted. The role of the local government was to gather the people together to discuss the options and the local people decided what will be done, how much the budget will be and how the plan will be implemented. The external budget was quite small, but the main achievements were in the process of community participation and their financial contribution.

For example, a community in one part of the phuong decided that the first priority was to improve some toilets. They prepared a plan of action, estimated the cost and hired construction workers and labourers from their own community.

Although there were constraints due to financial limits, and the quality of the work was not so high due to the low skill level of the workers, the degree of satisfaction was very high, both from the point of view of the local people and government officers. The local government provided assistance to the people in terms of managing the loan and the repayments, but the level of repayment was high.

In another area, it was decided to improve the sewerage system, as environmental conditions were very bad. As the people had low and unstable incomes, they were unable to make financial contributions to government initiated schemes. With the community based approach, it was decided that the people's contribution would be in the form of labour, rather than cash and the scheme was designed with full community consultation. With this flexible approach and with the option of contributing either cash or labour there was a higher level of satisfaction from the people and the government.

In An Hoa Phuong, there was a project aimed at benefiting women from low income families who had previously taken large loans from a money lender. In order to get out of this debt the women started to manage their own savings scheme and started a garment production group to earn money.

The twenty four members of the group were able to make weekly savings of 10,000 to 20,000 VND and the group was given a weekly loan of 200,000 to 500,000 VND. Based on the successful operation, the group was able to attract external low interest credit of up to 46,000,000 VND.

The impact and potential of this approach is high, providing it is well arranged by the local government, and there are good consultants to help them complete the task.

5.2 (b). RAP Projects - "Coming Home People's Support Project "

This project was introduced as a settlement upgrading programme by the authorities but in fact, RAP projects were not strictly community based. Under these projects there is a budget for areas where there are many people legally coming home from various asylum camps .The local government in those areas will manage the budget to improve the living standards of the community, based on local a spatial plan .The budget will be granted when the area has a high enough percentage of returnees.

5.3 Role of Government Institutions in the Delivery of Housing and Infrastructure

The following matrices indicate the role of government institutions, private individuals and the community in the provision of housing, infrastructure and services in Can Tho City

TABLE 5.3.1

Matrix for Delivery Housing Facilities

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
LAND OWNER	Owner		- Owner - Bank loan - Investment from govt		Private consultant firm	Local people
PHUONG		Local committee				
BOARDS OF CITY **DEPARTMENT OF PROVINCE**		- Housing and Construction Board, - City's Committee, - Provincial Committee			Housing and Construction Board	
PRIVATE CONTRACTOR	Private Consultant Firm			Private contractors		Private contractors
GOVERNMENT COMPANY	Consultant firms, Housing Development Companies		Banks, Housing Development Companies	Construction companies	Consultant firms	Cons-truction companies

TABLE 5.3.2

Matrix for Delivery and Maintenance of Community Level Footpaths (up to 2m)

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY	Local people		Local people		Community's representative	Local people
PHUONG	Local committee	Local committee	Local committee			
PRIVATE CONTRACTOR				Private workers		

TABLE 5.3.3

Matrix for Delivery and Maintenance of Roads (Above 2m and Under 8 m wide)

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY			Local people			
PHUONG			Local committee			
CITY (BOARD) PROV (DEPART)	Transportation and Public Works Board	City's Committee	City's Committee		Transportation and Public Works Board	Transport and Public Works Board
PRIVATE CONTRACTOR				Various private contractors		
GOVERNMENT COMPANY				Road and Bridge Construction Companies		

TABLE 5.3.4

Matrix for Delivery and Maintenance of Roads Over 8m Wide

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
CITY (BOARD) PROV (DEPART)	Dept of Transportation	Provincial Committee	Provincial Committee		Dept of Transportation, Management Boards	Road and Bridge Construction companies
PRIVATE CONTRACTOR				Various private contractors		
GOVERNMENT COMPANY				Road and Bridge Construction companies		

TABLE 5.3.5

Matrix for Delivery and Maintenance of Community Level Water Supply

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONSTRUCTION SUPERVISION	MAINTAIN
OWNER, COMMUNITY			Local people		Community's representative, Water supply Company	Local people
PHUONG		local committee				
CITY (BOARD) PROVINCE (DEPARTMENT)		City's committee			City's committee	
PRIVATE CONTRACTOR				Various private contractor		
GOVERNMENT COMPANY	Water supply Company			Water supply Company	Water supply Company	Water supply Company

TABLE 5.3.6

Matrix for Delivery and Maintenance of Community Level Electricity

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONSTRUCTION SUPERVISION	MAINTAIN
COMMUNITY			Local people		Community's representative	Local people
PHUONG		Local committee				
CITY (BOARD) PROVINCE (DEPARTMENT)		City's or Provincial Committee			Management Boards	
PRIVATE CONTRACTOR				Private Contractor		
GOVERNMENT COMPANY	Power Company			Power Company	Power Company	Power Company

TABLE 5.3.7

Matrix for Delivery and Maintenance of Community Level Street Lights

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY			Local people		Community's representative	Local people
PHUONG			Local Committee			
CITY (BOARD) PROVINCE (DEPARTMENT)	Transportation and Public Works Board	City's Committee	City's Committee		Transportation and Public Works Board	
PRIVATE CONTRACTOR				Various private contractor		
GOVERNMENT COMPANY	Public Works Company			Public Works Company		Public Works Company

TABLE 5.3.8

Matrix for Delivery and Maintenance of Community Level Public Toilets

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY						
PHUONG					Local Market Management Board	Local Market Manage ment Board
CITY (BOARD) PROVINCE (DEPARTMENT)	Market Management Board	City's committee	City's committee	Market Management Board		
PRIVATE CONTRACTOR				Private contractor		
GOVERNMENT COMPANY						

NB. Because public toilets were originally constructed near markets, the Market Management Board still retains responsibility for public toilets in the rest of the city.

TABLE 5.3.9

Matrix for Delivery and Maintenance of Toilets within the House or on House Land

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY			Local people		Local people	Local people
CITY (BOARD) PROVINCE (DEPARTMENT)		Housing and Construction Board				
PRIVATE CONTRACTOR	Private workers			Private workers		

TABLE 5.3.10

Matrix for Delivery and Maintenance of Community Level Drains (Small Drains at Community Level)

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY	Community		Community		Community's representative	Community
PHUONG		Local committee	Local committee		Local committee	
CITY (BOARD) PROVINCE (DEPARTMENT)						
PRIVATE CONTRACTOR				Private workers		

TABLE 5.3.11

Matrix for Delivery and Maintenance of Drains (Large Drains at City Level)

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY					Local people	
CITY (BOARD) PROVINCE (DEPARTMENT)	Transportation and Public Works Board	City's or Provincial committee	City's or Provincial committee		Transportation and Public Works Board, Management Boards	
PRIVATE CONTRACTOR				Private contractors		
GOVERNMENT COMPANY	Public Works Company			Public Works Company		Public Works Company

TABLE 5.3.12

Matrix for Delivery and Maintenance of Social Buildings (Meeting Room etc)

	DESIGN	APPROVAL	FINANCE	CONS-TRUCTION	CONS-TRUCTION SUPERVISION	MAINTAIN
COMMUNITY					Community's Representative	Community
PHUONG	Local Committee	Local Committee	Local Committee		Local Committee	
PRIVATE CONTRACTOR				Private contractors		

6. HOUSING LAND AND INFRASTRUCTURE COSTS

6.1 Cost of Land Use Rights

The information available on the cost of land use rights is taken from the twelve Phuongs where low income communities have been identified and for the city centre and suburban Phuongs.

The following table indicates the official price for land use rights in the urban areas of Can Tho City. The official price changes from time to time and these prices were applicable in September 2001. The actual market price of the land may be considerably excess of the official land use rights cost.

TABLE 6.1.1

Official Price of Urban Residential Land in Can Tho City

	GRADE OF STREET	LOCATION 1	LOCATION 2	LOCATION 3	LOCATION 4
Prices in 000's VND per sq.m.	1	3500	1248	525	350
	2	2600	936	390	260
	3	1440	624	216	144
	4	710	550	106.5	71
Notes	Grade of street decided by City's Committee	Fronting street	Fronting some wide alleys Decided by City's Committee	Fronting alleys	Fronting sub alleys
Based on Decision No1279/1998/ QD.UBT (Dated June 5 1998) of the Provincial Committee - Price for official tax/rent/compensation/evaluation					

TABLE 6.1.2

Official Price of Suburban Residential Land in Can Tho City

	GRADE OF STREET	PRICE PER SQ.M. (VND)
Prices in 000's VND per sq.m.	1	420
	2	266
	3	190
	4	100
	5	60
Notes	Grade of street decided by City's Committee	
Based on decision No1279/1998/ QD.UBT (Dated June 5 1998) of the Provincial Committee - Price for official tax/ rent/compensation/evaluation		

6.2 Land Use Right Taxes

There are three types of tax to be paid when land use rights are acquired

1. The tax for land use right will depend on:-

(a) The official price of the land (For example see Tables 7.1.1 and 7.1.2 above)

(b) The time when the owner starts to occupy the land or has documentary evidence to show his possession of the land. In this case the rate of tax depends on the land laws applicable at the time of occupation.

