Environmental and Social Considerations in Detailed Planning Survey

(Technical Cooperation for Development Planning)

1. Full Title of the Project

Honiara Transport Master Plan

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

Master Plan Study

3. Categorization and its reason

The Study is classified as a "Category B" because of the following reasons:

The project is unlikely to cause significant adverse environmental and social impacts referring to the sensitive sectors, characteristics and areas described in "Guidelines for Environmental and Social Considerations, JICA, April 2010".

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

Ministry of Infrastructure Development: MID

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

5-1. Expected Goals which will be attained after the Project Completion

(1) Goal of the Proposed Plan

To improve the traffic condition in Honiara by formulating the transport master plan.

(2) Goal which will be attained by utilizing the Proposed Plan

To provide higher quality of the traffic network with public transport for faster, safer, more comfortable, more reliable and environmentally friendly means of road transport for Honiara and its urban area, which supports national goals of rapid, inclusive and sustained economic growth of the country.

5-2. Outputs

(1) Traffic Master Plan shall be formulated and clarified for the year of 2036;

(2) Priority projects list shall be identified.

5-3. Activities

(1) For the output (1) "Traffic Master Plan shall be formulated and clarified for the year of 2036."

1) Review the current national road & mini-bus network and the latest city and area development plans (including review of related plan of 「National Development Plan」 and other plans)

2) Assess regional connectivity from viewpoints of location of urban centers and industry/transportation hubs

3) Undertake traffic surveys (traffic count survey, roadside OD survey etc.) in coordination with MID
4) Formulate future socio-economic framework
5) Forecast future traffic demand
6) Identify issues of road network and area connectivity
7) Define the criteria of road network
8) Identify environmentally, socially and cultural critical areas
9) Conduct Information, Education & Communication (IEC) activity as part of Strategic Environmental Assessment
10) Formulate road network development strategy consistent with the Country or City Transport Policy
11) Establish overall road network plan

(2) For the output (2)" Priority projects shall be identified with implementation program."

1) Identify criteria for prioritization of projects
2) Examine project cost, economic and financial analysis, engineering and environmental aspects, and so on at preliminary and corridor levels
3) Prioritize projects and examine appropriate implementation and financing schemes
4) Formulate project implementation program in short, medium, and long terms
5) Conduct public consultation for the projects

