

SUPPORTING REPORT (2)

ANNEX 6 : SOCIAL DIMENSIONS

**THE STUDY ON STORM WATER DRAINAGE PLAN
FOR THE COLOMBO METROPOLITAN REGION
IN
THE DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA**

FINAL REPORT

VOLUME IV : SUPPORTING REPORT (2)

ANNEX 6 : SOCIAL DIMENSIONS

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CHAPTER 1 NECESSITY OF LAND ACQUISITION AND RESETTLEMENT

1.1 Minimization of Resettlement Attribute to Land Acquisition

In principle, the proposed storm water drainage plan mainly employs positive utilization of the vacant lowland as retention area. Because of this, widening of the existing canal and construction of new canals and pumping stations, which tend to cause relocation along with land acquisition for the construction, are minimized. As a result, scale of resettlement caused by land acquisition for the proposed project is minimized.

One of the components for the proposed schemes is improvement of existing canals. In the case of canals in residential area, houses and building structures have to be relocated in some extent as the existing canals are widened. Relocation and land acquisition can be minimized by utilizing a rectangular cross section for the canal instead of a trapezoidal cross section.

In the upper Nugegoda Ela and lower Delkanda Ela areas, vacant land is available near the existing canal so branch channel and diversion channel are proposed respectively to minimize resettlement.

1.2 Land to be Acquired for the Proposed Project

An estimated 31 ha of the lands have to be acquired for the structural measures of the proposed schemes as shown in the following table. As most of the land is in non-residential areas such as marshy lands the percentage of residential lands in total is rather low (8.9% in total).

Land Area to be Acquired and Residential Area to be Relocated

(Unit: m²)

| Scheme | Estimated Land Area to be Acquired | Surveyed Residential Area* | (%) |
|---|------------------------------------|----------------------------|---------|
| 1. Weras Ganga - Flood protection wall | 9,500 | 3,853 | (40.6%) |
| 2. Bolgoda Canal - Channel improvement | 31,600 | 339 | (1.1%) |
| 3. Nugegoda-Rattanaipitiya - Channel improvement | 67,975 | 21,338 | (31.4%) |
| 4. Ratmalana-Moratuwa - Urban drainage and ponds | 201,600 | 2,105 | (1.0%) |
| Total | 310,675 | 27,635 | (8.9%) |

Note: * The data is based on the Inventory Survey on Households to be Resettled as explained in the following section.

1.3 Identification of Houses and Structures to be Relocated

Based on proposed project boundaries drawn on the topographic map with a scale of 1:2,000, houses and building structures to be relocated by the proposed schemes are identified. The latest information on these houses and structures was confirmed in the field through the Inventory Survey on Households to be Resettled undertaken by a local consultant. Land survey was not conducted in the survey. Therefore, the numbers of houses and structures to be relocated is subject to change in further detailed study stage.

The number of houses and structures to be relocated are shown in the following table. Out of total 158 houses to be relocated, most are located in the Weras Ganga Scheme area (36 houses) and Nugegoda-Rattapitiya Scheme (98 houses). A small number are expected for the Bolgoda Canal Scheme (3 houses). In addition, 2 factories and a community hall are subject to relocation by the land acquisition.

Number of Houses and Structures to be Relocated

(Unit: nos.)

| Scheme | House/Structure to be Relocated | | |
|-------------------------|---------------------------------|---------|----------------|
| | House | Factory | Community Hall |
| 1. Weras Ganga | 36 | 0 | 0 |
| 2. Bolgoda Canal | 3 | 0 | 0 |
| 3. Nugegoda-Rattapitiya | 98 | 2 | 1 |
| 4. Ratmalana-Moratuwa | 16 | 0 | 0 |
| Total | 158 | 2 | 1 |

Source: EIA Study on Weras Ganga Basin Storm Water Drainage Plan, JICA Study Team, 2002

CHAPTER 2 SOCIO-ECONOMIC CHARACTERISTIC OF THE POTENTIAL RESETTLERS

2.1 Land Use Characteristic of the Residents along the Canal System

Land use characteristic along the canals in the feasibility study area can be broadly classified into two types of land use: residential area and non-residential lowland such as marshy lands and abandoned paddy field. The residential areas in the feasibility study area are densely populated in all places, especially Nugegoda-Rattanapitiya, Bolgoda Canal and Ratmalana-Moratuwa Scheme areas.

The socio-economic characteristics of the residential households along the canal system in the feasibility study area, were determined from the Inventory Survey on Households to be Resettled. Detailed analysis on the survey is mentioned in the following sections.

2.2 Inventory Survey on Households to be Resettled

The Inventory Survey on Households to be Resettled was conducted as part of the EIA Study for the feasibility study by subcontract to a local consultant. The objectives of the Inventory Survey on Households to be Resettled were to identify the land to be acquired and house/structure/movable properties to be relocated by the proposed schemes, to identify residential households to be resettled, and to collect their socio-economic data, opinions on improvement of their living environment, and intention and demand related to the resettlement.

Regarding the survey area, the survey for Nugegoda-Rattanapitiya Scheme extended 20 m from the present edge of the canal/stream on both sides along the canals. For the Bolgoda Canal Scheme area, the area lower than 1 m and below MSL was surveyed. For the Weras Ganga and Ratmalana-Moratuwa Schemes, the area lower than 2 m and below MSL was surveyed.

In the survey, an inventory of acquired land and house/structures to be relocated, and any socially significant properties such as religious facilities and sacred trees in and around the proposed project sites was prepared with the topographical maps with a scale of 1:2,000. The project-affected settlements and structures to be relocated were highlighted on the map.

2.3 Results of the Inventory Survey on Households to be Resettled

As mentioned above, the households to be relocated are identified from the surveyed households. The remainder of the surveyed households which will not be relocated can be considered as project beneficiaries because they are residing close to the project site of proposed schemes and will be protected from storm water damage by implementation of the proposed schemes. The number of beneficiaries is 1,386 households as shown in the following table.

Number of Households Surveyed and to be Relocated

(Unit: nos.)

| Scheme | Households surveyed and to be Relocated | | |
|---|---|--------------------------------|--|
| | Households Surveyed (a) | Households to be Relocated (b) | Households to be Benefited (c)=(a)-(b) |
| 1. Weras Ganga | | | |
| - Dredging and flood protection wall const. | 626 | 36 | 590 |
| - Weras Ganga Swamp Retention Area | 57 | 0 | 57 |
| - Maha Ela Retention Area | 100 | 0 | 100 |
| 2. Bolgoda Canal | | | |
| - Dredging and channel improvement | 3 | 3 | 0 |
| - Bellanwila-Attidiya Retention Area | 291 | 0 | 291 |
| 3. Nugegoda-Rattanapitiya | 406 | 98 | 308 |
| 4. Ratmalana-Moratuwa | 56 | 16 | 40 |
| Total | 1,539 | *153 | 1,386 |

Note: 5 households to be resettled were not able to be surveyed due to absences during the survey period.

