

**Environmental and Social Considerations in the Detailed Planning Survey
for
The Project for Capacity Strengthening on Planning of
Transit Oriented Development along the Metro Line 3
in
Republic of Panama
(Technical Cooperation)**

1. Full Title of Project

Project For Capacity Strengthening on Planning of Transit Oriented Development along the Metro Line 3

2. Type of the Project

Technical Cooperation for Development Planning

3. Categorization and its reason

The Project is categorized as a "Category B" Project under the Japan International Cooperation Agency (JICA) Guidelines for Environmental and Social Consideration (January 2022) (hereafter, JICA Guidelines).

The two target stations are located on Metro Line 3. In accordance with the current environmental and social conditions around the two target stations which were identified in this survey, significant environmental and social impacts are not expected in the implementations of the TOD concept plans. And possible impacts during construction and operation phases are expected to be at a level that can be mitigated through general environmental management.

If a TOD project is planned in the future, however, the location of each proposed TOD zone may result in the occurrence of land acquisitions and involuntary resettlement. Thus, the proposed project plan should be sufficiently careful to not include any activities involving large-scale involuntary resettlement, which is the threshold for category classification in one project plan.

4. Institutions Responsible for the Implementation of the Project

- ① Panama Metro (MPSA)
- ② Ministry of Housing and Territorial Planning (MIVIOT)

5. Outline of the Project

(1) Overall Goal

TOD plan(s) along Line 3 progresses towards implementation.

(2) Project Purpose

Institutional system and capacity of MPSA and MIVIOT for TOD Project promotion is strengthened.

(3) Outputs

Output1: TOD planning ability of MIVIOT and MPSA is strengthened through pilot study of model station(s).

Output 2: Legal status, process and a series of documents necessary for development and approval of TOD plan are clarified.

Output 3: A coordination mechanism and task demarcation among related organizations for TOD planning and implementation is established.

6. Description of the Project Site

(1) Candidate Site Location

TOD's pilot site candidates will be in the vicinity of the Vista Alegre and Nuveo Chorrillo stations on the proposed Metro Line 3 (Phase 1). Figure 1 shows the locations of the two target stations on Metro Line 3.

Figure 1. Two Target Stations subject to TOD on Metro Line 3



Two target stations: Stations indicated by red ovals

Base Map: MPSA

(2) Environmental and Social Conditions around the Two Target Stations

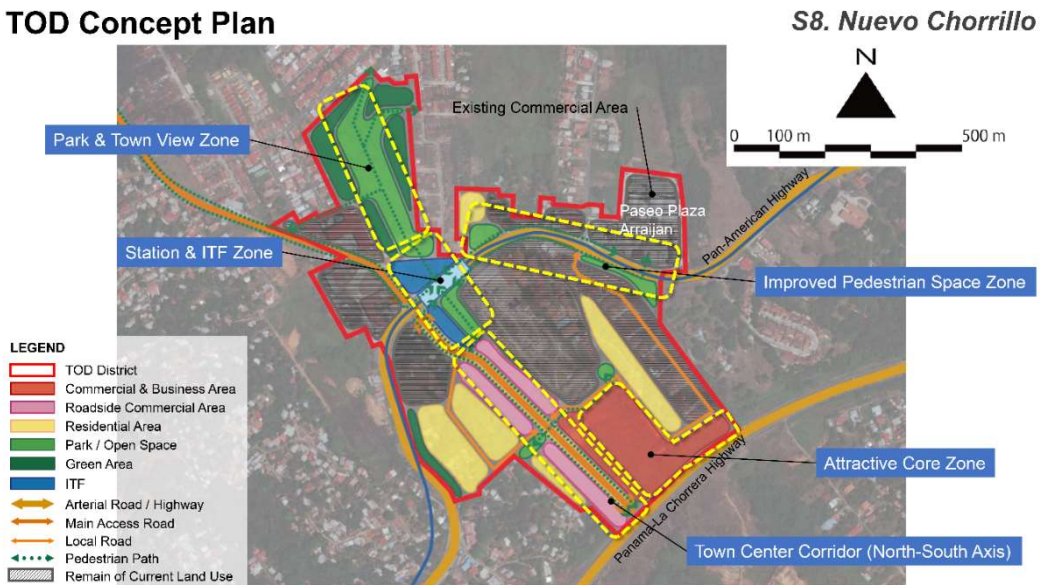
The environmental and social conditions of the surrounding area around the two target stations were confirmed with reference to the TOD concept plans proposed in the Information Collection and Confirmation Study on Public Transit Oriented Development (TOD) for Metro Line 3 Project in Panama, 2022, JICA.

1) Nuevo Chorrillo station

The TOD concept plan for the Nuevo Chorrillo Station area proposes five zones as below.