(c) There is a change in use i.e. from agricultural to housing

This tax may vary from 0%, 20%, 40% to 100% of the official value of the land

2. A tax is payable each time there is a change of registered owner, payable by the purchaser. This rate is now 1% of the official value.

3. A tax is payable by the seller at the time of change of owner's name at 4% of the official value.

There is a limit on the housing area that can be owned by a household. In the urban area the limit is 150 sq.m. and in the suburban area it is 200 sq.m. (Decision No 67/2000/QD.UBT dated 2.11.2000). Above that area, the land will be considered as agriculture land and has the different price as follows:

TABLE 6.2.1

Official Price of Non Residential/Agricultural Land in Can Tho City

	GRADE	PRICE SQ.M.
Prices in VND	1	19,300
	2	16,100
	3	13,000
	4	9,800
	5	6,300
	6	1,750
Notes	Depends on location and agricultural purpose (Decided by Committee)	
Based on decision No 1279/1998/QD.UBT (Dated June 5 1998) of the Provincial Committee - price for official tax/rent/compensation/evaluation		

People who are living in low income housing areas have to face many problems regarding the documentation required for the granting of land use rights. Many of them do not have any proof of possession of the land and those who are living on the sides or over the streams cannot obtain any documentation.

In the low income communities a lot of approvals by the local officer are required and the biggest problem is the tax they might be charged, sometimes up to 100% official value of their land; i.e. if they do not have any way to prove that they lived there before 1993, or bought it legally after 1993.

Although people in low income communities face particular difficulties, even other citizens face problems in the procedures and documentation and there is uncertainty about the percentage of the tax that has to be paid.

Land use rights are not granted if there are any disputes with the owners of neighbouring land, especially over the demarcation of the land. This is one of the main reasons why many people are not able to obtain land use rights.

6.3 Cost of Housing and Housing Improvements

This information is based on limited random sampling and information from the Department of Construction, for the cost of new construction for different types of houses. The cost of simple house improvements is based on limited random sampling, in low income housing areas.

There will be some expenses when obtaining construction permission, such as the payments for measuring and mapping works, for designing the construction, for drawing the blueprint etc. The cost for mapping, measuring and designing depends on the value of the land and/or the future building. Usually, it costs some tens of thousand VND per sq.m.

Most of low income families choose a small private contractor or private workers, to repair, upgrade or build their house, due to their flexibility and the possibility of arranging a suitable price. In this way they can also contribute themselves as the construction labourers. They can get the self-designed and self-managing construction procedures and can collect materials directly from any available sources - brand new, used or recycled. By avoiding taxes (costs for construction permission, land/house use right licenses, and tax to be charged on contractors etc...)they will reduce the costs dramatically.

In the other hand, in by-passing the official processes they may not follow the official or proposed spatial plan, they may create environment problems and construct buildings unsuitable for the area in terms of height, plot coverage and use. They may also leave insufficient space for future infrastructure networks, service lines or roads.

Unit prices for labour and materials were collected from various private small contractors, mostly labour intensive and using the minimum amount of machinery. Comparisons have also been made with the official Handbook for Basic Construction Unit Prices, published by the local government.

TABLE 6.3.1

Estimated Material and Labour Prices

TYPE OF WORKS	NOTES	UNIT PRICE	MATERIALS MIN	MAX	LABOR MIN	MAX	NOTES
land filling (labour)	muddy	VND/1 m3			12,000	18,000	depends on muddy condition
	dry soil	VND/1 m3			6,000	10,000	depends on grade of soil
water channel digging (labour)		VND/1 m3			8,000	25,000	depends on grade of soil, complexity, and size
road filling (labour)		VND/1 m3			8,000	15,000	depends on grade of soil, complexity , and pressing coefficient
wall building		VND/1 m3	220,000	300,000	20,000	32,000	depends on class of brick
column building		VND/1 m3	265,000	340,000	40,000	52,000	depends on material/height
roof, brick tiling		VND/1 M2	65,000	200,000	2,000	2,250	depends on height and material/size of tile
roof, fibrocement /metal sheet tiling		VND/1 M2	26,000	46,000	650	950	depends on material
floor tiling	cement	VND/1 M2	37,000		2,000	2,500	
	ornament	VND/1 M2	60,000		2,500	3,000	
	ceramic	VND/1 M2	80,000		4,000	5,500	
pavement tiling		VND/1 M2	36,000	72,000	2,200	2,700	
lacquer painting		VND/1 M2	2,500	11,500	700	3,000	depends on difficulty and material
lime painting		VND/1 M2	300	800	400	500	depends on material and height
electric meter installing		piece			5,000		labour only
water pipes		VND / M	1,200	9,500	1,400	2,200	hard plastic tube
tile roof and frame building		VND/1 m3	6,000,000	6,700,000	140,000	170,000	depends on complexity
ceiling works		VND/1 M2	100,000	200,000	5,000	6,000	depends on material and height

Note : There is a Handbook published by Decision No 45/1999/QĐ.UBT (The Provincial Committee) which gives very detailed prices of various works in basic construction .The specified prices are similar to estimated figures above.

- **Toilet Construction**

The price for making a simple "septic tank" type toilet inside an already built house, with private workers is estimated at about 1,300,000 VND to 1,500,000 VND. The estimated prices paid for making similar toilets for the UNDP/UNCHS project in Xuan Khanh were 2,000,000 to 2,500,000. This was because of the difficulty of digging ditches and drains in that area.

6.4 Compensation for House

TABLE 6.4.1

Official Evaluation for Compensation and Tax Determination for House Possession

UNIT PRICE, VIETNAM DONG / M2 OF FLOOR AREA - NEW CONSTRUCTION										
Based on Decision No 60 / 1999 / QD.UBT Dated June 30.1999										
Floor	**Grade (estimated)**	**Column**	**Roof**	**Wall**	**Ground floor**	**From 1st floor**	**Official price (*)**	**Actual Price (2001)**	**Note 1**	**Note 2**
Multiple floors	1	concrete	concrete	brick	ceramic / ornament tile	concrete	1,200,000 / 1,100,000	1,500,000		
		concrete	concrete	brick	cement/ Chinese terracotta tile	concrete	1,000,000	1,400,000		
	2	concrete	metal sheet, fibro-cement, terracotta tile	brick	ceramic / ornament tile	concrete	900,000 / 850,000	1,200,000		
		concrete	metal sheet, fibro-cement, terracotta tile	brick	cement/ Chinese terracotta tile	concrete	800,000	1,100,000		
Two-floors	3	concrete	metal sheet, fibro-cement, terracotta tile	brick	ceramic / ornament tile	wooden	750 000 / 700 000	1,000,000	1. This price is for the ground floor surface. First floor count on wooden floor price. (160 000 /M2)	floor with same structure add 20% to the ground floor
		concrete	metal sheet, fibro-cement, terracotta tile	brick	cement/ Chinese terracotta tile	wooden	650,000	900,000		
		wooden/ brick	metal sheet, fibro-cement, terracotta tile	brick	ceramic / ornament tile	wooden	500 000 / 450 000	700,000		
		wooden/brick	metal sheet, fibro-cement, terracotta tile	brick	cement/ Chinese terracotta tile	wooden	400,000	550,000		
	4	Wooden / brick	metal sheet, fibro-cement, terracotta tile	metal sheet/wooden	ceramic / ornament tile	wooden	400 000 / 350 000	500,000		
		Wooden / brick	metal sheet, fibro-cement, terracotta tile	metal sheet / wooden	Cement / Chinese terracotta tile	wooden	300,000	400,000		