Source: EIA Study on Weras Ganga Basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.1 Property-Related Characteristic

The durations of dwelling in present location are shown in the following table. People living in the survey area locating in the Ratmalana-Moratuwa area (Weras Ganga dredging and flood protection wall construction and Ratmalana-Moratuwa Schemes) stay rather shorter period among the surveyed households, while people in the proposed Bellanwila-Attidiya retention area live for longer period. On the whole, households to be resettled tend to live at their present location for a shorter period compared to other surveyed households.

Duration of Dwelling in Present Location

(Unit: nos.)

| Scheme | Duration of Dwelling | | | | | Total | Average year |
|---|----------------------|-------------|--------------|---------------|---------------|----------------|----------------|
| | Less 1 year | 1 – 5 years | 6 - 10 years | 11 - 20 years | Over 20 years | | |
| 1. Weras Ganga | | | | | | | |
| - Dredging and flood protection wall const. | 1 (0) | 196 (16) | 160 (7) | 192 (5) | 44 (0) | 593 (28) | 10.7 (6.6) |
| - Weras Ganga Swamp Retention Area | 0 (-) | 29 (-) | 14 (-) | 5 (-) | 3 (-) | 51 (-) | 7.8 (-) |
| - Maha Ela Retention Area | 0 (-) | 28 (-) | 18 (-) | 24 (-) | 19 (-) | 89 (-) | 14.8 (-) |
| 2. Bolgoda Canal | | | | | | | |
| - Dredging and channel improvement | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 3 (3) | 3 (3) | 33.3 (33.3) |
| - Bellanwila-Attidiya Retention Area | 2 (-) | 74 (-) | 58 (-) | 74 (-) | 72 (-) | 280 (-) | 16.2 (-) |
| 3. Nugegoda-Rattapitiya | | | | | | | |
| | 2 (1) | 85 (16) | 51 (13) | 106 (20) | 135 (32) | 379 (82) | 21.6 (24.7) |
| 4. Ratmalana-Moratuwa | | | | | | | |
| | 0 (0) | 13 (4) | 23 (5) | 12 (3) | 5 (2) | 53 (14) | 11.0 (12.0) |
| Total | 5 (1) | 425 (36) | 324 (25) | 413 (28) | 281 (37) | 1,448 (127) | 14.8 (19.5) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

Average land areas occupied by surveyed households are shown in the following table. Households living in the proposed Bellanwila-Attidiya retention area and Maha Ela retention area have largest land area on average per household, 367 m² and 351 m² respectively. This is probably because landowners, who owned large lands when the area was used for agriculture, are included

On the other hand, households living in the Bolgoda canal dredging and channel improve section and Ratmalana-Moratuwa Scheme reside on smaller land areas, on average 113 m² and 129 m² per household, respectively. Many households living on small land areas less than 50 m² were found in the Weras Ganga flood protection wall construction section (44 households) and Nugegoda-Rattapitiya Scheme (32 households).

Average Land Area Occupied by Surveyed Households

(Unit: number of households)

| Scheme | Average Land Area (m ²) | | | | Total | Average Area |
|---|-------------------------------------|-------------|-------------|-------------|----------------|------------------|
| | Less 50 | 51 - 100 | 101 - 200 | Over 200 | | |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 44 (3) | 154 (9) | 251 (12) | 162 (5) | 611 (29) | 171.9 (132.8) |
| - Weras Ganga Swamp Retention Area | 1 (-) | 2 (-) | 24 (-) | 28 (-) | 55 (-) | 220.4 (-) |
| - Maha Ela Retention Area | 0 (-) | 11 (-) | 31 (-) | 55 (-) | 97 (-) | 351.0 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 1 (1) | 0 (0) | 2 (2) | 0 (0) | 3 (3) | 112.9 (112.9) |
| - Bellanwila-Attidiya Retention Area | 17 (-) | 14 (-) | 70 (-) | 179 (-) | 280 (-) | 367.0 (-) |
| 3. Nugegoda-Rattanapitiya | | | | | | |
| | 32 (11) | 49 (16) | 95 (23) | 200 (32) | 376 (82) | 317.4 (242.5) |
| 4. Ratmalana-Moratuwa | | | | | | |
| | 3 (2) | 21 (2) | 28 (5) | 4 (3) | 56 (12) | 128.7 (140.3) |
| Total | 98 (17) | 251 (27) | 501 (42) | 628 (40) | 1,478 (126) | 258.5 (204.7) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

The tenure status of land and house are shown in the following table. Many of the surveyed households living in and around the Weras Ganga flood protection wall construction section are illegal occupants (253 households). In contrast, a large percentage of the surveyed households living in the proposed Bellanwila-Attidiya retention area own their lands (237 out of 287 households in total surveyed).

Of the households to be resettled, more than a half own lands and houses (76 households). The remainder (57 households including 35 illegal occupants) do not own their lands.

Tenure Status of Land and House

(Unit: number of households)

| Scheme | Tenure Status | | | | | Total |
|---|-----------------|---------------|-----------------|-----------------|---------------|-------------------|
| | (a) | (b) | (c) | (d) | (e) | |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 311 (6) | 1 (0) | 14 (1) | 253 (16) | 32 (5) | 611 (28) |
| - Weras Ganga Swamp Retention Area | 50 (-) | 1 (-) | 5 (-) | 0 (-) | 1 (-) | 57 (-) |
| - Maha Ela Retention Area | 75 (-) | 1 (-) | 13 (-) | 4 (-) | 5 (-) | 98 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 3 (3) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 3 (3) |
| - Bellanwila-Attidiya Retention Area | 237 (-) | 8 (-) | 30 (-) | 8 (-) | 4 (-) | 287 (-) |
| 3. Nugegoda-Rattanapitiya | 289 (53) | 7 (3) | 46 (12) | 50 (18) | 6 (1) | 398 (87) |
| 4. Ratmalana-Moratuwa | 27 (14) | 0 (0) | 0 (0) | 22 (1) | 6 (0) | 55 (15) |
| Total | 992 (76) | 18 (3) | 108 (13) | 337 (35) | 54 (6) | 1,509(133) |

Note: (a): Own land and house, (b): Rent land and own house, (c): Rent land and house, (d): Illegal occupancy of land & own house, (e): Others (mostly land permit in public land)
The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

The ownership statuses of land are shown in the following table. Most of land where surveyed households reside is privately-owned. It is highly probable that the households living in the public land such as State land and local authority's land are illegal occupants except for the households living in the permitted land.