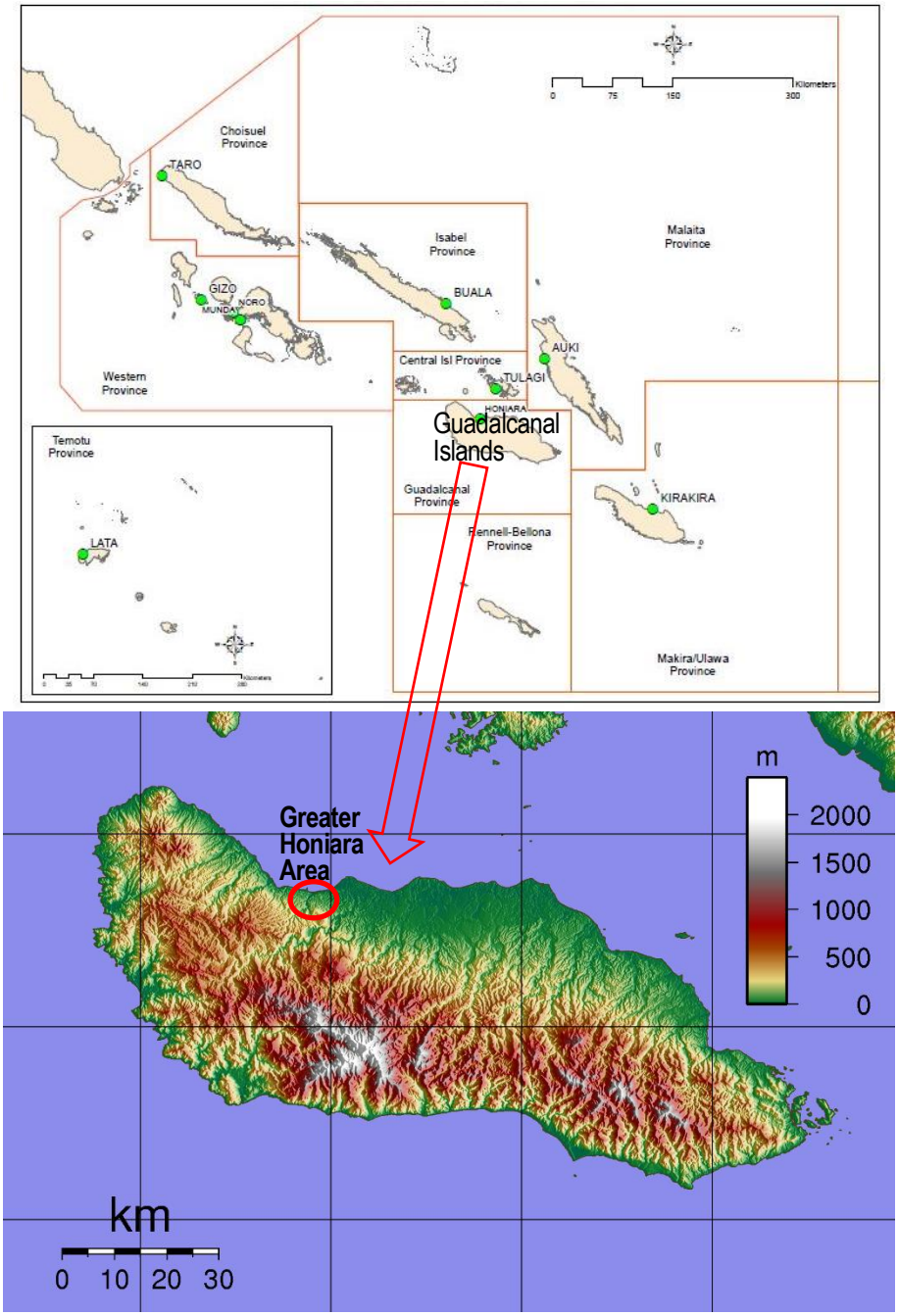
6. Description of the project site (maps, environmental and social condition, current issues, etc.)

6-1. Location map

Location map of the Greater Honiara Area is shown in Figure-1 and Figure-2. The Greater Honiara Area including Honiara City is located in Guadalcanal Island in the Solomon Islands.

Source: Ministry of Lands, Housing and Survey

Figure-1 Greater Honiara Area



Source: National Statistics Office, Wikimedia Commons

Figure-2 Locations of Guadalcanal Island and Greater Honiara Area

6-2. Environmental and social conditions

(1) Topographical and Geological Condition

The terrain of the Great Honiara Area can be divided into three distinctive zones. The coastal area on the west is the central urban area of Honiara, which is a flat area about 200 - 300 meters wide. On the other hand, the eastern coastal area is a floodplain of about 2 kilometers in depth including the Honiara International Airport. These coastal areas form an alluvial plain. In addition, the south side of the central urban area becomes a hilly land where the terrain rises steeply by about 40 meters at the land area of 200 to 300 meters, and gradually rises in a terraced shape.

This hilly land is finely carved in the valley.

(2) Protected Area

In the Protected Areas Regulations 2012, there are five kinds of protected areas of the Solomon Islands and world heritage classified as follows. However, a concrete list showing these protected areas was not confirmed in the preparatory survey.

- Nature Reserve
- National Park
- Natural Monument
- Resource Management Area
- Closed Area

According to SOLOMON ISLANDS STATE OF ENVIRONMENT REPORT 2008, the protected areas of Solomon Islands are explained as follows.

- East Rennell (World Heritage)
- Arnavon Islands Marine Conservation Area (marine protected area between Santa Isabel and Choiseul islands)
- Tetepare Islands (ocean and terrestrial protected areas)

In addition to the above, there is a marine protected area (MPA) managed by the local community.

There are no protected areas located in the Greater Honiara Area.

(3) Population

Table-1 shows the trend of population density over 30 years in the target area. The population density of Honiara City has nearly doubled in the last 20 years, and tripled in 30 years. The population density has rapidly become overcrowded as population increases.

