

Environmental and Social Considerations in Detailed Planning Survey
(Technical Cooperation for Development Planning)

1. Full title of the Project

The Project for Development of Integrated Urban Transport Management Mechanism in Phnom Penh Capital City (The Project)

2. Type of the study (e.g. Master Plan, Feasibility Study, Detailed Design, etc.)

Master Plan

3. Categorization and its reason

The Project is classified as a “Category B” because of the following reasons:

The project is not likely to have significant adverse impact on the environment under the JICA Guidelines for Environmental and Social Consideration (January 2022, hereinafter referred to as JICA Guidelines) in terms of its sectors, characteristics and areas.

The Project updates comprehensive urban transportation master plan and improve planning and managing capacity of urban transport of Phnom Penh Capital Administration and relevant institutions. The Project intends to conduct pilot projects; however, those actions will not include any mechanical construction activities that may negatively impact surrounding environment. Therefore, the impact of the project is expected to be moderate and may be handled by proper mitigation measures.

4. Agency or institution responsible for the implementation of the project

Phnom Penh Capital Administration (PPCA)

5. Outline of the Project (objectives, justification, location, proposed activities)

(1) Overall Goal

Through steady progress of the updated Phnom Penh Urban Transport Master Plan (PPUTMP), development and improvement of urban transport that supports sustainable urban environment in PPCA is promoted.

(2) Project Purpose

The capacity for comprehensive planning and management of urban transport in Phnom Penh Capital City is strengthened.

(3) Justification

Phnom Penh Capital City is the country's political and economic centre with a population of approximately 2.28 million population, which is expected to grow to approximately 2.62 million by 2035. Furthermore, the number of newly registered vehicles in the country continues to double in less than a decade from 282,000 in 2013 to 506,000 in 2021. Although there have been series of cooperations to improve traffic conditions in the city, the car-centric traffic system remains unchanged, with traffic congestion becoming more serious. This project aims at updating transport master plan and enhancing PPCA's capacity to implement public transportation projects with collaboration among relevant authorities, and ultimately contribute to improve urban transportation in the city. It is also in line with the country's policy to strengthen urban management and modernization.

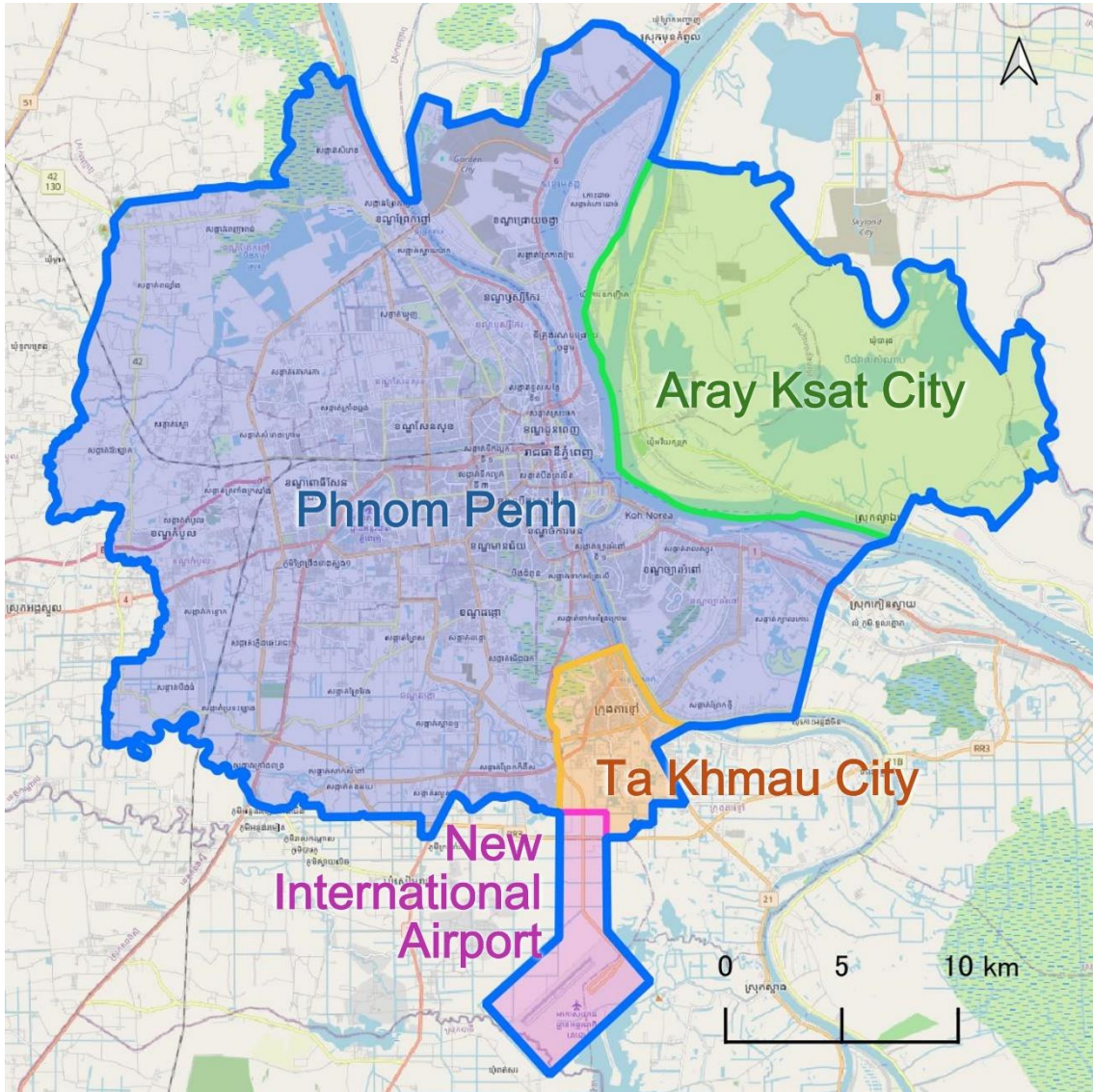
(4) Output

- Output 1 Under the lead of PPCA, PPUTMP is updated based on a process of discussion, examination, and consensus building across multiple related organizations.
- Output 2 Through the practice of pilot projects for short-term measures, in which collaboration among multiple organizations is essential, the ability to implement cross-sectoral projects in urban transport is enhanced.
- Output 3 Organizational structure for public transportation management and operation is strengthened.

6. Description of the project site (maps, environmental and social condition, current issues)

Target basins of the Project are selected as follows.

PPCA and a part of Kandal Province (surrounding area of Phnom Penh covering new airport and its access, Ta Khmau city and Aray Ksat city).