Figure 2. TOD Concept Plan for the Nuevo Chorrillo Station Area

TOD Concept Plan



Source: Final Report of Data Collection Survey on Transit Oriented Development (TOD) in Panama Metropolitan Area Urban Transportation Line-3, JICA 2022

The Nuevo Chorrillo Station (construction site) is located west of Panama City, along the Pan-American Highway, approximately 12.5 km in a straight line from the American Bridge over the Panama Canal, and approximately 3.5 km in a straight line from the Arriaján Protected Forest.

- The area around the Pan-American Expressway in the Station & ITF (Intermodal Transit Facility) zone around the station (construction site) is mainly used for commercial land use such as gas stations, small and medium-sized shopping malls and multiple individual shops.
- A large shopping mall (Plaza Paseo Arriaján) and others are located along the Pan-American Highway in the Improved Pedestrian Space zone on the east side of the station (construction site).
- The Park & Town View Zone on the north side of the station (construction site) is a small forest area with commercial facilities in between, and the land use is mainly residential houses, retail commercial facilities, and restaurants along the surrounding roads. The north side of this forested area is gently sloping and has a certain amount of vacant land.
- The Town Center Corridor/Attractive Core zone on the south side of the station (construction site) is vacant land occupied by small- and medium-sized trees and is a valley with a relatively steep slope toward the Arriaján-La Chorrera Highway.

As noted above, the area around the Nuevo Chorrillo station (construction site) has an undulating topography, with a certain amount of development through commercial and residential land use, while forests and other vacant land occupied by small- and medium-sized trees are widespread.

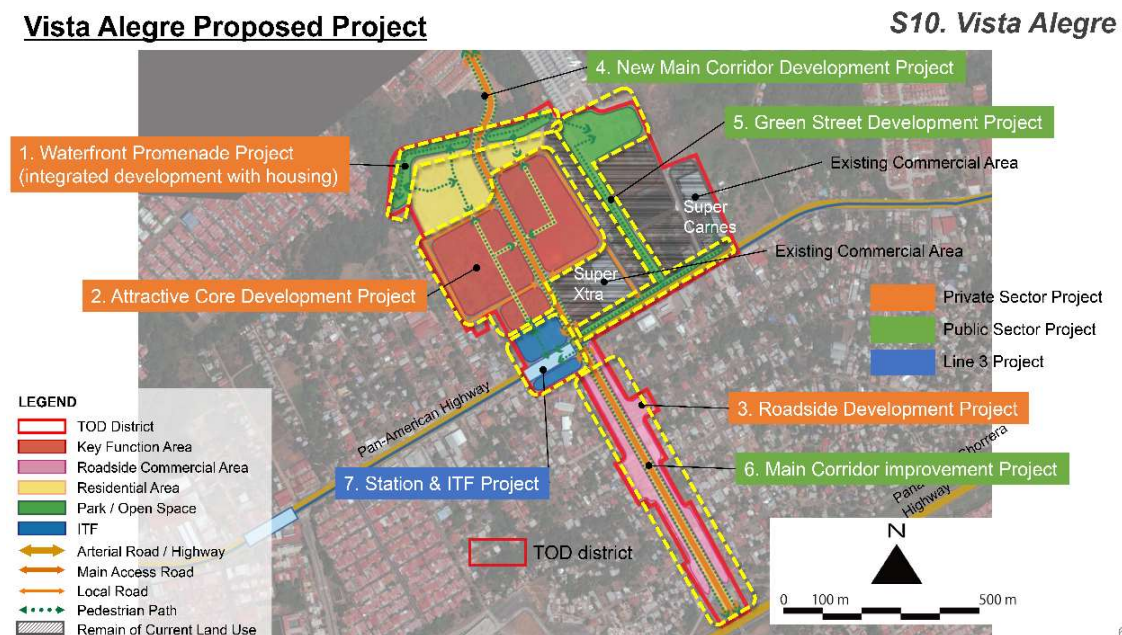
In addition, the Nuevo Chorrillo station (construction site) is approximately 3.5 km away from the Arriaján Protected Forest, and the San Vicente de Biqué archaeological site is not located in the vicinity of the station construction site. Therefore, the implementation of the TOD Concept Plan

around Nuevo Chorrillo Station will have no impact on the protected area and the archaeological site during the construction and operation periods.

2) Vista Alegre Station

The TOD concept plan for the Vista Alegre Station area proposes seven zones as below.

Figure 3. TOD Concept Plan for the Vista Alegre Station Area



Source: Final Report of Data Collection Survey on Transit Oriented Development (TOD) in Panama Metropolitan Area Urban Transportation Line-3, JICA 2022

The Vista Alegre Station (construction site) is located west of Panama City, along the Pan-American Highway, approximately 15 km in a straight line from the American Bridge over the Panama Canal, and approximately 6.5 km in a straight line from the Arriján Protected Forest.