Floor	Grade (estimated)	Column	Roof	Wall	Ground floor	From 1st floor	Official price (*)	Actual Price (2001)	Note 1	Note 2
single floor with concrete column	1	concrete	concrete	brick	Ceramic / ornament		1,000,000/ 960 000	1,400,000	If there is only wooden/thatch wall on one side reduce by 5 %. Shared wall reduce by 3.5 -7 % on overall price of the house.	reduce by 8% if column is made by poor wood or recycle metal
		concrete	concrete	brick	cement/ Chinese terracotta tile		910,000	1,300,000		
	2	concrete	metal sheet, fibro-cement, terracotta tile	brick	ceramic / ornament tile		500,000 / 450,000	630,000		
		concrete	metal sheet, fibro-cement, terracotta tile	brick	Cement / Chinese terracotta tile		400,000	560,000		
	3	concrete	thatch	brick	ceramic / ornament tile		250,000 / 230,000	320,000		
		concrete	thatch	brick	Cement / Chinese terracotta tile		180,000	250,000		
single floor with wooden or brick column	4.1	Wooden / brick	metal sheet, fibro-cement, terracotta tile	brick	ceramic / ornament tile		400,000 / 370,000	520,000	Reduce by 8 % if the roof is thatched.	
		Wooden / brick	metal sheet, fibro-cement, terracotta tile	brick	Cement / Chinese terracotta tile		320,000	450,000		
	4.2	Wooden / brick	metal sheet, fibro-cement, terracotta tile	one side / wooden or metal sheet	ceramic / ornament tile		350,000 / 320,000	450,000		
		Wooden / brick	metal sheet, fibro-cement, terracotta tile	one side/ wooden or metal sheet	Cement / Chinese terracotta tile		270,000	380,000		
	4.3	Wooden / brick	metal sheet, fibro-cement, terracotta tile	metal sheet / wooden	ceramic / ornament tile		270,000 / 240,000	340,000		
		Wooden / brick	metal sheet, fibro-cement, terracotta tile	metal sheet / wooden	Cement / Chinese terracotta tile		200,000	280,000		

	4.4	Wooden / brick	metal sheet, fibro-cement, terracotta tile	thatch	ceramic / ornament tile		170,000 / 150,000	210,000		
		Wooden / brick			Cement / Chinese terracotta tile		130,000	180,000		
	5		thatch	thatch	earth		60,000	85,000		
(*) based on Decision No 60/1999/QD.UBT, june-10-1999										

In practice, besides houses built with concrete floor and column (well built – above 2nd grade), half-well built houses are considered 3rd (concrete column) and mostly 4th grade (brick/wooden column). Below 4th grade are temporary houses.

(*) Ornament tile = the floor tile made by compressed cement decorated with colored plaster texture in surface , ordinary used in late 60's and 70's << gach bong>>
Ceramic tile = new high- tech one with a melted ceramic coat on top of the cement tile, appeared in 80's <<gach men>>
Chinese terra-cotta tile = tile made by burnt clay, same procedure as brick, big, raw pieces, traditional one. << Gach Tau>>

There is also another official note for evaluating the taxes for registering:

TABLE 6.4.2

Calculation of Registration Tax

Grade of house	Unit price VND/m2	Note
1	1,300,000	Can use more than 100 years
2	1,100,000	50 –100 years
3	550,000	20 –50 years
4	400,000	Under 20 years
Temporary material	100,000	Temporary use

Note: Decision No 56/1999/QD.UBT of provincial committee

6.5 Cost of Developing Relocation Sites

TABLE 6.5.1

Investment Calculation for Residential Areas

	UNIT	UNIT PRICE /M2	AN BINH	91B+AN BINH	CAI SON- HANG BANG
land compensation price	VND	60,000	16,584,300,000	20,501,040,000	27,900,000,000
land filling	VND	45,000	12,438,225,000	16,947,500,000	12,624,000,000
infrastructure	VND		24,847,500,000	30,706,500,000	26,649,000,000
total costs	VND		53,870,025,000	68,155,040,000	67,173,000,000
total area	m2		276,405	341,684	397,600
price for 1m2 of total area including public infrastructure	VND		194,895	199,468	168,946
available area for housing	m2		156,463	169,985	142,418
price for 1m2 of housing area	VND		344,299	400,947	471,661

The costs for various areas differ depending on road circulation designs, infrastructure and the planning schemes. Other important criteria that affect the cost are the agreements for compensation price with local people.

Local authorities estimate the cost per one square meter of housing area may be around 300,000 VND to 450,000 VND, providing the relocation site is in the suburban area.

The compensation payment may vary from 40 000 – 50 000 VND (price for cultivated field - excluding the tax for purpose of changing of land from cultivating field to residential use, around 50 000 VND or more) to 195,000 VND (urban land, nearby large street) sometime it will reach as high as 2,600,000 VND.(housing land in front of wide streets)

In practice very few people were willing to sell at a compensation price as low 40 000 – 50 000 VND for existing field or suburban land.

It is easy to understand why the local authorities tends to choose the solution of planning location sites far away from the city centre when we analyse the cost of the scheme at Tham Tuong area in Phuong Xuan Khanh. The costs are very high in comparison with other more distant relocation sites.

TABLE 6.5.2

Investment Calculation for Tham Tuong Area

CATEGORIES		SCHEME 1			SCHEME 2 (choose)		
RIVER IMPROVEMENT	unit	quantity	unit price	subtotal	quantity	unit price	subtotal
Land compensate	m2	6,000	195,000	1,170,000,000	5,000	195,000	975,000,000
house compensate	house (60m2)	216	9,000,000	1,944,000,000	216	9,000,000	1,944,000,000
leaving expenses support	house	216	2,000,000	432,000,000	216	2,000,000	432,000,000
cleaning	m3	40,000	10,000	400,000,000	25,000	10,000	250,000,000
filling					18,000	30,000	540,000,000
consolidating	m2	2,000	1,500,000	3,000,000,000	1,500	1,500,000	2,250,000,000
STREET & INFRA -STRUCTURE							
Land compensate	m2	25,023	195,000	4,879,485,000	25,023	195,000	4,879,485,000
house compensate	house (60m2)	423	9,000,000	3,807,000,000	318	9,000,000	2,862,000,000
leaving expenses support	house	423	2,000,000	846,000,000	318	2,000,000	636,000,000
street &infrastructure	m2			19,944,000,000			21,123,500,000
PARK & GARDEN							
Land compensate	m2	8,399	195,000	1,637,805,000	8,399	195,000	1,637,805,000
house compensate	house (60m2)	27	9,000,000	243,000,000	27	9,000,000	243,000,000
leaving expenses support	house	27	2,000,000	54,000,000	27	2,000,000	54,000,000
land filling & construction	m2	8,399	300,000	2,519,700,000	8,399	300,000	2,519,700,000
HOUSING AREA							
Land compensate	m2	74,770	195,000	14,580,150,000	78,100	195,000	15,229,500,000
house compensate	house (60m2)	123	9,000,000	1,107,000,000	123	9,000,000	1,107,000,000
leaving expenses support	house	123	2,000,000	246,000,000	123	2,000,000	246,000,000
land filling & construction	m3	43,000	30,000	1,290,000,000	43,000	30,000	1,290,000,000
TOTAL COSTS				58,100,140,000			58,218,990,000
housing area available after planning	m2			77,059			81,884
per square housing meter, new area	*VND*			*753,970*			*710,993*
total area	m2			114,192			116,522
cost per square meter in this area	*VND*			*508,793*			*499,639*

Notes:

1. The above average costs were presumably calculated for the re-constructed area only. If we consider that the infrastructure accessibility would benefit the whole area of 511,058 m2, then the investment for each square meter for overall sub-region will only be around 113,700 VND to 113,900 VND)

2. The cost for land filling is counted on basis of:
   - The price of one cubic meter of sandy soil is around 25000 - 30000 VND
   - The land filling from 1.2 to 1.5 m, hence need around 1.2 - 2 m3 for filling including natural compression.
   - Whether there are lots of ponds, ditches, water running or not.
   - Transportation of soil.

3. The costs for infrastructure varies a lot, depending on the planners' and local government's inclusion and standard of streets, pavements, streetlights, public facilities such as park, garden, elementary school, market etc...

TABLE 6.5.3

Investment for Thoi Nhut residential area

	unit	unit price /m2	scheme 1	scheme 2	scheme 3
land price	VND	40,000	2,560,800,000	2,736,000,000	4,778,400,000
land filling	VND	30,000	1,920,600,000	2,052,000,000	3,583,800,000
infrastructure	VND		9,554,200,000	9,654,000,000	22,604,416,200
total costs	VND		14,035,600,000	14,442,000,000	27,386,400,000
total area	m2		64,020	68,400	119,460
price for 1m2 of total area including public infrastructure	VND		219,238	211,140	229,252
available area for housing	m2		34,480	34,032	68,824
price for 1m2 of housing area	VND		407,065	424,365	397,919

Officers in the City's committee estimate that average cost for one square meter of housing land in the ordinary relocation site (suburban - as mentioned above) is around 300 000 to 450 000 VND, including infrastructure and tax.