Ownership Status of Land

(Unit: number of households)

| Scheme | Owner Status of Land | | | | | Total |
|---|----------------------|----------------|---------------|-----------------|-----|-------------------|
| | (a) | (b) | (c) | (d) | (e) | |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 203 (1) | 52 (7) | 74 (2) | 287 (17) | | 617 (27) |
| - Weras Ganga Swamp Retention Area | 56 (-) | 0 (-) | 0 (-) | 0 (-) | | 56 (-) |
| - Maha Ela Retention Area | 94 (-) | 0 (-) | 0 (-) | 0 (-) | | 94 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 3 (3) | 0 (0) | 0 (0) | 0 (0) | | 3 (3) |
| - Bellanwila-Attidiya Retention Area | 262 (-) | 4 (-) | 5 (-) | 8 (-) | | 279 (-) |
| 3. Nugegoda-Rattanapitiya | 323 (64) | 24 (7) | 11 (7) | 21 (9) | | 379 (87) |
| 4. Ratmalana-Moratuwa | 23 (15) | 5 (0) | 3 (0) | 24 (0) | | 55 (15) |
| Total | 964 (83) | 85 (14) | 93 (9) | 340 (26) | | 1,483(132) |

Note: (a): Privately owned land, (b): State land owned by UDA or SLLRDC, (c): Local authority's land, (d): Permitted land owned by UDA/MC/SLLRDC
The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.2 Socio-economic Characteristic

The average numbers of household member are shown in the following table. Average number in total surveyed households and households to be resettled are 4.2 and 4.4 persons/household respectively.

Average Number of Household Member

(Unit: number of households)

| Scheme | Average Number of Household Member (person) | | | | |
|---|---|------------|----------|------------|----------------|
| | Less 3 | 3 – 5 | Over 5 | Total | Average Number |
| 1. Weras Ganga | | | | | |
| - Dredging and flood protection wall const. | 44 (4) | 493 (20) | 89 (5) | 626 (29) | 4.2 (4.0) |
| - Weras Ganga Swamp Retention Area | 7 (-) | 43 (-) | 7 (-) | 57 (-) | 4.0 (-) |
| - Maha Ela Retention Area | 10 (-) | 75 (-) | 13 (-) | 98 (-) | 4.0 (-) |
| 2. Bolgoda Canal | | | | | |
| - Dredging and channel improvement | 1 (1) | 2 (2) | 0 (0) | 3 (0) | 4.0 (4.0) |
| - Bellanwila-Attidiya Retention Area | 42 (-) | 189 (-) | 56 (-) | 287 (-) | 4.2 (-) |
| 3. Nugegoda-Rattanapitiya | 55 (9) | 258 (58) | 61 (14) | 374 (81) | 4.1 (4.4) |
| 4. Ratmalana-Moratuwa | 0 (0) | 46 (11) | 10 (4) | 56 (15) | 4.7 (5.0) |
| Total | 159 (14) | 1,106 (91) | 236 (23) | 1,501(125) | 4.2 (4.4) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

The main occupations of household heads are shown in the following table. Major occupation among the surveyed households is labour, followed by unemployed. For the Maha Ela retention area section, unemployed status ranks first. These facts may show there is a potential employment opportunity in the area related to the proposed project.

Main Occupation of Household Heads

| Scheme | Ranking of Main Occupation (Top 5) | | | | |
|---|------------------------------------|-----------|--------|-----------|------------|
| | 1 | 2 | 3 | 4 | 5 |
| 1. Weras Ganga | | | | | |
| - Dredging and flood protection wall const. | N1 (N1,N2,C) | N2(E,H,J) | E (M) | H (-) | C (-) |
| - Weras Ganga Swamp Retention Area | N1 (-) | M (-) | C (-) | H, N2 (-) | B, D (-) |
| - Maha Ela Retention Area | M (-) | N1 (-) | N2 (-) | B, E (-) | A,D,H,J(-) |
| 2. Bolgoda Canal | | | | | |
| - Dredging and channel improvement | N1,N,E (N1,N,E) | - (-) | - (-) | - (-) | - (-) |
| - Bellanwila-Attidiya Retention Area | N1 (-) | N2 (-) | M (-) | E (-) | A (-) |
| 3. Nugegoda-Rattanapitiya | N1 (N1) | M (M,N2) | E (B) | B (C,E) | N2 (D,H) |
| 4. Ratmalana-Moratuwa | N1 (N1) | H (C) | C (E) | E (-) | F, J (-) |

Note: A: Senior official or manager, B: Professional, C: Technicians or associate professional, D: Clerk, E: Sales or service worker, H: Craft or related worker, J: Elementary occupation, M: Unemployed, N1: Labor, N2: Driver

The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

The religious characteristics of surveyed households are shown in the following table. The majority are Buddhist with other religions represented by much smaller numbers. This characteristic is similar for the households to be resettled. In the resettlement, the religious characteristic, especially for Hindu, Christians and Muslims in small

number groups, should be carefully considered and selection of the resettlement sites should be based on their preferences.

Religious Characteristics of Surveyed Households

(Unit: number of households)

| Scheme | Religions | | | | | |
|---|--------------------|---------------|---------------|---------------|--------------|--------------------|
| | Buddhist | Hindu | Christians | Muslims | Others | Total |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 557 (22) | 9 (1) | 50 (5) | 5 (1) | 0 (0) | 621 (29) |
| - Weras Ganga Swamp Retention Area | 56 (-) | 0 (-) | 0 (-) | 1 (-) | 0 (-) | 57 (-) |
| - Maha Ela Retention Area | 97 (-) | 0 (-) | 2 (-) | 0 (-) | 0 (-) | 99 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 3 (3) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 3 (3) |
| - Bellanwila-Attidiya Retention Area | 273 (-) | 1 (-) | 9 (-) | 2 (-) | 0 (-) | 285 (-) |
| 3. Nugegoda-Rattanapitiya | 317 (62) | 11 (5) | 25 (2) | 3 (2) | 0 (0) | 356 (71) |
| 4. Ratmalana-Moratuwa | 50 (15) | 0 (0) | 6 (0) | 0 (0) | 0 (0) | 56 (15) |
| Total | 1,353 (102) | 21 (6) | 92 (7) | 11 (3) | 0 (0) | 1,477 (118) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

The income level characteristic of surveyed households is shown in the following table. Approximately half the total households (722 households out of total 1,478 households) are counted as low income households (less than Rs. 5,000/month). Further, 303 households fall into a category under the poverty line (Rs. 3,000/month).

Among the surveyed households, the Weras Ganga flood protection wall construction area and Ratmalana-Moratuwa Scheme area show higher rate of lower income households. The surveyed households in the proposed Bellanwila-Attidiya retention area and Nugegoda-Rattanapitiya Scheme have a high rate of highest income group (over Rs. 10,000/month).