Table-1 Population and Density of Honiara

Province Name	Population (person)				Density (person/km^2)				Area
	1986	1999	2009	2017*	1986	1999	2009	2017*	(km^2)
Choiseul	13,569	20,008	26,379	28,480	3.5	5.2	6.9	8.9	3,837.3
Western	41,681	62,739	76,649	82,187	5.6	8.4	10.2	12.5	7,509.0
Isabel	14,616	20,421	26,158	28,150	3.5	4.9	6.3	8.0	4,136.2
Central	16,655	21,577	26,051	27,852	27.1	35.1	42.3	50.9	615.3
Rennel	1,802	2,377	3,041	3,274	2.7	3.5	4.5	5.8	670.7
Guadalcanal	49,831	60,275	93,613	103,059	9.3	11.3	17.5	26.1	5,336.3
Malaita	80,032	122,620	137,596	146,143	18.9	29.0	32.6	37.1	4,224.7
Makira	21,796	31,006	40,419	43,627	6.8	9.7	12.7	16.2	3,187.7
Temotu	14,781	18,912	21,362	22,679	17.0	21.8	24.6	28.2	868.4
Honiara	30,413	49,107	64,602	70,002	1,388.7	2,242.3	2,949.9	3,859.5	21.9
Solomon Islands	285,176	409,042	515,870	555,453	9.4	13.5	17.0	21.5	30,407.5

Note: * Predicted population
Source: National Statistics Office, Population and Housing Census 2009

(4) Land use

The main urban facilities concentrate on the flat land of the coastal area. The land is used for commercial and business facilities (shops, offices, hotels), harbors, government facilities, religious facilities (churches), central market, education facilities, central hospital, Solomon Islands National University and King George VI campus, industrial area, residential area. Residential area and cultivated land spread over the eastern region where the international airport is located in. Residential area is dominated in the hilly land with small valleys in the south and southwest side of the area. Informal settlers also reside in the valleys.

(5) Living Conditions

The living conditions of Honiara City is the most urbanized compared to the whole country and Guadalcanal Province. However, many households still use firewood for cooking fuel and it is concerned about deforestation. Water pollution of surface and ground water is another concern as the households discharge domestic wastewater without treatment or septic tank and dumping of garbage in rivers and streams.

(6) Informal Settlers

Informal settlers particularly reside in the western part (Nggosi and Vavaea wards) and in the central southern regions (Kola'a and Vura wards) in Honiara City. In recent years, they have also increased in the Panatina ward of the eastern part and the Guadalcanal province in the southern part of the Greater Honiara Area.

(7) Indigenous and Ethnic people

The presence of indigenous and ethnic people in the Greater Honiara Area was not confirmed, but it should be reconfirmed in the Project.

(8) Cultural Heritages

There are churches scattered in the urban area of the Great Honiara Area. Cultural facilities such as the National Museum and monuments, cemeteries are also located, but designated cultural heritage such as historic district was not identified. Meanwhile, some local communities may have old trees, rocks, traditional buildings as sacred places although the details are unknown. It should be reconfirmed in the Project.

6-3. Current Issues

Current major environment and social issues in the Greater Honiara Area are identified as follows.

(1) Solid waste management

(2) Septage and sewerage management

(3) Traffic management, roads and other transport infrastructure (Traffic congestion and emission)

(4) Informal settlers

7. Legal Framework of Environmental and Social Considerations

7-1. Laws, regulations and standards related to environmental and social issues including requirements and procedures of Environmental Impact Assessment (EIA), stakeholder participation, and information disclosure

(1) Strategic Environmental Assessment (SEA)

Strategic Environmental Assessment (SEA) has not been legislated in the Solomon Islands yet. Although Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM) is reviewing the Environment Act and Environment Regulations introducing SEA, its content is not yet concrete, and there is no prospect of approval.

(2) Environmental Impact Assessment System

(3) Environmental impact assessment in Solomon Islands is carried out based on The Environment Act 1998 and The Environment Regulations 2008. The former act stipulates the establishment of the Environment Conservation Department and the Environment Advisory Committee for environmental protection and conservation, and the procedures of environmental impact assessment. The latter provides rules for environmental impact assessment to generally implement to enforce the Environment Act 1998.