- The area around the Pan-American Highway in the Station & ITF zone near the station (construction site) is mainly commercial land uses such as a large shopping malls (Super Xtra) and stores, as well as individual residences.
- A large shopping mall (Super Carnes) is located along the American Expressway in the Green Street Development Zone on the east side of the station (construction site), and the land to the north is vacant land and individual houses.
- The Attractive Core Development Zone and the Main Corridor Improvement Zone to the north of the station (construction site) show some evidence of land leveling, but most of the land is relatively flat and vacant with small- and medium-sized trees. Further north, the Waterfront Promenade zone is a vacant land with lush vegetation, and the Aguacate River (Rio Aguacate) flows from east to west, and nature is relatively preserved. In addition, there are many detached houses in the north-south direction surrounded by the Attractive Core Development Zone, Green Street Development Zone, and Waterfront Promenade Zone.

- The Roadside Development/Main Corridor Improvement zone on the south side of the Station (construction site) is located around the Puente Sobre Autopista road that has a relatively wide ROW with two lanes and heavy traffic, which runs from the Pan-American Highway to an interchange (Puente de vacamonte) of the Arriján-La Chorrera Highway. The land along the road is used for individual commercial facilities.

As noted above, the area surrounding the Vista Alegre station (construction site) is relatively flat, with a certain amount of development in the form of commercial and residential land use, while vacant land occupied by shrubs and medium-sized trees is widespread.

The station (construction site) is located approximately 6.5 km from the Arriján Protected Forest, and the San Vicente de Biqué archaeological site is located approximately 2.7 km to the southeast of the station construction site, beyond the Arriján-La Chorrera Highway.

Therefore, the implementation of the TOD concept plan around the Vista Alegre Station will have no impact on these protected areas or archaeological sites during the construction and operation phases.

3) Flora and fauna around Two Target Stations

Based on the review of the JICA FS report and Environmental Impact Assessment (EIA) report for Metro Line 3 (approved in January 2016), no protected and valuable species of flora and fauna are identified in the vicinity of the two target stations.

4) Indigenous Peoples in the Vicinity of Two Target Stations

Based on a review of the JICA FS report and EIA report for Metro Line 3 (approved in January 2016), no indigenous settlements are identified in the vicinity of the Two Target stations.

7. Legal Framework for Environmental and Social Considerations

(1) Strategic Environmental Assessment (SEA)

1) Basic Requirements for Environmental and Social Considerations

This technical cooperation project will conduct a pilot study on TOD planning for the two stations in Metro Line 3. According to Executive Decree No.123 (14th August 2009), EIA is not required for a conceptual plan if it doesn't become commercialized. Thus, the environmental and social considerations for TOD plans are Strategic Environmental Assessment (SEA) which applies to the higher-level policies, plans, and programs (PPPs). Therefore, the following requirements will be applied to this project.

- JICA Requirement: JICA Guidelines for Environmental and Social Considerations (January 2022)
- Panama Requirement: Executive Decree No. 4 (1st February 2017) (Regulations on SEA)

2) Direction of SEA in the Technical Cooperation Project

Considering the “Project Purpose” of this technical cooperation project, it is desirable to take the stance of not necessarily conducting SEA for the draft TOD plan based on JICA's and/or Panama's SEA requirements as mentioned above, but rather to conduct and experience SEA for the TOD plan development in the Technical Cooperation Project, and to assist in enhancing Panama's

capacity for environmental and social considerations and SEA implementation when developing higher level PPPs.

MIVIOT is of the opinion that it would be a good idea to include a training course on SEA in the Technical Cooperation Project to strengthen its implementation capacity, etc., and to include the Ministry of Environment (Ministerio de Ambiente or MiAmbiente) as a related organization of the Technical Cooperation Project. This is because MIVIOT is a central government administrative organization that formulates national policies and plans for urban development at the macro level and recognizes the need to implement SEA based on Executive Decree No. 4 for higher-level PPPs formulated by MIVIOT and to enhance its ability to give appropriate environmental and social consideration to their PPPs.

MPSA is the implementing agency for Metro line projects, and therefore needs to be capable of implementation, management, and procedures of EIA for their projects, rather than SEA, but MPSA is the most important stakeholder in SEA for TOD planning. Therefore, it is necessary to support MPSA in developing its capacity for SEA implementation and procedures together with MIVIOT by recognizing MPSA's position as the major stakeholder. In addition, MPSA will need to be supported by the Technical Cooperation Project to enhance its ability to understand the hierarchy (Tiering) between SEA and EIA in conducting an EIA if a TOD plan is in a project implementation phase.

3) Step-by-Step Implementation of SEA

Rather than conducting a full-scale SEA with the participation of all possible stakeholders for all planned TOD alternatives, the following step-by-step SEA is suggested.