Income Level Characteristics of Surveyed Households

(Unit: number of households)

| Scheme | Income (Rs./month) | | | | | | Total |
|---|--------------------|---------------|---------------|---------------|----------------|-------------|-------------|
| | Less 3,000 | 3,000 – 5,000 | 5,000 – 7,000 | 7,000 – 9,000 | 9,000 – 10,000 | Over 10,000 | |
| 1. Weras Ganga | | | | | | | |
| - Dredging and flood protection wall const. | 160 (12) | 237 (9) | 104 (4) | 54 (2) | 28 (1) | 40 (1) | 623 (29) |
| - Weras Ganga Swamp Retention Area | 7 (-) | 12 (-) | 12 (-) | 2 (-) | 4 (-) | 20 (-) | 57 (-) |
| - Maha Ela Retention Area | 24 (-) | 21 (-) | 17 (-) | 10 (-) | 3 (-) | 22 (-) | 97 (-) |
| 2. Bolgoda Canal | | | | | | | |
| - Dredging and channel improvement | 2 (2) | 1 (1) | 0 (0) | 0 (0) | 0 (0) | 0 (0) | 3 (3) |
| - Bellanwila-Attidiya Retention Area | 41 (-) | 70 (-) | 45 (-) | 22 (-) | 24 (-) | 82 (-) | 284 (-) |
| 3. Nugegoda-Rattanapitiya | 52 (16) | 61 (15) | 70 (22) | 36 (5) | 26 (3) | 113 (11) | 358 (72) |
| 4. Ratmalana-Moratuwa | 17 (7) | 17 (3) | 5 (1) | 5 (2) | 3 (0) | 9 (2) | 56 (15) |
| Total | 303 (37) | 419 (28) | 253 (27) | 129 (9) | 88 (4) | 286 (14) | 1,478 (119) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.3 Infrastructure Coverage

The infrastructure coverage for the surveyed households is shown in the following table. The infrastructure coverage on all items for the households to be resettled is less than that of the total households surveyed.

Infrastructure Coverage for Surveyed Households

| Scheme | Infrastructure Coverage | | | | |
|---|----------------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|
| | Electricity | Water supply pipe | Telephone | Individual toilet | Drain pipe |
| 1. Weras Ganga | | | | | |
| - Dredging and flood protection wall const. | 468/626 (19/29) | 503/626 (20/29) | 124/626 (2/29) | 531/626 (22/29) | 101/626 (3/29) |
| - Weras Ganga Swamp Retention Area | 52/57 (-) | 51/57 (-) | 10/57 (-) | 54/57 (-) | 16/57 (-) |
| - Maha Ela Retention Area | 81/100 (-) | 10/100 (-) | 25/100 (-) | 88/100 (-) | 3/100 (-) |
| 2. Bolgoda Canal | | | | | |
| - Dredging and channel improvement | 2/3 (2/3) | 3/3 (3/3) | 0/3 (0/3) | 3/3 (3/3) | 1/3 (1/3) |
| - Bellanwila-Attidiya Retention Area | 251/291 (-) | 232/291 (-) | 127/291 (-) | 264/291 (-) | 53/291 (-) |
| 3. Nugegoda-Rattanapitiya | 313/406 (54/88) | 281/406 (49/88) | 176/406 (21/88) | 309/406 (58/88) | 83/406 (8/88) |
| 4. Ratmalana-Moratuwa | 46/56 (9/15) | 32/56 (9/15) | 5/56 (2/15) | 40/56 (11/15) | 8/56 (3/15) |
| Total | 1,213/1,539 (79%) (84/135) (62%) | 1,112/1,539 (72%) (81/135) (60%) | 467/1,539 (30%) (25/135) (16%) | 1,289/1,539 (84%) (94/135) (70%) | 265/1,539 (17%) (15/135) (11%) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Coverage: covered number/total number of households surveyed

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.4 Recognition and Opinion on Storm Water Drainage Improvement

In the household survey, the extent of recognition and opinion on the storm water drainage issue was asked of the households surveyed. The most significant issue recognized was flooding, followed by water stagnation.

Issue on Storm Water Drainage

| Scheme | Ranking of Issue on Storm Water Drainage | | | | | |
|---|--|-------|-------|-------|-------|-------|
| | (a) | (b) | (c) | (d) | (e) | (f) |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 1 (1) | 2 (2) | 5 (4) | 4 (-) | 3 (3) | - (-) |
| - Weras Ganga Swamp Retention Area | 1 (-) | 1 (-) | - (-) | 3 (-) | 2 (-) | - (-) |
| - Maha Ela Retention Area | 1 (-) | 3 (-) | - (-) | - (-) | 2 (-) | 4 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 2 (2) | - (-) | - (-) | - (-) | 1 (1) | - (-) |
| - Bellanwila-Attidiya Retention Area | 1 (-) | 2 (-) | 5 (-) | 4 (-) | 3 (-) | 6 (-) |
| 3. Nugegoda-Rattanapitiya | | | | | | |
| | 1 (1) | 2 (2) | 5 (-) | 4 (2) | 3 (3) | - (-) |
| 4. Ratmalana-Moratuwa | | | | | | |
| | 1 (1) | 2 (3) | - (-) | 4 (-) | 3 (2) | - (-) |

Note: (a): Flooding, (b): Water stagnation, (c): Siltation and blockage due to water weeds, (d): Lack of storm water drainage facilities, (e): Water pollution, (f): No issue
The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.5 Recognition and Opinion on Environmental Issues

As shown in the following table, the major concern on environmental issues was water pollution, followed by hygiene issues related to the mosquito. Both issues have close linkage with the storm water drainage.

Recognition of Environmental Issues

| Scheme | Concerns on Environmental Issues | | | | | |
|---|----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|---------------------------------|
| | (a) | (b) | (c) | (d) | (e) | (f) |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 489/626 (26/29) | 86/626 (3/29) | 65/626 (1/29) | 201/626 (10/29) | 236/626 (11/29) | 313/626 (16/29) |
| - Weras Ganga Swamp Retention Area | 37/57 (-) | 0/57 (-) | 1/57 (-) | 14/57 (-) | 37/57 (-) | 54/57 (-) |
| - Maha Ela Retention Area | 67/100 (-) | 14/100 (-) | 14/100 (-) | 13/100 (-) | 25/100 (-) | 84/100 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 3/3 (3/3) | 1/3 (1/3) | 1/3 (1/3) | 2/3 (2/3) | 1/3 (1/3) | 3/3 (3/3) |
| - Bellanwila-Attidiya Retention Area | 221/291 (-) | 14/291 (-) | 16/291 (-) | 61/291 (-) | 131/291 (-) | 257/291 (-) |
| 3. Nugegoda-Rattanapitiya | 315/406 (72/88) | 23/406 (5/88) | 55/406 (18/88) | 182/406 (55/88) | 152/406 (36/88) | 269/406 (56/88) |
| 4. Ratmalana-Moratuwa | 42/56 (12/15) | 6/56 (0/15) | 5/56 (1/15) | 27/56 (8/15) | 44/56 (11/15) | 47/56 (12/15) |
| Total | 1,174/1,539 (113/135) | 144 /1,539 (9/135) | 157/1,539 (21/135) | 500/1,539 (73/135) | 626/1,539 (58/135) | 1,027/1,539 (87/135) |

