

Environmental and Social Review Summary (ESRS) New Financing Structure for Roads 2/7 - PARAGUAY

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1 General Information of the Project and Scope of IDB Invest's Environmental and Social Review

The Ministry of Public Works and Communications of Paraguay (hereinafter "MOPC", for its acronym in Spanish), through Call to Tender No. 156/2015, tendered the contract for the design, financing, construction, maintenance and operation of the then-called¹ National Highways No. 2 (RN-2) and No. 7 (RN-7) with Rutas del Este S.A. Consortium (SOE), currently comprising Sacyr Concesiones SL (60%) and Ocho-A S.A. (40%) being awarded the contract. The corresponding Public-Private Partnership Agreement No. 01/2017 (hereinafter the "PPP Agreement") was signed in March 2017 and amended in November 2018 through Bankability Addendum No. 1 (hereinafter the "Addendum"). The term of the concession is 30 years.

The "Project" consists of widening and duplicating 149.3 km of highway between km 34 and km 183 of RN-2 (where the highway under concession of Tapé Porá S.A. begins) and improving the roadway between San Lorenzo (km 13) and Ypacaraí² (km 34) and between km 39 and km 40.5, with a length of 22.5 km.

The Project is located in three districts (Central, Cordillera and Caaguazú), benefiting 11 municipalities (San Lorenzo, Capiatá, Itauguá, Ypacaraí, Caacupé, Eusebio Ayala, Itacurubí de la Cordillera, San José de los Arroyos, Nueva Londres, Coronel Oviedo and Caaguazú). The works include the construction of detours ("bypasses") to the cities of Caacupé, Itacurubí de la Cordillera,³ San José de los Arroyos and Coronel Oviedo; a junction with Route 8 and a viaduct in Coronel Oviedo; construction of a highway, side collector roads and access roundabouts to the city of Caaguazú.

From Ypacaraí to Coronel Oviedo, the width of the public strip is 50 meters; in this section, the extension will use the existing highway subgrade (two 3.25-meter roads plus two 2.50-meter shoulders), expanding the section to a 21-meter-wide highway subgrade (four 3.50-meter lanes, a 0.60-meter inner shoulder, a 2.50-meter outer shoulder, and a 0.80-meter central barrier). Where downgrades greater than 3% occur, and in sections where there is a speed reduction for heavy vehicles, a third, slow-transit lane will be built, as noted in Paraguay's Highway Manual. Between Coronel Oviedo and Caaguazú (formerly RN-7) the width of the public strip is 100 m, and the expansion will consist of the construction of a new highway subgrade parallel to the existing one, with a 15 m wheelbase consisting of a 3.50 m wide two-lane roadway, a 1 m wide inner shoulder, a 2.50 m wide outer shoulder and a 6 m wide central separator.

The Project has four work camps: (i) camp Section 2, k78+800, for works only on Section 2; (ii) camp Section 3, km105+300, for storage of supplies; and (iii) Section 4 camp, km140, which includes a stone crushing plant,

¹ It should be made clear that, as of July 2019, RN-2 consists of the entire stretch from Ypacaraí to Caaguazú.

² The section between San Lorenzo and Ypacaraí is the so-called Section 0, which was in the process of completion when this assessment began.

³ The bypass project has been discarded for the city of Ypacaraí; for Itacurubí de la Cordillera, the construction of a bypass was excluded under the current Project (Addendum No.2/2020 to PPP Contract 01/2017), with its execution planned at a later date; its design is currently being evaluated by the municipality of Itacurubí de la Cordillera and the MOPC.

a concrete plant, an asphalt plant, a pre-cast factory, a mechanical workshop, a vehicle washing area, a warehouse area, administrative offices, fuel dispensing and workers' accommodation; and iv) Section 5 camp, km169+500, which includes a concrete plant, an asphalt plant and fuel dispensing.

The Project extracts petrous aggregates from two quarries: i) Coronel Oviedo quarry, located at km 135, operated by Ocho A S.A. and ii) Caaguazú quarry, located at km 155, owned by Ocho A, but operated by Constructora Vial Sur. The Project uses 43 borrowed areas to serve Sections 2, 3, 4 and 5.

The Preliminary Environmental Impact Study prepared by SOE was approved on November 15, 2017, by the Directorate-General for the Control of Environmental Quality and Natural Resources (DGCCARN, for its acronym in Spanish) of the Environmental Authority (SEAM, for its acronym in Spanish), through Resolution 2039-2017, which approves the respective Environmental Impact Statement (EIS).⁴ This study specifies that, in order to mitigate the Project's environmental and social impacts, SOE will implement the Social-Environmental Management Plan (EMP), in accordance with the requirements of the General Environmental Technical Specifications (GETS) for Road Works of the MOPC. The EMP includes the Socio-Environmental Management Plan (ESMP) and the terms of reference for the development of the land registry and the Social Action Plan for the Liberation of the Domain Strip (SAPRDS).

The Project's Area of Direct Influence (ADI), defined as a 4-km wide strip symmetrically extended along the RN-2 axis, has been divided into 5 sections: Section 1: Ypacará - Eusebio Ayala (38.57km); Section 2: Eusebio Ayala - San José de los Arroyos (31.20km); Section 3: San José de los Arroyos - Coronel Oviedo (23.70km); Section 4: Coronel Oviedo - Progresiva 155.1 (27.90km); and Section 5 (Progresiva 155.1 - Caaguazú).