Source: Open Street Map, JICA survey team

Figure 1 Project area (provisional)

(1) General Features and Natural Environment

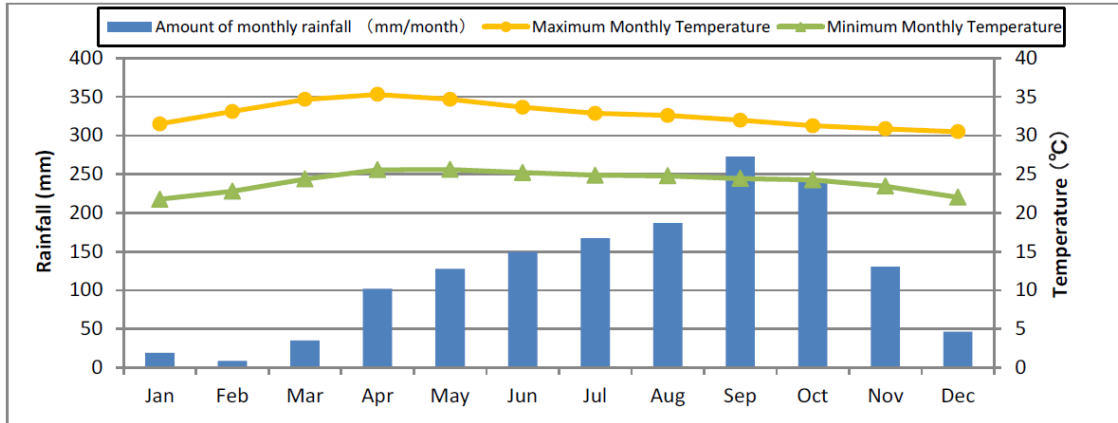
1) Outline

Phnom Penh is located in the south-central region of Cambodia, at the confluence of the Tonlé Sap, Mekong, and Bassac rivers. Phnom Penh lies in front of the Mekong River, which is the main river in Asia with a length of 4,200km. The original source of the river is from the highlands of Tibet China. The river crosses Cambodia from North to South with a total length of 486km (302 miles) and passes Phnom Penh as an intersection of the river to create attractive freshwater and ecosystems for the city.

2) Physical Features

Climate Conditions

Phnom Penh Metropolis is at high flood risk due to its topographical conditions. The climate is classified as tropical monsoon climate (Am) with an annual rainfall of approximately 1,400 mm. Most of the precipitation is concentrated in the rainy season from May to November.



Source: Preparatory survey report on the project for flood protection and drainage improvement in Phnom Penh (phase IV)

Figure 2 Monthly average precipitation, maximum and minimum temperature

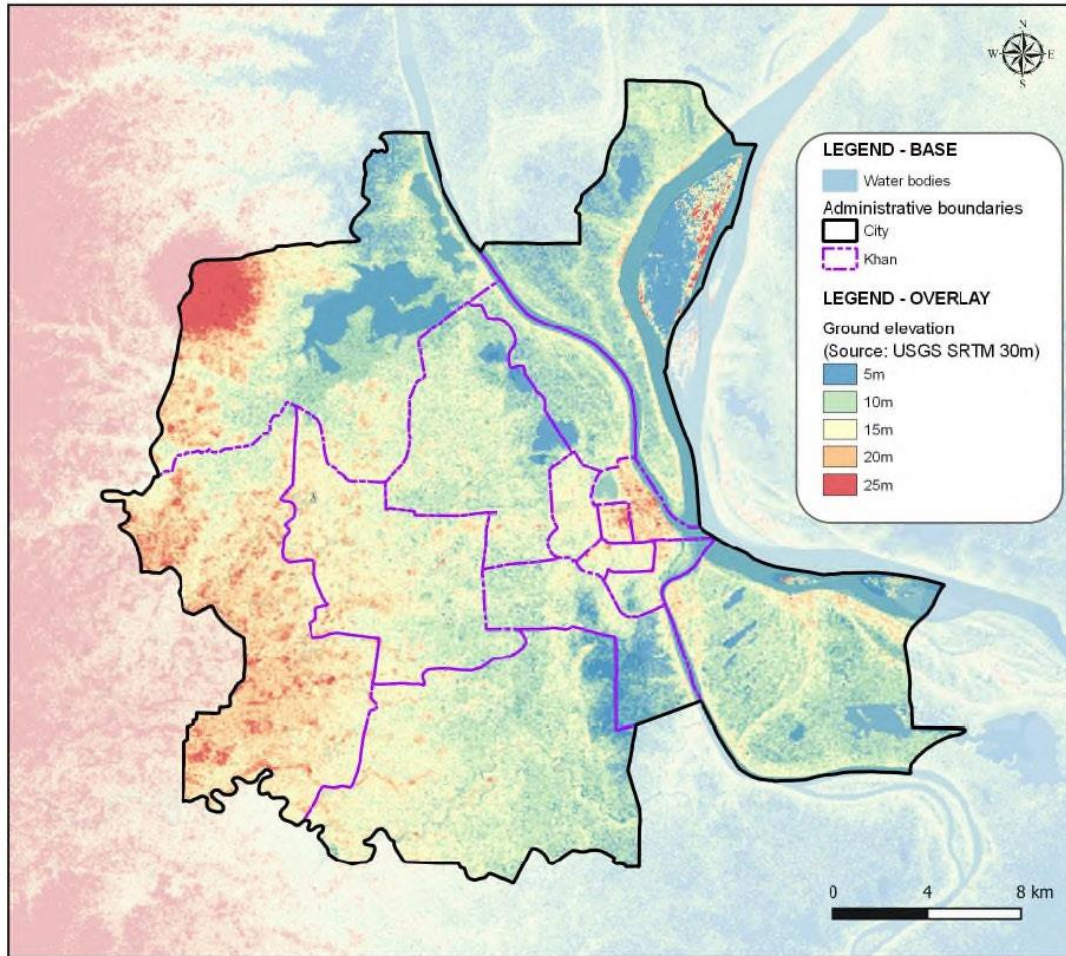
Geographical Features

The main geology of the area around Phnom Penh Metropolis is solid debris soil. The topography of the city is generally flat, with a gentle slope from north to south and west to east. Elevation is highest in the western boundary capital (up to 25 m), with relatively high land between the west and Phnom Penh International Airport at 14 m above sea level.

There are flood plains along the Tonle Sap, Bassac and Mekong rivers with an elevation of approximately 4 m. As the project area is located on the floodplain where the three rivers converge, the city has the following flood drainage and water storage functions.