Note: (a): Water pollution, (b): Air pollution, (c): Noise, (d): Offensive odor, (e): Waste/garbage, (f): Hygiene issue related to mosquito

The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

In the household survey, households were asked their opinion on source/cause of the water pollution in the canal. In the areas of the Weras Ganga dredging and flood protection wall construction, Nugegoda-Rattanapitiya Scheme and Ratmalana-Moratuwa Scheme, garbage dumping was thought as a prime source of water pollution in the canal. In the proposed Weras Ganga swamp and Maha Ela retention areas, the view was that water stagnation caused the water pollution in the canal. In the area for the Bolgoda Canal Scheme including the proposed Bellanwila-Attidiya retention area, factories were recognized as prime source of water pollution in the canal.

Opinion on Water Pollution Source/Cause in the Canal

| Scheme | Ranking of Opinion on Water Pollution Source/Cause in the Canal | | | | | |
|---|---|-------|-------|-------|-------|-------|
| | (a) | (b) | (c) | (d) | (e) | (f) |
| 1. Weras Ganga | | | | | | |
| - Dredging and flood protection wall const. | 2 (2) | 3 (2) | 5 (3) | 1 (1) | 6 (5) | 4 (4) |
| - Weras Ganga Swamp Retention Area | 3 (-) | 1 (-) | 5 (-) | 2 (-) | - (-) | 4 (-) |
| - Maha Ela Retention Area | 2 (-) | 1 (-) | - (-) | 3 (-) | - (-) | 4 (-) |
| 2. Bolgoda Canal | | | | | | |
| - Dredging and channel improvement | 1 (1) | - (-) | - (-) | - (-) | - (-) | 2 (2) |
| - Bellanwila-Attidiya Retention Area | 1 (-) | 3 (-) | 4 (-) | 2 (-) | 6 (-) | 5 (-) |
| 3. Nugegoda-Rattanapitiya | | | | | | |
| | 4 (3) | 2 (2) | 6 (-) | 1 (1) | 5 (3) | 3 (4) |
| 4. Ratmalana-Moratuwa | | | | | | |
| | 2 (1) | 4 (-) | - (-) | 1 (2) | 5 (-) | 3 (3) |

Note: (a): Factory, (b): Water stagnation, (c): Blockage from water weeds, (d): Garbage dumping, (e): Direct connection of toilets, (f): No opinion

The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

The opinions on resolution of environmental issues are shown in the following table. Most of surveyed households consider that garbage dumping into the canal should be solved as first priority. Secondly, it was suggested that the proposed project should include environmental improvement measures.

Opinion on Resolution of Environmental Issues

| Scheme | Ranking of Opinion on Resolution of Environmental Issues | | | | | | |
|---|--|-------|-------|-------|-------|-------|-------|
| | (a) | (b) | (c) | (d) | (e) | (f) | (g) |
| 1. Weras Ganga | | | | | | | |
| - Dredging and flood protection wall const. | 1 (4) | 4 (3) | 5 (5) | 6 (-) | 3 (1) | 7 (-) | 2 (2) |
| - Weras Ganga Swamp Retention Area | 2 (-) | 5 (-) | 4 (-) | - (-) | 3 (-) | 1 (-) | 4 (-) |
| - Maha Ela Retention Area | 5 (-) | 4 (-) | 1 (-) | 6 (-) | 2 (-) | 6 (-) | 3 (-) |
| 2. Bolgoda Canal | | | | | | | |
| - Dredging and channel improvement | 1 (1) | 2 (2) | - (-) | - (-) | - (-) | - (-) | - (-) |
| - Bellanwila-Attidiya Retention Area | 1 (-) | 2 (-) | 4 (-) | 6 (-) | 3 (-) | 2 (-) | 5 (-) |
| 3. Nugegoda-Rattanapitiya | | | | | | | |
| | 1 (1) | 6 (4) | 2 (2) | 6 (6) | 3 (3) | 5 (6) | 4 (5) |
| 4. Ratmalana-Moratuwa | | | | | | | |
| | 1 (1) | 5 (2) | 3 (-) | 6 (-) | 2 (2) | - (-) | 4 (2) |

Note: (a): No dumping of garbage into canal, (b): No direct discharge of factory waste, (c): Awareness program for the public, (d): MC should not dump garbage on the marsh area, (e): Project should include environmental improvement, (f): Prevent mosquito problem, (g): No opinion

The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.6 Intention on Resettlement

The Inventory Survey on Households to be Resettled was conducted before the boundary of the proposed schemes was finally determined. Therefore, boundary of the survey area was set wider than the boundary of land acquisition for the proposed schemes. In the survey, intention on resettlement caused by the storm water drainage

project was asked to all surveyed households as potential resettlers in terms of acceptability of the resettlement.

More than half of the total surveyed households were not willing to accept the resettlement at all. However, tendency of the intention varies location to location. For example, more than half of the surveyed households living in the Weras Ganga dredging and flood protection wall construction section and Ratmalana-Moratuwa Scheme area answered that the resettlement could be accepted with some conditions.

Regarding the households to be resettled based on the project boundaries, half of the total households to be resettled answered that the resettlement can be fully accepted or accepted with some conditions. This is because most of these households living near the canal system are illegal occupants as mentioned above and it is expected that they cannot insist on staying. They also prefer better living condition in the resettlement sites.

Since the household survey was conducted in the early stage of the feasibility study preparation, the surveyed households were informed of the very limited information on the proposed schemes and the almost lack of information on the resettlement and related-assistance which was available to them during the survey. Therefore, households who answered that they “do not accept resettlement” may not necessarily have a rigid intention to refuse resettlement, though some 55% of the surveyed households replied they would “not accept”.