7 INFRASTRUCTURE SERVICES OPTIONS AND COST MATRIX

7.1 Matrix of Service Levels for Basic Infrastructure.

TABLE 7.1.1

Service Level Planning Standards and Cost Assumptions

Service	Basic	Intermediate	Full
Land Filling	Average 1m3 of river sand for each square meter surface, approx.2 USD /m3	Average 1m3 of river sand for each square meter surface, approx. 2 USD / m3	Average 1m3 of river sand for each square meter surface, approx. 2 USD / m3
Water	Ô 60mm-250 m non-metallic common pipe , 5 households connect to one shared meter approx.6,250,000 VND (417 USD)	One water meter for each household, connected to Ô 60mm-250m non-metallic pipe approx.6,250,000 VND (417 USD) + 650,000 VND (US$43) per each meter	One water meter for each household, connected to Ô 90mm-250m non-metallic pipe approx. 9,375,000VND (US$625) + 650,000 VND (US$43) per each meter
Sanitation	Pour flush latrine with septic tank approx.2,000,000 VND (US$133) / piece	Pour flush latrine with septic tank approx. 2,000,000 VND (US$133) / piece	Water closet with septic tank approx.3,500,000 VND (US$233) / piece
Road	Road 3m wide (excluding both 1.5m earthy sidewalks), 0 - 4 cm stone ,10cm deep graveled approx. 15,000 VND (US$1) per m2 road surface	Road 3m wide (excluding both 1.5m earthy sidewalks), 4x6 cm stone, 10cm deep gravelled , paved by 5cm deep cement M200 grade approx. 84,000 VND (US$5.6) per m2 road surface	Road 3m wide (excluding both 1.5m earthy sidewalks), 0 - 4 cm stone, 20cm deep gravelled , paved by 5cm deep bitumen M200 grade approx. 150,000 VND (US$10) per m2 road surface

Drainage	Drainage ditches along both sidewalks, wall built, brick 5x8x18cm,M100 cement approx. 80,000 VND /m (US$5.4 /m)+ Ô100mm-15m drain pipe from each household (300,000VND-US$20)	Drainage ditches along both sidewalks, wall built, solid brick 5x8x18cm ,M100 cement, lined by 10cm layer of 4x6 stone and 5cm concrete M200 approx.125,000 VND /m (US$8.2 /m.) + Ô 100mm-15m drain pipe from each household (300,000VND-US$20)	Drainage ditches along both sidewalks, wall built, solid brick 5x8x18cm ,M100 cement, lined by 10cm layer of 4x6 stone and 5cm concrete M200. Covered by 6cm thick concrete panels approx. 145,000 VND /m (US$9.6 /m.)+ Ô 100mm - 15m drain pipe from each household (300,000VND-US$20)
Refuse Collection	Communal intermediate simple container, 1 per 10 ha, 30m2 area, cement lined, 1m - high surrounding brick walls, **excluding land compensate price** approx. 6,000,000 VND (US$400) per 10 Ha	Door to door collection with household bins, Communal intermediate upgraded container ,1 per 10 ha, 30m2 area, cement lined, high surrounding brick walls, **excluding land price and household bins & monthly fees** US$1400/ 10 Ha	Door to door collection with household bins, Communal intermediate complex container,1 per 10 ha, 30m2 area, cement lined, high surrounding brick walls, **excluding land price and household bins & monthly fares** US$2000/ 10 Ha
Street lighting	60 cm fluorescent lamp on existing poles, 10 poles per ha approx. 4,000,000 VND (US$266) / Ha.	60 cm fluorescent lamp on new built poles, 10 poles per ha approx. 8,000,000 VND (US$533) /Ha.	120 cm fluorescent lamp on new built poles, 20 poles per ha approx.20, 000,000 VND (US$1334) /Ha.
Electric supply	Five households share one meter, one 15KVA transformer for entire area, three phase lines attached to existing street light pole US$1737-1850/Ha	Each house has one meter, one 15KVA transformer for maximum 80 households, three phase lines attached to existing street light pole US$3346-4747/Ha	Each house has one meter, one 15KVA transformer for maximum 60 households, three phase lines attached to separate exclusive poles US$3826-5631/Ha

TABLE 7.1.2

Matrix of Service Level Costs for basic Infrastructure (US$ per Hectare)

Service / density	Basic	Intermediate	Full
Land filling			
a) 400 pers/ha	20,000	20,000	20,000
b) 500 pers/ha	20,000	20,000	20,000
c) 600 pers/ha	20,000	20,000	20,000
Water			
a) 400 pers/ha	1,106	3,858	3,858
b) 500 pers/ha	1,278	4,718	4,718
c) 600 pers/ha	1,657	5,785	5,785
Sanitation			
a) 400 pers/ha	10,640	10,640	18,640
b) 500 pers/ha	13,300	13,300	23,300
c) 600 pers/ha	15,960	15,960	27,960
Roads			
a) 400 pers/ha	750	4,200	7,500
b) 500 pers/ha	750	4,200	7,500
c) 600 pers/ha	750	4,200	7,500
Drainage			
a) 400 pers/ha	5,100	6,500	7,200
b) 500 pers/ha	5,700	7,100	7,800
c) 600 pers/ha	6,300	7,700	8,400
Refuse collection			
a) 400 pers/ha	40	140	200

b) 500 pers/ha	40	140	200
c) 600 pers/ha	40	140	200
Street lighting			
a) 400 pers/ha	266	533	1,334
b) 500 pers/ha	266	533	1,334
c) 600 pers/ha	266	533	1,334
Electric supply			
a) 400 pers/ha	1,637	3,346	3,826
b) 500 pers/ha	1,744	4,046	4,626
c) 600 pers/ha	1,850	4,747	5,361
Total			
a) 400 pers/ha	39,538	49,216	62,557
b) 500 pers/ha	43,077	54,037	69,478
c) 600 pers/ha	46,823	59,065	76,540

TABLE 7.1.3

Per Capita Costs, based on Tables 8.1.1 and 8.1.2 (US$ per capita)

Cost per capita	Basic	Intermediate	Full
a) 400 pers/ha	99	123	156
b) 500 pers/ha	86	108	139
c) 600 pers/ha	78	98	128

8. EXISTING AND PROPOSED TRUNK INFRASTRUCTURE

Information obtained on existing water, drainage and sewerage networks and proposals for extending existing networks funded either through Official Development Assistance, Central Government, Provincial or City sources from Socio-Economic & Spatial plan of Can-Tho province to 2010 and Socio-Economic Records, 1995-2000, Can-Tho city)

8.1 Existing Networks

- **Existing Water Supply System**

Can Tho City now has 2 Water Supply Plants:

- Water Treatment Plant No 1, has a capacity of 40,000 m3 / day,
- Water Treatment Plant No 2, has a capacity of 20,000 m3 / day

There is an existing system of 21 Km of main transfer pipe and around 170 km of distribution pipe. The biggest has 700 mm in diameter (500 m long). Most of the system (92 Km) has 100 mm in diameter. Most of tubes below 300 mm in diameter are non-metallic (PVC). Those above 300 mm are cast-iron.

TABLE 8.1.1

Water Supply Network in Can Tho City

Pipe diameter in mm	Materials	Length (m)
700	cast iron	500
600	cast iron	13,900
450	cast iron	2,900
375	cast iron	8,600
300	cast iron	8,100
250	non metallic	8,600
200	non metallic	26,000
150	non metallic	27,600
100	non metallic	92,000
< 100		uncounted

Average yearly output recorded is 18,615,000 m3. Loss rate is reported to be about 33%.

This system is estimated to serve 80% of the urban population with an expected 80 litres per capita / day standard, and there were reported to be 38,337 households using 28,300 meters (53.6 % of population) in 1999.

Most of households located in legal urban area of Can-Tho city can access the common water supply system if they can afford the expenses of piping installation. The problem faced by low income communities is the cost of the meter and the cost of pipe extensions if they are far from the existing network. Unregistered families have difficulty in accessing the network. Some households share from existing neighbour's meter or use water from public standpipes.

- **Existing Drainage System**

Existing drainage system is a combined system for both storm and foul water. This drainage is not treated and most of the outfalls go directly to the rivers. The main system consists of 52.2 km of pipes and ditches running along 46 main streets.

This system was built:

-before 1975 - 23 Km
-from 1975 to 1993 - 8.6 Km
-after 1993 - 20.6 Km

The pipe diameter is 200 -1000 mm. Obstructions are reported especially during heavy storms in the rainy season due to the degraded, aged, overloaded, silted system, where there is very little fall.

- **Existing Power Supply System**

Electricity supplied to Can-Tho City comes from the National Southern System and the 500KV North-South Line. There is a power plant in the province which provides 183 MW to the National System. There are transformers separately for the northern and southern regions of the city. The city's total household consumption for 2000 was estimated to be 71,610 KWh. About 65,200 households are reported to have access to the electricity system. There is a system of about 110 Km of 15-35 KV (high voltage) lines, 100 Km intermediate voltage lines and 200 Km 380V low voltage lines in the urban area. Loss rate was reported to be around 11.6 % in 1999.

Most of households located in legal urban area of Can-Tho city can access electricity system if they can afford the expenses of power line installation and meter. Others share electricity from neighbours.

8.2 Proposed Networks

- **Proposal for Power Network Improvements**

There is a project underway for improving the power network that involves providing electric power access for all phuongs and communes in Can-Tho city. With total an investment of about 19,000,000 USD The proposal is for about 141 Km of mixed (underground and in the airr) high voltage cables, new relay stations and 421 km of low voltage lines will be installed. The proposed starting date was December 2001. It is reported as being funded by ADB at a cost of US$ 15 million.

