

4.4 Bridge No.'s 4, 5, 6 and 7

4.4.1 Current Conditions around the Project Site

(1) Location

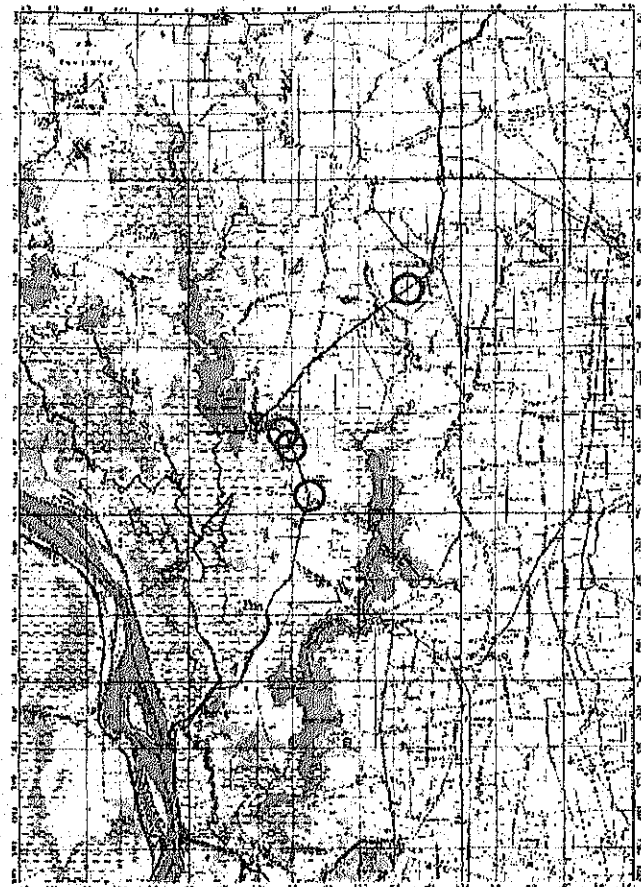
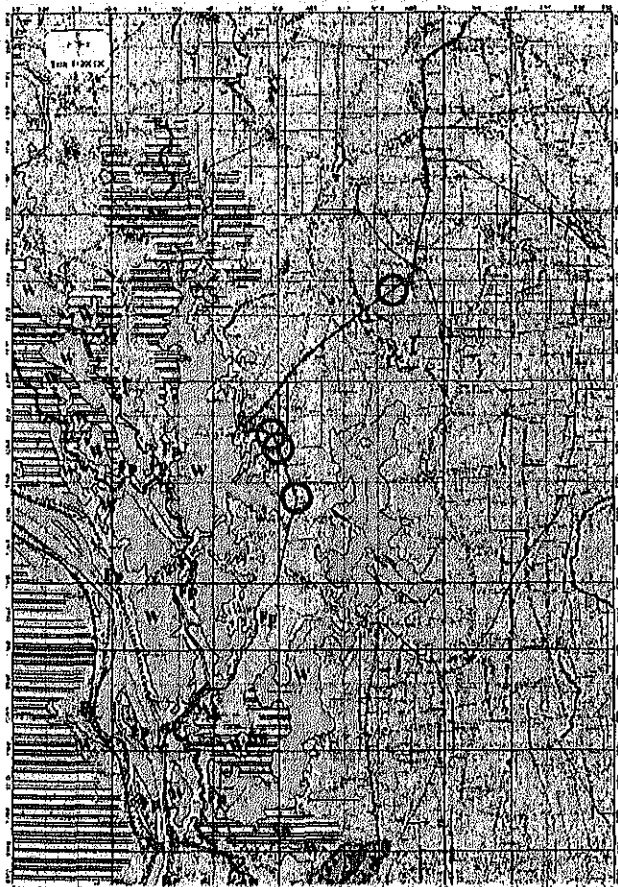
The locations of bridge No.'s 4, 5, 6 and 7 are shown in the table below.

Table 4.10 Location of Bridge No.'s 4, 5, 6 and 7

Bridge No.	No.4	No.5	No.6	No.7
Province	Prey Veng			
District	Peam Ro	Kamong Leav	Kamong Leav	Prey Veng
Commune	Peam Ro	Prey Kandieng	Baray	Me Bon
Village	Peam Kaoh	Prey Kandieng	Baray Lech	Me Bon
Road No.	NR.11			

(2) Topography

NR.11 runs from Neak Loeng to NR.7 near Komponcham. The four (4) bridges cross irrigation canals. The land in the vicinity of the project sites is flat, as shown in the right side figure.



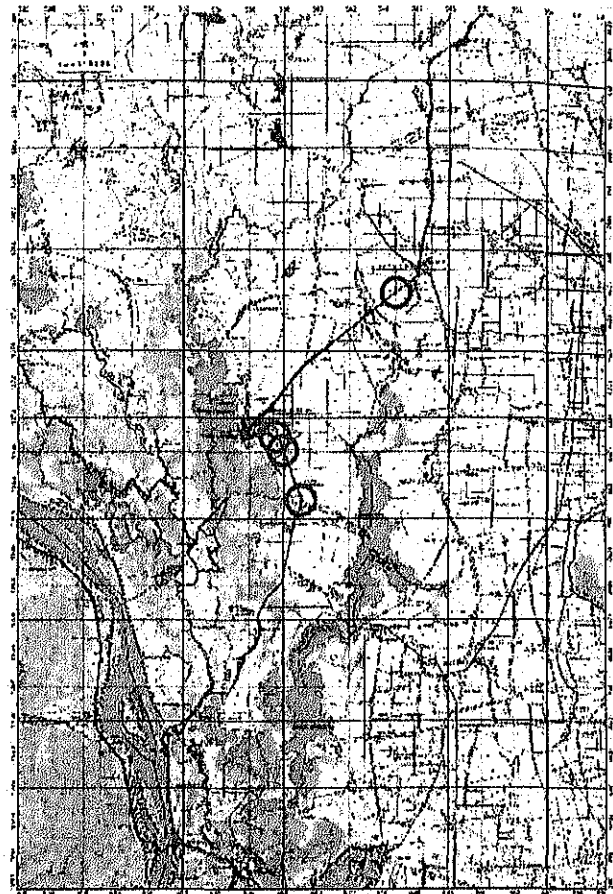
(3) Geology

The geology around the project areas is divided into three (3) types:

- 1) Organic deposits (Sw) in the north;
- 2) Floodplains (Fp), and water (W) in the west;
- 3) Organic deposits (Sw), floodplains (Fp), and water (W) in the south; and
- 4) Water (W) in the east.

(4) Land Use

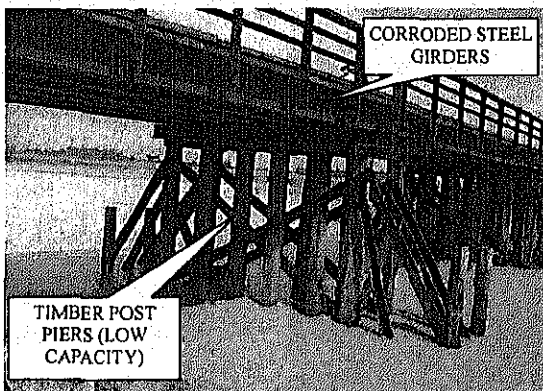
The land use around the project sites is categorized as paddy fields as shown in the right side land use map.



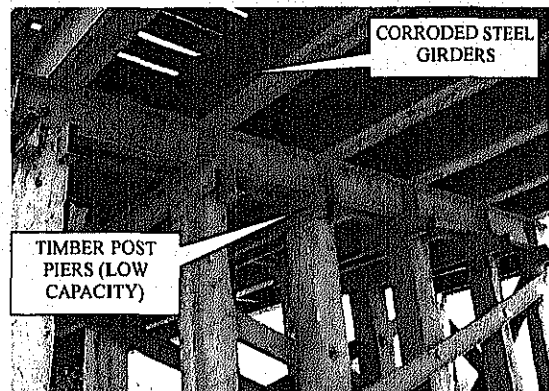
4.4.2 Current Conditions at the Project Site and Bridge Plan/Design

(1) Condition of the Existing Bridges and Outline of the Proposed Bridges

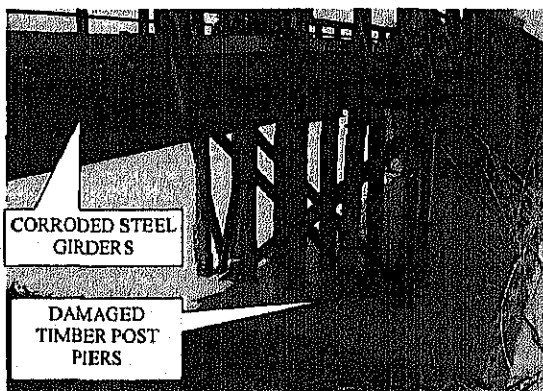
The existing bridges are in poor condition. The bridge widths are only 4.9 m to 5.4 m and this allows for only one way traffic. Therefore traffic has to wait for traffic from the opposite direction to pass before proceeding. This situation is dangerous for motorbikes and pedestrians due to the narrow bridge width. The bridges are at risk of collapse due to the poor structures.



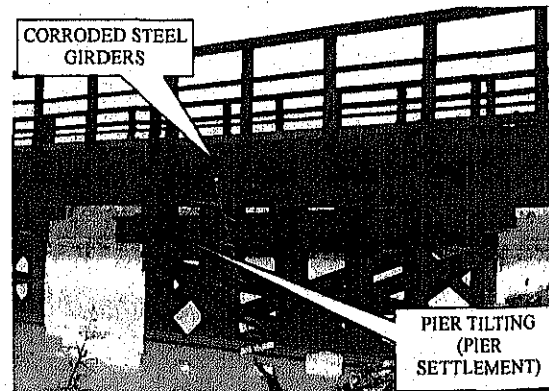
NR-11 Km 84+900
 Bridge No.4



NR-11 Km 88+094
 Bridge No.5



NR-11 Km 89+060
 Bridge No.6



NR-11 Km 103+475
 Bridge No.7

An outline of the existing and proposed bridges is shown in the table below.