The overall progress of the project through the end of August 2021 was 60.80%. The progress by tranche was as follows: (i) tranche 1.1: 0.83%; (ii) tranche 1.2: 5.44%; (iii) tranche 2.1: 61.88%; (iv) tranche 2.3: 88.47%; v) tranche 2.4: 74.37% vi) tranche 3: 100%; vii) tranche 4.1: 100%; tranche 4.2: 64.78%; viii) tranche 5.1: 100%; ix) tranche 5.2: 100%. x) tranche 5.3: 100%; and xi) tranche 6: 33.45%. The Caacupé bypass recorded progress of 0.25%, while the Coronel Oviedo bypass recorded progress of 18.24%. The Project is scheduled for completion in November 2022.

This new transaction, which is intended to supplement the financing for the completion of the Project's construction works, consists of the acquisition by the IDB Group of a new structured bond that securitizes the long-term collection rights committed by the Paraguayan government in the PPP Contract, including the construction period of the remaining sections of RN-2.

The Environmental and Social Due Diligence (ESDD) for the first Project financing transaction (from inception to October 2021) was conducted in February 2018 and March 2019. The ESDD for this new transaction was carried out in October 2021.

2 Environmental and Social Categorization and Rationale

The Project has been classified as a Category A operation according with BID Invest's Environmental and Social Sustainability Policy since it may generate the following impacts and risks among others: i) involuntary resettlement of people; ii) generation of interferences to pedestrian and automobile traffic caused by the

⁴ As of July 2018, the SEAM has been replaced by the Ministry of Environment and Sustainable Development.

construction works; iii) increased probability of road accidents; iv) impact on air quality due to particulate matter emissions; v) generation of vibrations and noise; and v) possible impact on water, soil and biodiversity due to quarrying, camp operations and accidental chemical spills during the construction processes. All of these impacts are considered to be of medium-high to high magnitude and intensity.

The Performance Standards (hereinafter “PS”) triggered by the Project are: i) PS1: Environmental and Social Assessment and Management System; ii) PS2: Labor and Working Conditions; iii) PS3: Pollution Prevention and Abatement; iv) PS4: Community Health, Safety, and Security; v) PS5: Land Acquisition and Involuntary Resettlement; vi) PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; vii) PS8: Cultural Heritage.

3 Environmental and Social Context

3.1 General Characteristics of the Project’s site

RN-2 is 326 km long and is the main highway linking the capital, Asunción (512,000 inhabitants according to the 2002 census), with the country's second largest city, Ciudad del Este (222,000 inhabitants according to the 2002 census). From East to West, the highways reach from Brazil to Argentina, facilitating the connection of the Atlantic and Pacific Oceans. At the district level, the Project affects the Governorates of Central, Cordillera, and Caaguazú. At the municipal level, it involves the municipalities of Ypacaraí, Caacupé, Eusebio Ayala, Itacurubí de la Cordillera, Coronel Oviedo and Caaguazú⁵.

The Project is located in an area with a mostly flat topography, with altitudes ranging from 63 to 318 meters above sea level (masl). The region's average annual temperature is 22°C and its annual rainfall is 1,500 mm, well distributed throughout the year. The landscape of both highways is strongly anthropized.

RN-2 concentrates a large population along its edges. A large number of small- and medium-sized businesses (stores, restaurants, grocery stores, handicrafts, furniture, service stations, etc.), especially in the areas close to the cities (such as Ypacaraí, Caacupé, Itacurubí, San José, Coronel Oviedo and Caaguazú), have been expropriated by the MOPC to allow for the expansion of the original route.⁶

The highways do not cross any protected areas or critical habitats.

3.2 Contextual Risks

Paraguay is, overall, a safe country. However, like many countries in the region, it is not exempt from petty crime, violent crime (e.g. smuggling activities, money laundering, etc.). The country has not recorded any terrorist attacks in its recent history.

Although levels of citizen insecurity in Asunción are still lower than in other capitals in the region, there is growing concern about the rapid increase in robberies and homicides. A growing phenomenon is that of the so-called "motochorros", criminals who use a motorcycle to commit robbery. Most of the claims report

⁵ The improvement works of the so-called Section 0 of RN-2 are not considered in this report. These works were performed by SOE prior to the production of this report, and benefited the municipalities of San Lorenzo, Capiatá, Itauguá and Ypacaraí.

⁶ The results of MOPC's 2018 census reveal the existence of 978 facilities in the domain strips of Tranches 1 to 5.

robberies and assaults in the city center, in marginal neighborhoods and outlying areas, on public transport (buses) and in places such as Mercado Cuatro and the Chacarita neighborhood (in the city center), in the evening hours.

Ciudad del Este has higher levels of insecurity due to the large crowds of people on its streets during business hours.

In the border area, between the Districts of Concepción and San Pedro, the so-called Paraguayan People's Army (EPP, for its acronym in Spanish) is relatively active and has been blamed for several violent actions. As a result, police and military deployment has been increased in these localities. The city of Pedro Juan Caballero, in the District of Amambay, has higher crime rates than other areas of the country due to its border location.⁷

In other parts of the country there have been armed robberies against vehicle drivers, on roads with little traffic and in cities, especially in the Districts of Chaco: Alto Paraguay, Boquerón and Presidente Hayes. Occasionally there are assaults on buses traveling along RN2.

Another contextual risk factor is the existing vulnerabilities among the affected communities, indigenous peoples near RN-2 and weak local institutions. In the case of indigenous peoples, some families from these communities move along RN-2 and occasionally temporarily settle near the road, to make demonstrations to the government to address their needs. Due to the fact that its manifestations coincide with areas close to the work fronts, the Project takes preventive measures to control community safety risks. Another contextual risk associated with the Project relates to pre-existing conditions of exclusion of some groups by local legislation, especially with regard to land issues, pending negotiations, expropriations and past imposition of easements in favor of the State. In such circumstances, the client, together with the MOPC, assesses how these associated or contextual risks affect the Project; the MOPC takes these risk factors into account when modifying the design or implementation of the Project works.