- (i) Circular embankments in the urban area
- (ii) The Kop Srov embankment extending westwards past the airport
- (iii) Open channels located north to south of Tamouk Lake
- (iv) Open channel aligned south of Tompun Lake and wetlands

It has been reported that floods exceeding 10.5 m on the Mekong River could result in the breach of dykes and have a long-term impact on the floodplain of Phnom Penh.

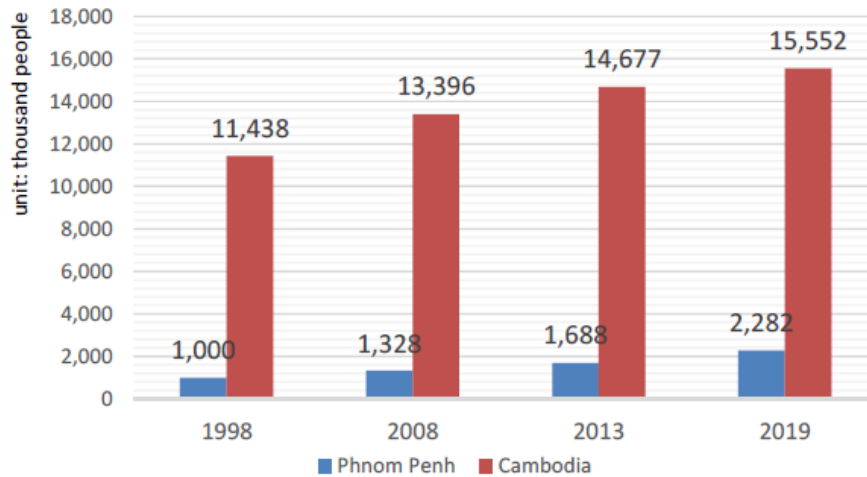


Source: ADB CAM: Improved Sanitation through the Development of Citywide Inclusive Sanitation (CWIS) in Phnom Penh

Figure 3 General features of Phnom Penh and surrounding area

Population

In Cambodia, population censuses surveys (census) have been conducted in 1998, 2008, and 2019. The most recent census survey was conducted in 2019, and the report was released in October 2020. In addition, an intermediate census was conducted in 2013, which ensures accuracy of data at the provincial level. The population of the country is growing steadily, from approximately 11.4 million in 1998 to 15.6 million in 2019. While the national population growth rate since 1998 has been 1.5% per year, the Phnom Penh metropolitan area has grown at an annual rate of 2.9% (between 2008 and 1998) and 5.0% (between 2019 and 2008), indicating that social growth due to the influx of people from other provinces has been a factor. As a result, the population of Phnom Penh increased from 9.9% in 2008 to 14.7% of the national total, making it the largest in the country and the most densely populated area in the country with 3,361 people/km² compared to 87 people/km² in the whole of Cambodia.



Source: Data collection survey on urban transport in Phnom Penh, Final Report (2023)

Figure 4 Population of Cambodia and Phnom Penh between 1998 and 2019

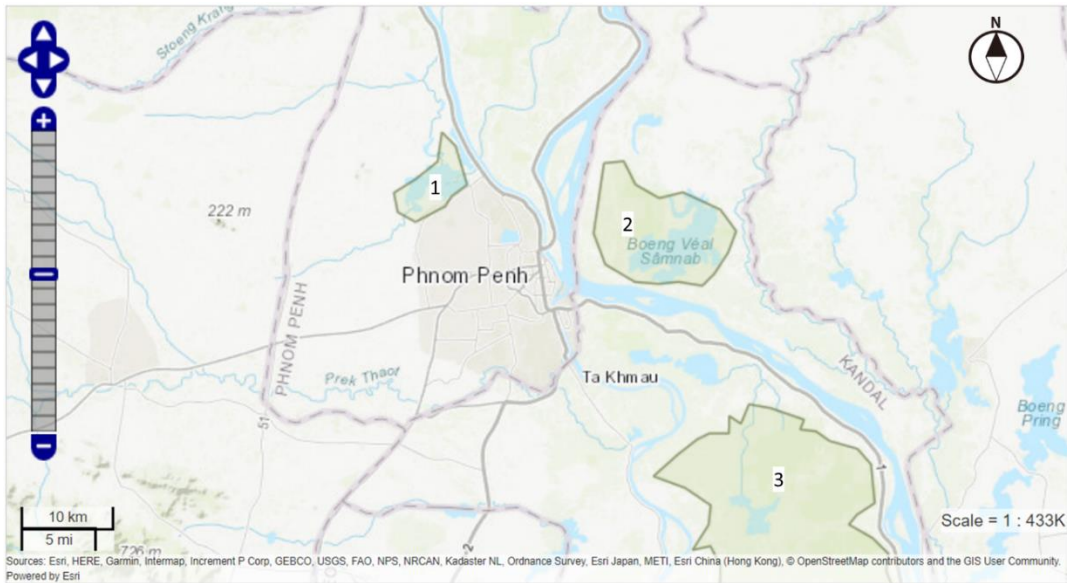
Protected Areas and Biologically Important Areas

As indicated in Table 1 and Figure 5, there are two Important Bard Areas (IBA) located within the area, namely, Basset Marsh in the north, Boeung Veal Samnap in the east. Also, one IBA, Bassac Marsh is located just outside of the project area facing south. Among observed species in those areas, *Anhinga melanogaster*, *Pelecanus philippensis*, and *Ploceus hypoxanthus* at Basset March and *Anhinga melanogaster*, *Threskiornis melanocephalus*, *Pelecanus philippensis*, and *Mycteria leucocephala* at Boeung Veal Samnap are categorized as Nearly Threatened in IUCN Red List. There is no protected area, Key Biodiversity Area, nor Ramsar site located within or around the project area.