- **Proposal for Water Supply System**

- Water Treatment Plant No 1 Upgrading project, from 40,000m3/day to 50,000m3/day,
- Water Treatment Plant No 2 Upgrading project, from 20,000m3/day to 40,000m3/day,
- Water Supply System for Tra Noc region project, 40,000m3/day, at a cost of 8.5 million USD
- Water Supply System for Hung Phu region project, 70,000m3/day, at a cost of 12.8 million USD
- City's Water-Pipe System Upgrading project, capacity 90,000 m3/day, at a cost of 6.9 million USD.

- **Proposal for Sewerage Processing System**

There is a proposal from a Germany ODA loan source to set up a trunk drainage processing system for Can Tho city. This proposal has been approved by the Central Government since 2000 with the investment of about 182 billion VND (26,400,000 DM), in which the German side will give loans or non-refund aid of about 127 billion VND (18,500,000 DM) . German experts have been on site reviewing this project since November 2001 and intend to start the project by 2002.

- **Additional Proposals Awaiting Funding**

- Draining Processing Plant for Tra-noc Industrial Park Project, 2.2 million USD,
- Regional 700-Bed General Hospital Drainage Processing System project, 250,000 USD,
- Draining Processing Plant for Hung Phu Industrial Zone Project, 2.2 million USD,
- City's Solid Waste Processing Plant Project, 2.2 million USD,
- Hospital-Garbage Processing Plant Project, 1.9 million USD.

8.3 Access to Infrastructure and Services

Individual households in most of the urban area of Can Tho city who want to access to common electricity and water supply system can send an application form to the Water Company or Power Company with the approval of local government and information on the Official Family Registration Status, together with official valid real-estate ownership papers. The applicant needs to be able afford the cost of connections and to agree with the terms of using the service set by the company.

The technicians from the company will survey the physical conditions and prepare a technical drawing. The leaders will review and approve it. The company then sends the bill checklist to the customer. After the expenses are paid, the installing works start.

Tariff for water and electricity consumption can be paid monthly to the meter reader or at the company's office. There are different tariffs applied to households who have business at home and those who do not. There is also progressive pricing policy for the monthly amount consumed.

Due to the weak pressure of water flow in remote branches of the supply system, the expense of water and remote line installation, many households prefer to install a bore well down to 80-100 m to get underground water.

Cost for this kind of well is around 1-2 million VND (80 -140 USD). Theoretically, there is a Resource Tax charged on these wells, but in practice it is not implemented, and in any case users do not always declare these wells in official records.

Urban poor families who do not have official Family Registration Status are not able to obtain official connections to either water or electricity supplies

The waste collection service payment is almost obligatory for every household within the urban area, regardless of the garbage disposal amount, except certain remission or free of charge for those who are unemployed or extremely poor. This fee is collected monthly. Again, many poor families dispose of their own waste to avoid having to pay the collection fee.

9. KEY ISSUES, STRATEGIES AND THEIR IMPACT

ISSUES	STRATEGIES AND THEIR IMPACT
9.1 Urban Poverty in Can Tho City	
1. Insufficient income to meet daily needs 2. Unstable occupations, temporary employment, low and fluctuating incomes	A Pro-Poor Urban Upgrading Project will not have a direct impact on either the level of household incomes, or stability of employment. However, it is likely to make a substantial contribution in terms of placing poor urban households in a better position to improve their employment opportunities and income levels.
3. Houses that do not provide adequate protection from the elements, allow the penetration of rain water and are subject to flooding. 4. Occupation of rental housing due to in sufficient financial resources to purchase the land and obtain land use rights and building occupancy certificates. 5. Not enough money to pay for medical treatment. 6. Not enough money to pay for school fees. 7. Borrowing money for emergencies as well as for daily needs and being unable to pay back loans. 8. Poor health, contributed to by insanitary living and poor environmental conditions. 9. Inadequate food and clothing	Improvements in access to sanitation facilities and water supply, drainage and garbage disposal and a reduction in the likelihood of flooding are likely to lead to improvements in health status and therefore people's ability to not only be more successful in existing occupations but to be better at seeking new or improved employment opportunities. Upgrading housing in the priority areas of quality of roofing and raising and upgrading the quality of flooring will also have direct health benefits. This will lead to a reduction in expenditure on health, especially for women and children who spend much of their time in and around the house. The carrying out of construction work, as part of an upgrading project may also create skilled and semi-skilled employment opportunities for urban poor families. The psychological impact of living in a better quality house and having direct access to basic services is not to be under-estimated, especially for women. In this connection, on-plot sanitation facilities make a major impact. Improved quality of housing and environmental conditions lead to improved social integration - better off people are more likely to make visits and this will assist in a popular strategy for moving out of poverty through marrying into relatively richer families. The combined effect of a pro-poor urban upgrading project is therefore likely to lead to households having a higher proportion of their income for the essentials of food, clothing, health and education and to reduce the need to borrow money for daily needs. These are areas where indicators need to be developed so that the medium and long term impacts can be measured.

9.2 Security of Tenure and Other Legal Issues	
1. Lack of building occupancy and land use registration certificates 2. Household and birth registration	The present system of acquiring building occupancy and land registration certificates, is complex, lacking in transparency and, for poor households, expensive. Processes need to be simplified, costs reduced and assistance provided to obtain essential documentation. Some form of security of tenure, will encourage households to make on plot improvements to housing and sanitation, leading to improvements in both living and community environmental conditions. This process is further enhanced when public facilities such as roads, footpaths and drains are improved and water and electricity supplies are provided. On plot investments by households are likely to be substantial. There are examples in other similar projects where the ratio of investment by households to the investment in upgrading public services is as high as 4:1. The provision of small loans can be a major factor in increasing the ratio of on plot investments. Lack of household registration leads to problems of accessing basic services, such as water supply and electricity and public education and health facilities. It also creates problems when registering births and this in turn leads to difficulties in obtaining places in schools. Although the registration of migrants in urban areas is a major policy issue, as an interim measure, forms of temporary registration allowing access to public services need to be introduced.
9.3 Area Improvement Approach to Urban Upgrading	
	Successful urban upgrading depends on linkages to city level networks, especially drainage, water supply and electricity, but also road and alley access. The design of local level upgrading schemes need to take into account catchment areas and supply zones. Primary and secondary level networks need to be upgraded to allow for additional capacity. Drainage networks need to take into account existing systems of ponds and streams. In Can Tho this is particularly critical where the management of tidal effect and seasonal heavy rain showers depends on the holding capacity of natural drainage areas. In this connection, the interface between community participation in the design of local level drainage schemes and city level networks is critical. There are many examples of local, small scale schemes which merely have the effect of creating problems in others

	areas that were earlier free from drainage and flooding problems.

9.4 Community Involvement in the Selection of Service Standards	
	Community involvement in the selection of service standards is often promoted as the corner stone of a successful pro-poor urban upgrading project. It is seen as a major factor in increasing levels of "community satisfaction", community financial and labour contributions at the time of construction and community involvement in operation and maintenance. It is also viewed as a factor in increasing city level coverage in a cost effective manner. However, there are often conflicts of interest between city officials and engineers who have been trained in a minimum (and often excessive) standards approach and lower service level options which communities view as better than they have now even if they are below "city level" standards. There are notable examples in Can Tho of community involvement in service standard selection, for example through the UNDP/UNCHS project, but these are on a very small scale. They have however, demonstrated that genuine community involvement is possible, but the difficulty is to take local level pilots to a city level scale. One way is through "horizontal networking", whereby communities learn from each other and professionals act as guides and facilitators. For communities to learn to work and plan together takes time and involves the development of partnerships between the community members, NGOs, mass organisations and local and city level officials. An investment in capacity building is an essential pre-requisite. The opportunity costs of community involvement and participation are high. Time spent participating, is time away from earning an income, from children and the family. It needs to be done in an effective and efficient manner. In order to make informed decisions people need to have information on advantages, disadvantages and costs. A costed services matrix is one basis for discussion and a way of presenting this information.
9.5 Construction of New and Upgrading of Existing Housing	
	With the majority of new houses being constructed by individuals the provision of land in locations close to employment opportunities, at prices at which poor and nearly poor people can afford is essential to reduce the formation of new slum areas. The land needs to have not only basic services but also community facilities.

	It is estimated that the population of Can Tho City will increase by 213,000 over the next 10 years. Assuming an average household size of four, this will mean a demand for over 50,000 new plots of land and houses. Lack of formal housing finance is a major factor in limiting both the production of new houses and incremental improvements to the existing housing stock.