Table 4.11 Outline of Existing and Proposed Bridges

	Existing	Capacity		Existing Bridge			PCU Traffic	Existing Condition
		Bridge Capacity (ton)	Live Load	Length (m)	Width (m)	Superstructure	2005	
	Design Load	2020						
4	Existing	15		42	5.4	I Steel + Timber	2,087	Very Poor
	Designed	T 44 L 44 HLP 240		42.6	12.5	PCDG (AASHTO Type IV)	17,325	-
5	Existing	15		84	5.4	I Steel + Timber	2,087	Very Poor
	Designed	T 44 L 44 HLP 240		92.6	12.5	PCDG (AASHTO Type IV)	17,325	-
6	Existing	15		45	4.9	I Steel + Timber	2,087	Very Poor
	Designed	T 44 L 44 HLP 240		69.6	12.5	PCDG (AASHTO Type IV)	17,325	-
7	Existing	15		48	4.9	I Steel + Timber	1,765	Very Poor
	Designed	T 44 L 44 HLP 240		54.6	12.5	PCDG (AASHTO Type IV)	16,700	-

(2) Bridge Plan/Design

An outline of the bridge design is shown below.

Table 4.12 Outline of Bridge Design

Bridge No.	4	5	6	7
Road No.	NR.11	NR.11	NR.11	NR.11
Station	084+878.359	088+047.591	089+025.372	103+448.058
Deck Elev. (m)	10.14	11.60	10.80	10.84
Total Length (m)	42.6	92.6	69.6	54.6
Superstructure	Type	PCDG (AASHTO Type IV)	PCDG (AASHTO Type IV)	PCDG (AASHTO Type IV)
	Spans (m)	4 @ 23	3 @ 23	3 @ 18
Substructure	Pier	Column Pier on RC CIP Piles(f1.0m)	Column Pier on RC CIP Piles(f1.0m)	Column Pier on RC CIP Piles(f1.0m)
	Abutment	Seat Type Cantilever on RC CIP Pile (f1.0m)	Seat Type Cantilever on RC CIP Pile (f1.0m)	Seat Type Cantilever on RC CIP Pile (f1.0m)

(3) Environmental Conditions

There are no environmental protection areas or protected forests around the bridges. There are no forests or habitats for rare species because the land in the vicinity of the bridge basically consists of paddy fields and residential areas along NR.11.

In the project area for Bridge No. 5, noise, vibrations and air pollution should be considered due

to the proximity of the residential area. Noise and vibrations will occur during the construction period due to the machines and earthworks. Dust will appear during the earthworks and along the detour route.

The situation in the project area is shown in the next page figure.

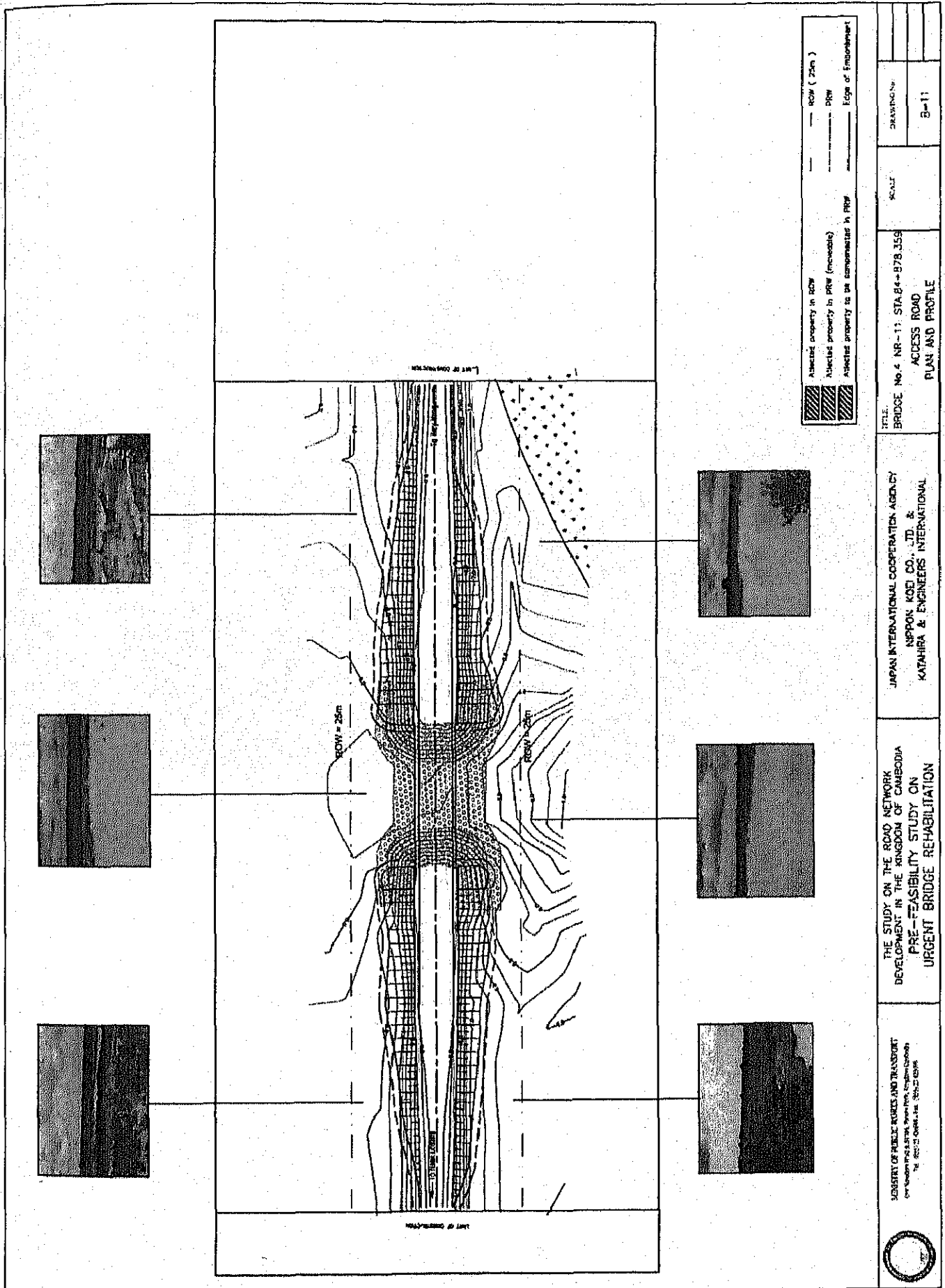
(4) Social Conditions

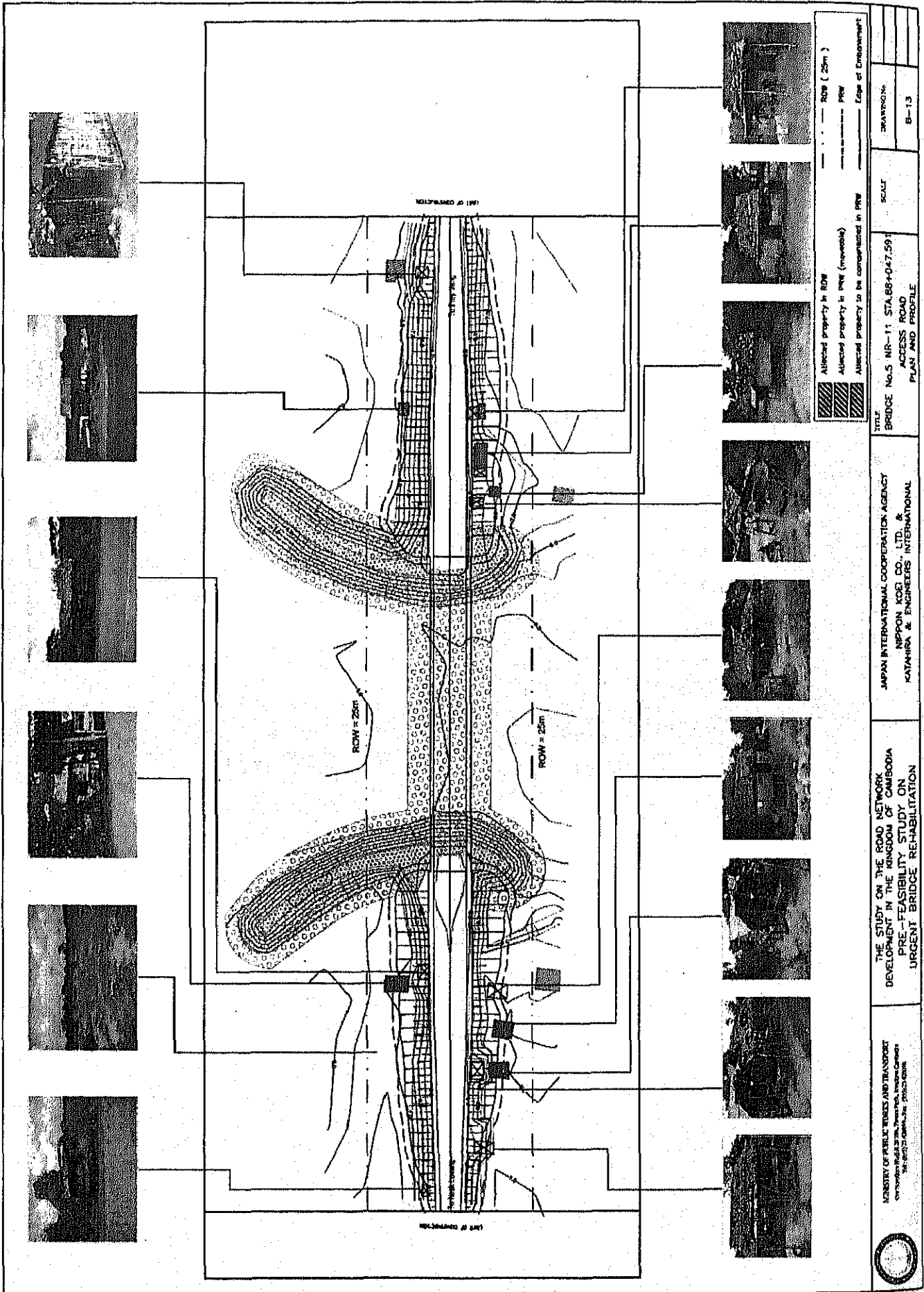
The project site for Bridge No.5 is within a residential area while there are no residential houses near to Bridge No.'s 4, 6, and 7.