That said, the contextual risk associated with the Project is low to medium-low.

4 Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental and Social Risks and Impacts

4.1.a E&S Assessment and Management System

Rutas del Este has established, documented and implemented an Integrated Environmental, Social, and Health and Safety Management System (IMS), structured according to the requirements of ISO 14001⁸ and ISO 45001,⁹ applicable to the Project's construction and operation phases.

⁷ Spanish Ministry of Foreign Affairs.

⁸ ISO 14001 is an internationally accepted standard for environmental and social management quality.

⁹ ISO 45001 "Occupational Health and Safety Management" is an internationally accepted quality standard for occupational health and safety management.

Through the IMS, SOE complies with the requirements of national legislation (including the ESMP, ETAGs and health and safety legislation) and of the PS applicable to the Project. SOE supervises and controls that Construction Consortium's environmental, social and health and safety management system is in line with the requirements of the IMS.

4.1.b Policy

SOE, as part of the IMS, has adopted an Integrated Management Policy, in accordance with the requirements of PS1.

4.1.c Identification of Risks and Impacts

SOE has prepared a specific procedure called "Hazard identification, socio-environmental aspects. Evaluation of risks and opportunities", which sets out the methodology for applying the respective identification and evaluation matrices for environmental aspects and occupational hazards, designating the persons responsible for their application.

4.1.c.i Direct and Indirect Impacts and Risks

The most relevant direct impacts are social in nature, and are associated with the involuntary resettlement of people, required for the release of the public domain strip and to build the bypasses. Likewise, the environmental and social impacts and health and safety risks associated with construction works (traffic interference, risk of road accidents, risk of soil and water contamination, noise generation, vibrations, suspended dust particles, etc.), are considered to be of medium intensity.

4.1.c.ii Analysis of Alternatives

No formal alternatives analysis study has been carried out for the existing road expansion areas. However, for the bypasses to the towns of Caacupé, Itacurubí de la Cordillera, San José de los Arroyos and Coronel Oviedo, different layout analyses have been performed in order to reduce resettlement, to the extent possible.

4.1.c.iii Cumulative Impact Analysis

The Project conducted a Cumulative Impacts Study, which included: (i) identifying the spatial and temporal boundaries of the assessment; (ii) identifying the environmental and social aspects potentially affected by the incremental effects of the projects to be considered; (iii) identifying all current and future undertakings that may generate incremental impacts on environmental and social factors; iv) determining the final environmental and social components (valuable ecosystem components - VECs) and projects to be considered in the assessment; v) identifying and assessing the cumulative impacts on the VECs; and vi) defining a management and mitigation program to avoid or diminish the cumulative effects.

The study identified 22 VECs (water quality; erosion; trees; agriculture; residential, commercial, industrial, and recreational areas; landscapes; national parks and reserves; health and safety; employment; service structure and infrastructure; transportation network; service network; fauna; flora; air quality; rivers and streams; activities of cultural value; road safety; travel time; accessibility to communities; forestry

production; and tourism) and 7 past, present and future projects that could exacerbate environmental and social conditions in the Project's area of influence (Coronel Oviedo Wastewater Treatment Plant; Yacyretá - Ayolas - Villa Hayes 500 kV Transmission Line; Caacupé Sanitary Sewer and Wastewater Treatment Plant; Ypacaraí Wastewater Treatment Plant; Commuter Train; Spirituality Route; and Paving of the Coronel Oviedo Airport Access).

The evaluation shows that, of the 7 projects analyzed, 3 involve wastewater treatment, the negative impacts of which are manifested mainly during the construction phase, but which disappear during the operation phase and begin to generate a series of positive impacts. In this regard, although the analysis shows predominantly positive incremental impacts in the long term, the study proposes a Cumulative Impact Mitigation Plan, which is being implemented by SOE.

4.1.c.iv Gender Risks

Paraguay has a broad legal framework to respond to situations of family violence and gender violence, ranging from provisions in the National Constitution, passing through the Code of Children and Adolescents and including other special laws such as Law No. 6202/2018, which implements rules for the prevention of sexual abuse and comprehensive care for child and adolescent victims of sexual violence; there is also Law No. 5777/2016 on Comprehensive Protection of Women against all forms of violence, which also creates the Women's Observatory within the Ministry for Women.

Despite the above, in 2020, Paraguay's Public Ministry reported an average of 80 new cases of family violence per day; the Judiciary reported 118 cases of family violence; and the Ministry for Women received 558 calls about violence against women. In terms of femicides, almost one hundred victims were recorded in the same year.

The Project does not add gender risks. However, SOE's Human Resources Policies include a policy of no labor or sexual harassment and incorporate training plans on gender perspective, rules for good coexistence with the community, safety of the population near RN-2, among others, for its workers, contractors and subcontractors in work fronts. In addition, the Complementary Resettlement Plan (CRP) takes a gender approach to monitoring vulnerable social units, and the Human Resources and Communications areas promote gender equity issues and raise awareness of the importance of gender non-discrimination. To complement this action, SOE has procedures that allow complaints of sexual or labor harassment, discrimination, or gender violence to be made confidentially and without fear of reprisals.