Acceptability of Resettlement

| Scheme | Acceptability of Resettlement | | | | |
|---|-------------------------------|-----------------------|------------|-----------|------------|
| | Fully accept | Accept with condition | Not accept | No answer | Total |
| 1. Weras Ganga | | | | | |
| - Dredging and flood protection wall const. | 8 (1) | 315 (18) | 291 (9) | 12 (1) | 626 (29) |
| - Weras Ganga Swamp Retention Area | 1 (-) | 18 (-) | 37 (-) | 1 (-) | 57 (-) |
| - Maha Ela Retention Area | 4 (-) | 27 (-) | 66 (-) | 3 (-) | 100 (-) |
| Sub-total | 13 (1) | 360 (18) | 394 (9) | 16 (-) | 783 (29) |
| 2. Bolgoda Canal | | | | | |
| - Dredging and channel improvement | 0 (0) | 2 (2) | 1 (1) | 0 (0) | 3 (3) |
| - Bellanwila-Attidiya Retention Area | 7 (-) | 57 (-) | 218 (-) | 9 (-) | 291 (-) |
| Sub-total | 7 (0) | 59 (2) | 219 (1) | 9 (0) | 294 (3) |
| 3. Nugegoda-Rattanapitiya | 9 (2) | 133 (33) | 212 (36) | 52 (17) | 406 (88) |
| 4. Ratmalana-Moratuwa | 2 (1) | 32 (10) | 21 (4) | 1 (0) | 56 (15) |
| Total | 31 (4) | 584 (63) | 846 (50) | 78 (18) | 1539 (135) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Basin Storm Water Drainage Plan, JICA Study Team, 2002

As shown in the following table, most of the total surveyed households (88%) prefer to receive compensation in the form of land and house rather than cash, in the case of resettlement. This characteristic is stronger for the households to be resettled (93%).

Preference of Compensation Method in Case of Resettlement

| Scheme | Preference of Compensation Method in Case of Resettlement | | | | |
|---|---|-----|--|-------|-------------|
| | Cash Compensation Only | | Land & House (or Money to Construct House) | | Total |
| 1. Weras Ganga | | | | | |
| - Dredging and flood protection wall const. | 58 | (2) | 534 | (26) | 592 (28) |
| - Weras Ganga Swamp Retention Area | 6 | (-) | 51 | (-) | 57 (-) |
| - Maha Ela Retention Area | 16 | (-) | 82 | (-) | 98 (-) |
| 2. Bolgoda Canal | | | | | |
| - Dredging and channel improvement | 0 | (0) | 3 | (3) | 3 (3) |
| - Bellanwila-Attidiya Retention Area | 32 | (-) | 254 | (-) | 286 (-) |
| 3. Nugegoda-Rattanapitiya | 50 | (5) | 304 | (68) | 354 (73) |
| 4. Ratmalana-Moratuwa | 6 | (1) | 48 | (14) | 54 (15) |
| Total | 168 | (8) | 1,276 | (111) | 1,444 (119) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Basin Storm Water Drainage Plan, JICA Study Team, 2002

Regarding the preferable location for resettlement site, while a large percentage of the total surveyed households (40%) prefer to remain near their present location, more than half of the households (53%) do not clarify their preference by withholding an answer.

Preferable Location for Resettlement Site in Case of Resettlement

| Scheme | Ranking of Preferable Location for Resettlement Site | | | | | | | | | |
|---|--|------|-----|-----|-------|-----|-----|------|-------|-------|
| | (a) | (b) | (c) | (d) | Total | | | | | |
| 1. Weras Ganga | | | | | | | | | | |
| - Dredging and flood protection wall const. | 285 | (17) | 47 | (2) | 5 | (0) | 289 | (10) | 626 | (29) |
| - Weras Ganga Swamp Retention Area | 27 | (-) | 0 | (-) | 0 | (-) | 30 | (-) | 57 | (-) |
| - Maha Ela Retention Area | 43 | (-) | 0 | (-) | 0 | (-) | 57 | (-) | 100 | (-) |
| 2. Bolgoda Canal | | | | | | | | | | |
| - Dredging and channel improvement | 2 | (2) | 0 | (0) | 0 | (0) | 1 | (1) | 3 | (3) |
| - Bellanwila-Attidiya Retention Area | 101 | (-) | 5 | (-) | 3 | (-) | 182 | (-) | 291 | (-) |
| 3. Nugegoda-Rattanapitiya | 142 | (25) | 18 | (5) | 12 | (3) | 234 | (55) | 406 | (88) |
| 4. Ratmalana-Moratuwa | 21 | (8) | 8 | (0) | 1 | (0) | 26 | (7) | 56 | (15) |
| Total | 621 | (52) | 78 | (7) | 21 | (3) | 819 | (73) | 1,539 | (135) |

Note: (a): Nearby present location, (b): Does not matter, (c): Any location, but preferably to apply public housing scheme, (d): Not willing to answer now
The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.7 Finding and Feedback from Surveyors

In addition to the direct inquiry to the households, some items which would provide supplementary information on the surveyed households were observed by the interviewers as shown below.

The majority of the total surveyed households (86%) answered the questions of the survey frankly. Around 14% of the households showed some cautiousness to the

survey. This is usual behavior because the proposed project had not yet been realized. It is reported that a small number of households in the study refused to answer the questionnaire. This was also expected in this kind of the survey.

Attitude of Answer to the Questions

| Scheme | Attitude of Answer to the Questions | | | |
|---|-------------------------------------|---------|----------|---------|
| | Frank/Straightforward | | Cautious | |
| 1. Weras Ganga | | | | |
| - Dredging and flood protection wall const. | 87.2% | (82.8%) | 12.8% | (17.2%) |
| - Weras Ganga Swamp Retention Area | 87.7% | (-) | 12.3% | (-) |
| - Maha Ela Retention Area | 75.8% | (-) | 24.2% | (-) |
| 2. Bolgoda Canal | | | | |
| - Dredging and channel improvement | 66.6% | (66.6%) | 33.3% | (33.3%) |
| - Bellanwila-Attidiya Retention Area | 83.9% | (-) | 15.7% | (-) |
| 3. Nugegoda-Rattanapitiya | | | | |
| 4. Ratmalana-Moratuwa | | | | |
| Total | 85.6% | (85.8%) | 14.4% | (14.2%) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

Regarding the concern on the resettlement caused by the proposed projects, more than half of the total surveyed households showed low interest on the resettlement (52%). On the other, more than half of the households to be resettled show rather high interest in the resettlement. This is probably because the households to be resettled who live nearby existing canal system might be more conscious that the canal improvement will be implemented causing resettlement in the near future.

Degree of Concern on Resettlement

| Scheme | Degree of Concern on Resettlement | | | |
|---|-----------------------------------|---------|-------|---------|
| | High | | Low | |
| 1. Weras Ganga | | | | |
| - Dredging and flood protection wall const. | 58.7% | (79.3%) | 41.2% | (20.7%) |
| - Weras Ganga Swamp Retention Area | 59.6% | (-) | 40.4% | (-) |
| - Maha Ela Retention Area | 32.3% | (-) | 67.7% | (-) |
| 2. Bolgoda Canal | | | | |
| - Dredging and channel improvement | 66.6% | (66.6%) | 33.3% | (33.3%) |
| - Bellanwila-Attidiya Retention Area | 31.5% | (-) | 68.5% | (-) |
| 3. Nugegoda-Rattanapitiya | | | | |
| 4. Ratmalana-Moratuwa | | | | |
| Total | 48.5% | (54.2%) | 51.5% | (45.8%) |

Note: The numbers in parentheses indicate the numbers of households to be relocated out of total number of the households surveyed.