Table 1 Important Bard Areas in the Project area

No.	Name	Area (ha)	Type of reserve, remarks
1	Basset Marsh	2,770	IBA (A1 ¹⁾)
2	Boeung Veal Samnap	11,286	IBA (A1 ¹⁾)
3	Bassac Marsh	52,316	IBA (A1, A4i ¹⁾)

1) A1: Globally threatened species, A4 Congregations
 Source: BirdLife International (2024) Important Bird Area factsheet



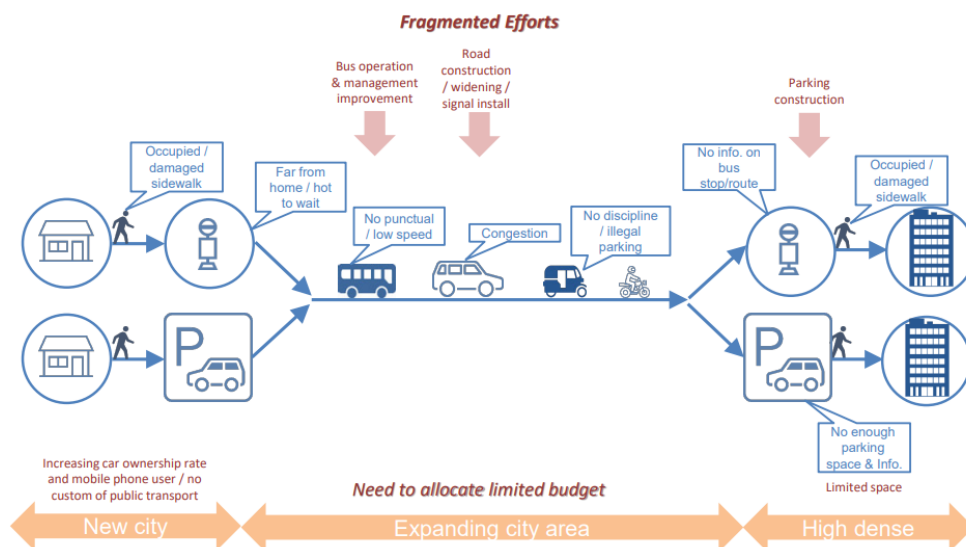
Note) numbers in the map correspond to those of Table 1

Source: <https://www.protectedplanet.net>

Figure 5 Map of IBAs inside and around the Project area

Current urban transportation issues in Phnom Penh

There have been several efforts made to improve the urban transport in Phnom Penh, such as urban road development and widening, traffic signal installment, city bus operation, etc. based on PPUTMP. However, those efforts are fragmented and not been effective to change the behavior of citizens, namely shifting from private vehicle users to public transport users. In order to bring a behavioral change of Phnom Penh citizens, it is necessary to effectively reorganize fragmented efforts, stand from the user's point of view, and to seamlessly connect means of transports from origin to destination in view of user's convenience.



Source: Data collection survey on urban transport in Phnom Penh, Final Report (2023)

Figure 6 Efforts Made to Improve Urban Transportation and Current Issues

7. Legal Framework of Environmental and Social Considerations

(1) Legal Framework.

Major legislations relevant to environmental and social impact assessment and pollution control in Cambodia are shown in the following table. Basic guidance to conserve environment is stipulated by environmental and natural resources code (2023) and the law on environmental protection and natural resources management (1996). The code stipulates the rules to be followed and practiced in strengthening, modernizing, harmonizing and improving the management of environmental protection, conservation and restoration of natural resources, biodiversity, and ecosystem functions for survival and sustainable development of the country.

Table 2 Laws and Regulations Relevant to Environmental and Social Considerations

Law/Regulation	Year/month
<i>Environmental law/regulations</i>	
Environment and Natural Resources code (Royal Kram No. 0623/007)	2023/6
Law on Environmental Protection and Natural Resources Management	1996
Prakas (Declaration) on Guideline for Conducting Environmental Impact Assessment Report, No.49	2000/3
Prakas (Declaration) on Power Delegation of Decision Making Instead of Ministry of Environment for Investment Projects to the Municipal-Provincial Department of Environment	2005
Prakas (Declaration) on General Guidelines for Developing Initial and Full Environmental Impact Assessment Reports, No. 376 BRK.BST	2009/9
Prakas (Declaration) on Establishment of Technical Working Group for Reviewing and Commenting on EIA Report, No. 063 Pr.K MoE	2014/2
Prakas (Declaration) on Registration of Consulting Firms for Studying and Preparing Environmental and Social Impact Assessment Reports, No. 215 BrK	2014/5
<i>Environmental Impact assessment and pollution control</i>	
Sub-decree on Environmental Impact Assessment Process, No. 72 ANRK.BK	1999/8
The Royal Decree on the Creation and Designation of Protected Areas	1993
Sub-Decree on Water Pollution Control, No. 27 ANRK.BK	1999/4
Sub-Decree on Solid Waste Management, No. 36 ANRK.BK	1999/4
Sub-Decree on Air Pollution Control and Noise Disturbance, No. 42 ANRK.BK	2000/7
Joint Declaration between MOE and MEF on Determination of Service Fee for EIA reviewing and Monitoring	2012

Source: Prepared by JICA Study Team based on original documents

(2) Impact assessment and its procedures

In Cambodia, it is stipulated that environmental impact assessments must be carried out in all public and private projects, which is a requirement for environmental impact assessment, and reviewed and examined by the Ministry of Environment under the Law on Environmental Protection and Natural Resources Management (1996). In addition, Sub-decree No. 72 ANRK.BK (1999) sets out the procedures for environmental impact assessment, responsibilities of ministries/project implementers, EIA procedure, conditions for project approval and penalties.

1) Projects Subject to Environmental Assessment

Prakas (Declaration) No. 021 (2020) "The Classification of Environmental Impact Assessment for Development Projects" stipulated a screening criteria table to determine the types of impact assessment studies required to implement development project. There are 3 types of assessment

depending on the intensity of environmental impacts of the project, namely, "EIA", Environmental Impact Assessment, "IEIA" Initial EIA, and "Environmental Protection Contracts". As indicated in Table 3, all kinds of railroad construction requires EIA and the classification of other types of projects such as road construction and widening of roads depends on the size, type and location of the project.

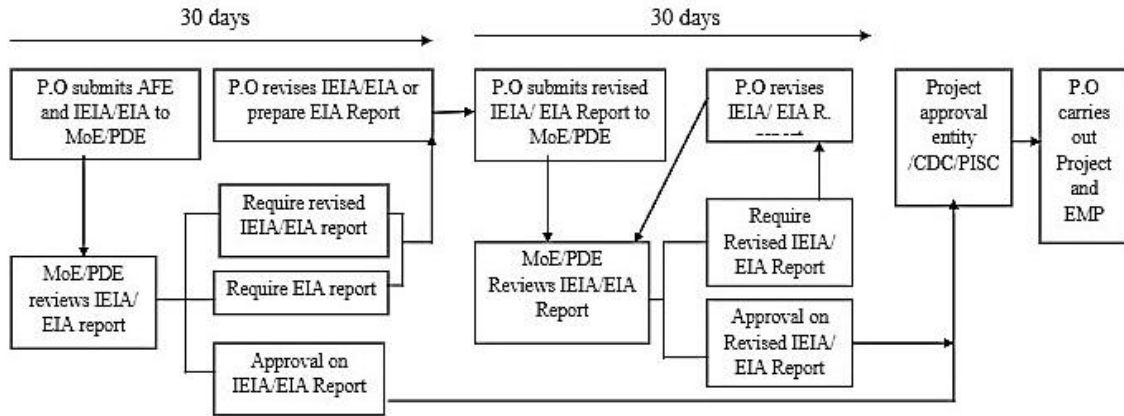
Table 3 List of Projects subject to Environmental Assessment (extract)