Major laws and regulations for environmental management in the Solomon Islands are listed below.

- Provincial Government Act 1979
- River Waters Act 1973
- National Parks Act 1978
- Wild Birds Protection Act 1978
- Environmental Health Act 1980
- Agriculture and Livestock Act 1982
- Forest Resource and Timber Utilization Act 1991
- Mines and Minerals Act 1996
- Wildlife Management and Protection Act 1998
- Fisheries Act 1998
- Environment Act 1998
- Environment Regulations 2008
- Wildlife Protection and Management Regulation 2008
- Protected Areas Act 2010
- Environmental Impact Assessment Guidelines 2010
- Protected Areas Regulations 2012

As described in Table-2 presented in the Environmental Impact Assessment Guidelines, either Public Environmental Report (PER) or Environment Impact Statement (EIS) is required for the EIA. Public participation is required at the stages of EIA (PER or EIS) report review.

Table-2 Procedures of Environmental Impact Assessment

Step	Title	Details of Actions	Time frame (days)	Stakeholders involved in each action
1.	Proposal Application	The developer lodges a proposal application to the ECD with an application fee of $200. The proposal application should be a formal letter outlining detail description of the proposed development.	na	Developer
2.	Screening	ECD decides whether or not EIA is required by screening the	15	ECD & Developer

Step	Title	Details of Actions	Time frame (days)	Stakeholders involved in each action
		proposal applications. In the case where EIA is not required, go to step 13. Conversely once an EIA is required, then go step 3		
3.	Scoping	ECD after considering the application within 15 days requires the developer to carry out an EIA study. Scoping is where major impacts of the proposed development are identified and highlighted. ECD will then advise the developer of the type of information required and will decide whether PER or EIS is required of the developer.		ECD & Developer
4.	EIA study	The developer carries out studies to collect and prepare the environmental information (report) required by ECD. If the developer is preparing a PER go to step5 or EIS go to step 9.	na	Developer
5	Submission of PER and Development application	The developer prepares and submits PER and the development application (Form 2 in Environment Regulations 2008) with a development application fee.	na	Developer
6	1st Review of PER	ECD reviews the application to determine the nature of the proposal and whether the PER complies with the ACT. If the PER does not fulfill the requirements of the Act, ECD may advice the developer to submit further information or details. If the PER meets the Act requirements, go to Step 7.	10-review 5- decision	ECD
7.	PER Public Display and Participation	ECD will publish the PER document such that it is made available to the public and convene a meeting that ensures public participation. The notice of the meeting (form4 in Environment Regulation 2008) will be published in the newspaper and posted in public places in the communities, which will be likely affected. Any cost associated with the publication of the Notice or PER will be borne by the developer.	30	ECD, relevant organization, provincial government, developer, resource owners/users, public.
8.	2nd PER Review	The PER will be reviewed again by ECD taking into consideration any objections and information received during the Public display meeting or after the meeting. 1. Approve (step 13) 2. Reject- developer may appeal to advisory committee (step 14) 3. Deferred for approval- ECD may require an EIS from developer (step 9)	15	ECD
9	Submission of EIS and Development Application	Developer prepares and lodges the EIS and development application with development application fee. If the EIS meets the requirements of the Act, go to Step10.	na	Developer
10	1st EIS Review	ECD reviews the application to determine the nature of the proposal and whether the EIS complies with the ACT. If the EIS does not fulfill the requirements of the Act, ECD may advice the developer to submit further information. If the EIS meets the Act requirements, go to Step 11.	10-reiview 5- decision	ECD
11	EIS Public Display and Participation	The ECD will publish the EIS document such that it is made available to the public and convene a meeting that ensures public participation. The notice of the meeting shall be published in the newspaper and posted in public places in the communities, which will be likely affected. Any cost associated with the publication of the Notice or EIS will be borne by the developer.	30	ECD, Any person, relevant organization, provincial government, developer
12	2nd EIS Review	The EIS will be reviewed again by ECD taking into consideration any objections and information received during the Public display meeting or after the meeting. ECD may after the review: 1. Approve (step 13) 2. Reject- developer may appeal to advisory committee (step 14)	15	ECD
13	Approval	The development consent is issued to the developer with conditions (form 5 of Environment Regulation 2008). The fees for development consent vary depending on the type of prescribed development. The decision of ECD shall be published in the newspaper having wide circulation in the Solomon Islands or in any other forms of public notices as	5	ECD