Source: EIA Study on Weras Ganga Sub-basin Storm Water Drainage Plan, JICA Study Team, 2002

2.3.8 Overall Analysis

Among the total households surveyed in the Inventory Survey on Households to be Resettled, a relative large number of illegal occupants were identified

(337 households), especially areas for proposed Weras Ganga flood protection wall construction (253 households) and Nugegoda-Rattanapitiya Scheme (50 households).

A wide range of land occupations were observed among the surveyed households, ranging from 3 m² to 6,000 m², as well as various income levels in the feasibility study area. These tendencies were observed for the households to be resettled as well. Therefore, appropriate and fair assistances should be considered for various socioeconomic characteristic of the households in preparation of the resettlement.

CHAPTER 3 RESPONSIBLE ORGANIZATIONS

3.1 Organizational Responsibilities

In SLLRDC as a project executing agency, Canal Development & Maintenance Division (CDM) is in charge of the land acquisition and resettlement with assistance of NHDA, which has many experiences on resettlement from similar projects. CDM is responsible for the preparation and implementation of the Resettlement Action Plan (RAP) under the National Involuntary Resettlement Policy (NIRP). For the land acquisition process, acquiring officers in relevant five local authorities conduct legal communication with landowners (such as property survey and price negotiations) under official request from SLLRDC for the acquisition of designated lands for the proposed schemes.

For the resettlement, relevant five local authorities undertake official procedures and activities related to the resettlement by direct communication with the households to be resettled. In each local authority, Housing and Community Development Committee (HCDC) is organized to resolve social issue including the resettlement-related matters such as opinion and grievances from households to be resettled. Since five local authorities are related to the project, a HCDC coordination committee (HCC) should be established under SLLRDC as recommended in the Annex 2. HCC instructs relevant HCDCs to implement appropriate assistance to the households to be resettled at same level. Organizational structure for HCDC and HCC is shown in Annex 2.

CHAPTER 4 ASSISTANCE FOR RESETTLEMENT

4.1 Necessity of Preparation of the Resettlement Action Plan

According to the Sri Lanka National Involuntary Resettlement Policy (NIRP), which was approved by the Cabinet of Ministers on May 24, 2001, a comprehensive Resettlement Action Plan (RAP) has to be prepared for the proposed project if 20 or more families are affected (resettled) by the project.

Under the existing Land Acquisition Act No.9 of 1950 (LAA), compensation is made only for loss of properties such as land and house, however, there is no legal assistance and compensation of losses caused by the resettlement. At present, revision of relevant laws on resettlement such as LAA and National Environmental Act and preparation of relevant guidelines have been underway for proper implementation of the NIRP by Ministry of Lands and Ministry of Environment and Natural Resources. These revised laws and guidelines are supposed to take effect within a few years.

In line with these requirements, a RAP for the proposed scheme is prepared in this chapter. Based on items of the RAP mentioned below, more updated and detailed RAP should be elaborated to realize smooth implementation of the resettlement-related activities for the proposed schemes.

4.2 Entitlement of Compensation and Resettlement Assistance

According to the NIRP, “Affected persons who do not have documented title to land should receive fair and just treatment.” This means low-income households, even illegal occupants, are eligible for some assistance on resettlement. To determine the households who are eligible for compensation and resettlement assistance, a cut-off date should be fixed as soon as the project implementation is decided to avoid an unnecessary influx of ineligible people to the project area for compensation and land speculation.

4.3 Resettlement Assistance

For smooth land acquisition and successful resettlement, assistances by local authorities and relevant agencies to the households to be resettled are required from preparation stage before the resettlement to settlement stage after the resettlement. Examples of the resettlement assistances are shown in the following table. Some of the assistance should be decided and provided based on consultation process.

Example of Resettlement Assistances

| Items of Resettlement Assistances |
|---|
| 1. Assistance of resettlement site selection such as information on housing scheme nearby |
| 2. Assistance of house-moving such as provision of low cost truck |
| 3. Special assistance to vulnerable groups such as disabled and elderly persons |
| 4. Consultation on secure of employment in resettlement location in the case where affected household member have to change his/her job due to the resettlement |
| 5. Consultation on livelihood issue after resettlement |
| 6. Consultation on educational matters for children such as availability of school in the resettlement location |
| 7. Consultation on any opinion and grievance related to compensation and resettlement issue |

4.4 Preparation of Resettlement Sites

The households to be resettled are generally located scatteredly except for the Delkanda Ela area. Therefore, community-based resettlement, as for past similar projects, is not applied for the proposed schemes. Based on consultation with each household, resettlement location for each household to be resettled should be secured appropriately with assistance of the HCDC, NHDA and SLLRDC.

According to the Inventory Survey on Households to be Resettled, most of the households to be resettled prefer a resettlement location near the current location. However, difficulties are expected in securing resettlement location for each household in the Delkanda Ela area where population density is high, with relative large number of the households to be resettled (60 households). In this situation, part of proposed retention area at the downstream of the Nugegoda Ela would be a candidate site for the resettlement site by appropriate land preparation and installation of necessary infrastructure as shown in Figure 4.4.1.

In the case where all 60 households to be resettled prefer to move to the proposed resettlement site, some 10,000 m² of the lands, which are almost same area with lands presently occupied by the households to be resettled, are required at maximum based on replacement method which compensate same area of land as before under NIRP and to be amended in the Land Acquisition Act. The data on required land area was obtained from results of the Inventory Survey on Households to be Resettled.

CHAPTER 5 PUBLIC INVOLVEMENT

5.1 Public Involvement

Up to F/S stage, technical study was mainly conducted to prepare the base of the storm water drainage plan from a civil engineering viewpoint. During this stage, information on the present condition on storm water damage, opinion and preference on storm water drainage improvement and possibility of the resettlement were collected from relevant households through the inventory survey as preliminary public involvement for the planning.

In a further stage of the project, explanation meetings on the project and resettlement should be held with the households to be resettled as earlier as possible. In addition, consultation with the households to be resettled should be conducted by relevant organizations such as local authorities, NHDA and SLLRDC to obtain requirements of the households to be resettled on resettlement-related matters such as preference of the resettlement location and requirement of assistance for livelihood recovery in the post-resettlement. The RAP should be elaborated to meet demand of the households to be resettled. Thus, the public involvement on the resettlement should be undertaken at the earliest stage of the project as possible.

5.2 Community Contract System

The community contract system was introduced as new approach under the Million Houses Program in 1980s¹. Under the system, community infrastructure and amenities such as footpaths, drain, toilet and community center is constructed by communities themselves as contractor under supervision of relevant agency. Under the system, only communities registered as Community Development Council (CDC) can be eligible for the contract system. The CDC is generally established through the CDC Formation Workshop, which is a part of workshop modules in the Community Action Planning (CAP) method dealing with specific aspects and needs of the communities².