Type and activities of projects	Size / Capacity		
	EIA	IEIA	Environmental Protection Contracts
173. Railroad Construction	All sizes	-	-
176. All kinds of buildings (office buildings, multi-sectoral buildings, commercial buildings, condominiums, bungalows, house and villas, supermarkets, and other buildings)	Construction area $\geq 45,000$ m ²	Construction area $> 15,000 - 45,000$ m ²	Construction area $> 3,000 - 15,000$ m ²
179. Road construction	≥ 100 kilometers	$\geq 30- 100$ kilometers	10- < 30 kilometers
180. Construction extends to roads and railways	≥ 100 kilometers	$\geq 50- 100$ kilometers	10- < 50 kilometers
181. Road construction in protected areas	> 30 kilometers	$\geq 10- 30$ kilometers	< 10 kilometers
182. Renovations to road widen in protected areas	> 50 kilometers	$\geq 10- 50$ kilometers	< 10 kilometers
189. Road bridge construction	-	Weight ≥ 30 Tones	-

Source: Sub-decree on Environmental Impact Assessment Process, No. 72 (1999) Annex

2) Procedures and Relevant Organizations

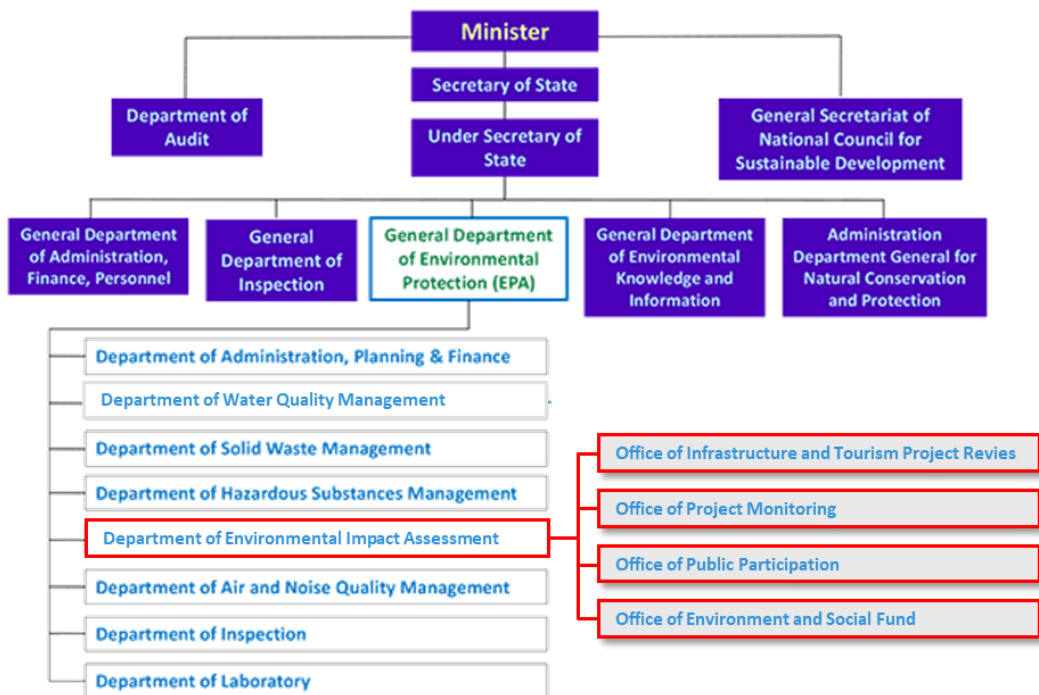
The project owner who intends to implement development projects are required to prepare and submit IEIA or EIA report to the ministry of environment and obtain approval before conducting the project. Figure 7 illustrated the approval procedures, and Figure 8 illustrates organizational chart of the ministry of environment.



NOTE: IEIA: Initial Environmental Impact Assessment MoE: Ministry of Environment P.O: Project Owner
 EIA: Full Environmental Impact Assessment PISC: Provincial Investment Sub-committee
 CDC: Council for Development of Cambodia PDE: Provincial Department of Environment
 EMP: Environmental Management Plan AFE: Application Form of Environment

Source: Annex of Prakas (Declaration) No. 376 BRK.BST (2009)

Figure 7 Procedures of Environmental Impact Assessment Study Approval



Source: Prakas No.445 and <https://wepa-db.net/>, edited by JICA study team

Figure 8 Organization Chart of Departments in charge of Environmental Impact Assessment

3) Public Participation

Sub decree No. 72 ANRK.BK (1999) chapter 1 stipulates that ‘public participation in the process of environmental impact assessment is encouraged and that conceptual inputs and suggestions from the public for review prior to project implementation should be taken into account’. In addition, Prakas No. 376 BRK.BST (2009) requires the project owner to disclose information about the project and to reflect feedback from relevant government agencies, comments from NGOs and

results of consultation with the affected population. However, specific timing and methods of participation, as well as procedures for information disclosure, are not specified. In practice, the Ministry of the Environment requires project owners to involve public at 3 timings during IEIA/EIA report preparation as follows. When implementing the project, timing and contents of public consultations shall be consulted with the ministry of environment to make sure the procedures comply with the requirements by the environmental authority.

- (1) Screening: disclose project information and collect general opinions from project affected people and relevant local government;
- (2) Impact assessment process: conducting more detailed on-site interviews and surveys with local residents and local government officials and others as a part of impact assessment study; and
- (3) Completion of Environmental Impact Assessment: Explain the result of impact assessment and proposed mitigation measures to project affected people and local government.

4) Strategic Environmental Assessment

Necessity of Strategic Environmental Assessment (SEA) is elaborated in Code on Environment and Natural Resources (2023), but the legal instruments on how to conduct the study have not been developed. SEA procedure is defined as follows in the Article 644 of the environmental code. Further detailed procedure shall be determined in a sub-decree, but it is not yet published. The progress of SEA guideline preparation shall be followed up after implementation of the Project.

- a. Screening and classification of policies, plans, and programs.
- b. Scoping of policies, plans, and programs.
- c. Preparation of the Strategic Environmental Assessment Report.
- d. Reviewing the Strategic Environmental Assessment Report.
- e. Deciding on the Strategic Environmental Assessment Report
- f. Monitoring the application of the Strategic Environmental Assessment.