4.1.c.v Climate Change Exposure

Paraguay's climate is characterized by an average annual rainfall that varies between 1,600 mm and less than 600 mm. The annual maximums are recorded over the southeast of the eastern region, on the border with Brazil, while the minimum is recorded over the Chaco, in the northwest region of the country.

Paraguay, like other countries in the region, is highly exposed to climate-related risks (extreme events, floods, droughts and heat waves). The document "Vulnerability and adaptation index to climate change in the Latin American and Caribbean Region", prepared by the Development Bank of Latin America (CAF), places Paraguay in the "extreme risk" category, in position number 8 out of 33 countries in Latin America and the Caribbean.

The climate trends in Paraguay considered by the Intergovernmental Panel on Climate Change (IPCC) for the 2020 (covering the 2010-2039 time period) and 2050 (covering the 2040-2069 period) horizons estimate, in four of the models used for this purpose, that the country will experience a warming of close to 1°C for the 2020 horizon, while by 2050 this warming will be even more significant, with values in the region of 2 to 2.5°C.

Changes in precipitation expected for the 2020s and 2050s are also expected to vary significantly, with increases in the North, East and mainly in the Southeast of the country; and a decrease towards the West and Northeast (SEAM 2012).

Given the above, the Project has a moderate-high to high exposure to climate risk. To mitigate this situation, all water structures considered in the planned works have been designed with safety factors greater than those usually required and sized to handle higher floods for longer return periods.

4.1.d Management Programs

The IMS includes operating procedures to manage potential environmental and social impacts, as well as health and safety risks typically associated with infrastructure works, complying with the requirements of the EMP, applicable legislation and the Performance Standards applicable to the Project.

4.1.e Organizational Capacity and Competency

Through the "Training, Competence and Awareness" procedure, SOE identifies the training, information, coaching and awareness needs of personnel in environmental, social and health and safety matters. To this end, it establishes responsibilities, schedules, as well as methods for training and awareness raising, record keeping and evaluation of the training provided.

The system also specifies that every worker, upon being hired, must go through an onboarding course and training, especially when their tasks are performed in high-risk areas (lifting device operators, excavation, embankment and work at height personnel).

4.1.f Emergency Preparedness and Response

SOE will prepare an Emergency Prevention and Response Plan for each site or facility that forms an operating unit (e.g., construction site, quarry, major civil works, etc.) identifying: i) site-specific emergency scenarios (spills on the ground or water, explosions, fires, flooding or landslides in the event of heavy rains, riots, etc.); ii) the corresponding actions to prevent and deal with an emergency; iii) the responsibilities of the people who will manage the emergency (including during holidays and weekends); iv) the external stakeholders potentially involved during an emergency (hospital, fire department, police, civil defense, etc.); v) the communication and decision-making flowchart; vi) the evacuation procedures indicating the meeting points; and vii) the locations of emergency exits, fire extinguishing equipment and facilities, flammable deposits, and power cut-off switches, among the most important ones. The actions to be taken by the staff in the face of specific scenarios will be the subject of drills that will be carried out every six months.

The IMS includes the "Incident Reporting and Investigation" procedure for managing personal accidents, which identifies responsibilities, immediate actions to be implemented, instructions for reporting and investigating each accident, and a communications flowchart.

4.1.g Contractor and subcontractor management

The IMS includes the "Procurement and contractor management" procedure, which establishes, among others, identifying the purchasing need and the purchasing requirements. The procedure also includes the methodology for business coordination to identify and record occupational risks, and coordinate preventive actions among different contractors reporting to a main contractor.

4.1.h Monitoring and Review

Compliance with the execution of the components and programs of the ESMP is subject to monitoring by the Project Oversight Authority and the DGSA – MOPC ¹⁰, either directly or through periodic meetings of the Site Environmental Partner Committee (comprising by SOE, the Project Oversight Authority, and the DGSA - MOPC). The Project Oversight Authority compiles the results of the ESMP monitoring in monthly reports that it sends to the DGSA, while SOE prepares monthly environmental and social compliance reports that it sends to the Project Oversight Authority. Representatives of the Ministry of Environment and Sustainable Development (MADES, for its acronym in Spanish) make random visits to the works in order to verify compliance with environmental legal requirements; The Project Oversight Authority and Oversight of the Ministry of Labor, Employment and Social Security also conduct unscheduled inspections of the work fronts.

In addition to regular oversight through on-site visits, IDB Invest continuously monitors the implementation of the CRP through a social expert who acts in coordination with SOE's social team and who, among other functions, evaluates the monthly progress reports on the implementation of the CRP and, to the extent possible, participates in the meetings of the Socio-Environmental Work Committee.

In terms of health and safety, in observance of Decree 14390/92, Construction Consortium has established the Internal Commission for the Prevention of Accidents (ICPA), comprising a representative of the company management, an occupational doctor, a safety and health engineer or technician, and the workers' representative. The members of the Commission meet on a monthly basis and summarize the results of the meetings and field tasks in a report that is sent to SOE's Management.

The Environmental, Social and Health and Safety Monitoring Plan adopted by SOE includes ongoing measurements of the following parameters: i) air; ii) ambient noise; iii) effluents; iv) occupational noise; v) ground resistance; vi) lighting; and vii) drinking water. These measurements are compared with the limits set by Paraguayan legislation and those established in the IFC operational guidelines.

SOE also reports accident statistics (Frequency Rate and Severity Rate) applicable to Construction Consortium personnel and subcontractors.