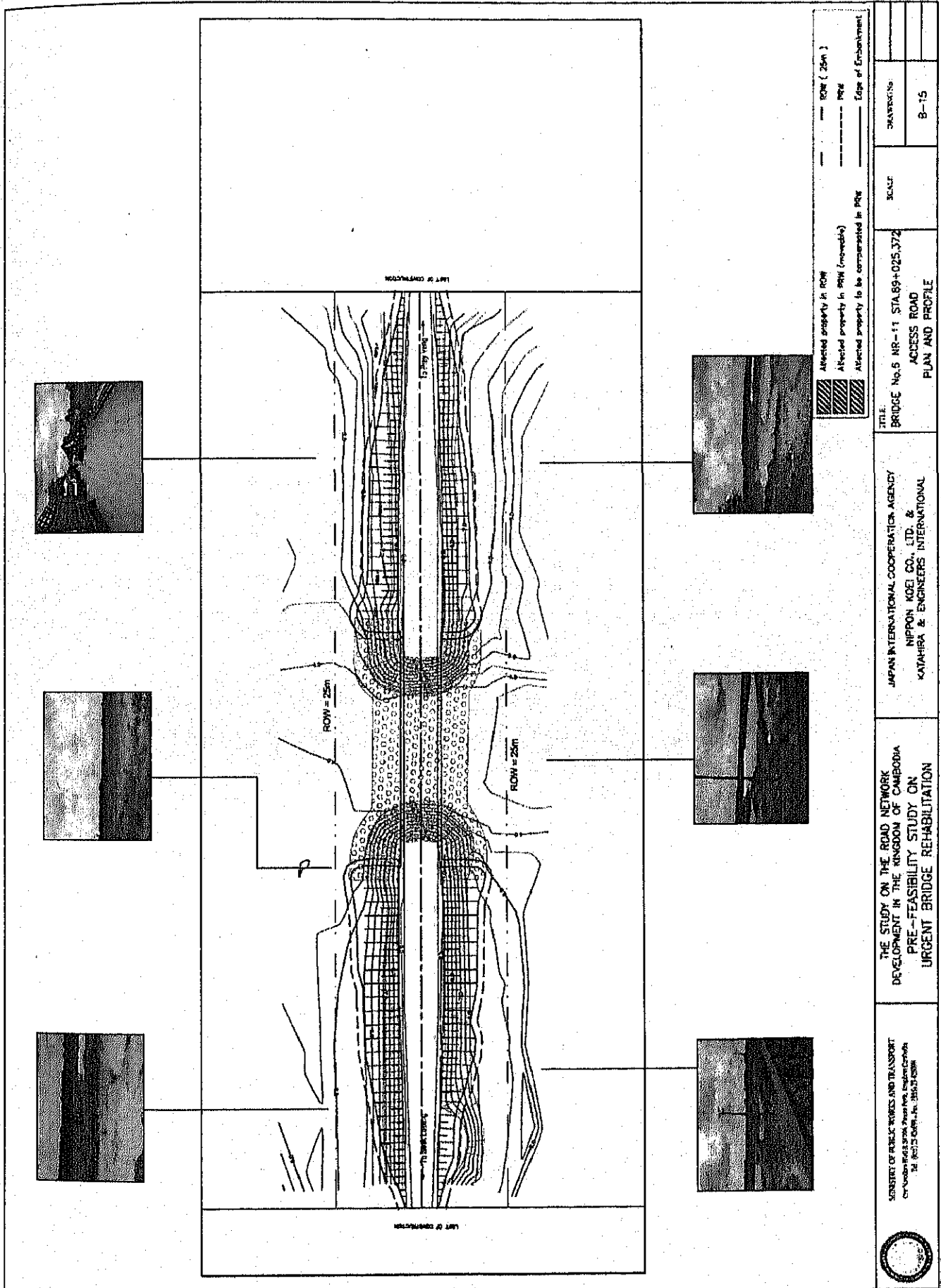
In the project area for Bridge No. 5, there are 15 houses and cottages in the ROW (25 m from the center of the road) and in the section 100 m from the edge of the bridge. There are six (6) houses and eight (8) cottages located within the provisional road width (PRW). These houses and cottages will need to be resettled.

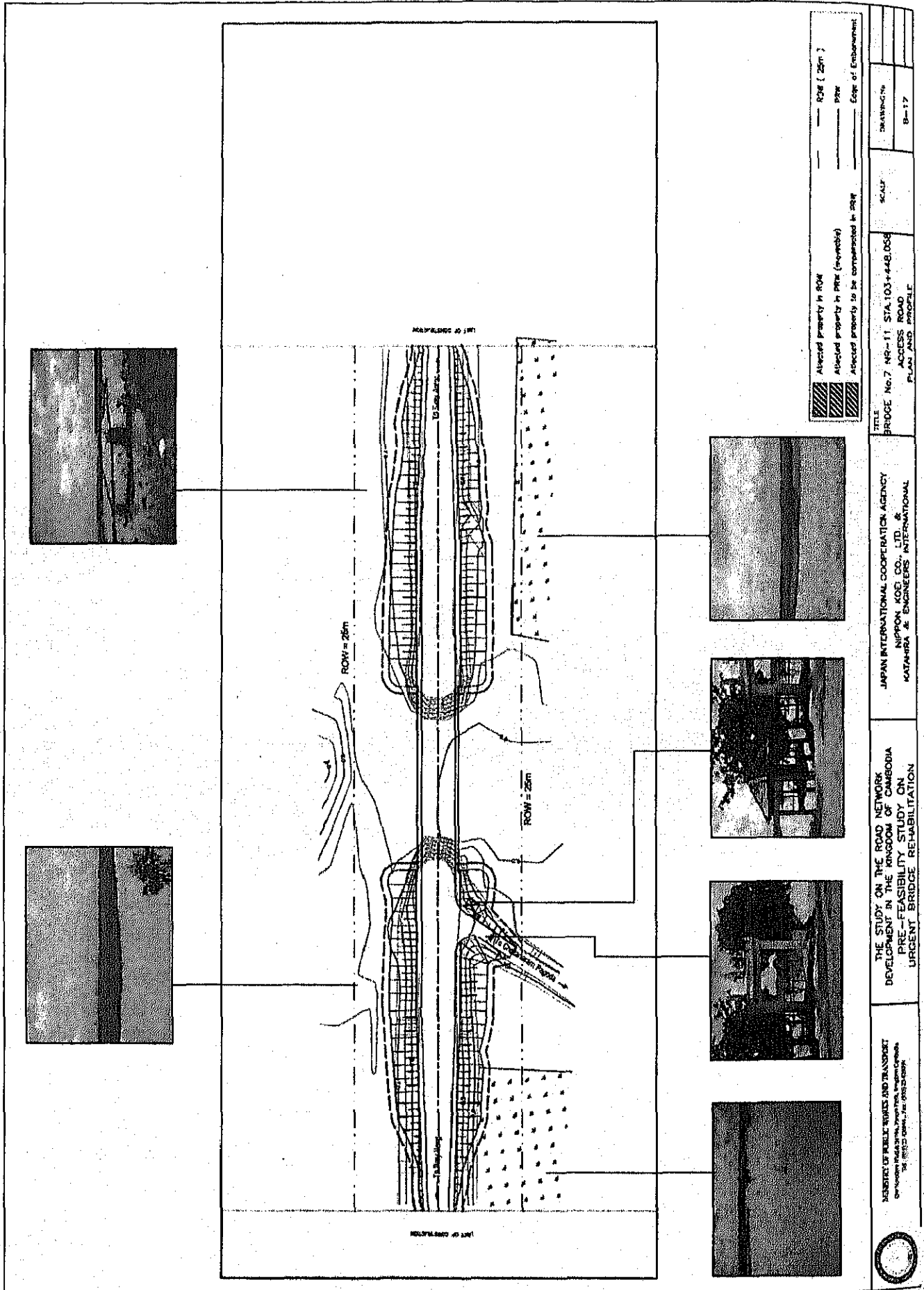
In the project area for Bridge No. 7, there are two (2) cottages in the PRW but they are not used for residential or business purposes. Therefore the resettlement of these is not expected to cause any impact.

The Chatanaram Pagoda and the gate of the pagoda is located in the PRW. It is recommended that some structural measures should be undertaken, such as a retaining wall, to avoid reconstruction of the gate.