(3) Land Acquisition and Involuntary Resettlement

1) Laws and regulations relevant to Land Acquisition and Involuntary Resettlement

Table 4 indicates the title and contents of relevant laws and regulations.

Table 4 Regulations Relevant to Land Acquisition

Title, No. (Year)	Key Contents
Constitution of the Kingdom of Cambodia (September 1993, amended March 1999)	Article 44 defines the right to ownership including land ownership for individual. The constitution also stipulates the state's right to land expropriation in public interest
Land Law NS/RKM/080/14 (August 30, 2001)	The law provides the regime of ownership for immovable properties for the purpose of guaranteeing the rights of ownership and other rights related to immovable properties.

Title, No. (Year)	Key Contents
Law on Land use Planning, Urbanization and Constitution (May 24, 1994)	The law aims at promoting the organization and embellishment of the urban and rural areas throughout the country.
Sub decree on State Land Management, No.118 ANK/BK (July 7, 2005)	The sub decree determines the principles, procedures, mechanisms, and institutional arrangements for state land management on identification and mapping of state land, registration and classification of state land.
Law on Expropriation, RKM/0210/003 (February 26, 2010)	The law defines expropriation in the country by defining the principle, mechanism, procedures of expropriation and fair and just compensation for any construction or rehabilitation, public physical infrastructure expansion project for the public and national interest and development of Cambodia.
Circular (letter) related to illegal occupation of state land, No.02 S.R. (February 22, 2007)	The circular provides guidance to administrate and protect against violation from illegal occupation on state land.
Circular Resolution of Temporary Settlements on State Land in Urban Areas, No.03 S.R. (May 31, 2010)	The circular defines the measures to identify illegal settlements and to guide resettlement with basic service provision.
Sub-decree No.22 ANK/BK, Standard Operating Procedures for Land Acquisition and Involuntary Resettlement for Externally Financed projects (February 21, 2018)	The sub decree provides guidelines for the planning and implementation of land acquisition and resettlement activities that become necessary when an infrastructure investment project is planned and implemented under financial support from development partners.

Source: Prepared by JICA Study Team based on original documents

2) Land Acquisition and Involuntary Resettlement Procedures

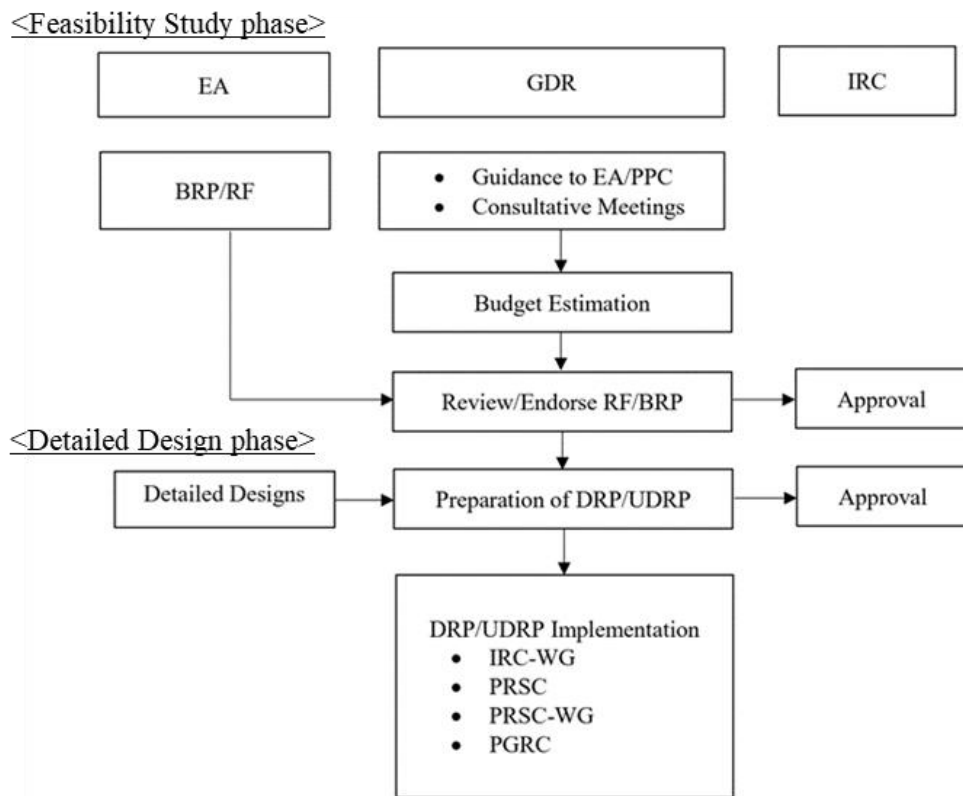
The legal procedures of land acquisition are stipulated in the Law on Expropriation (2010). This law defines the principles, mechanisms, and procedures of expropriation as well as fair and just compensation for any construction, rehabilitation, and public physical infrastructure expansion project in terms of the public and national interests and development of Cambodia.

When land acquisition is required for implementation of development projects, an expropriation committee will be established which is led by a representative of Ministry of Economy and Finance (MEF), and representatives of concerned ministries/institutions for proceeding land acquisition. Under the expropriation committee, an expropriation sub-committee will be established which is led by a board of municipal-provincial governors, and representatives of concerned provincial departments and authorities. The expropriation committee is to conduct a survey on the owner of acquired land and assets to be compensated and produce a report with recommendations and proposals for the government's approval of the land acquisition. Financial compensation will be based on a market price or replacement price on the date of declaration of the expropriation. The market price or the replacement price shall be determined by an independent committee or agent selected by the expropriation committee.

When the land acquisition causes involuntary resettlement, it should follow the procedures as stipulated in Sub-decree No.22 ANK/BK on the Promulgation of the Standard Operating Procedures for Land Acquisition and Involuntary Resettlement for Externally Financed Projects in Cambodia (2018, hereinafter referred as SOP). In the Feasibility Study (hereinafter referred as F/S) phase,

Executing Agency (hereinafter referred as EA) prepares Basic Resettlement Plan (hereinafter referred as BRP) under the guidance from the General Department of Resettlement (hereinafter referred as GDR), and submit it to the GDR for endorsement. After the endorsement, the BRP is approved by Inter-ministerial Resettlement Committee (hereinafter referred as IRC).