¹⁰ DGSA-MOPC – Directorate of Social and Environmental Management – Ministry of Public Works and Communications

4.1.i Stakeholder Engagement

The EIA was submitted to a public hearing in October 2017 in the city of Caaguazú. However, the event in question did not include a description of the measures foreseen in the EIA to avoid or minimize the risks and adverse social impacts that could be generated by the Project, nor was it able to capture the concerns of the attendees about them.

During the study, feasibility and planning phases of the Project, the MOPC carried out dissemination and public consultation activities in the headquarters of the local authorities along the road,¹¹ which included the participation of mayors, administrative officials, the local population, non-governmental organizations (NGOs) representatives and representatives of the MOPC, among others.

The consulting firm hired for the design and implementation of the SAPRDS identified each community directly affected by the works and informed them of the right-of-way release process, as well as the nature, scope and potential impacts that this could entail. The activities carried out by the MOPC as part of the SAPRDS were crucial to the preparation of the land registry and the compensation measures for the population.

In September and October 2017, this same firm held dissemination and socialization events in Ypacaraí, Caacupé, Eusebio Ayala, Itacurubí de la Cordillera, San José de los Arroyos, Coronel Oviedo and Caaguazú, where it explained the objectives, scope and general design of the Project. Additionally, from December 2017 to February 2018, for the same purpose, it socialized the Project along its entire road layout and held meetings with community leaders, representatives of local organizations and members of the affected communities.

Stakeholder participation during the construction phase is being carried out through multiple channels (website, social media, customer service offices, etc.).

4.1.i.i Disclosure of Information

In compliance with the provisions of the ESMP and the requirements of IDB Invest for the first loan operation, SOE is informing homeowners adjacent to the construction sites about the start date and scope of construction work and about the possibility of filing complaints and claims at the Caacupé, Caaguazú, and Coronel Oviedo offices. The communication modality, registration and formats are established in the IMS procedure "Information for the Community."

In addition, the removal of *nichos* or roadside shrines,¹² signs and trees from the easement strip, as well as the communication of possible cuts in services, and the accompaniment of MOPC authorities to inform owners about land expropriation, is carried out with the intervention of SOE social specialists, following the GIS "Dissemination (communication and consultation)" procedure.

¹¹ These activities took place in April 2013 (in the governorate of Caacupé and in the municipalities of Eusebio Ayala and Itacurubí) and in April 2014 (in the governorate of Coronel Oviedo and in the municipalities of San José de los Arroyos, Caaguazú and in the Juan M. Frutos University Campus).

¹² A "nicho" is the name given to the symbols and artifacts built in places where a person lost his or her life as a result of a traffic accident. These *nichos*, which are usually placed on road or highway easements, are characterized by the presence of crosses and religious figures.

4.1.i.ii Informed Consultation and Participation

SOE has three public service offices to answer "in person" queries from the population (Caacupé, Coronel Oviedo and Caaguazú). In addition, public participation channels have been established through social media and specific participation bodies (such as the Socio-environmental Committee of the Caaguazú Service Area).

4.1.i.iii Indigenous Peoples

Although the Project does not intersect indigenous areas, some indigenous populations exist within its area of influence, with whom SOE, through the MOPC, maintains a permanent dialogue to learn about and respond to their requests and needs.

4.1.i.iv Private Sector Responsibilities Under Government-Led Stakeholder Engagement

The first phase of the ESDD identified certain aspects of the resettlement process designed by the MOPC that needed to be complemented. To this end, IDB Invest requested SOE to supplement the SAPRDS with a Complementary Resettlement Plan (CRP), which was accepted by the MOPC in November 2018 and included as part of Bankability Addendum No. 1 to the PPP Agreement, through the so-called Supplementary Agreement.

SOE complies with the actions assigned to it in the CRP by applying the IMS's "Resettlement Plan" procedure.

4.1.i.v External Communication

SOE manages external stakeholder communications as per the "Communication" procedure included in the IMS.

4.1.i.vi Grievance Mechanisms for Affected Communities

SOE has developed and implements a mechanism for receiving and resolving complaints, claims or suggestions from any member of the community. The mechanism assigns responsibilities for handling complaints and establishes evaluation and response deadlines.

4.1.i.vii Provisions for addressing vulnerable groups' grievances

SOE, in fulfillment of the requirements of the CRP, continuously monitors both the vulnerable population that was compensated in the context of resettlement, as well as those who were not physically affected; complaints from vulnerable groups are dealt with through the mechanism for receiving and resolving complaints.

4.1.i.viii Ongoing Reporting to Affected Communities

Periodically, SOE informs the community about the progress of the Project, active fronts, potential impacts and planned ways to mitigate them. This activity is performed and recorded as per the IMS procedure "Information for the Community".

4.2 Labor and Working Conditions

4.2.a Working Conditions and Management of Worker Relationships

SOE has 37 permanent employees (12 women) and 10 contract employees; Construction Consortium has 782 permanent employees (65 women and one indigenous woman) and 652 contract employees; and Ocho A S.A. has 86 employees. Construction Consortium prioritizes local labor, using databases provided by the municipalities, as well as applications received in worker camps, construction sites and through the mail.

SOE, Construction Consortium, and subcontracted companies' personnel have medical insurance; the health status of personnel working on the construction site is monitored on an ongoing basis.

Noise levels, air quality, lighting levels, drinking water quality and electrical safety are continuously monitored and controlled by Construction Consortium to ensure an adequate working environment. In addition, the IMS safe work procedures are designed to manage the occupational hazards associated with the works.