- Lectures on SEA concepts and case studies will be conducted through classroom lectures.
- If necessary, invite lecturers from MiAmbiente to hold briefing sessions on Executive Decree No. 4 (2017).
- Start with screening and scoping for SEA by holding workshops with the participation of key stakeholders of MPSA and MIVIOT.
- Include a comparison of the "with" or "without" case for implementing projects in a proposed TOD plan.
- Review the progress of the TOD planning process, taking into account the baseline environmental and social conditions, and hold SEA workshops for alternatives as appropriate, if deemed necessary.
- The results of each workshop will be evaluated and reviewed, and the scope of stakeholders will be gradually confirmed and expanded to include a wider range of stakeholders.
- In the final phase of the TOD project, the results of the SEA workshop will be used as a reference for the implementation of the proposed TOD plan, and opportunities will be provided for the participants to understand the hierarchy (tiering) between SEA and EIA, for example, by discussing how to facilitate the implementation of EIAs.

(2) Relevant institutions

Since the SEA implemented in this technical cooperation project will take a step-by-step approach,

it will start with a small-scale workshop with the participation of MASP and MIVIOT, and then expand the stakeholder accordingly.

However, considering that the SEA will be conducted in a pilot study, it is desirable to limit the other stakeholders to relevant administrative organizations such as ATTT (Autoridad del Tránsito y Transporte Terrestre) MiAmbiente, Arriján City, etc.

8. Alternative to the project activities including ‘without project’ option

As mentioned in 11(3) Summary of the Survey, “With” or “Without” TOD plan can be discussed for SEA workshop in addition to planning alternative TOD plans. Thus, SEA Workshops shall be planned and implemented step-by-step.

9. Provisional Scoping

The table below shows an example of provisional scoping for the two target stations which are Nuevo Chorillo (NC) and Vista Alegre (VA). The provisional scoping has been done based on the TOD concept plan, mentioned above 6. (2), using the Environmental Checklist (Other Infrastructure Project) of the JICA Environmental and Social Considerations Guidelines (January 2022). The sheet has been slightly adjusted by deleting items that currently cannot be checked.

Example of Environmental and Social Impact Scoping

Component	Environmental Item	Evaluation		Model Stations	Confirmation of Environmental Considerations (Reasons for the Mitigation Measures)
		Before and during Construction	Post-operation		
Pollution Control	1 Air Quality	✓		N.C	Construction Phase: It is predicted that air pollutants will be generated temporarily due to movement of construction materials. Post-operation: It is predicted that air quality will be improved by implementation of TOD and reduction of traffic on the road around the station.
				V.A	
	2 Water Quality	✓ (V.A)	✓ (V.A)	N.C	Construction Phase/Post-operation: There is no river at the construction site.
				V.A	Construction Phase: It is predicted that water contamination is generated in Aguacate River which is in the north side of Waterfront Promenade zone in Vista Alegre station. Post-operation: An increasing number of TOD facility users affect water quality.
	3 Wastes	✓	✓	N.C	Construction Phase: It is predicted that some waste will be generated from the construction site during the construction. Post-operation: Although some waste that may affect the surrounding environment will not be generated, it is predicted that general waste from TOD facilities will be generated. Therefore, it is necessary to investigate the appropriateness of general waste disposal.
				V.A	
	4 Soil Contamination	✓		N.C	Construction Phase: It is predicted that soil contamination will be generated during the construction such as construction oil leak. Post-operation: It is not predicted that soil contamination will happen.
				V.A	
5 Noise and Vibration	✓		N.C	Construction Phase: It is predicted that noise and vibration are generated during the construction, particularly by movement of heavy equipment and tracks. Post-operation: It is not predicted that noise and vibration happen from TOD facilities to surrounding environment.	
			V.A		
6 Subsidence			N.C	Construction Phase/Post-operation: It is assumed that construction work that generates subsidence will not be conducted.	
			V.A		
7 Odor			N.C	Construction Phase: It is assumed that the construction work that generates odor will not be conducted. Post-operation: It is assumed that activities that generate subsidence will not happen.	
			V.A		
8 Bottom Sediment	✓ (V.A)	✓ (V.A)	N.C	Construction Phase / Post-operation: There is no river at the construction site.	