In the Detailed Design (hereinafter referred as D/D) phase, EA requests MEF for establishing Inter-ministerial Resettlement Committee-Working Group (hereinafter referred as IRC-WG), which comprised of EA and representatives from relevant ministries. GDR works as secretariats to IRC and takes the initiative for implementing resettlement procedure. Cooperating with IRC-WG, Provincial Resettlement Sub-committee (hereinafter referred as PRSC), PRSC-Working Group (hereinafter referred as PRSC-WG) and Provincial Grievance Redress Committee (hereinafter referred as PGRC), GDR prepares Detailed Resettlement Plan (hereinafter referred as DRP) by updating BRP and proceed the process of resettlement. A flow chart of resettlement procedure is shown in Figure 9..



Source: Sub-decree on the Promulgation of the Standard Operating Procedures for Land Acquisition and Involuntary Resettlement for Externally Financed Projects in Cambodia

Figure 9 Flow of Land Acquisition and Involuntary Resettlement in Cambodia

8. Provisional Implementing procedures and Scoping

1) Implementing Procedures

Based on Environmental code in Cambodia (2023) and JICA's Environmental and Social

Consideration guidelines (2022), the Environmental and Social Consideration (ESC) study for the Project shall be Strategic Environmental Assessment (SEA). As there are no official review procedures nor detailed guidelines for SEA reports by the ministry of environment, the Project shall contact person in charge of EIA study in the ministry and request comments in each process of decision making.

In addition, international guidance such as SEA Performance Criteria by International Association for Impact Assessment (IAIA) and other relevant guidelines shall be referred in conducting SEA. Also, as the study will be financed by JICA, it should align with JICA guidelines. Major tasks in the SEA process include the following.

- (1) Preparatory Works and Scoping for SEA
 - a. Establishment of a formation to implement SEA study, including SEA Team,
 - b. Stakeholder analysis and develop a participation strategy,
 - c. Implementation of SEA study including focus group discussions, data collection of following items: air pollution, noise & vibration, water quality, solid wastes, flora and fauna including aquatic ecosystem, transportation, local socio-economy, archaeological and cultural heritage, and land acquisition including involuntary resettlements and so on.
- (2) Assessment of the updated Phnom Penh Urban Transport Master Plan (PPUTMT)
 - a. Assessment of the countermeasure alternatives including ‘without project’
 - b. Initial environmental assessment for the pilot projects proposed by PPUTMT for future implementation (if appreciable)
- (3) Stakeholder Participation
 - a. Organizing stakeholder meetings including focus group discussions and community meetings
 - b. Engagement of non-governmental stakeholders
- (4) Reporting, Review and Approval (internal)

2) Provisional Scoping Results

It is assumed that the pilot projects proposed by PPUTMT consists of soft and hard measures, but concrete contents of those measures are not yet designed. Therefore, the provisional scoping is prepared based on the assumption that the PPUTMT may include urban transport upgrades, such as bus priority lane and widening pedestrian walkway that may involve moderate construction works with no large-scale land acquisition. The scoping results should be updated after contents of PPUTMT will be decided.

Table 5 Draft Scoping of the Project (in case of urban transport upgrade projects)

	Item	Rating		Reasons * CP: Construction Phase, OP: Operation Phase
		CP	OP	
Pollution Control				
1	Air Quality/Dust	✓		CP: During construction, temporary deterioration of air quality by dust due to construction activities is expected. OP: No air quality impacts are of concern.
2	Water quality	✓		CP: Water quality is expected to be affected by the construction work due to excavation of soils etc. OP: No negative impact is expected.
3	Soil contamination			CP/OP: It is expected that there is no impact by the project.
4	Noise & vibration	✓		CP: Noise due to construction activities and vehicles mobilization are expected. OP: No impact is foreseen from the project.
5	Land subsidence			CP/OP: There is no concern about land subsidence.
6	Offensive Odors			CP/OP: No impact is expected, as the project does not envisage any facilities that will permanently generate offensive odors.
7	Bottom Sediment			CP/OP: No impacts are foreseen from the project.
8	Solid Waste			CP/OP: It is expected that there is no impact by the project.
Natural (physical) environment				
9	Topography/geography			CP/OP: No major cut and fill would be necessary, so no topographical or geological impacts are envisaged.
10	Hydrography			CP/OP: No impact by the project is expected.
11	Groundwater			CP/OP: No impact by the project is expected.
12	Ecosystem/ Flora & Fauna/ Biodiversity			CP/OP: The project may not modify the ecosystem of surrounding areas, as the projects will be implemented in urban areas.
13	Protected area			CP/OP: No impact is expected as there is no national parks nor protected area located inside and nearby project area.
Social environment				
14	Land Acquisition/resettlement	✓		CP/OP: It is expected that the project may not induce large scale land acquisition but may require small scale involuntary (economic) resettlements (e.g. roadside vendors etc.)
15	Poor People			CP/OP: No activities are envisaged that will negatively impact the poor.
16	Ethnic minorities/indigenous peoples	✓	✓	CP/OP: It is not sure if ethnic minorities or indigenous peoples are located around the project site, so the current status shall be confirmed through the study.
17	Local economy, including employment and means of livelihood	✓	✓	CP/OP: Employment of unskilled labors by construction and other pilot activities may increase the income of local workers and temporarily improve their livelihoods.
18	Land use and use of local resources	✓	✓	CP/OP: The project may modify land use and local resources, and impact its use.
19	Water use and water rights			CP/OP: It is expected that the Project would not impact water use and water rights.
20	Social infrastructure and social services		✓	CP/OP: No negative impact by the project is expected. Besides, the Project may improve mobility of urban traffic, that may contribute positively to improve social services.
21	Social institutions (local decision-making institutions)			CP/OP: It is expected that there is no impact by the project.

	Item	Rating		Reasons * CP: Construction Phase, OP: Operation Phase
		CP	OP	
22	Misdistribution of benefits and damages			CP/OP: The project is not expected to cause misdistribution of damage and benefits.
23	Local conflict of interest			CP/OP: The project is not expected to cause conflicts of interest within the area, as the project aims to improvement of urban traffics and its management.
24	Cultural and historical heritage			CP/OP: No impact is expected as cultural heritage sites are not located in the project area and its surroundings.
25	Landscape	✓		CP: The project may cause slight modification of landscape by modifying road design, but it may not significantly impact the landscape of surrounding area. OP: No negative impact is expected during operation phase.
26	Gender	✓	✓	CP/OP: No specific negative impacts on gender from the project are envisaged, but positive impacts by improving women's access to public transport means.
27	Children's rights			CP/OP: No specific negative impacts on children's rights are expected.
28	Public health (infectious diseases)	✓		CP: The Project may negatively impact the public health status of the area due to influx of construction workers from outside of the area. OP: No negative impact is expected during operation phase.
29	Occupational health and safety	✓	✓	CP/OP: there are risks of occupational safe for construction workers during construction phase and traffic operators during operation phase as the project modify the traffic system and may confuse drivers.
others				
30	Accidents	✓		CP: The Project may cause increased accidents due to modification on traffic system. OP: No negative impact is expected during operation phase.
31	Transboundary impacts, and climate change			CP/OP: As the project activities are not large in scale, no significant transboundary climate change-related impact is envisaged. Nonetheless, it is expected that the project would contribute reducing GHGs emission by improving efficiency of public transport.