4.2.a.i Human Resources Policies and Procedures

SOE has adopted a specific Human Resources Policy for the Project aligned with local legislation and PS2, which promotes, among others, the following: (i) equal opportunities, fair treatment, non-discrimination, no tolerance of any form of harassment (with an emphasis on sexual harassment), forced labor or child labor; (ii) promotion of direct dialogue with employees and effective recognition of the right to legal and peaceful association, organization and collective bargaining by workers; (iii) assurance of health monitoring, adequate remuneration and working conditions; and (iv) assurance of adequate conditions, treatment and leave for women during maternity and breastfeeding periods. The behavioral guidelines based on the objectives and values set forth in the Human Resources Policy are described in the SOE Code of Conduct.

4.2.a.ii Working Conditions and Terms of Employment

4.2.a.iii Workers' Organizations

The SOE, through its Human Resources Policy, is committed to respecting the rights of employees to associate, organize and establish collective bargaining in a legal and peaceful manner, without punishment, threats, intimidation, dismissal or interference by the Company. Project personnel are not unionized.

4.2.a.iv Non-discrimination and Equal Opportunity

SOE, through its Human Resources Policy, clearly establishes the rejection of all types of discrimination and ensures equal opportunities for all its employees.

4.2.a.v Retrenchment

Prior to the completion of the Project's construction phase, SOE will conduct a retrenchment alternatives analysis (such as employee skills development programs) and update the already prepared retrenchment plan to mitigate the adverse impacts that may be caused by worker dismissal.

4.2.a.vi Grievance Mechanism

SOE has a "Staff Complaints and Grievances" procedure to address employee complaints and grievances (including anonymous complaints and grievances), which assigns responsibilities, establishes the methodology for capturing and processing the complaint or grievance, and sets maximum deadlines for issuing a response.

4.2.b Protecting the Workforce

All Project workers undergo medical check-ups prior to joining the Company and then every 12 months. In the case of high-risk activities, periodic check-ups are specific and performed every 6 months. SOE provides an occupational health service whose functions includes, among others: i) scheduling and implementing plans to protect workers' health; ii) conducting health investigations in the work place; iii) conducting mandatory regular medical examinations and those required for admission, caring for workers exposed to high occupational risks, as well as preparing and maintaining records of workers' health according to models provided by the Ministry of Public Health.

SOE prepares a monthly and a cumulative annual record of the Occupational Accident Rates (Severity Rate and Frequency Rate) calculated for both its employees and workers engaged by third parties, setting target values for selected indicators.

4.2.c Occupational Health and Safety

4.2.d Provisions for People with Disabilities

SOE will include in its Human Resources Policy specific sections referring to non-discrimination and the possibility of hiring, where possible, people with reduced capabilities.

4.2.e Workers Engaged by Third Parties

SOE will update the Special Regulations for Contractors and Subcontractors, establishing, among other requirements, the obligation to: i) respect SOE's Integrated Policy and Human Resources Policy; ii) comply with the requirements set out in the IMS's safe work procedures applicable to its activity; iii) manage water, energy, and waste in accordance with the IMS; iv) comply with the requirements of the ESMP's Road Safety Plan; v) train its personnel in accordance with the requirements of the ESMP's Road Safety Plan; and vi) respect the rules of good community relations in line with the requirements of the IMS.

4.2.f Supply Chain

Construction Consortium extracts materials from quarries¹³ and borrow pits, which have their respective EIA studies and the corresponding authorizations. Likewise, the mining and transport operations of the materials

¹³ The Project currently has two operational basalt quarries, the one located at km 135 (Coronel Oviedo quarry) has the largest capacity and is directly operated by the Ocho A consortium, while the Caaguazú quarry (at km 155) is owned by Ocho A, but operated by a third party (Constructora Vial Sur).

sourced from the quarries, as well as the transport of the supplies required for the Project, is carried out by duly authorized companies. The environmental, social, health and safety management applied by quarry operators, as well as the working conditions and community relations tied to their activities, are supervised and controlled by SOE and Construction Consortium on an ongoing basis.

4.3 Resource Efficiency and Pollution Prevention

4.3.a Resource Efficiency

SOE uses the "Rational use of water and electricity" procedure of the IMS to define actions aimed at raising awareness among its own and contracted personnel on the rational use of both resources.

4.3.b Greenhouse Gases

Every year, SOE prepares a Greenhouse Gas Inventory for the construction stage of the Project, which includes the calculation of emissions for the year elapsed and the estimation of emissions for the following year.

4.3.c Water Consumption

The "Surface water management" procedure of the IMS contains a series of actions for the proper collection and use of water in production processes, seeking efficiency of use.

4.3.d Pollution Prevention

The IMS's "Surface Water Management" procedure sets out actions aimed at preventing the pollution of natural watercourses, either by works carried out on them, by washing machinery on their banks, or by sediment dragging from the works area during heavy rains.

The management of air emissions, noise, liquid effluents and possible spills from asphalt plants, cement plants and fuel dispensing facilities is carried out through the implementation of the IMS procedure called "Installation of worker camps and temporary facilities".

The specifications for managing soil possibly contaminated by hydrocarbons in areas adjacent to service stations are established in the IMS procedure "Management of soil contaminated with hydrocarbons". The specifications of this procedure respond to the legal requirements and the principles of waste management set forth in the PSs.

4.3.e Waste

Solid waste management is performed by implementing the "Solid Waste Management" procedure of IMS, which sets out the actions required by the ESMP and the legislation in force, promoting recovery and recycling, when possible. Liquid waste (both domestic and industrial) and chemical substances are managed by applying the IMS procedure "Management of liquid waste, fuels, oils and chemical substances".