Step	Title	Details of Actions	Time frame (days)	Stakeholders involved in each action
		approved by ECD.		
14	Appeal 1.	The developer or any person(s) who disagrees with any decision of the Director may within 30 days of publication of the decision appeal to the Environment Advisory committee (EAC) in writing, stating clearly the grounds of appeal. The appellant shall pay an appeal fee.	30	Developer/Any person
15	Appeal 2.	If again any person disagrees with the EAC's decision, he or she may within 30 days from such decision appeal to the Minister who will make the final decision.	30	Developer/Any person
16	Monitoring	ECD or any relevant public authority may at any time, whether before or after a development activity has been completed, monitor or cause to be monitored, all or any of the environmental aspects of the implemented development activity.	na	ECD /Other relevant public authority

Source: Environmental Impact Assessment Guidelines

(4) Land acquisition and resettlement

Major laws and regulations related to land acquisition and resettlement are listed below. In the Solomon Islands, there are no regulations and procedures specifically designed for land acquisition and resettlement. If land acquisition is necessary for project, the project proponent directly negotiates with land owners. Regarding the amount of compensation, there is no posted land price, and an authorized assessor registered in the MLHS with a license calculates an appropriate land unit price with reference to the recent real estate prices in the area. However, the land owners tend to demand a high final price.

- The Town and Country Planning Act 1979
- Lands and Titles Act 1996
- Customary Land Record Act 1996
- Valuers Act 2009
- SAFEGUARDS PROCEDURES MANUAL 2016 (MID)

7-2. Relative agencies and institutions

As the project is master plan study, SEA shall be conducted in the project. Roles and functions of the relative agencies for SEA are described below:

- MID will implement SEA on the proposed development plans and holds stakeholder meetings as the project director and manager.
- ECD will participate in SEA process to study the urban transportation system development plan and take part in decision making process in master plan considering environmental and social impacts from the viewpoint of environmental management through stakeholder meetings.
- Honiara City and Guadalcanal Province will participate in SEA process to study the urban transportation system development plan and take part in decision making process in master plan considering environmental and social impacts from the viewpoint of land use plan through stakeholder meetings.

- Other agencies related to the plans and projects, National Disaster Management Office (NDMO), Ministry of Fisheries and Marine Resources, Ministry of Forestry, Environment and Conservation, Ministry of Culture and Tourism, Ministry of Health and Medical Services, Ministry of Women, Youth and Children: cooperate for the environmental and social considerations on the proposed urban transport system development plans and priority projects.

8. Provisional scoping (type and magnitudes of possible adverse impacts and mitigation measures)

Provisional scoping was done based on the environmental and social conditions of the Greater Honiara Area. The likely impacts were expected due to potential urban transport system development projects, and the results of the scoping are summarized in Table-3. In the rating, it was mainly considered that the likely impacts were expected in both construction and operation phases in the long-term, cumulatively, or in broader area. Although this scoping is to identify important items to be studied for the master plan, tentative impacts during pre-construction and construction phases were considered. Further and detail scoping shall be conducted and discussed among the stakeholders in the Project. Mitigation measures and plans will be also studied in the Project.