Component	Environmental Item	Evaluation		Model Stations	Confirmation of Environmental Considerations (Reasons for the Mitigation Measures)	
		Before and during Construction	Post-operation			
				V.A	Construction Phase/Post-operation: It is possible that the work may affect bottom sediment of Aguacate River which is in the north side of Waterfront Promenade zone in Vista Alegre station.	
Natural Environment	9	Protected Areas		N.C	Construction Phase/Post-operation: It is not predicted that the construction and TOD facilities affect protected forest area in Arraijan because it is located 3.5km away from the construction site.	
				V.A	Construction Phase/Post-operation: It is not predicted that the construction and TOD facilities affect protected forest area in Arraijan because it is located 6.5km away from the construction site.	
	10	Ecosystem	✓	N.C	Construction Phase/Post-operation: Although it is assumed that there is no rare animals or plants in the project site, it is necessary to investigate surrounding ecosystem before the construction.	
				V.A		
	11	Hydrology	✓ (V.A)		N.C	Construction Phase/Post-operation: There is no river at the construction site.
					V.A	Construction Phase: It is necessary to check if there is any work that affects or changes the water flow and riverbed of Aguacate River which is in the north side of Waterfront Promenade zone in Vista Alegre station.
	12	Topography and Geology	✓ (N.C)	N.C	Construction Phase: It is predicted that cutting earth method will be required in Park and Town zone (north of the station) because there is a hill behind the commercial area. In addition, it is predicted that embankment method will be required in Town Center/Attractive Core zone (south of the station) because it is empty land with a slope.	
				V.A	Construction Phase: It is not predicted that cutting earth and embankment methods are required because the project area is flat.	
Social Environment	13	Resettlement	✓	N.C	Pre-construction and planning phase: It is necessary to conduct detailed investigation on possibility of resettlement and land acquisition, so that existing available land and road can be utilized and incorporated in TOD planning phase.	
				V.A	Post-operation: It is not predicted that additional resettlement and land acquisition will be necessary during post-operation stage.	
	14	Poverty	✓	N.C	Pre-construction: If resettlement is generated, it is necessary to investigate possibility of involvement of people in poverty.	
				V.A	Post-operation: It is not predicted to have activities that cause additional impact on people in poverty during post-operation stage.	
	15	Ethnic Minorities and Indigenous Peoples			N.C	Construction Phase/Post-operation: There is no ethnic minorities and indigenous peoples around and inside of the project sites.
					V.A	
	16	Local Economy such as Employment and Livelihood			N.C	Construction Phase/Post-operation: It is possible that income of local employees increases through the construction and temporarily improve their livelihood.
					V.A	
	17	Land Use and Use of Local Resources			N.C	Construction Phase/Post-operation: It is expected that TOD projects increase real estate value and bring positive impact in the area.
					V.A	
	18	Use of Water	✓	✓	N.C	Construction Phase/Post-operation: Although there is no river in the project site, it is necessary to check source of the construction water.
					V.A	Construction Phase: It is predicted that turbid water will be generated during construction phase if the water from Aguacate river will be used around the project site. Post-operation: It is possible that use of waster will be affected if the water from Aguacate river will be used around the project site.
	19	Existing Infrastructures and Social Services	✓		N.C	Construction Phase: It is predicted that there will be traffic congestion during the construction.
					V.A	Post-operation: It is predicted that there will be positive impact from improvement of convenience for using the stations.
	20	Social organization such as policy/decision making organization and social capital			N.C	Construction Phase/ Post-operation: The main purpose of this project is to improve surrounding environment of the stations, and thus, it is not predicted that social capital and local decision-making organization will be affected.
					V.A	
	21	Uneven Distribution of Damage and Benefits			N.C	Construction Phase/Post-operation: The main purpose of this project is to improve surrounding environment of the stations, and thus, it is not predicted that the project causes uneven distribution of damage and benefits in the local area.
					V.A	
	22	Conflict of Interest			N.C	Construction Phase/Post-operation: The main purpose of this project is to improve surrounding environment of the stations, and thus, it is not predicted that the project causes a conflict of interest in the local area.
					V.A	

Component	Environmental Item	Evaluation		Model Stations	Confirmation of Environmental Considerations (Reasons for the Mitigation Measures)	
		Before and during Construction	Post-operation			
	23	Cultural Heritage			N.C	Construction Phase/Post-operation: There is no cultural heritage in the area.
					V.A	Construction Phase/Post-operation: San Vicente de Biqué archaeological site is the closest cultural heritage to the station which is located 2.7km away from southeast direction of the station area and over the Arraijan-Chorrela highway. Thus, it is not predicted that the cultural heritage will be affected during the construction and post-operation stage.
	24	Landscape			N.C	Construction Phase/Post-operation: The main purpose of this project is to improve surrounding environment of the stations, and thus, it is not predicted that landscape of the areas will be affected during construction and post-operation stage.
					V.A	
	25	Gender			N.C	Construction Phase/Post-operation: Negative impact on gender issue by the project is not predicted.
					V.A	
	26	Children's Right			N.C	Construction Phase/Post-operation: Negative impact on children's right by the project is not predicted.
					V.A	
	27	Infectious Diseases such as HIV/AIDS	✓		N.C	Construction Phase: Although large construction is not expected, it is possible to spread infectious diseases due to inflow of the construction workers. Post-operation: It is not predicted that the improvement of the station areas cause spread of infectious diseases.
					V.A	
	28	Working Conditions including Safety	✓		N.C	Construction Phase: It is necessary to consider working condition (including safety) of the construction workers. Post-operation: Work that might negatively affect employees during post-operation stage is not planned.
					V.A	
Others	29	Accident	✓		N.C	Construction Phase: It is predicted that an accident may happened during the construction. Post-operation: It is not predicted that an accident happens in the post-construction stage.
					V.A	
	30	Cross-border and Climate Change			N.C	Construction Phase/Post-operation: Since it is a small-scale project around the station area to improve TOD, impact on cross-border and climate change during the construction and post-operation stage are not expected.
					V.A	

N.C: Nuevo Chorrillo 駅、 V.A : Vista Alegre

10. Terms of Reference for Environmental and Social Considerations

This document describes a draft framework of the terms of reference for a Strategic Environmental Assessment (hereinafter referred to as "SEA") for the Project. The contents of the document are tentative and subject to change. The details of the SEA shall be discussed through the process of Project implementation.