The handling of construction materials (aggregates, concrete, asphalt, etc.) as well as debris generated during demolition and surplus construction material is specified in the IMS's "Handling of Demolition, Debris and Construction Surplus" procedure.

4.3.f Hazardous Materials Management

The IMS procedures called "Handling of hazardous substances" and "Handling of liquid waste, fuels, oils and chemicals" allow SOE to manage hazardous substances, considering the requirements of the ESMP and those established in PS3.

4.3.g Pesticide Use and Management

Pesticide handling and use is done as per the IMS's "Handling of Hazardous Substances" procedure, and the purchase of products with Ia (extremely hazardous) or Ib (highly hazardous) components, according to the World Health Organization's (WHO) classification of hazardous substances, is prohibited.

4.4 Community Health, Safety and Security

4.4.a Community Health and Safety

SOE manages potential impacts on road safety for workers, RN-2 users, and members of the communities adjacent to the works, through the following specific IMS procedures: (i) "Machinery, equipment and transport management", for the transfer of heavy machinery; (ii) "Vehicle signage", which includes the standardization of symbols and colors to increase the visibility of project vehicles; (iii) "Vehicle driving", which provides safe vehicle driving guidelines; iv) "Road Planning and Intervention", which indicates the methodology for planning interventions (such as road closures) at construction and operation sites; and vi) "Road Safety Plan", which specifies how road safety should be managed at construction sites on an operational road.

Preventive and control measures for the risk of injury to third parties due to flying material from blasting in quarries are documented in specific procedures for quarry operators, and are supervised by SOE.

4.4.a.i Infrastructure and Equipment Design and Safety

As indicated in the IMS's "Road Safety Plan", all Project trucks must have valid mechanical inspection certificates in order to be able to circulate. The stone crushers in the quarries are sprayed with water to avoid blowing and dispersion of particulate matter generated during the process.

4.4.a.ii Hazardous Materials Management and Safety

The management of hazardous materials used in the Project works is governed by the "Handling of Hazardous Substances" procedure used by SOE. When the measures described in the procedure are applied, the likelihood of potentially hazardous events for third parties is immaterial.

4.4.a.iii Ecosystem Services

Given the location of the Project, in a highly anthropized area, no material impacts to ecosystem services are expected.

4.4.a.iv Community Exposure to Disease

The risk of COVID-19 infection due to the circulation of people in the populations adjacent to the works is limited, since Construction Consortium applies specific protocols (its own and those mandated by the corresponding health authorities) to prevent infection among its personnel and third parties. Hence, the community is not considered to be exposed to other types of diseases as a result of the Project.

4.4.a.v Emergency Preparedness and Response

The management of potential emergency situations that could affect third parties, such as explosions, will be included by SOE as possible emergency scenarios in specific emergency prevention and response plans for each operating unit (e.g., existing asphalt plants or fuel tanks in construction camps, which could potentially explode).

4.4.a.vi Security Personnel

The security companies hired by SOE to perform basic surveillance tasks are trained and cleared by the relevant authorities. Such personnel is not armed and has a Code of Conduct that regulates their behavior with the surrounding communities.

4.5 Land Acquisition and Involuntary Resettlement

4.5.a General

The project has required the release of the right-of-way, which had been invaded by various facilities (fixed sales stalls, family housing, unoccupied or abandoned buildings, and religious, health and educational centers, among others). For this purpose, the MOPC hired a consulting firm¹⁴ and executed a process based on the Expropriation Law (Law No. 5389/15), which comprised two phases: i) Phase A: conducting a census to prepare the land registry and value the properties that will be affected by the release of the public domain strip; and ii) Phase B: prepare and execute the Social Action Plan for the Release of the Domain Strip (SAPRDS).

The Real Estate Directorate (DBI, for its acronym in Spanish) of the MOPC is in charge of implementing the SAPRDS, including the land registry, appraisal and release of the domain strip and land for construction of the bypasses. To ensure compliance with the requirements stipulated in the PSs, SOE is implementing the Complementary Resettlement Plan (CRP).

¹⁴ As a result of an international public tender process, the MOPC has assigned the execution of the Land Registry and the preparation and implementation of the Social Action Plan for the Release of the Domain Strip (SAPRDS) to the consulting firm ICATECSI. The SAPRDS sets forth the actions to diminish and/or compensate the socioeconomic effects caused by the possible displacement and/or affection of people or productive units located in the domain strip of highways 2 and 7 between PK 40+500 (detour from San Bernardino to the exit of the town of Ypacaraí) and 183+05 (at the exit of the town of Caaguazú and the beginning of the Tapé Porá concession).

Currently, the land for sub-tranches 2.1, 2.2, 2.3, 2.4, 3, 4.1, 4.2, 5.1, 5.2 and 5.3 has already been released and handed over by the MOPC to SOE.¹⁵ Sub-tranches 1.2 and the land of the Caacupé and Coronel Oviedo bypasses still have occupied land that must be released.

As of August 2021, the total number of properties affected by the Project amounted to 3,039,¹⁶ of which 1,145 were acquired by the MOPC, 1,818 are in the process of being acquired, and 76 had been disaffected. Of the total number of properties to be acquired, 72.3% have a legal owner, while the remaining 27.7% correspond to properties with de facto occupants¹⁷ (possessors).

4.5.a.i Project Design

The detours or bypasses for the cities of Caacupé, Itacurubí de la Cordillera, San José de los Arroyos and Coronel Oviedo have been studied by the MOPC and the respective municipalities to minimize the number of resettlements as much as possible.