4.5 Bridge No.8

4.5.1 Current Conditions around the Project Site

(1) Location

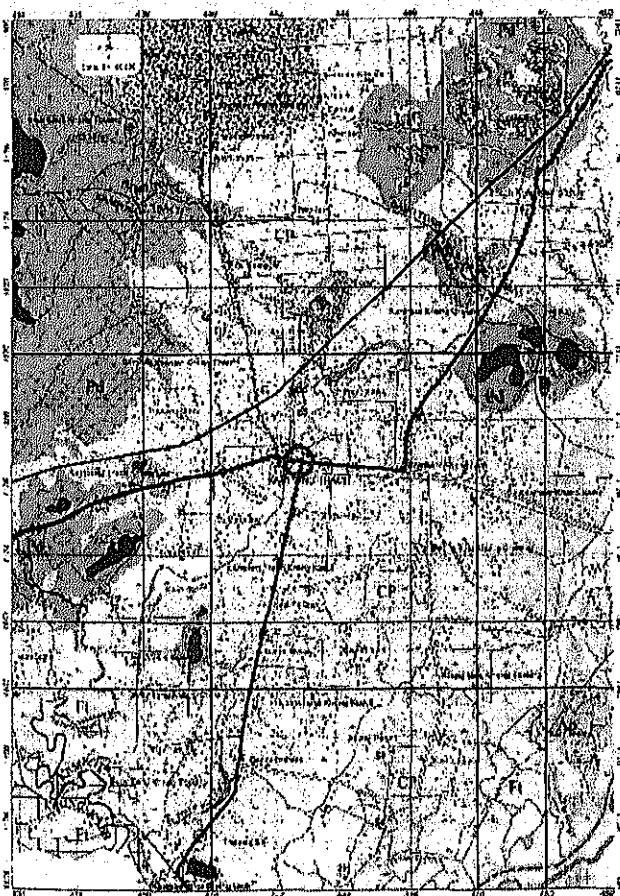
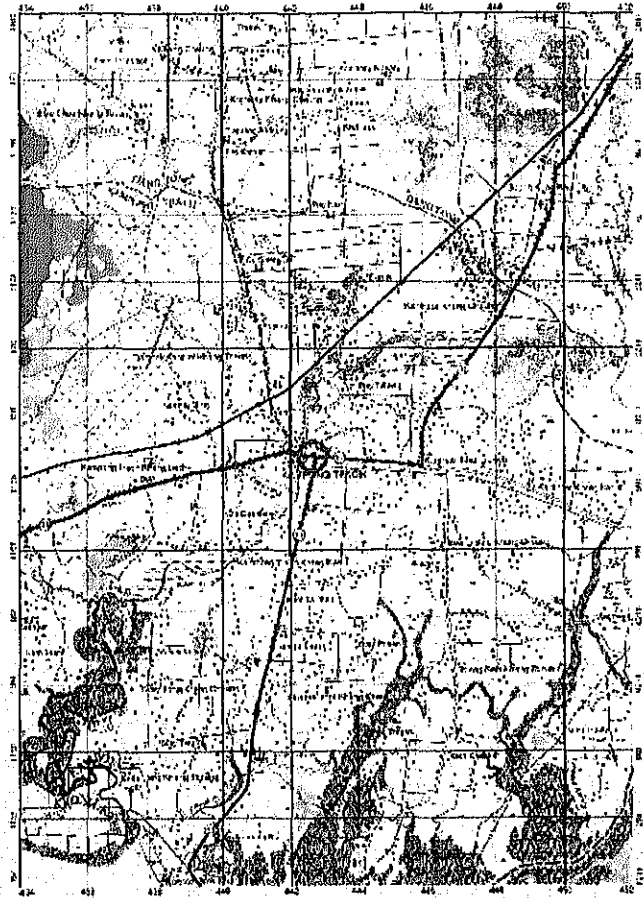
The location of bridge No.8 is shown in the table below.

Table 4.13 Location of Bridge No.8

Province	Kampot
District	Kampong Trach
Commune	Kampong Trach Khang Kaeut
Village	Boeng Thum Khang Lech
Road No.	NR.33

(2) Topography

The bridge is located near Kampong Trach on NR.33. The bridge crosses the Preaek Kaoh Ta Sek River. The land in the vicinity of the project site is flat as shown in the right side figure.



(3) Geology

The geology around the project area is roughly classified into five (5) types:

- 1) Terrace alluvial (Ta), coastal plains (Cp) and pediments (Pd) in the north;
- 2) Pediments (Pd) and alluvial plains (Ap) in the east;
- 3) Coastal plains (Cp) and tidal flats (Ft) in the south; and
- 4) Pediments (Pd) in the west.

(4) Land Use

The land use around the project site is categorized as paddy fields and villages as shown in the right side land use map.



4.5.2 Current Conditions at the Project Site and Bridge Plan/Design

(1) Conditions of Existing and Designed Bridges

The existing bridge is in poor condition. The width of the bridge is only 4.2 m and allows for only one way traffic. Therefore traffic has to wait for traffic from the opposite direction to pass before proceeding. This situation is dangerous for motorbikes and pedestrians due to the narrow bridge width. The bridge is at risk of collapse because of the poor structure.



NR-33 Km 36+540

An outline of the existing and proposed bridges is shown in the table below.

Table 4.14 Outline of Existing and Proposed Bridge

	Capacity	Existing Bridge			PCU Traffic	Existing Condition
		Length (m)	Width (m)	Superstructure		
Existing	Bridge Capacity (ton)	30	4.2	Bailey	2005	Very Poor
Designed	Design Live Load				2020	
Existing	5	30.6	12.5	RC Slab (D=600)	3,744	-
Designed	T 44 L 44 HLP 240					

(2) Bridge Plan/Design

An outline of the bridge design is shown below.

Table 4.15 Outline of Bridge Design

Bridge No.	8	
Road No.	NR.33	
Station	036+524.167	
Deck Elev. (m)	3.60	
Total Length (m)	30.6	
Superstructure	Type	RC Slab (D=600)
	Spans (m)	3 @ 10
Substructure	Pier	Wall Pier on RC Driven Pile (0.4x0.40m)
	Abutment	Seat Type Cantilever on RC Driven Pile (0.4x0.40m)

(3) Environmental Conditions

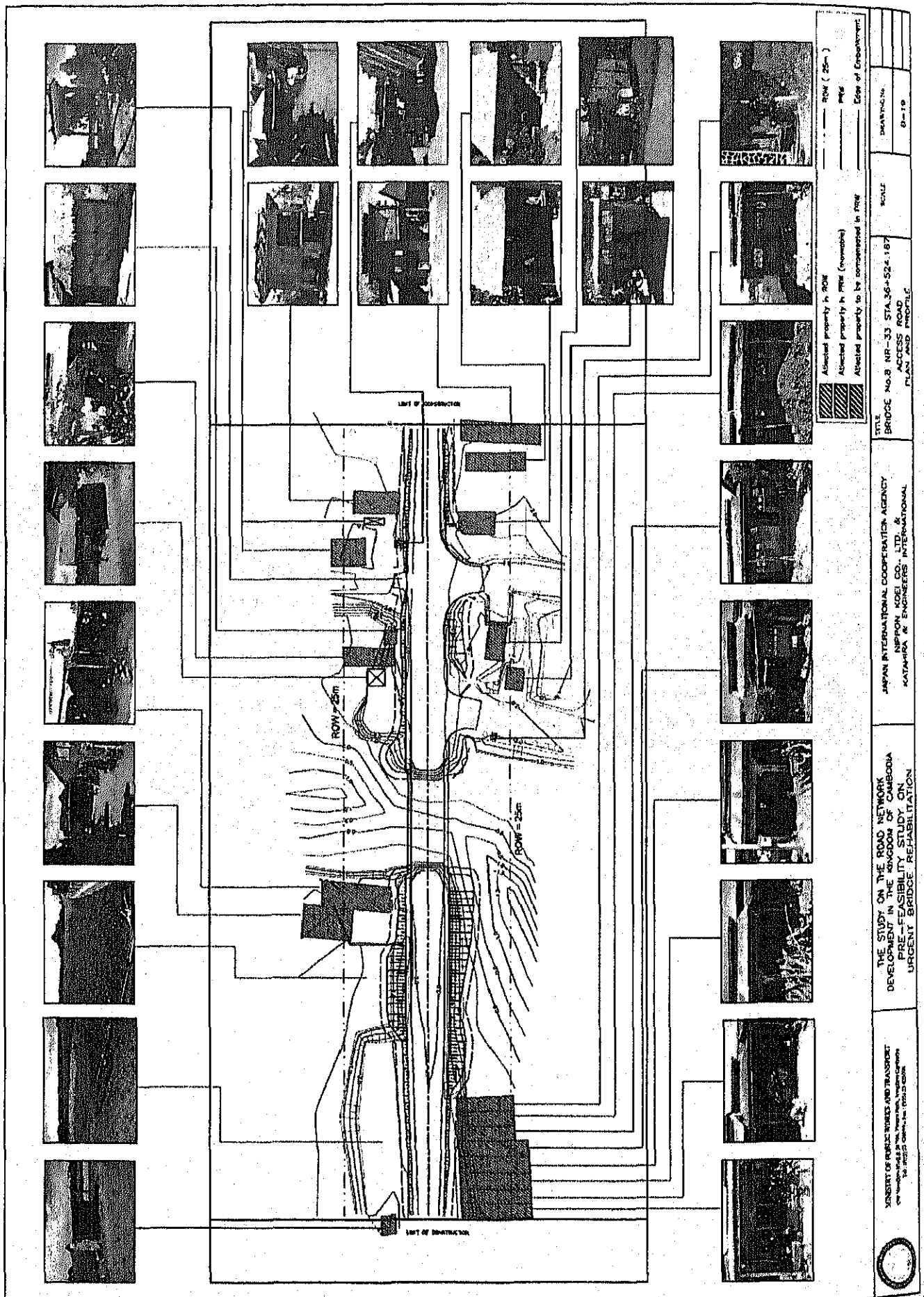
There are no environmental protection areas or protected forests around the bridge. There are no forests or habitats for rare species because the land in the vicinity of the bridge basically consists of residential areas along the NR.33.

Noise, vibrations and air pollution should be considered due to the proximity of the residential area. Noise and vibrations will occur during the construction period due to the machines and earthworks. Dust will appear during the earthworks and along the detour route.

The situation in the project area is shown in the next page figure.

(4) Social Conditions

The project site is within a residential area. There are 23 houses, cottages and a shop in the ROW (25 m from the center of the road) and in the section within 100m from the edge of the bridge. There are four (4) houses and one (1) movable shop within the provisional road width (PRW). These will need to be resettled.



TITLE BRIDGE No. 8 NR-33 STA. 36+52.187 ACCESS ROAD PLAN AND PROFILE	SCALE 1:1000	DRAWING No. 0-19
	JAPAN INTERNATIONAL COOPERATION AGENCY NIPPON KOGI CO. LTD. & KATAHIRA & ENGINEERS INTERNATIONAL	
THE STUDY ON THE ROAD NETWORK DEVELOPMENT IN THE KINGDOM OF CAMBODIA PRE-FEASIBILITY STUDY ON URGENT BRIDGE REHABILITATION		
MINISTRY OF PUBLIC WORKS AND TRANSPORT No. 100, Street No. 100, Phnom Penh, Cambodia		

5 Social and Environmental Impacts of the Whole Program

5.1 General

The project impacts can be divided into two (2) types: impacts that occur during the project implementation (including those occurring during the design and construction period); and impacts that occur after the project completion. Impacts that occur during the project implementation are generally due to land acquisition and construction works, such as earthworks, construction machines and equipment.