9.6 Resettlement	
	Resettlement is often seen as the solution to the problems of low income housing areas. Resettlement is costly and socially and economically disruptive to poor households. In the process, many of the very poor are not able to move to relocation sites and those that do, find it difficult to afford the construction costs of "standard" houses. They end up by informally disposing of their allocated plots and moving back into other low income housing areas. It is essential that resettlement is viewed as a method of last resort. Although some resettlement may be unavoidable where families are living in areas that are dangerous to their health and safety the need for resettlement can be reduced by careful re-planning of existing low income community areas, with participation of community members. For example, plot re-adjustment has been successfully applied in other projects, to improve existing layouts, so that drainage systems and access alleys can be improved and minimum acceptable plots formed that enable building occupancy and land use certificates to be issued. This process requires close collaboration between community members and local and city level officials.

10. KEY ISSUES FOR ACTION PLAN PREPARATION

The following are the main issues that will form the basis for the development of the Can Tho City Action Plan :-

10.1 Drainage

- Maximising the potential of the existing natural drainage network

The city has an existing network of rivers, streams, canals and ponds, providing natural drainage into the main rivers. The network is silted up, polluted from outfalls from the combined storm and sewerage system, has toilets and household waste water flowing directly into it, is obstructed by unregulated land filling and houses built on the banks and over the water courses and is used as a garbage dumping area.

The natural drainage system has a critical role to play in the prevention of flooding, especially in terms of its potential retention capacity during high tides and heavy seasonal rain showers.

The first step that is required is a survey of the natural drainage network, identifying problem areas and the development of a plan of action to maximise its potential. This will include, de-silting, a strategy to deal with existing structures built on the banks of and over natural water courses and retention areas (where appropriate as part of community upgrading plans) and the minimising of outfalls leading directly into the natural drainage areas. A programme of planned maintenance also needs to be developed. In order to minimise the disruption to existing structures that do not directly impede the natural flow of water, floating dredging equipment could be considered in some areas.

The extension of the existing solid waste management system together with community awareness raising on environmental issues are an integral part of the action plan.

- Maximising the potential of, and extending the existing sewerage system

There are proposals to construct an interceptor sewer and treatment plant, but the main benefits of this will be felt in the existing city centre area and it will have the effect of reducing the amount of polluted water reaching the main rivers. However, the main problem as far as the low income communities are concerned is the removal of waste water from their houses and toilets. About half of the households do not have connections to existing drainage systems. About 20% of the alleys are also subject to regular flooding.

De-silting of the existing network and ensuring that falls are maintained will improve its efficiency and there may be critical areas where sludge pumps are required to be installed.

A priority activity is the establishment of bench mark levels for outfalls from low income community areas and the extension of the existing network so that all low income community areas can have access. The establishment of outfall levels will ensure that proposals for drainage in community upgrading plans link into the city level network and do not cause flooding problems in other areas. In addition to upgrading of existing areas, the city will need to identify substantial areas for new housing and related development and there may also be a need for a limited number of relocation sites to be developed.

10.2 Water Supply

- Extension of existing networks and house connections

About 30% of the households in the city do not have their own metered water connections. This is because either the network is not close enough to make a connection, the households do not

have the required documents or the cost of a connection is beyond the affordability of the household.

There are proposals to improve the capacity of and coverage of the existing network but this needs to be reviewed to ensure that all low income community have access and that the network will cover new housing areas and proposed relocation sites.

The introduction of a phuong level loan scheme to enable poorer households to pay for a metered connection will not only benefit the households but also improve the income of the water company by reducing un-metered water losses. This needs to be accompanied by a simplification of the documentation required in order to obtain a metered connection.

10.3 Electricity

- Improvements to existing network and house connections

Proposed improvements to the existing network are likely to bring about an increase in access to electricity. However, low income communities face two problems - metered connections and street lighting in the alleys. The provision of street lighting may be included as part of the community upgrading plans.

As with water supply meters, the availability of the required documents and the cost of the connection are constraints on officially accessing the system by low income households.

The introduction of a phuong level loan scheme to enable poorer households to pay for a metered connection will benefit the households. This needs to be accompanied by a simplification of the documentation required in order to obtain a connection.

10.4 Solid Waste Management

Between 30% and 50% of the households do not have their garbage collected on a regular basis. The uncollected garbage is not only a major health hazard and source of environmental pollution but also leads to the blockage of natural water courses and drainage systems. The poorer communities, where access is difficult and there is reluctance to pay for the service are the worst affected.

Other cities in Vietnam have been able to bring about substantial improvements in solid waste management, particularly at the community level, through the introduction of "socialisation" of solid waste management. This needs to be an integral part of the community upgrading plans.

Socialisation has taken various forms including organising the collection of garbage from the households by the communities themselves, sometimes by the employment of community members as collection teams and with their wages and the maintenance of the equipment being recovered from household collection fees. The introduction of these community level schemes has been accompanied by awareness campaigns organised by Youth and Women's Unions.

For collection at the community level to be successful, integration into the city collection system is essential, by the regular removal of garbage from intermediate collection stations and its disposal in sanitary landfills.

The minimisation of waste that has to be disposed of, can be done through household and collector level separation and the integration of traditional re-cyclers into the system. A reduction in garbage handling through directly loading waste from small garbage carts used in the alleys into large trucks brings about efficiencies and cost reductions. Some cities have privatised to secondary collection and disposal to the final dumping site.

A review of the existing solid waste management system needs to be undertaken and appropriate systems introduced to ensure that there is full coverage of all low income community areas.

10.5 Community Upgrading Plans

The development of community upgrading plans form the basis of the urban upgrading action plan. There is some experience in Can Tho through the UNDP/UNCHS project, where on a limited scale communities have worked together with officials at the phuong and city level to introduce environmental and sanitation improvements.

The first step in the community upgrading process is a participatory problem identification exercise along similar lines to the participatory research and analysis (PRA) methods that have been used in rural areas in other countries. This involves the community members themselves, in partnership with local level officials, undertaking surveys and mapping exercises to identify what they perceive as the problems in their area.

The community members and local officials will have a good knowledge of areas that seasonally flood, where garbage is thrown, where drains are blocked and where street lights are required, amongst other things. The problem identification exercise will also cover household level information, such as houses which lack sanitation facilities, connections to water supply, those who do not have land use and building occupancy certificates and houses that are built in dangerous conditions such as over rivers and ponds. Social, economic and health conditions can also be recorded on sketch maps of the areas.

The participatory problem identification exercise will result in the production of a community data base in both statistical, report and map formats shared with and understood by the community members and local level officials.

The next step is the identification of priorities and the development of the community upgrading action plans. At this level, communities will require some technical support. For example, the identification of connections into the city level drainage system and establishment of outfall levels will be required.

The identification of priorities will be influenced by affordability both at the community and project level. Community level upgrading plans are part of a city wide upgrading project for which there are limitations both in terms of overall budget and community level contributions, which can be in the form of cash or labour. Costed infrastructure and services matrices, an example of which is given earlier in this report, are an important tool in this process.

One of the more important, but difficult areas, is the adjustment of plots and houses to allow for the introduction of services and the improvement of alleys. The layout of the houses and alleys within the community also needs to be reviewed to facilitate the issue of building occupancy and land use certificates, and, if they are seen as a priority by the community, construction permits. The community and local level officials will also need to find a solution to the problem of households living in conditions that are dangerous or are a health hazard and those whose houses are blocking drains and natural water courses. In some cases, relocation may be the only solution, but wherever possible communities should be encouraged to find ways of re-adjusting within their own community areas.

The phasing of the implementation of the community upgrading plans will be influenced by engineering considerations and the need for "success stories" in the early stages, to provide encouragement to communities that are facing difficulties in developing their upgrading plans. Improvements in community level drainage will be a highly visible form of development but for

these to be successful they must be phased to coincide with secondary level network improvements and from an engineering point of view this often means "starting downstream".

The final package of improvements in terms of components and standards in any community will be decided upon by the prioritisation exercise carried out in the community, within the context of the improvements that can be provided under the project, taking into account the overall budget and community level contributions.

Low income communities are unlikely to be able to reach city level standards in one step. Community based urban upgrading is therefore an incremental approach, that brings about an immediate improvement in living conditions that may eventually lead towards these communities being able to afford "city level" standards.

Communities in other parts of the city may have already found solutions to problems faced in other areas and the setting up of a network of low income communities and their local officials partners will bring about an exchange of ideas and support the development from community level to city scale.

10.6 Capacity Building

Apart from limited experience under the UNDP/UNCHS project, noted above, the concept of community based upgrading plans is relatively new. The communities themselves, local and city level officials, local leaders and mass organisations, will all require support and capacity building, not only in technical matters, but also in terms of working together as partners. The traditional approach has been for communities to be asked to participate in projects identified by government officials and for government officials to participate in a process whereby projects are identified through working together as partners with local communities will require changes in attitudes and working relationships.

Training and capacity building in the preparation of community upgrading plans will be required at the very beginning of the process.