The SEA is an environmental assessment at Policy (P), Planning (P), and Program (P), (PPP) level. It has a profound significance in the plans for proactive environmental and social considerations into the higher levels of decision-making processes by early warning on environmental and social impacts, broad and long-term perspective. Then, it is required to conduct the SEA as the Environmental and Social Considerations for the Project.

The SEA will be conducted based on this document as described below. However, through the Project study, when JICA, MPSA, MIVIOT, and the stakeholders reach a conclusion, the SEA will be conducted under the legislation pertaining to the SEA, as necessary. The SEA shall be implemented under the legislation of Panama and JICA Guidelines.

The study compares and analyzes alternative plans of each option in the SEA. Specifically, a comparative analysis of alternative plans of each option needs to be conducted including likely environmental and social impacts after having carried out scoping process to clarify essential items on environmental and social impacts and its evaluation methods at the time of decision making such

as policy, plan, and program levels.

Main items of the Study are as follows:

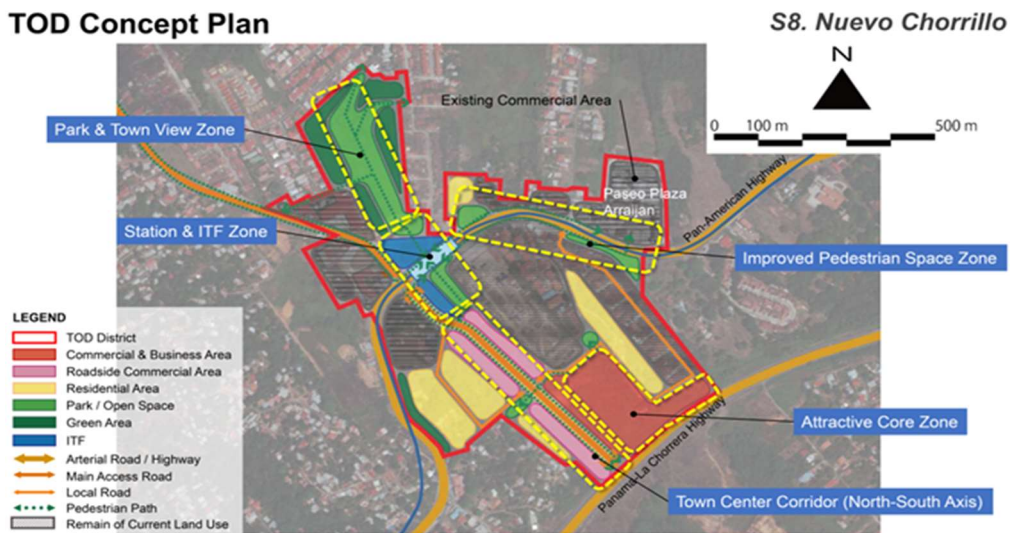
- (1) Review the existing development plans (upper level/related plans), development projects, studies, and policies on TOD.
- (2) Examine the issues on environmental and social aspects for urban development planning on TOD.
- (3) Confirmation of legal framework and institution of the GOP (Government of Panama) on environmental and social considerations, and SEA cases in Panama.
 - 1) Laws, regulations and standards related to environmental and social considerations (environmental impact assessment, resettlement, public participation, information disclosure and others).
 - 2) Gaps between the “JICA Guidelines” and legal framework of Panama on environmental and social considerations.
 - 3) Outlines of relative agencies and institutions responsible for the implementation of the Project.
 - 4) SEA cases conducted in Panama.
- (4) Examine the methods to implement the SEA for the Project.
- (5) Examine the plans, and configure alternatives, which are subject to the SEA.
- (6) Study the baseline situation on environmental and social aspects of the plans subject to the SEA.
- (7) Conduct scoping (clarify extremely important items on environmental and social impacts and its evaluation methods at the time of decision making such as policy, plan, and program levels).
- (8) Predict the environmental and social impacts of each alternative based on the results of scoping.
- (9) Compare and evaluate the alternatives including ‘without project’ option from technical, financial, and impacts on environmental and social points of view, and select the optimal plan.
- (10) Study the mitigation measures in the optimal plan (to be avoided, minimized, reduced, mitigated and compensated).
- (11) Study the monitoring method based on the mitigation measures.
- (12) Support to hold stakeholder consultations hosted by MPSA and MIVIOT, and to incorporate the outputs into the Project.