Impacts that occur after the project has been completed are mainly due to increased traffic volumes and an increase in vehicle speeds. One of the project outcomes is the reconstruction of the temporary bridges. In this respect, the traffic and infrastructure systems will basically remain the same as they are at present. The major changes resulting from the construction works will relate to safety, stability, the width of the bridges, and the water flow capacity in the river section. The reconstruction of the bridges will enhance the safety of the bridge structure against the risk of collapse. This in turn will improve the stability of the bridge and the road network will be strengthened. Basically, the widening of the bridges will increase the traffic capacity to two (2) lanes and will improve traffic safety as there will no longer be the risk of the opposite lane. There may also be some increase in vehicle speeds.

Table 5.1 Bridge Width

Bridge No.	Width (m)	
	Existing	Designed
No.1	4.5	12.5
No.2	4.2	12.5
No.3	4.5	12.5
No.4	5.4	12.5
No.5	5.4	12.5
No.6	4.9	12.5
No.7	4.9	12.5
No.8	4.2	12.5

It is anticipated that traffic volumes will increase following the project completion. This increase will not be caused directly by the project but will be the result of an increase in the population and economic development in the future. Whether the existing bridges are improved or not, all vehicles will have to pass these bridge roads as there are no alternative routes. Therefore, traffic volumes with or without the construction project will be basically the same. The traffic volume in 2005 and the estimated volume in 2020 are shown in the table below. The traffic volume on each bridge will have increased several times by 2020.

Table 5.2 Traffic Volumes (PCU)

Bridge No.	2005	2020
No.1	5,169	19,426
No.2	3,090	8,400
No.3	2,099	3,372
No.4	2,087	17,325
No.5	2,087	17,325
No.6	2,087	17,325
No.7	1,765	16,700
No.8	713	3,744

The reconstruction works will increase the bridge lengths as shown in the following table. Thus the cross-sectional width of the rivers will increase and the capacity of the rivers will be enhanced. This will cause a reduction in the flow speed. Consequently, soil erosion is unlikely after the construction works have been completed.

Table 5.3 Bridge Lengths

Bridge No.	Bridge Length (m)	
	Existing	Designed
No.1	37	60.6
No.2	48	54.6
No.3	130	140.8
No.4	42	42.6
No.5	84	92.6
No.6	45	69.6
No.7	48	54.6
No.8	30	30.6

5.2 Scoping Study

The following table is a checklist for the scoping study based on the JICA guidelines.

Table 5.4 Checklist for Scoping Study

No	Impacts	Bridge No.								Total	Description
		1	2	3	4	5	6	7	8		
Social Environment:											
*The impacts on "Gender" and "Children's Rights" are likely to be related to all of the Social Environment criteria.											
1	Involuntary Resettlement	B	B	B	no	B	no	B	B	B	Several involuntary resettlements will be caused by the land acquisition.
	Affected Property in ROW	24	5	1	0	15	0	2	24	71	
	Affected Property in PRW	6	1	1	0	14	0	2	5	29	
	Affected Property to be compensated in PRW	3	1	0	0	6	0	0	4	14	
2	Local economy such as employment and livelihood, etc.	B	B	no	no	no	no	B	B	B	Several shops/restaurants will be relocated due to the land acquisition.
3	Land use and utilization of local resources	no	no	no	no	no	no	B	no	B	Some parts of the cultivated land in the PRW will be affected by the land acquisition.
4	Social institutions such as social infrastructure and local decision-making institutions	no	no	no	no	no	no	no	no	no	
5	Existing social infrastructure and services	B	B	no	no	no	no	B	no	B	There are some pagodas.
6	The poor, indigenous and ethnic people	C	C	C	C	C	C	C	C	C	A social survey must be conducted before the finalization of the IEIA.
7	Unequal distribution of benefits and damage	no	no	no	no	no	no	no	no	no	
8	Cultural heritage	B	B	no	no	no	no	B	no	B	There are some pagodas.
9	Local conflict of interests	C	C	C	C	C	C	C	C	C	A social survey must be conducted before the finalization of the IEIA.
10	Water usage or water rights and rights of common	B	B	B	B	B	B	B	B	B	The usage of river water might be affected during the construction period.
11	Sanitation	no	no	no	no	no	no	no	no	no	
12	Hazards (risks) e.g. infectious diseases such as HIV/AIDS	B	B	B	B	B	B	B	B	B	Infectious diseases might increase in the construction workers during the construction period.

Table 5.4 Checklist for Scoping Study

No	Impacts	Bridge No.								Total	Description
		1	2	3	4	5	6	7	8		
Natural Environment											
13	Topography and Geographical features	no	no	no	no	no	no	no	no	no	
14	Soil Erosion	no	no	no	no	no	no	no	no	no	
15	Groundwater	no	no	no	no	no	no	no	no	no	
16	Hydrological Situation	B	B	B	B	B	B	B	B	B	Water flow difficulties in the rivers during the construction period
17	Coastal Zone	no	no	no	no	no	no	no	no	no	
18	Flora, Fauna and Biodiversity	B	B	B	B	B	B	B	B	B	Wildlife, birds, fish and other aquatic animals might be disturbed during the construction period.
19	Meteorology	no	no	no	no	no	no	no	no	no	
20	Landscape	no	no	no	no	no	no	no	no	no	
21	Global Warming	no	no	no	no	no	no	no	no	no	
Pollution											
22	Air Pollution	B	B	B	B	B	B	B	B	B	- Dust during the construction period - Air pollution following the construction works due to the increase in the future traffic volumes.
23	Water Pollution	B	B	B	B	B	B	B	B	B	Risk of water pollution during construction.
24	Soil Contamination	no	no	no	no	no	no	no	no	no	
25	Waste	B	B	B	B	B	B	B	B	B	- Construction and demolition waste from the existing bridge. - Wastes from construction yard
26	Noise and Vibrations	B	B	B	B	B	B	B	B	B	- Noise and vibrations during the construction period. - Noise and vibrations after the completion of the construction works due to the increase in the future traffic volumes.
27	Ground Subsidence	no	no	no	no	no	no	no	no	no	
28	Offensive Odors	no	no	no	no	no	no	no	no	no	
29	Bottom sediment	B	B	B	B	B	B	B	B	B	Benthos might be disturbed during the construction period.
30	Accidents	B	B	B	B	B	B	B	B	B	- Traffic accidents might occur due to the increase in the speed of vehicles after completion of the construction works. - Traffic accidents during the construction period might occur due to the detour road.
31	Others	B	B	B	B	B	B	B	B	B	- UXOs - Landmines

Rating:

A: Serious impact is expected.

B: Some impact is expected.

C: Extent of impact is unknown (Examination is needed. Impacts may become clear as study progresses.)

No Mark: No impact is expected. IEE/EIA is not necessary.

Some of the impacts are categorized as B, C and 'no mark'. As a result, the program can be considered to be category B. Therefore, the program does not require a full scale environmental

impact assessment (EIA).

5.3 Social Impacts

Based on the above table, the detail situation and impacts are described below.

(1) Involuntary Resettlement

ROW

The ROW's for NR's 3, 7, 11 and 33 are 25 m from the center line. Several properties were confirmed to lie within the ROW area for six (6) bridges, excluding bridge No.'s 4 and 6.

PRW

The provisional road width (PRW) has been set at 2 m from the edge of the embankment in terms of construction space and safety. This 2 m width is necessary for the construction work, such as allowing access by construction machines and for truck passing bays.

Therefore, properties within the PRW will need to be removed for the construction to proceed. A total of 29 properties were confirmed to lie within the PRW for six (6) of the bridge sites, excluding bridge No.'s 4 and 6.

Compensation

Basically, the properties affected by the construction will be paid compensation. However, if the property can be easily moved (such as a cottage, etc.), compensation will not be paid. As a result, a total of 14 properties will need to be paid compensation in relation to the construction of four (4) bridges; bridge No.'s 1, 2, 5 and 8.

PAPs

The number of project affected persons (PAPs) is not clear at present as the household survey has not been conducted yet.

Table 5.5 Affected Properties

Bridge No.	(a) Affected Property in ROW	(b) Affected Property in PRW	(c) Affected Property to be compensated in PRW
1	24	6	3
2	5	1	1
3	1	1	0
4	0	0	0
5	15	14	6
6	0	0	0
7	2	2	0
8	24	5	4
Total	71	29	14

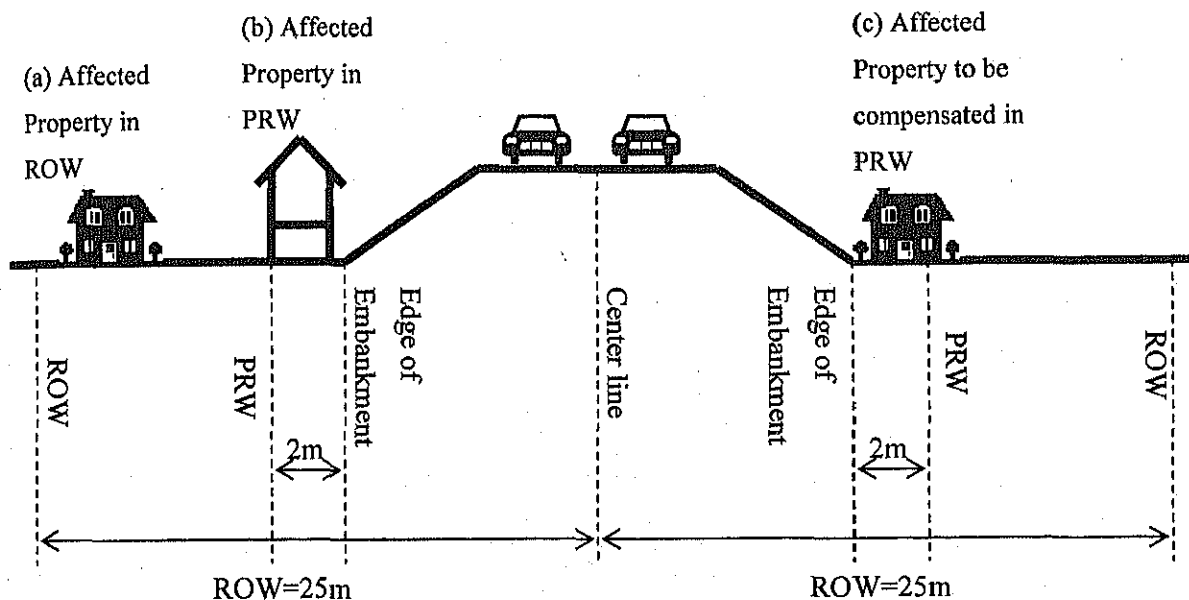


Figure 5.1 Affected Properties

Involuntary resettlement is one of the most serious effects of the project. Even though large scale resettlement will not occur, the necessary actions relating to the resettlement need to be considered and formulated in a resettlement action plan (RAP), which would include the number of PAPs, compensation, a detailed measurement survey (DMS), negotiation, grievance mechanisms, a relocation site if required, and monitoring.