Table-3 Results of Provisional Scoping

	No.	Likely Impacts	Rating		Description of Impacts/ Reasons for Rating
			Pre-const./ Construction	Operation	
Pollution	1	Air Pollution	B-	B+/-	[Construction Phase] Exhaust gas and dust caused by operation of construction vehicles and equipment can temporally deteriorate air quality around the construction sites of the urban transport system. [Operation Phase] Decrease of traffic congestion due to the improvement of transport conditions can reduce emission, leading to air quality improvement.
	2	Water Pollution	B-	D	[Construction Phase] Soil erosion from the construction works and waste water from site offices or material yards can temporally affect river water quality. [Operation Phase] No operations of facilities or equipment to generate soil contamination are expected.
	3	Soil Contamination	B-	D	[Construction Phase] If unintentional fuel and oil spills from construction vehicles or equipment occur, it may contaminate soil nearby the construction sites. [Operation Phase] No operations of facilities or equipment to generate soil contamination are expected.
	4	Waste	B-	D	[Construction Phase] Waste can be temporally generated with construction such as waste soil from construction works, solid wastes and night soil from site offices, and labor's camps. [Operation Phase] No operations of facilities or equipment to generate waste are expected.
	5	Noise and Vibration	B-	B+/-	[Construction Phase] The operation of construction vehicles and equipment can temporally increase levels of noise and vibration nearby the construction sites. [Operation Phase] No operations of facilities or equipment to generate noise and vibration are expected.
	6	Ground Subsidence	D	D	The urban transport system developments will not require a large-scale groundwater withdrawal, no serious adverse impacts are expected on the ground subsidence.

	No.	Likely Impacts	Rating		Description of Impacts/ Reasons for Rating
			Pre-const./ Construction	Operation	
	7	Offensive Odor	B-	D	[Construction Phase] Operation of construction vehicles, equipment and site offices can temporally generate offensive odor by exhaust gas, discharging water, and domestic waste. [Operation Phase] No operations of facilities or equipment to generate the offensive odor are expected.
	8	Bottom sediment	B-	D	[Construction Phase] If the construction works of the urban transport system developments are implemented without protection of earthwork, it may temporally generate soil runoff and it can affect bottom sediment. [Operation Phase] No operations of facilities or equipment which cause soil erosion and worsen the bottom sediment are expected.
Natural environment	9	Protected Areas	D	D	No protected areas are located in the Greater Honiara Area.
	10	Flora, Fauna and Biodiversity	B-	D	[Construction Phase] Little natural environment is left and particular ecosystem is not identified in the project area. Tropical forests are deteriorated in the hilly land of southern part. However, some green areas are scattered on the slopes of urbanized area and in the valleys of hilly land. The urban transport system developments may affect the green areas according to the network plans. Besides, the construction works can require clearance of roadside trees along the planned route. [Operation Phase] No operations of facilities or equipment which worsen the existing biodiversity are expected.
	11	Hydrological Situation	C	C	As water system in the area composed of three major rivers and small urban creeks where garbage is dumped. Informal settlers reside especially on the small valleys in the hilly land of upstream area. It may further obstruct drainage and overflow of rain water in the urbanized areas. However, the hydrological conditions of surface water, groundwater and tidal current are unknown. It is necessary to confirm the degree of impacts of urban transportation system construction.
	12	Topography and Geographical features	D	D	As the urban transport systems are planned in the existing road networks, it will not involve any major alteration of the topography or geology, no serious adverse impacts are expected on the topography and geographical features.
Social Environment	13	Involuntary Resettlement	B-	D	[Pre-Construction Phase] Scale of land acquisition and resettlement can be minimized generally because the existing road networks will be used maximally for the urban transportation system developments. [Operation Phase] No involuntary resettlement is expected in the operation phase.
	14	The poor, Vulnerable Group	B-	C	[Pre-Construction Phase] As informal settlers are identified in the Greater Honiara Area especially in the southern valley areas, their livelihoods may be affected in relocation or involuntary resettlement according to the urban transport network plans. [Operation Phase] The impacts of urban transportation system developments on the poor and vulnerable groups are still unclear.
	15	Indigenous and Ethnic people	C	C	No indigenous and ethnic people's residence is located in the area. However, their existences will be further studied.
	16	Local economy such as employment and livelihood, etc.	B+/-	B+/-	[Pre-Con./Construction Phase] The construction activities will demand for workers (especially unskilled), and it can provide a temporary boost for local employment. Local service sector can provide the construction workers accommodation, foods and beverages. It can facilitate business opportunities for the local service sector. Meanwhile, inadequate compensation can cause loss of livelihoods, difficulty to recover livelihoods, and/or degradation of previous living conditions of relocated people. Besides, traffic congestions caused by the construction activities can stagnate the local economic activities, daily activities and livelihoods of residents. [Operation Phase] As the urban transport system can improve accessibility in the area, it can stimulate the local economic activities. However, there is concern that the existing public transportation operators may lose their means of livelihoods or reduce their incomes.