11. Result of investigations for Environmental and Social Considerations

(1) Content of the survey conducted

- To collect relevant laws /regulations and systems on environmental and social considerations of Panama.
- Meeting with relevant officials with MPSA, MIVIOT, Ministry of Environment (MiAmbiente), and local consultant for Metro Line 3.
- Identification of source information on ANATI-managed cadastral land titles.
- Site survey for the target two stations (Nuevo Chorrillo Station and Vista Alegre station)

(2) Site surveys based on the existing TOD Concept Plans

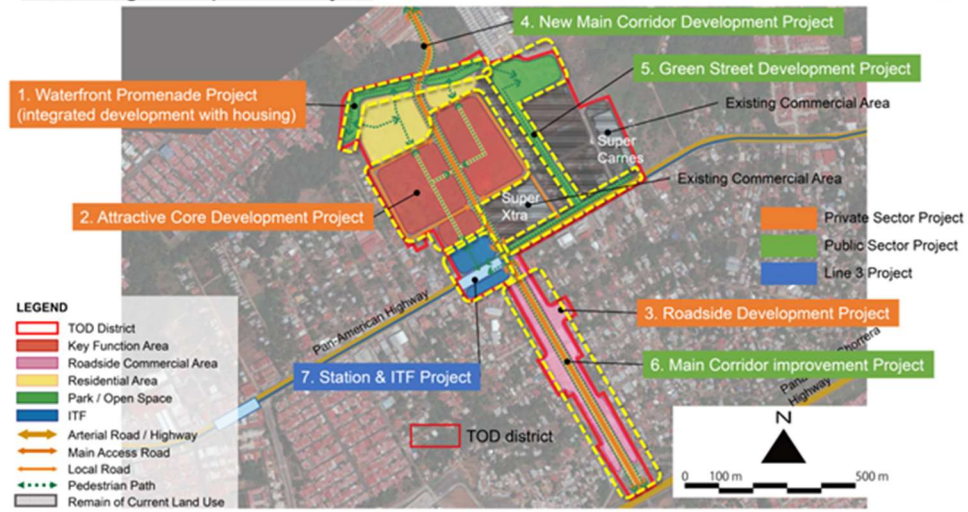


Nuevo Chorrillo Train Station: Photos of the areas around each zone of the proposed TOD.







Station & ITF Zone	Commercial building in front of the station (overlooking Park & Town View Zone)	The distant view around Park & Town View Zone (small forested area)
The distant view around Town Center Corridor/ Attractive Core Zones	Improved Pedestrian Space Zone (along PA-highway)	Improved Pedestrian Space Zone (around commercial facility)

Vista Alegre Proposed Project

S10. Vista Alegre



Vista Alegre Train Station: Photos of the areas around each zone of the proposed TOD.

		
Around Station & ITF Zone	Attractive Core Development Zone	Waterfront Promenade Zone
		
Around Green Street Development zone (distant view)	Green Street Development Zone (along highway)	Road Side Development/Main Corridor Improvement Zone

(3) Summary of the survey

Using the JICA Environment 1 Checklist No. 20 (Other Infrastructure Projects), an annex to the JICA Guidelines for Environmental and Social Considerations, the JICA survey team summarizes the results of the environmental and social considerations survey the team conducted.

Category	Item	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
1. Permits and Consultations	(1) Environmental Assessment and Environmental Permits	<ul style="list-style-type: none"> ● Panama Side : Executive Decree No 4. (1st Feb. 2017) on SEA (DECRETO EJECUTIVO No. 4 ,de 1 de febrero de 2017, Que reglamenta el artículo 5 del Texto único de la Ley 41 de 1 de julio de 1998 sobre Evaluación Ambiental Estratégica) ● JICA Side: JICA Guidelines for Environmental and Social Considerations (Jan,2022) (LINEAMIENTOS PARA CONSIDERACIONES AMBIENTALES Y SOCIALES DE LA, Enero 2022) <ul style="list-style-type: none"> ➤ First, the JICA survey team confirmed that prior consultation with Ministry of Environment (MiAmbiente) is required to determine whether or not to implement SEA for TOD plans in accordance with Executive Decree No. 4. ➤ It is recognized that SEA will not be implemented for all policies, plans, and programs, and that SEA will be required in cases where significant impacts are expected at the planning stage. ➤ In JICA-supported projects, it is necessary to follow both the requirements of the JICA Guidelines for Environmental and Social Considerations and the respective requirements for environmental and social considerations on the Panamanian side. ➤ Therefore, with regard to the implementation of SEA, it is necessary to implement SEA within the framework of JICA requirements based on the JICA Guidelines for Environmental and Social Considerations, even if it is not required under MiAmbiente requirements.
	(2) Explanation and Consultation with Local Stakeholders	<ul style="list-style-type: none"> ● Stakeholders' workshops are required for the TOD Planning for SEA ● Possible stakeholders for SEA will be transport-labor unions, transport labor associations, municipalities, users, MPSA, MPSA, ATTT, etc.
	(3) Examination of Alternatives	<ul style="list-style-type: none"> ● For considering possible impacts, in addition to planning alternative TOD plans, "With" or "Without" TOD plan can be discussed for SEA workshop. ● SEA Workshops shall be planned and implemented step-by-step.
2. Pollution Control	(1) Air Quality	<ul style="list-style-type: none"> ● The TOD projects are generally considered to have limited environmental and social impacts because the project will improve the station areas through the construction of pedestrian paths and other improvements. ● Therefore, the impacts on pollution, especially during the construction period, can be mitigated through the implementation of appropriate environmental management.
	(2) Water Quality	
	(3) Wastes	
	(4) Soil Contamination	
	(5) Noise and Vibration	
	(6) Subsidence	
	(7) Odor	
3. Natural Environment	(1) Protected Areas	<ul style="list-style-type: none"> ● Arraiján Forest Protected Area (Bosque Protector de Arraiján) is located at 3.5 km east of Nuveo Chorillo station and 6.5 km east of Vista Alegre station in a straight-line distance.