(2) Local Economy, Land Use and Local Resources

A number of shops/restaurants and sections of cultivated land will be affected by the project. Compensation should be paid for these properties where necessary.

(3) Social Infrastructure and Cultural Heritage

There are pagodas in the vicinity of bridge No.'s 1, 2 and 7. The gates of the pagodas in the vicinity of bridge No.'s 1 and 7 will be affected by the construction works. The wall of the pagoda in the vicinity of bridge No.2 will also be affected.

Consultation with the monks and village people is necessary before construction commences. The construction works required to avoid these affected gates and wall could be considerable, such as the construction of retaining walls.

(4) Water Usage

River water usage may be affected by the construction works. The construction method needs to be considered in relation to minimizing changes in the water flows and usage. The continuation of the river discharge must be ensured, and consequently the substructure should be constructed in the dry season so that the impacts can be minimized.

(5) Infectious Disease

Cases of infectious diseases, such as HIV/AIDS, might increase in the construction workers during the construction period. Many construction workers will come to the project sites from outside of the area.

Educational training on HIV/AIDS and other infectious diseases should be conducted for the construction workers. NGOs who are involved in these activities should conduct the training.

5.4 Natural Impacts

(1) Hydrological Situation

The hydrological situation might be affected during the construction period. The hydrological situation will not be impacted in the long term by the construction works (i.e. the situation after the construction will not be different than the situation before the construction works) even though riverbed protection works will be carried out. In order to ensure the continuation of the river discharge, a construction method should be applied to minimize the impacts during the construction period.

(2) Flora, Fauna and Biodiversity

Wildlife, birds, fish and other aquatic animals may be disturbed during the construction period. In particular, fish and other aquatic animals may be affected during the construction period. A construction method should be adopted that will minimize such impacts, for example utilizing methods to avoid the occurrence of muddy water.

(3) Air Pollution

Dust will appear during the construction period due to the earthworks and detour roads. Periodic sprinkling and covering the detour roads with gravel will be necessary, especially in the vicinity of bridge No.'s 1, 2, 5 and 8, where there are many houses.

Following the construction works, there may be an increase in air pollution due to the increase in future traffic volumes, although this is considered to be an indirect impact because the reconstruction of the existing bridges cannot contribute to the increase in traffic volumes directly.

Bridge widening through the reconstruction works will contribute towards smoothing traffic flows as cars will not need to stop and wait for cars from the opposite direction. This improvement in traffic flows may contribute towards a decrease in emissions.

(4) Water Pollution

Water pollution may occur during the construction period, due to wastewater being produced from the construction works, such as from cement. Such wastewater will need to be adequately treated prior to disposal.

Water quality monitoring is necessary, including a baseline survey prior to construction. If the monitoring results exceed the standards, mitigation measures will need to be promptly administered.

(5) Waste

Three (3) types of waste will be created during the construction works; construction waste, demolition waste from the existing bridges, and waste from the construction yards. The demolition waste from the existing superstructure of the bridges should be returned to the MPWT. The demolition waste from the existing substructure of the bridges should be broken into pieces and then disposed of into a designated site. The construction waste, and the waste from the construction yards, should be disposed of properly.

(6) Noise and Vibrations

Noise and vibrations will occur during the construction period. They are caused mainly by the machines and earthworks. There are many houses in the vicinity of bridge No.'s 1, 2, 5 and 8. The construction method and the construction machines should be selected to minimize noise and vibrations, especially in these areas:

Monitoring of noise and vibrations is necessary, including a baseline survey before construction commences. If the results of the monitoring exceed the environmental standards, mitigation measures should be promptly administered.

(7) Bottom Sediment

A portion of the bottom sediment will change due to the riverbed protection works. The ecological system, however, will not be affected even though benthos might be disturbed during the construction period.

(8) Accidents

The number of traffic accidents might increase, both during and after the construction period. Accidents may occur during the construction period due to the detour road. Therefore, during the construction period, traffic safety measures should be undertaken such as flag men, traffic sign boards, etc.

Basically, reconstruction of the existing narrow bridges will contribute towards improving traffic safety due to widening of the bridges such that cars can drive safely in both lanes. As a result of these improvements there may be an increase in the speed of vehicles. Even though the reconstruction of the existing bridges will not contribute towards a direct increase in the traffic volumes, an increase in the traffic volumes in the future might contribute towards an increase in traffic accidents. In this sense, the increase in traffic accidents caused by the increased traffic volumes in the future can be considered as an indirect impact.

(9) Others

There may be UXOs and landmines around the construction areas. In order to avoid accidents due to the UXOs and landmines, they should be cleared in cooperation with the Cambodian Mine Action Centre (CMAC).

5.5 Indirect Impacts

Indirect impacts may appear in the future, such as air pollution and traffic accidents caused by the increase in traffic volumes. Disordered development may also occur in the future based on the increase in traffic volumes.

It is difficult to predict the indirect impacts. Therefore, monitoring of the project, together with the maintenance of the bridges and roads, is important in order to realize the impacts. If some impacts are realized through the monitoring, necessary measures should be considered together with the relevant governmental organizations or other organizations concerned, including NGOs.

6. Environmental Management Plan

The environmental management plan (EMP) needs to be included in the tender documents so that the contractor can monitor the impacts and undertake the necessary mitigation measures. A baseline survey needs to be conducted during the construction stage for the purpose of comparing with the situation before the project.

The monitoring items include; air pollution, water pollution, noise, vibrations and the accident and resettlement process, which includes the negotiation process and living standards after resettlement.

6.1 Necessary Actions to be taken

After implementation of the project has been confirmed by the government, the following actions should be promptly carried out.

6.1.1 Public Consultation

Public consultation should be conducted for the people around the project sites for the purpose of disclosing the project information so that the people can understand both the positive and negative impacts of the project.

In addition, the project procedure, laws and regulations should be introduced to the people through the public consultation process as most of the people will not know their rights and ROW, which are stipulated in the laws and regulations in Cambodia. The people should also be informed about the grievance mechanisms. In addition, they will not be aware of the procedure for undertaking the construction works, resettlement and compensation, and consequently these procedures should also be introduced during the public consultation process.

Public consultation meetings should be conducted on several occasions, such as before the public awareness survey and the DMS.

6.1.2 Public Awareness Survey (Simple Survey)

The public awareness survey is necessary for the people around the project site for the purpose of confirming their basic agreement with the project. If many people oppose the project, the project should be reconsidered. In addition to gaining their basic agreement to the project, their needs and social situations should be clarified through the survey. The survey should be conducted at the same time as the cut-off date.

6.1.3 Cut-off Date

The cut-off date must be declared when the project implementation date is decided so as to protect the ROW against illegal squatters aiming for compensation.

6.1.4 Formulation of Resettlement Action Plan (RAP)

The prompt formulation of a resettlement action plan (RAP) is crucial after the project implementation date has been decided. The most important aspect of the RAP is to ensure that the PAPs maintain the same standard of living as they had before the project. In this sense, the necessary measures should be planned in the RAP and the monitoring plan for after the resettlement should also be formulated in the RAP.

6.1.5 Finalization and Submission of IEIA

The MPWT, as the project owner, has to finalize the IEIA and submit the IEIA to MOE for the project approval. The necessary additional surveys, such as the household survey which forms part of the public awareness survey (simple survey), should be conducted properly and promptly.

REPORT ON THE NGO WORKSHOPS

NGO Workshops

1. Background

As described in Chapter 15 of the Master Plan, the main environmental and social impacts of the project are: 1) resettlement and compensation issues, and 2) indirect impacts due to the road development project.

These issues mainly arise as a result of the inadequate legal framework, law enforcement capabilities and capacity of each Ministry. Even though the MPWT, as the project owner, considers the environmental and social impacts in terms of the design and construction methodology during implementation, indirect impacts may appear that are outside of the scope of the MPWT.

In order to resolve these issues the following measures are required, as described in Chapter 15 of the Master Plan.

- (1) Strengthening of the legal framework and law enforcement capabilities, capacity building and establishment of monitoring mechanisms.
- (2) Sufficient explanation of the project through public consultation, public coordination and the establishment of grievance mechanisms for the purpose of consensus building between the project owners and the people.
- (3) Positive cooperation and coordination between the relevant ministries, such as the Ministry of Agriculture, Forestry and Fishery (MAFF), Ministry of Rural Development (MRD) and the Ministry of Environment (MOE), and the NGOs working for the local communities.
- (4) Coordination with the land use plan and the regional development plan.

The implementation of these measures will take a significant period of time as there are no immediate solutions. It is important that the above measures are promptly administered, both for the project implementation in the future and for the development of Cambodia as a nation.

It would be advantageous to utilize not only governmental agencies but all available resources to the maximum, including NGOs who work for rural and community development, environmental protection and the support of vulnerable people. This will ensure that environmental and social impacts can be avoided or mitigated and the project can be effectively implemented through cooperation between the government and the NGOs.

It is also important for the MPWT to effectively cooperate with the NGOs and other relevant ministries as cooperation between the relevant ministries is required to mitigate both direct and indirect impacts caused by road development.

However, at present the government and NGOs only discuss issues on an individual project

basis. Medium and long term strategies have not been sufficiently discussed, in terms of how the parties will cooperate with each other. Therefore workshops were conducted to consider the possibility of an evolving cooperation between the government and NGOs in the future.

The first workshop aimed to explain and facilitate NGOs in understanding the draft National Road Network Master Plan, and to enable the exchange of opinions and ideas among the participants from the NGOs. The second workshop aimed to discuss and clarify the likely and possible fields for cooperation from the NGOs after presenting information about the NGOs activities in relation to the road development project and existing resettlement issues, and also to exchange ideas on how to facilitate cooperation between the government and NGOs.