No.	Likely Impacts	Rating		Description of Impacts/ Reasons for Rating
		Pre-const./ Construction	Operation	
17	Land use and utilization of local resources	D	B+/C	[Construction Phase] As the existing road networks will be used for the urban transportation system developments, the construction activities do not seriously change the existing land use. [Operation Phase] Improved accessibility due to the operation of urban transportation system can facilitate effective utilizations of land and local resources. Additionally, population growth and commercial developments can be expected, however, its impacts are still unclear.
18	Water Usage or Water Rights and Rights of Common	C	C	As the urban transport system developments aim at improvement of traffic conditions in the urbanized area as a public service, no serious adverse impacts are expected on water usage specifically. However, the situations of water usage of surface water, ground water and sea water (fishing activities) are still unclear.
19	Existing social infrastructures and services	B-	B+/-	[Construction Phase] To secure the construction space and the construction works can hinder the access to the social services due to traffic congestion around the construction sites. [Operation Phase] As the urban transport system can improve accessibility in the area, it can stimulate conveniences of the social services in neighborhoods and regions. Meanwhile, the modal shift may cause unemployment of the existing public transportation workers.
20	Social institutions such as social infrastructure and local decision making institutions	C	C	As the urban transport system developments aim at improvement of traffic conditions in the urbanized area as a public service, no serious adverse impacts are expected. However, degree of the impact is still unknown.
21	Misdistribution of benefit and damage	D	B-	[Construction Phase] No serious adverse impacts are expected on this item specifically. [Operation Phase] Although the urban transport system can improve the traffic conditions as a public service in the urban area, its operation may generate the misdistribution of benefits on relocated people or the existing public transportation operators who can lose livelihoods, suffer difficulty to recover livelihoods and/or degradation of previous living conditions
22	Local conflict of interests	D	B-	[Construction Phase] No serious adverse impacts are expected on this item specifically. [Operation Phase] Although the urban transport system can improve the traffic conditions as a public service in the urban area, it may generate the local conflict with the existing public transportation operators.
23	Cultural heritage	C	D	[Construction Phase] No specific cultural heritages like historical urban districts were identified in the area. However, there could be local cultural/historic places that those locations are still unclear. [Operation Phase] No operations of facilities or equipment are expected to affect the cultural heritages specifically.
24	Landscape	D	D	Although the area includes coastal area, hilly land and small valleys, there are no particular natural or cultural landscape resources. The urban transport system developments are planned not to seriously change or detract surrounding landscape.
25	Gender	C	C	As the urban transport system developments aim at improvement of traffic conditions in the area as a public service, no serious adverse impacts are expected on gender specifically. However, degree of the impact is still unknown.
26	Children's rights	C	C	As the urban transport system developments aim at improvement of traffic conditions in the area as a public service, no serious adverse impacts are expected on children's rights specifically. However, degree of the impact is still unknown.

	No.	Likely Impacts	Rating		Description of Impacts/ Reasons for Rating
			Pre-const./ Construction	Operation	
	27	Hazards (Risk), Infectious diseases such as HIV/AIDS	C	D	[Construction Phase] As the local employment may be promoted for the construction works, considerable influx of workers is unexpected. However, a risk of infectious diseases due to the mass inflow of laborers from other areas is unclear. [Operation Phase] No operations of facilities or equipment to generate infectious diseases are expected specifically.
	28	Working conditions	B-	D	[Construction Phase] There is a possibility of accidents involving workers caused by operation of construction vehicles and equipment. It can temporally disturb their health and security. Traffic accidents can be also caused around construction sites. [Operation Phase] No operations of facilities or equipment to endanger the worker's safety and health are expected specifically.
Others	29	Accidents	B-	B+/-	[Construction Phase] There is a possibility of accidents involving workers and the local people caused by operation of construction vehicles and equipment. It can temporally disturb their health and security. Bedsides, traffic accidents can increase due to heavy traffic around construction sites. [Operation Phase] The urban transport system can improve the traffic conditions and the traffic safety can be improved. Meanwhile, traffic accidents may increase due to increased traffic speed.
	30	Global Warming	C	C	[Construction Phase] Although exhaust gas will be temporarily generated by operation of construction vehicles and equipment, it is limited in area and period. It does not affect global warming. [Operation Phase] As the urban transport system can improve the traffic conditions, it can reduce the traffic congestion, leading to decrease of CO_2 emissions.