10.7 On Plot Improvements

Although much of the improvement work will be in common areas and will benefit the community as a whole, individual connections to service networks and on plot improvements such as toilets and bathrooms as well as house upgrading are essential for households to gain the full benefit from the upgrading activities.

Urban poor households face difficulties both in terms of the documentation required to obtain official connections to services and the actual cost of the connections. As a first step, transparency in the procedures and documents required, as well as the cost of obtaining the service connections can bring about major improvements in accessibility. As a second step, improvements in procedures, such as those already implemented in some cities under the national public administration reform programme need to be introduced. The "one stop shops", with their public service delivery approach, are proving to be successful in helping low income families gain access to public services.

The cost of service connections as well as small scale physical improvements are often beyond the affordability of low income families and the introduction of loans schemes, complimentary to the urban upgrading programme are required. There are examples of successful schemes implemented elsewhere, such as loans through the Women's Union in Haiphong, which could be studied for their possible implementation in Can Tho.

10.8 Security of Tenure and Legal Issues

Lack of security of tenure, mainly in the form of building occupancy and land use certificates and difficulties faced by lack of registration in the city are priority issues for many low income households. The cost of, and lack of transparency in the process makes it very difficult for households to be able to obtain security of tenure. As a result, many are reluctant to invest in house improvements for fear that they may lose their houses without reasonable compensation.

These are areas of public administration reform where a step-by-step approach is required. Firstly to improve transparency in existing processes and then to reform procedures.

The registration of households in the city is a more difficult issue. The immediate problem faced by low income households is access to services and health and education facilities. Again a step-by-step approach may be appropriate, which allows access to basic services.

10.9 Resettlement

Some element of resettlement may be inevitable as part of an urban upgrading project, but it should be seen as a method of last resort. There are a limited number of families who are living in conditions which are dangerous from a safety or health point of view and in some areas essential services may have to be provided where low income families are living.

Where there is no alternative, resettlement should take place to locations where there is a minimum of disruption to existing social and economic networks and where there is adequate compensation to allow the families to obtain security of tenure on the new site and construct basic housing. The provision of support by community development workers, to assist families in overcoming inevitable difficulties is essential to minimise the problems they will face. the World Bank and other donors have developed guidelines for essential resettlement which take into account international experience but which need to be adapted to local conditions.

10.10 Construction of New Housing

The need for new housing needs to be taken into account within an overall housing policy framework. If population and household projections prove to be correct, Can Tho will need about 5,000 new houses to be constructed per year, over the next ten years, of which about 2,200 will b required for low income households. Land needs to be identified and developed so that new house construction can take place and the possibility of low income communities forming in their present condition, reduced.

11. CAN THO CITY ACTION PLAN

11.1 Basic Assumptions

The Action Plan for Can Tho City is based on population projections, estimates of poor, nearly poor and vulnerable households, access to services and infrastructure, housing and costs estimates for urban upgrading and relocation described in the earlier section of this report.

The key figures used in the Action Plan preparation are as follows:

(a) Population

The population will grow to about 550,000 by 2010 and that by that time there will be 183,000 households. It is estimated that there will be an increase in population of about 210,000 over the next 10 years. Household formation is a function of average household size. Official figures assume a substantial reduction in average household size from 4.02 to 3.01. This may be over optimistic. However, it is likely that at least 5,500 new households will be formed each year and this figure represents the need for additional housing stock. Out of these, 2,200 are likely to fall in the various categories of "poor".

(b) Poor, Nearly Poor and Vulnerable Households

Using the official definition of urban poor households, it was estimated that there were 1,703 poor households (2.37% of the total), although this figure may not take into account unregistered households. A 2001 survey of low income communities identified 2,332 households living in low income areas. However, in 2000, 27% of the housing stock was described as "temporary" and an additional 17% of houses had thatched roofs. It is likely that a substantial number of households living in these houses were "nearly poor" or "vulnerable". Therefore about 44% of the households fall into this category.

More recent surveys have estimated that there are about 16,400 households living in 11 Phuongs in the city poor or nearly poor and are in areas that are lacking in basic infrastructure.

It has been assumed that about 44% of households are poor, nearly poor and vulnerable or do not have access to basic infrastructure and adequate housing.

(c) Existing Access to Services and Infrastructure

The following estimates have been used in calculating the need for improved access to services and infrastructure:

- 30% did not have their own metered water supply
- 30% did not have had their own toilets
- 27% did not have electricity connections
- 40% of the alleys did not have street lights
- 19% of the alleys were not paved
- 21% of the alleys were subject to regular flooding
- 60% of the households were not connected to a drainage system
- In the 25 low income communities 57% of the households did not have garbage collection

(d) Cost of House Construction

Most low income families use small private contractors or direct labour for house construction and repairs. Costs of construction vary from about 1,500,000 VND per square metre for grade 1

and 2 housing to around 300,000 VND per square metre for simple houses with brick columns, metal sheet roof and tiled floors.

(e) Cost of Developing Relocation Sites

Analysis of a number of relocation sites was undertaken, including the land price, land filling and infrastructure costs. The cost of land available for housing varied according to the location of the site and therefore the price of land, but a figure of 350,000 to 450,000 VND per square metre of housing land was an average figure. The cost of developing infrastructure varied from 350,000 to 450,000 VND per square metre.

(f) Infrastructure Services Costs

Costed matrices for various levels of infrastructure were prepared and an analysis of costs per hectare and costs per person were made, assuming densities of 400, 500 and 600 persons per hectare. Per capita costs of a basic set of infrastructure varies from US$ 78 to 99 per capita, at the intermediate level from US$ 98 to 123 per capita and at the highest level, US$ 128 to 156 per capita.

11.2 Action Plan Components

The action plan will cover low income communities in 11 Phuongs in Can Tho City, covered by the low income community mapping exercise. It is estimated that there are about 16,400 existing poor or nearly poor households in these areas lacking access to basic infrastructure or living in inadequate housing. This figure does not include unregistered households, who may make up a further 10% and it does not allow for the natural increase in population during the project implementation period.

The Action Plan for Urban Upgrading in Can Tho City is made up of five main components:-

(a) Upgrading of existing identified low income areas

(b) Improvements to city level primary and secondary infrastructure

(c) Support for essential relocation, the provision of serviced land and housing to meet the demands of the growing population and improvements to existing housing

(d) Improvements in security of tenure

(e) Capacity building at both community and local government levels.

Details of the activities under each of these main components are as follows:-

11.2.1 Upgrading of existing identified low income areas:-

(a) Community Upgrading Plans

The basis for upgrading of existing low income areas is the preparation of community upgrading plans (CUPs). For this purpose it is recommended that Phuong level Ad Hoc Committees are established with representatives from the communities, mass organisations, Phuong and City level officials, as well as representatives from utility companies and the Transportation and Public Works Board. External consultants will also work with the communities to assist them in the preparation of the community upgrading plans.

The CUPs will include, amongst other things:

- Description of the existing situation and a mapping of existing plots and houses, whether they are formally recognised or not.
- Availability and condition of public and on plot sanitation, water supply and drainage facilities.
- Existing roads and alleys and public drains.
- Open drainage streams, canals and ponds.
- Electricity supply lines, street lights and houses with electricity connections and house meters.
- Identification of house plots, alleys and roads that are subject to regular flooding.
- Areas where the community feels that there are social problems.
- Existing housing conditions, including those that do not have building occupancy and land use certificates.
- Houses that are near or over existing drainage channels and those that are in dangerous areas or on very small or otherwise unsuitable plots.

Based on the costed services matrix, per capita or household cost ceilings and the communities ability to contribute to the improvements, a community upgrading plan is then prepared. This will identify priorities and a time frame for implementation. The costing exercise will also take into account operation and maintenance costs and the community's ability to pay for or participate in operation and maintenance. The community upgrading plan will include the identification of houses for relocation within the low income community area, or where there is no alternative, relocation outside.

(b) Physical improvements within the low income areas:-

- **Drainage, Road and Alley Improvements**
- Road and alley improvements, including re-alignment
- Drainage schemes in conjunction with roads and alleys
- Rehabilitation of existing roads, alleys and drains that have fallen into disrepair
- Rehabilitation of, and where cost effective extension of existing drainage system

- **Water Supply**
- Water supply distribution system to cover un-served areas, including provision for house connections
- Provision of new common water points where house connections are unaffordable
- Replacement of undersized or leaking water supply lines
- Provision bore wells where extension of supply network is not feasible

- **Electricity**
- Improvements to existing network especially street security lighting and where affordable, metered house connections

- **Sanitation**
- Support for households to install on plot sanitation with septic tanks according to local practice
- Provision of shared sanitation facilities where space does not permit individual facilities
- Rehabilitation of existing shared facilities where necessary
- Provision of community level sewerage networks where off site connections are available

- **Solid Waste Management**
- Introduction of community collection schemes on the principle of "socialisation" that link into city level solid waste management programme
- Separation of solid waste at source

- **Public buildings**
- There is a demand for public buildings suitable for use a pre-schools, clinics and community halls. These could be in the form of multi-purpose buildings, shared between smaller communities.