2. First Workshop

2.1 Objectives

The objectives of the first workshop were as follows:

- Introduction and disclosure of the draft road network development master plan, and
- Exchange of opinions and ideas in relation to environmental and social considerations.

2.2 Program

Date: February 24, 8:30 – 12:00

Venue: Conference room, 1st floor of MPWT

Program

Time	Contents
8:30 – 8:35	Opening Remarks
8:35 – 9:30	Presentation of National Road Network M/P
9:30 – 10:00	Presentation of Social and Environmental Considerations
10:00 – 10:10	Self-Introduction
10:10 – 10:30	Coffee Break
10:30 – 11:50	Questions & Answers Open Discussion
11:50 – 12:00	Closing Remarks

2.3 Participants

Participants: 35 participants in total

- NGO : 26 participants from 21 NGOs
- C/P : 2 participants from MPWT and MOE
- JICA Cambodia Office : 3 participants
- JICA expert : 1 participant

- JICA Study Team : 3 participants

2.4 Main Questions and Comments from NGO Participants

A Cambodian facilitator was assigned to the 'questions and answers and open discussion' session and the Study Team provided support. In the discussion, there were questions from the participants on the master plan and many comments relating to the future road development. The main questions and comments are itemized below:

(1) Resettlement and Compensation Issues

- 1) There are critical problems relating to resettlement in the existing BOT project. Does the master plan include BOT projects?
- 2) It is advisable that some representatives are involved as working group members.
- 3) There were no problems with resettlement for the railway project before 1970. Are there any resettlement problems in Japan?
- 4) People will face several problems after construction starts even though they appreciate the road development.
- 5) It is impossible for the PAPs in the urban areas to rehabilitate their houses near the original location with the compensation provided. It is recommended that the government provides apartments.
- 6) In some cases, there are people who have certificates of land title in the ROW even though the protection measures against illegal squatting in the ROW, as proposed in the master plan, are taken. Should these people be paid compensation?

(2) Land Issues

- 1) It is advisable that land use plans for the provinces and regions should be coordinated with the road development plan.
- 2) It is advisable that exact boundary of ROW.
- 3) It is important to inform people of the boundary of the ROW after which is defined because the boundary of the ROW is not clear though the sub-decree (Prakas) on ROW is enacted.
- 4) The master plan aims to improve the lives of the poor community people while wealthy people or people of power will benefit from land speculation. Does the master plan propose any measures against land speculation?
- 5) It is recommended that the information in the master plan, which includes information up until 2020, is disseminated to the local authorities who should undertake to reduce the number of resettlements and restrict illegal settlements.

(3) Traffic Safety Issues

- 1) Are measures against traffic accidents proposed in the master plan?

- 2) Many vehicles do not pay taxes and are not registered with a number plate. In addition, many traffic accidents occur. It is recommended that the MPWT, MOE and the police strengthen the tax collection and registration practices.

(4) Other Issues

- 1) The proposal for cooperation between the NGOs and the relevant ministries is appreciated.
- 2) It is advisable that the proposal should include not only ministries but also local authorities for cooperation.
- 3) Is the master plan coordinated with the road development projects implemented by the army corps?
- 4) Is the master plan coordinated with the ADB's programs in the GMS concept?
- 5) Monitoring and evaluation of the project should be proposed.

2.5 Outline of the Workshop

Participants spoke freely and with enthusiasm throughout the entire workshop. There were no negative comments against the road development in itself, and the participants understood that the road development is necessary. Then they spoke based on the recognition that how to avoid or mitigate impacts.

The workshop was not an opportunity to discuss specific issues in depth as it was only the first workshop, the NGOs had different objectives and there was a large volume of material to be covered in the speeches. The main concerns of the participants were: 1) resettlement and compensation issues; 2) land issues; 3) cooperation and coordination with relevant agencies; and 4) traffic safety. There was a significant range in the level of understanding of the participants. Some of the NGOs did not properly understand the ROW and COI issues.

2.6 Lessons Learnt from the Workshop


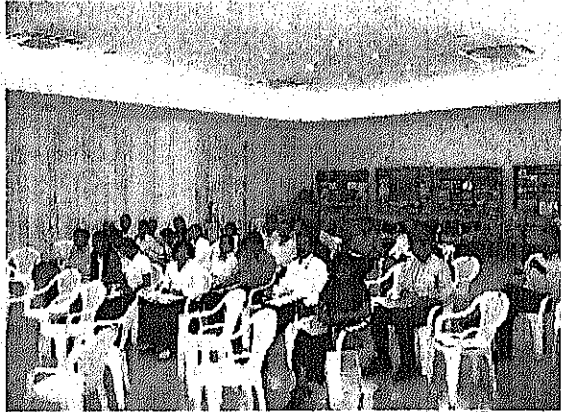
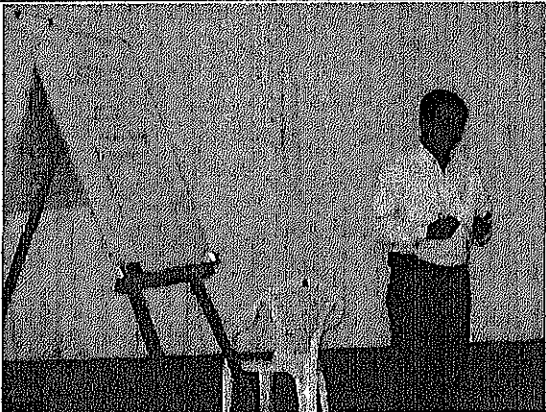



The first workshop was useful in terms of providing information to the NGOs and the NGOs appreciated the workshop. Therefore it is important to have this kind of opportunity to provide information and exchange opinions in order to determine how to facilitate cooperation between the government and NGOs.

It is, however, difficult for several of the NGOs to discuss specific issues in depth as there is such a large range of activities covered by these NGOs. Therefore, it is more appropriate to set the discussion topics and allow the NGOs, who are interested in the topic, to participate voluntarily.

This kind of workshop appears to be an effective method as it not only avoids unnecessary misunderstandings, but also provides proper information to the people through the NGOs and encourages good actions.

A participant from the NGOs pointed out that coordination and cooperation between the MPWT (as a project owner) and the local authorities is important for land management in the ROW and public consultation with the people in the project implementation area. It would be more effective to coordinate and cooperate with the local authorities once a plan proposed in the Master Plan becomes a concrete project for implementation. It is important to educate not only the people along the road but also the local authorities on the information contained in the sub-decree (Prakas) on ROWs.

The First Workshop

	
<p>Presentation</p>	<p>Participants</p>
	
<p>Facilitator</p>	<p>Speech from participant</p>
	
<p>Speech from participant</p>	<p>Closing Remarks</p>

3. Second Workshop

3.1 Objectives

The objectives of the second workshop were as follows:

- To clarify the likely and possible fields for cooperation from the NGOs.
- To exchange ideas on how to facilitate cooperation and coordination between the NGOs and the government and to be a stepping stone for future relationships.

3.2 Program

Date: July 20, 8:30 – 12:00

Venue: Conference room, 1st floor of MPWT

Program

Time	Contents
8:30 – 8:35	Opening Remarks
8:35 – 8:45	Presentation of the review on the first NGO workshop and the future framework.
8:45 – 9:00	Presentation on life rehabilitation issues from the experience gained through rural development.
9:00 – 9:15	Presentation of ROW Protection
9:15 – 9:30	Self-Introduction
9:30 – 9:50	Coffee Break
9:50 – 10:30	Group Discussion
10:30 – 11:00	Presentation by Group Representative
11:00 – 11:50	Open Discussion
11:50 – 12:00	Closing Remarks

3.2 Participants

Participants: 34 participants in total

- NGO : 16 participants from 12 NGOs
- MEF : 3 participants
- MPWT : 1 participant
- C/P : 1 participants from MOE
- JICA Cambodia Office : 2 participants
- JICA Study Team : 11 participants

3.3 Main Speech from the Participants

Instead of the group discussion that was originally planned, a plenary discussion was conducted due to the number of participants. A Cambodian facilitator was assigned for the group discussion. The discussion topics included; what kind of cooperation the NGOs can provide in the resettlement process, and how to

facilitate cooperation between the government and NGOs. The main speeches from the participants are listed below.

Speaker	Main Speeches
NGO	<p>(1) The government has not conducted household surveys on the people to be resettled.</p> <p>(2) Some names have been found that are not on the DMS list.</p> <p>(3) If NGOs become members of the working group, NGOs can point out problems so that effective implementation of the project, such as smooth implementation of projects and transparency of the process, can be ensured.</p>
NGO	<p>(4) The NGOs, rather than the government, should implement the resettlements and the government should monitor the implementation.</p>
Gov.	<p>(5) It is impossible for NGOs to participate in the working group.</p> <p>(6) It is possible for NGOs to monitor the project implementation.</p> <p>(7) NGOs should not criticize the government but should raise questions to the donors.</p>
NGO	<p>(8) A NGO has sufficient experience to conduct the baseline survey contracted to the World Bank for the World Bank's project.</p> <p>(9) It is necessary to conduct a survey on the livelihood and capacity of the people to be resettled. Following this the necessary support, such as training opportunities, should be made available.</p>
NGO	<p>(10) The district government interrupted the survey while confirmation was obtained for the DMS.</p> <p>(11) The IRC should disclose their information.</p> <p>(12) NGOs can deliver information to the people.</p> <p>(13) Information should be exchanged between NGOs and the government.</p>
Gov.	<p>(14) NGOs can give people legal support.</p> <p>(15) NGOs can be an independent monitor. In this case, NGOs should not be paid by the government; the donors should bare the cost.</p>
Gov.	<p>(16) NGOs have a right to deliver information to people.</p> <p>(17) NGOs should try to educate people that living in a ROW is illegal, and attempt to make them understand their situation.</p> <p>(18) The IRC does not mind if the NGOs visit people but it is likely that the local authority will want to know who they are as they may think that someone is doing something wrong.</p> <p>(19) The MOI should clarify the objectives and tasks of the registered NGOs.</p>
Gov.	<p>(20) Even though people agree with the IRC, sometimes people do not understand the issues and will incorrectly voice their concerns. Some new NGO staff don't know about the policy and procedures for the project, and they confuse people by providing incorrect explanations.</p>