Rating:
A+/-: Significant positive/negative impact is expected.
B+/-: Positive/negative impact is expected to some extent.
C: Extent of positive/negative impact is unknown. (A further examination is needed, and the impact could be clarified as the study progresses)
D: No impact is expected (except tentative impacts to be managed by future detailed construction plan).

9. Alternatives to the project activities including 'without project' option

9-1. Without project option

"Without project option" means no urban transport system development plan is formulated and will not take any actions on the present transport situations in the Greater Honiara Area. Meanwhile, as the population of Honiara is increasing and the economic activities are being accelerated, the following issues are expected to occur if "without project" is adopted:

- Traffic congestion will be increased and accelerated,
- The worsened traffic conditions will disturb the economic and social activities, consequently, and
- It will stagnate the sustainable development in the Greater Honiara Area.

9-2. Consideration of alternative/optional activities

The alternative or optional activities will be discussed and studied in the Project.

10. Results of the consultation with recipient government on environmental and social consideration including roles and responsibilities

MID agreed to abide by "JICA Guidelines for Environmental and Social Considerations" in order to ensure that

appropriate considerations will be made for the environmental and social impacts of the Project. This statement of agreement is described in the Record of Discussions (R/D) on this project.

11. Terms of reference for environmental and social considerations

SEA will be implemented in the Project at master plan level according to "Guidelines for Environmental and Social Considerations, JICA, April 2010". Its procedures and methods are discussed and decided through coordination among the stakeholders in the Project. Also, provisional scoping will be studied for the priority projects. Both SEA and provisional scoping will be studied with IEE level. Terms of Reference (TOR) for the study of environmental and social considerations to be conducted in the Project are presented as follows.

(1) For SEA

1) Review of existing development plan, development projects, studies, and public and private investment;
2) Analysis to identify environmental and social constrains to the urban transport system developments
3) Confirmation of legal framework and institution of the Solomon Islands on environmental and social considerations, and examination of the experiences of SEA study in the Solomon Islands
   A) Laws, regulations and standards related to environmental and social considerations (environmental impact assessment, resettlement, public participation, information disclosure and other)
   B) SEA study reports conducted in the Solomon Islands development projects, and other relevant information
   C) Gaps between the "JICA Guideline for Environmental and Social Considerations (April 2010)" and legal framework of the Solomon Islands on environmental and social considerations
   D) Institute of relative agencies responsible for implementation of projects and their roles on environmental and social considerations including EIA and SEA
4) Study of methods for SEA implementation under coordination with the stakeholders
5) Study to identify the subjects of SEA, the urban transport system developments with alternatives proposed as strategic scenarios, development plans or project prioritization under consideration of developed policy and plans
6) Data collection of the existing environmental and social conditions for SEA subject scenarios, plans or project prioritizations with alternatives as the baseline data
7) Scoping (clarify extremely important items on environmental and social impacts and its evaluation methods with indicators and criteria for evaluation)
8) Prediction of likely impacts according to the scoping
9) Evaluation of likely impacts of the alternatives including 'without project' option through comparative analysis based on 8)
10) Examination of the mitigation measures (to be avoid, minimized and compensated) for the selected alternative in 9)

11) Examination of the monitoring methods (monitoring items, frequencies and methods) for the selected alternative in 9)

12) Support to hold stakeholder meetings

(2) For Priority Projects

The provisional scoping will be done for proposed priority projects of urban transport system developments with mitigation measures for further studies such as feasibility studies, which should be preferentially implemented in the immediate term.