Source: Prepared by JICA Study Team

9. Result of the consultation with recipient government on environmental and social consideration including roles and responsibilities.

Phnom Penh Capital Administration agreed with JICA on DAY MONTH 2024 on abide by “JICA Guidelines for Environmental and Social Considerations (January, 2022)” in order to ensure that appropriate considerations will be made for the environmental and social impacts of the Project.

10. Terms of Reference for Environmental and Social Considerations

As mentioned above, the project shall conduct Strategic Environmental Assessment in compliance with the Japan International Cooperation Agency (JICA) Environmental and Social Considerations Guidelines (January 2022) (the JICA Environmental Guidelines). Emphasis shall be placed on comparing and examining the alternatives at the policy, plan, and program (PPP) levels above the project. Specifically, after conducting scoping (clarifying the environmental and social impact items that are extremely important in decision-making of policies, plans, programs, etc. and their assessment methods), a comparative study of multiple alternatives, including the impact of environmental and social aspects shall be conducted.

1) Studies to be Conducted

- (1) Examination of objectives and targets of policies, plans, etc. of the Master Plan
- (2) Confirmation of environmental and social consideration systems and organizations of the host country
 - a. Laws, regulations, standards, etc. related to environmental and social considerations (environmental impact assessment, resident relocation, resident participation, information disclosure and others.)
 - b. Gap Analysis between the local law/regulation and the JICA Environmental Guidelines
 - c. Outline of related organizations
- (3) Examination of the contents of policies and plans (development forecasts, lists of countermeasures, maps of routes and future development areas and others.)
- (4) Consideration of alternatives to achieve the purpose within a reasonable range
- (5) Implementation of scoping (clarification of extremely important environmental and social items in decision-making of policies, plans, programs, etc. and their evaluation methods)
- (6) Confirmation of baseline environmental and social conditions (land use, natural environment, living areas of indigenous peoples, economic and social conditions.)
- (7) Impact prediction
- (8) Impact assessment and comparison of alternatives (PPP level)
- (9) Consideration of mitigation measures (avoidance, minimization, mitigation and compensation)
- (10) Examination of monitoring methods
- (11) Preparation of scoping results of environmental and social consideration items of priority projects (alternative plans to be considered, scope of environmental and social impact items considered important, and prediction and evaluation method proposals)
- (12) Stakeholder consultations (examination of the purpose, participants, method and content of discussions and others. JICA Environmental Guidelines Appendix 5 shall be referred.)

2) Terms of Reference that corresponds to the scoping results

Terms of Reference of the environmental and social considerations survey for the project that correspond to the scoping results are proposed as follows.

Table 6 Terms of Reference for Environmental and Social Consideration survey (draft)

Environmental Factors	Survey Items	Survey Methods
Air Quality/ Dust	<ul style="list-style-type: none"> • Current condition of air quality around the project site and nearby monitoring station • Environmental standard of air quality 	<ul style="list-style-type: none"> • To review existing reports/data, conduct site measurement and analysis • To confirm relevant regulations in Cambodia

Environmental Factors	Survey Items	Survey Methods
	<ul style="list-style-type: none"> in Cambodia and other related international standards if necessary • Estimation of impact, propose mitigation measures and monitoring plan 	<ul style="list-style-type: none"> • To survey situations and measures taken by other similar institutions
Water quality	<ul style="list-style-type: none"> • Current condition of water quality in and around the project site • Environmental standard of ambient water quality in Cambodia and other related international standards if necessary • Estimation of impact, mitigation measures and monitoring plan 	<ul style="list-style-type: none"> • To review existing reports/data, conduct site measurement and analysis • To confirm relevant regulations • To conduct the field survey, to review existing reports/materials • To survey situations and measures taken by other similar projects
Noise and Vibration	<ul style="list-style-type: none"> • Environmental standard of noise and vibration in Cambodia and other related international standards if necessary • Estimation of impact, propose mitigation measures and monitoring plan 	<ul style="list-style-type: none"> • To confirm relevant regulations in Cambodia • To conduct the field survey around the project site • To study situations and measures taken by other similar projects
Land Acquisition/ resettlement	<ul style="list-style-type: none"> • Socio-economic condition of impact area 	<ul style="list-style-type: none"> • To conduct interview survey and inventory observation of project affected structures including households and business entities
Ethnic minorities/ indigenous peoples	<ul style="list-style-type: none"> • Social situation, demography and population by ethics of the impact area 	<ul style="list-style-type: none"> • Same as Land acquisition
Local economy, including employment and means of livelihood	<ul style="list-style-type: none"> • Employment plan during the construction phase • Prediction of impact on local economy caused by the project 	<ul style="list-style-type: none"> • To examine the construction plan • To review similar projects
Land use and use of local resources	<ul style="list-style-type: none"> • Land usage, local resources inventory 	<ul style="list-style-type: none"> • To conduct the field survey around the project site
Social infrastructure and social services	<ul style="list-style-type: none"> • Existing infrastructures and social services 	<ul style="list-style-type: none"> • To conduct the field survey around the project site
Landscape	<ul style="list-style-type: none"> • Current landscape and viewpoints of pilot project area(s) 	<ul style="list-style-type: none"> • To conduct the field survey around the project site
Gender	<ul style="list-style-type: none"> • Current situation related to gender issue especially in disaster 	<ul style="list-style-type: none"> • To review gender consideration of mitigation measures proposed by the project
Public health (infectious diseases)	<ul style="list-style-type: none"> • Current situation related to public health 	<ul style="list-style-type: none"> • To review statistics related to public health
Accidents	<ul style="list-style-type: none"> • Cases of traffic accidents around project site 	<ul style="list-style-type: none"> • To review accidents' record
Occupational Health and Safety	<ul style="list-style-type: none"> • Potential risks related to occupational health and safety • Guidelines related to occupational health and safety in Cambodia and other related international guidelines 	<ul style="list-style-type: none"> • To review the project activities • To review existing documents, reports and materials

Source: JICA Study Team

END