Speaker	Main Speeches
	(21) NGOs should work with the IRC Working Group and donors in the field.
NGO	(22) The NGOs conduct the individual surveys; however the government also conducts the same surveys. (23) It is important for the NGOs to consider how to cooperate with the government in the field so that the comments of the NGOs are reflected in the government policies.
NGO	(24) The support of both legal and illegal residents is not recommended as this may facilitate illegal squatting. (25) The compensation rate should not be decided by the government alone, NGOs should also be involved.
NGO	(26) Not only the NGOs and the government, but also the people should be involved in the discussions.
Gov.	(27) The government has already conducted a lot of public consultation for the people.
NGO	(28) The NGOs provide support to the people, such as financial support, water supply, vocational training, micro credit, education, school construction and health center construction. (29) However, the NGOs do not have enough funds to buy land. Therefore, it is desirable that the government provides land for the people when resettlements occur. (30) It is recommended that the NGOs should be the working group members and cooperate with the local authorities in formulating the Resettlement Action Plan.
NGO	(31) I have never received the project documents from the government even though I have requested them from the government on a number of occasions. (32) How can we cooperate with the government in such situations?
Gov.	(33) We could not show the people three alternative resettlement sites for the project for NR.1 as there were a lot of people to be resettled. It would be appreciated if the NGOs would check the alternative sites instead of the people. (34) It is not understand why NGOs always criticize the government.
Gov.	(35) NGOs should educate people about how to spend and save money. (36) Some people spend money in the wrong way or sell their land during the resettlement to buy something after they have received compensation.
NGO	(37) There are several types of NGO activities, such as legal assistance and advocacy. It is important that the government and NGOs understand each other.

Speaker	Main Speeches
	(38) If the government follows its own policies and laws and does not listen to the comments from the NGOs, the NGOs will become critical of the government. (39) It is crucial that methods for cooperating with the government are considered such that the situation can be improved rather than criticizing the government.
Gov.	(40) NGOs can criticize the government but NGOs should show concrete facts to the public.
NGO	(41) NGOs are immature as NGOs cannot share information with each other even though there are several types of NGOs across several sectors. (42) NGOs should cooperate with other NGOs as well as the local authorities, and provide the consistent messages to the public.
JICA Study Team	(43) Cambodia is still a young country. The government and NGOs may not have sufficient experience and there are many issues to be improved through mutual cooperation. (44) This is the last opportunity for the JICA Study Team to hold a workshop. We expect you to continue with this opportunity if you think this workshop has been effective.
NGO	(45) Several issues were discussed in the last workshop but only the resettlement issue has been discussed in this workshop. Does the JICA Study Team plan to have an opportunity to discuss other issues?
JICA Study Team	(46) This is a question for you as well. There are still so many issues. Do you want to continue with these discussions?
NGO	(47) It is crucial to continue with these discussions in the future.
JICA Cambodia	(48) I think today's meeting has been very worthwhile but who will be the secretariat in the future? (49) JICA wants to confirm the ownership of the Cambodian side.
NGO	(50) NGOs can hold the workshops but the government will not participate. (51) It is recommended that JICA or the government hold the workshop.
Gov.	(52) I am not in a position to make a decision about the workshops. Donors and the government should invite the NGOs.

3.4 Outline of the Workshop

The participants were from the local NGOs, Japanese NGOs, IRC and MPWT. In the discussion, these participants spoke freely and with enthusiasm. The discussion focused on constructive cooperation in the future, however both the NGOs and the government complained about mutual activities.

The main speeches from the government showed their distrust in that the NGOs confuse people by providing incorrect information, dissatisfaction that NGOs always criticize the

government, and dissatisfaction that NGOs do not work with the government in the field.

The main speeches from the NGOs related to resettlement and compensation issues, the lack of correspondence from the government, and requests for NGOs to be involved in resettlement policy making. In addition, NGOs expressed that they can be involved in policy making, surveys and education of the public. A Japanese NGO expressed a neutral comment based on extensive field work experience, which was that NGOs should not criticize the government but should consider how to cooperate with the government and how to improve.

It was confirmed that there were possibilities for cooperation in project monitoring, the base line survey, public consultation and information provision, the livelihood program and vocational training, in terms of clarifying the likely and possible fields for the cooperation of the NGOs, which was one of the objectives of the workshop.

In terms of another objective, which was to determine how to facilitate cooperation between the government and NGOs, it was confirmed that both the government and NGOs consider the cooperation necessary, however it was not possible to discuss a concrete mechanism or method for cooperation in the workshop. Many of the participants also understand the necessity of continuing these discussions, however the participants could not express their clear ownership, and some participants expected the donors to continue to facilitate these discussions.

3.5 Lessons Learnt from the Workshop



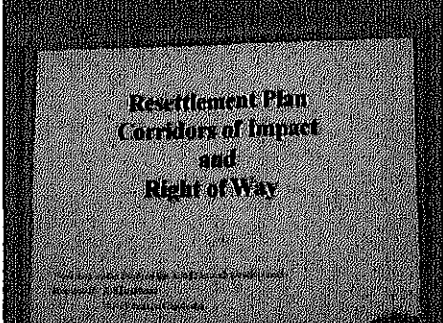

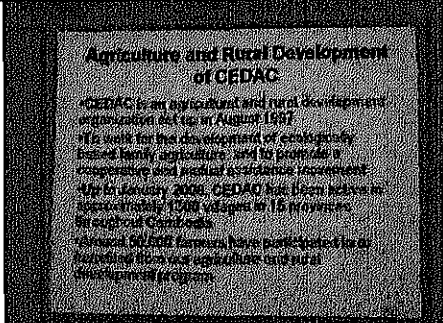

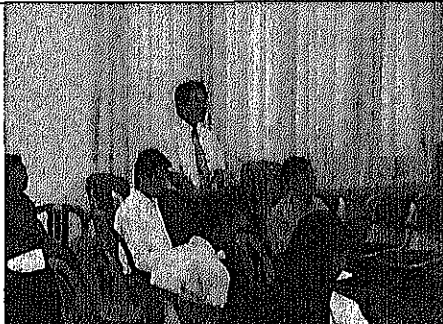
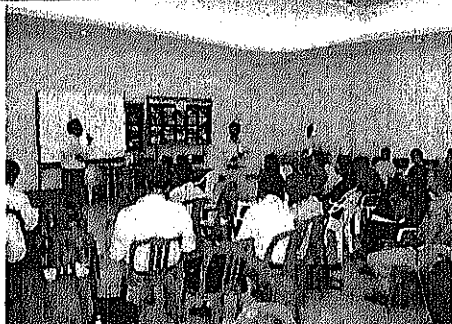
It appears that a solution cannot be found as the government and NGOs misunderstand each other as there have been no opportunities for ongoing discussions between the parties. At present, there is no framework for discussions and cooperation, and no clear responsibilities or roles for either the government or the NGOs.

Due to these circumstances, it is difficult to establish a framework for discussions and cooperation in a short timeframe as both the government and the NGOs are dissatisfied and distrust each other. Therefore, a preparatory step is necessary to constructively discuss this dissatisfaction and distrust to determine how to cooperate in the future. It is also important to facilitate a mutual understanding and to build mutual confidence. After that, concrete cooperation will be possible.

NGOs have several strong fields of expertise, such as rural development, health, human rights, law, urban issues, environmental protection and traffic safety, and they undertake several types of activities, such as advocacy and field work. In addition there are several levels of NGOs, such as those with experience of contracted work with donors, knowledge and experience. Therefore, there is a limit to the issues that can be discussed with all of the NGOs together. It is also necessary to consider the appropriate NGOs based on the topic of discussion or contents of the required cooperation.

It is impossible to build a relationship of cooperation at this moment because there is still mutual distrust between the government and NGOs. Most of them, however, understand the necessity for the continuation of discussions and expect these discussions to continue. The problem is that neither the government nor the NGOs will take ownership of the discussions and they expect the donors to continue the discussions.

The Second Workshop

	
<p>Presentation</p>	<p>Presentation from NGO Forum</p>
	
<p>Presentation from NGO Forum</p>	<p>Presentation from CEDAC</p>
	
<p>Presentation from CEDAC</p>	
	
<p>Government staff</p>	<p>Group Discussion</p>

4. Proposal for the Future

Firstly, it is important to continue the discussions between the government and NGOs. It appears that the support of the donors remains necessary until the Cambodian side can manage these discussions as there is no ownership from either the government or the NGOs. It is proposed that the donors will support the continuation of the discussions as a preparatory step and the Cambodian side will own and manage the full-scale discussions in the future.

4.1 Follow-up during Preparatory Step

Follow-up will be necessary during the preparatory step until both the government and the NGOs have taken ownership and built mutual confidence to a level whereby the Cambodian side can manage the workshops. The follow-up can be conducted by a neutral party (a donor), such as in the two (2) workshops in this study, and the displacement of an individual expert. In the workshop in the preparatory step, the following items should be examined; the contents of the discussions and manner of operation by the Cambodian side of the full-scale discussions in the future, and the direction, style, objectives and requirements of the participants.

4.2 Full-Scale Operation of Workshops by the Cambodian Side

Various types of full-scale operation are possible if ownership and mutual confidence between the government and NGOs is built up, and the Cambodian side can manage the full-scale operation. In terms of the type of workshops there can be formal or informal, government host, NGO host or joint host. It is anticipated that a sub-working group for individual projects, and cooperation works for individual projects such as independent monitoring and public consultation will be developed through the discussions in the future.

4.3 Conclusion

It is expected that effective cooperation between the government and NGOs can be continued through the mutual understanding and constructive discussions achieved during the workshops.

Ownership of the workshops cannot be achieved in the short term; however, continual monitoring of the discussions is crucial.

It is expected that the Japanese NGO will advise the local NGOs to seek constructive cooperation between the government and NGOs. This is because the Japanese NGO has experience from other countries and experience in cooperating with the government and understands the capacity and limit of the government.