11.2.2 Improvements to city level primary and secondary infrastructure

There are currently proposals to improve the drainage system and treatment of waste water being developed by the City with the support of KfW. According to the preliminary low income community mapping exercise many of the areas fall within the central area drainage basin and are likely to be able to benefit from the drainage scheme. A study, including a preliminary assessment and cost estimate of critical primary and secondary infrastructure needed to serve low income communities is being prepared.

Connection to secondary networks will need to be made to ensure that low income communities gain maximum benefit from improvements in the city level drainage networks.

The Can Tho Water Supply Company only covers 65% of the population. Surveys of low income areas have also indicated that about 30% of the households do not have a metered supply. There are a number of proposals for extension of the existing network under consideration. Extension of the secondary network and connecting the un-served low income areas may be part of the off site improvements works programme.

Can Tho City has a number of ponds and open canals that form a part of its natural drainage network. The rehabilitation of these natural drainage canals and ponds, including the reduction of pollution and structures obstructing the flow of water will need to be considered as complimentary improvements in the city's primary and secondary infrastructure networks.

11.2.3 Support for essential relocation, the provision of serviced land and housing to meet the demands of the growing population and improvements to existing housing.

This will cover (a) resettlement of those affected by the project, (b) micro finance for housing improvements for low income families living in the upgraded areas, and (c) sites and services programme for the poor (open to all households in the city)

(a) Relocation.

Relocation will be only used as a last resort for households that are living in dangerous conditions, such as areas subject to frequent flooding and where flood prevention methods are not cost effective. Accurate estimates of the number of houses that are likely to fall in the category of essential relocation will only be available after detailed surveys of the low income areas and the preparation of the community upgrading plans. At this stage it is assumed that 20% of the households will fall into this category and will require plots and/or housing on relocation sites.

Wherever possible households will be encourage to build their own houses, but where this is not affordable a limited amount of rental housing may need to be constructed. The action plan will include the costs for the development of infrastructure and housing construction, but not land acquisition and compensation. Families who are going to be relocated should be involved in the planning and design of the resettlement schemes.

(b) Housing improvements

Incremental improvements are seen as a priority for households both in terms of quality of construction and space available. Raising plots and house floor above flood levels and upgrading roofing materials are priorities. Small, short term loans of US$ 300-700 would be suitable for this purpose.

(c) Sites and services programmes for poor urban households

A strategy to provide access to serviced plots of land, in suitable locations in terms of employment opportunities and at affordable costs is essential to address the longer term problem of poor households in the city. It is estimated that the population of Can Tho City will increase by about 210,000 over the next ten years. This is likely to result in about 5,500 households being formed each year. At current levels of 40% of the households being considered poor or nearly poor, there would be a demand for 2,200 low cost serviced plots of land per year for the next ten years. Assuming densities of 500 persons per hectare, about 40 hectares of land would therefore need to developed every year.

11.2.4 Security of Tenure and Legal Issues

Some form of security of tenure is essential to encourage households to make on plot investments and to contribute to the common improvements. The issue of Building Occupancy and Land Use Certificates (BOLUCS) to households, whether or not they have formal residential status will need to be supported so that the estimated 60% of households who currently do not have these certificates in urban Phuongs are able to obtain BOLUCS.

11.2.5 Capacity Building

The successful implementation of the Action Plan, both in terms of new and improved physical works and operation and maintenance will depend on the formation of new partnerships between communities, mass organisations, local level officials and city and provincial departments, service providers and executing agencies. It is recommended that support for capacity building at all levels to participate in the process is included in the action plans.

11.3 ACTION PLAN COSTS

(a) Upgrading of existing identified low income areas

Cost estimates have been based on a total of 16,400 households occupying an estimated 1,078 hectares. The figures are used for the highest standards in the service options and cost matrix. (See Table 7.1.1)

TABLE 11.3.1

Upgrading Cost Estimates

Service	Standards	Coverage	Estimated Costs US$
Land Filling	1 metre deep	20% of area	4,300,000
Water	One meter per household	30% of households	347,000
Sanitation	On plot toilet and bath	30% of households	1,146,000
Access	Access 3m wide	20% of area	3,234,000
Drainage	Drainage ditches along both sidewalks Drain pipe from each household 300,000VND	60% of households	3,302,000
Refuse Collection	Household bins, Communal collector	50% of households	54,000
Street lighting	20 poles per hectare	40% of area	575,000
Electric supply	1 meter per house	30% of households	452,000
TOTAL			US$ 13,410,000

(b) Improvements to city level primary and secondary infrastructure

It is not possible to give an estimate of the cost of this component at this stage. Local consultants are currently carrying out a preliminary assessment and preliminary cost estimate of the critical primary and secondary infrastructure needed to serve the low income communities.

(c) Support for essential relocation, the provision of serviced land and housing to meet the demands of the growing population and improvements to existing housing.

(i) Essential relocation

It is estimated that 20% of the existing poor households (3,280 households) may have to be relocated because they are living in dangerous conditions, such as over natural drainage channels or in areas where essential services may have to be provided. This estimate will need to be revised after the Community Upgrading Plans have been prepared. It is estimated the provision of basic infrastructure on a relocation site for 3,280 households is US$ 2,125,000.

(ii) New serviced plots

Provision of serviced plots of land for the needs of the urban poor population over a six year period, assuming that there would be a demand for 2,200 plots per year over a six year period. The estimated cost of infrastructure development is US$ 8,552,000.

(iii) Loans for Incremental Improvements

Loans for incremental house improvements for 25% of the urban poor households (4,000 households) at an average cost of US$ 500 per household. US$ 2,000,000.

(d) Security of Tenure and Legal Issues

Support to the improvement of the BOLUCS issuing process. Lump sum estimate of US$ 500,000

(e) Capacity Building

Training and capacity building for communities, local level, city and provincial officials. Lump sum estimate of US$ 300,000.

TABLE 11.3.2

Summary of Cost Estimates

DESCRIPTION	ESTIMATED COSTS
(a) Upgrading of existing identified low income areas	**US$ 13,410,000**
(b) Improvements to city level primary and secondary infrastructure	**To be estimated**
(c) Support for essential relocation, the provision of serviced land and housing to meet the demands of the growing population and improvements to existing housing. (i) Essential relocation (ii) Provision of serviced plots of land (iii) Loans for incremental house improvements	**(i) US$2,125,000** **(ii) US$ 8,552,000** **(iii) US$ 2,000,000**
(d) Security of Tenure and Legal Issues	**US$ 500,000**
(e) Capacity Building	**US$ 300,000**
TOTAL OF ESTIMATED COSTS	**US$ 26,887,000**

11.4 ACTION PLAN PRIORITISATION

The City of Can Tho has prioritised the Phuongs to be upgraded as follows:-

TABLE 11.4.1

Prioritisation and Phasing

Phase	Priority	Phuong	Poor Households
1	1.	An Cu	1,728
1	2.	Xuan Khanh	1,968
1	3.	An Nghiep	782
1	4.	An Lac	1,066
2	5.	An Thoi	1,848
2	6.	An Hoi	819
2	7.	An Phu	1,056
2	8.	An Hoa	819
3	9.	Thoi Binh	1,265
3	10.	Hung Loi	1,923
3	11.	Cai Khe	1,912

TABLE 11.4.2

Annual and Phasing Schedule

PHASE	DESCRIPTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
1.1	Capacity building for communities						
1.2	Support for issue of BOLUCS						
1.3	Preparation of detailed CUPs Phuongs 1-4						
1.4	Extension of secondary infrastructure networks for Phuongs 1-4						
1.5	Upgrading programme in:- An Cu (1728 households) Xuan Khanh (1968 households) An Nghiep (782 households) An Lac (1066 households)						
1.6	House improvement loans in Phuongs 1-4						
1.7	Relocation site infrastructure development for 1090 households						
1.8	Development of sites and services for 4,400 households						
2.1	Preparation of detailed CUPs Phuongs 5-8						
2.2	Extension of secondary infrastructure networks for Phuongs 5-8						
2.3	Upgrading programme in:- An Thoi (1848 households) An Hoi (819 households) An Phu (1056 households) An Hoa (2024 households)						
2.4	House improvement loans in Phuongs 5-8						
2.5	Relocation site infrastructure development for 1090 households						
2.6	Development of sites and services for 4,400 households						
3.1	Preparation of detailed CUPs Phuongs 9-11						
3.2	Extension of secondary infrastructure networks for Phuongs 9-11						
3.3	Upgrading programme in:- Thoi Binh (1265 households) Hung Loi (1923 households) Cai Khe (1912 households)						
3.4	House improvement loans in Phuongs 9-11						
3.5	Relocation site infrastructure development for 1090 households						
3.6	Development of sites and services for 4,400 households						