Category	Item	Confirmation of Environmental Considerations (Reasons, Mitigation Measures)
		<ul style="list-style-type: none"> ● Therefore, no impact is expected in the Forest Protected area.
	(2) Biodiversity	<ul style="list-style-type: none"> ● In Panama, precious/protected species in the flora and fauna have been identified, but the EIA and other documents for Metro line 3 have confirmed that these conditions have already been degraded in the vicinity of Metro Line 3. ● Therefore, it is desirable to conduct a survey of the biota around the two target stations in advance of the TOD project planning, although it is considered that there will be no impact on the biological diversity of the area.
	(3) Hydrology	<ul style="list-style-type: none"> ● Since the Aguacate River (Rio Aguacate) runs east to west on the north side of the Waterfront Promenade zone at Vista Alegre Station, it is necessary to confirm the construction methods and water procurement methods, especially during the construction period.
	(4) Topography and Geology	<ul style="list-style-type: none"> ● The Park & Town View zone to the north of the Nuevo Chorrillo Station construction site is a small-forested area, where cut-and-fill and other construction methods are expected to be implemented. The Town Center Corridor/Attractive Core zone to the south of the Nuevo Chorrillo Station is a relatively sloped valley (depression) in a vacant lot occupied by low and medium-sized trees, so it is expected that fill and other construction methods will be used. ● For this reason, it is necessary to confirm the construction details and methods.
4. Social Environment	(1) Resettlement and Land Acquisition	<ul style="list-style-type: none"> ● Although it is assumed that each TOD plan considers the use of existing vacant lands and roads, it is necessary to confirm the land registry and land rights status of the necessary sites and the presence of houses, etc., for TOD Projects if the occurrence of land acquisition and resettlement is expected.
	(2) Living and Livelihood	<ul style="list-style-type: none"> ● No impact on the lives, etc. of residents in the surrounding area is assumed to be caused by each TOD project. On the other hand, the implementation of the projects is expected to have a positive impact on the convenience of the station area and the employment of local people during the construction and operation periods.
	(3) Vulnerable Social Groups	<ul style="list-style-type: none"> ● If involuntary resettlement occurs, the possibility that the target population may include poor people and vulnerable groups should be investigated.
	(4) Heritage	<ul style="list-style-type: none"> ● There is an archaeological site of “San Vicente de Biqué” which is located approximately 2.7 km southeast of the Vista Alegre station, beyond the Arraján-Chorrera highway. No impact on the site is expected.
4. Social Environment	(5) Landscape	<ul style="list-style-type: none"> ● The TOD project aims to improve the stations and is not expected to impact on landscapes.
	(6) Ethnic Minorities and Indigenous Peoples	<ul style="list-style-type: none"> ● There are no ethnic minorities or indigenous peoples in or around the project site.
	(7) Working Conditions	<ul style="list-style-type: none"> ● The working environment of construction workers needs to be taken into consideration in accordance with relevant laws and regulations.
	(8) Health, Safety and Security of Local Communities	<ul style="list-style-type: none"> ● Although large-scale construction is not anticipated, the influx of construction workers could spread infectious diseases.
5. Others	(1) Monitoring	<ul style="list-style-type: none"> ● Monitoring contents and implementation methods will be discussed during SEA. ● MPAS has an environmental unit and MIVIOT has an environmental department, and the necessary monitoring system is considered to be in place.

12. Impact Assessment

The environmental impact assessment will be conducted in compliance with both SEA and the JICA Guidelines for Environmental and Social Considerations (January 2022).

13. Environmental Management Plan (Mitigation measures for adverse impact)

The environmental management plan will be created in compliance with both SEA and the JICA Guidelines for Environmental and Social Considerations (January 2022).

14. Environmental Monitoring Plan

As mentioned in 11.(3) Summary of the Survey, the monitoring contents and implementation methods will be discussed through project activity when SEA is conducted. An Environmental Unit of MPSA and Environmental Department of MIVIOT will be in charge of the monitoring.

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

Please see 11.(3) Summary of the Survey.【

16. Other relevant information

N.A