The community contracted work is implemented by community under supervision of NHDA. Through the work, the community members can learn relevant skills by technical instruction by NHDA. In addition, sustainable operation and maintenance

¹ Community Contracts System Guidelines. NHDA. 1988

² Community Action Planning: Making Micro Plans for Community Improvement - CAP Workshop Module Guidelines Series. UNCHS/DANIDA, 1994 (The CAP method was established in NHDA under assistance of UNCHS and DANIDA in 1984 as community-level participatory planning methods.)

of the community infrastructure such as community drains can be expected by enhancement of the awareness of the necessity of the maintenance through the technical understanding.

Regarding the proposed schemes, it is recommended to apply the community contract system for the construction work, even for small parts of the construction, to allocate a part of project profit to the community and also to enhance public awareness on necessity of maintenance of the storm water drains by local communities. Among the proposed schemes, the community contract system will probably be applied to the drainage channel improvement work in the Ratmalana-Moratuwa Scheme.

In addition to the community contract, it is proposed to establish a system to employ the people affected by the Project as a labour-force with priority as much as possible taking into account the low-income level of the households affected by the Project.

CHAPTER 6 MONITORING AND EVALUATION

6.1 Monitoring and Evaluation

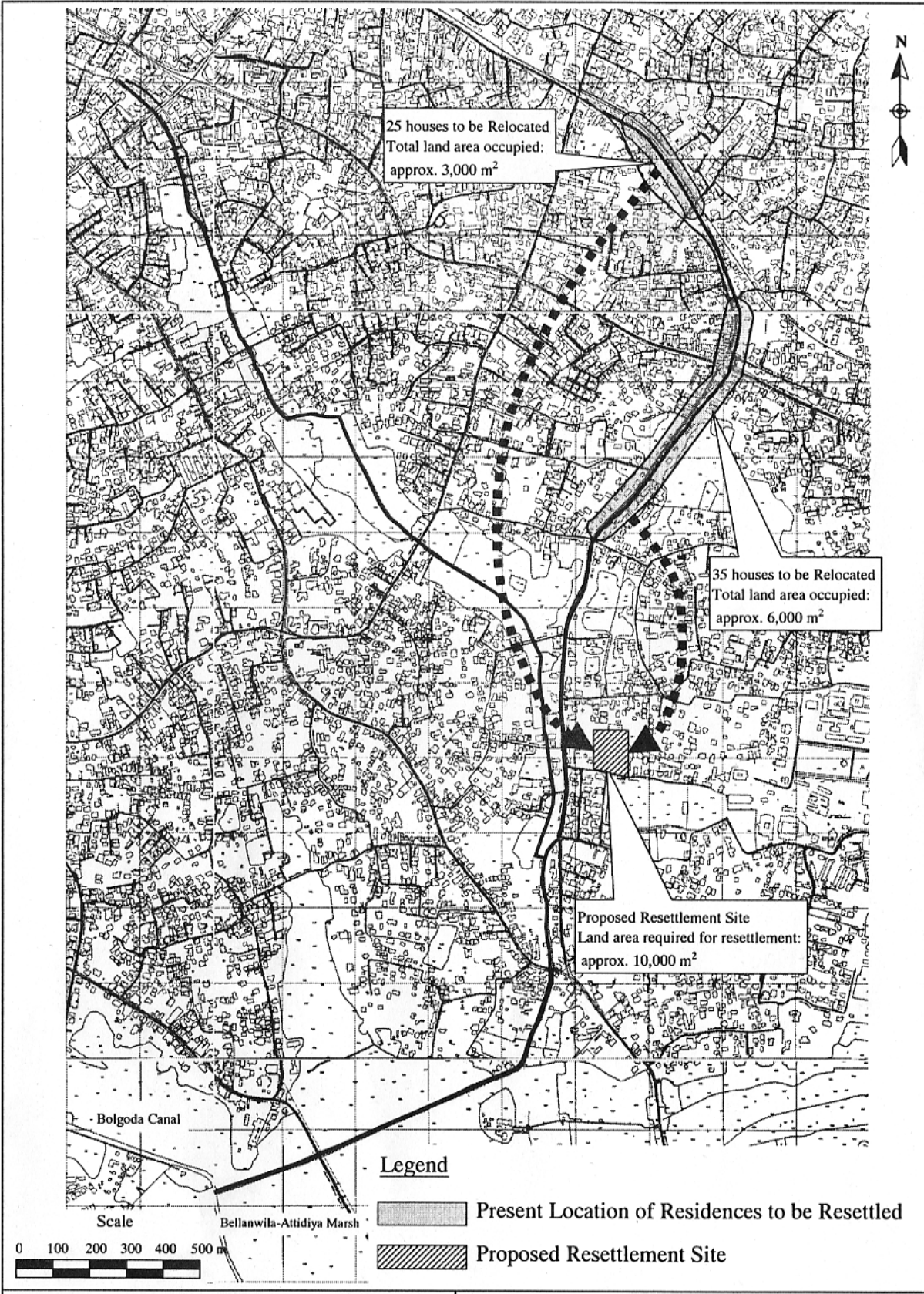
The resettlement assistances planned in the RAP should be monitored to confirm appropriate implementation and expected effectiveness. Based on the evaluation of monitoring results, countermeasure should be considered and executed promptly to implement the resettlement smoothly.

The households to be resettled need to recover their livelihood after the resettlement, to at least the same the previous livelihood level. The condition of the livelihood recovery of the households to be resettled should be monitored regularly after the resettlement. Where the livelihood recovery for the household is not achieving targets, additional assistance by the project should be examined and executed promptly. In addition to the planned items related to the resettlement activity, unexpected incidence and/or grievance from the households might occur and the monitoring activity should cover these matters. Example of monitoring items for resettlement are shown in the following table. In further study, a monitoring plan covering monitoring items, monitoring methods, frequency, organization and staff, necessary equipment, cost and budget arrangement should be prepared based on the implementation schedule of the proposed project.

Example of Monitoring Items for Resettlement

| Monitoring Items |
|---|
| 1. Payment of compensation such as amount of paid compensation and period of payment |
| 2. Provision of planned assistances such as consultation before resettlement and arrangement of move to resettlement site |
| 3. Livelihood recovery such as employment status, and income and expenditure |
| 4. Living condition such as installation of necessary infrastructures |
| 5. Any opinion and grievance |

Figures



*The Study on Storm Water Drainage Plan
for the Colombo Metropolitan Region
in the Democratic Socialist Republic of Sri Lanka*

Figure 4.4.1
Proposed Resettlement Site
for Delkanda Ela Area

JAPAN INTERNATIONAL COOPERATION AGENCY