4.5.a.ii Compensation and Benefits for Displaced Persons

The strategy adopted through the SAPRDS consists of considering each appropriation on a case-by-case basis, taking into account the socioeconomic conditions of each person, family or group and applying preset vulnerability criteria, in order to allocate fair monetary compensation.

The payment made by the MOPC for the liberation of the public domain strip includes the following cases: i) exclusively for improvements (47.6%), in the case of possessors; ii) exclusively for land (44%) and iii) for both land and improvements (8.4%),¹⁸ in the case of owners with titles to the properties.

4.5.a.iii Community Engagement

Since the entire resettlement process is government-led, community participation processes have also been led by the relevant government offices, in accordance with national legislation. SOE, as part of the CRP, has facilitated the community participation process associated with the resettlement through the community participation activities it conducts for the entire project.

4.5.a.iv Grievance Mechanism

Although the government is in charge of the involuntary resettlement process, the complaint and grievance mechanism implemented by SOE to address community complaints and concerns has been frequently used by the displaced population to channel their grievances. With the exception of the complaints filed by the

¹⁵ Tranche 0: PK 13 to 34; Ypacaráí: PK 34 to 39; Sub-tranche 1.1: PK 40.5 to 49.6; Caacupé Bypass: PK 49.6 to 59.2; Sub-tranche 1. 2: PK 59.2 to 73.7; Sub-tranche 2.1: PK 73.7 to 85.6; Sub-tranche 2.1: PK 73.7 A 85.6; Sub-tranche 2.2: PK 85.6 to 91; Sub-tranche 2.3: PK 91 to 99.7; Sub-tranche 2. 4 San José Bypass; Tranche 3: PK 104.9 to 128.6; Coronel Oviedo Bypass: PK 128.6 to 136.9; Sub-tranche 4.1: PK 136.9 to 145.55; Sub-tranche 4.2 PK 145.55 to 155.100; Sub-tranche 5.1: PK 155.1 to 174.9; Sub-tranche 5.2: PK 174.9 to 180.4; Sub-tranche 5.3: PK 180.4 to 183.05.

¹⁶ Information provided in August 2021 by DBI - MOPC

¹⁷ Some of the reasons why the legal ownership of these properties has not been settled include the following: i) the location of the property in places prohibited from alienation (in the public domain strip, for example); ii) lack of completion of the land titling process (in the case of the land provided by the National Institute for Rural and Land Development, or INDERT), or iii) because there is a legal problem that prevents access to the land title (such as an intestate succession that has not been concluded).

¹⁸ Data provided by the Real Estate Directorate (DBI) of the MOPC - September 2021.

Caaguazú merchants, whose compensation process is handled by SOE, these claims are forwarded to the MOPC for processing.

4.5.a.v Resettlement and Livelihood Restoration Planning and Implementation

The incorporation of the CRP to the PPP Agreement has allowed the traders affected by the Project to choose the relocation of their economic units instead of opting for compensation. As provided for in the Complementary Agreement, during the phase prior to the release of the public domain strip, SOE is responsible for: i) the design, construction, conditioning, and urbanization of the areas under municipal management¹⁹ of affected traders; ii) the relocation of fixed points of sale, providing logistical support during the relocation process for vulnerable social or economic units, and iii) the preparation and implementation of a grievance and claims response mechanism. For its part, the MOPC is responsible for: i) entering into agreements with intendants and affected parties to define the location of areas under municipal management; ii) releasing land for construction and quantifying the affected parties who will be displaced, in order to allow SOE to design the areas under municipal management; and iii) agree on and quantify the affected parties who should be displaced.

As part of the execution of the CRP, SOE designed, built and equipped a service area near the city of Caaguazú, on land provided by the government, to relocate the stalls of 75 merchants that were historically located on the public strip of land at the entrance to the city. The maintenance of this area is in the process of being fully undertaken by the municipality of Caaguazú.²⁰

4.5.b Displacement

4.5.b.i Physical Displacement

While the planning and subsequent implementation of the involuntary resettlement plan for the release of the right-of-way continues to be the responsibility of the government, SOE voluntarily assists in its implementation to the best of its ability. It has therefore provided logistical support in the transfer of furniture, household goods and utensils of several displaced families.

4.5.b.ii Economic Displacement

As in the case of physical displacement, compensation for the economically displaced is the responsibility of the government.

4.5.b.iii Private Sector Responsibilities Under Government-Managed Resettlement

The CRP's mitigation and compensation measures complement those provided for in the SAPRDS for the pre-construction stage. The MOPC has therefore led the process of freeing the public domain strip, while SOE has coordinated and executed specific and supplementary actions to the SAPRDS, borne by the Project.

¹⁹ The areas under municipal management are owned by the State and are under municipal control.

²⁰ Until the management of the service areas is fully transferred to the municipality of Caaguazú, a Socio-environmental Committee has been formed with representatives of the merchants, the municipality, the DGSA - MOPC, and SOE.

During the construction phase, SOE is also responsible for: i) implementing an assistance program for vulnerable social or economic units that, while not located on the domain strip, may suffer some effects during the construction or operation phases; and ii) provide support to the relocated units. To this end, SOE must: i) execute a support and assistance program to ensure the restoration of livelihoods; ii) provide technical and business training to the affected population so that they may access new employment opportunities both in the affected area and in the construction sites; and iii) implement a communications (dissemination, consultation, grievance and complaints reception and resolution) plan.

The CRP schedules actions that include the characterization and evaluation of impacts on the population that: i) will be displaced by bypasses; ii) has been isolated by the construction of these bypasses (scheduled to be carried out up to 1 year before the start of operation of each bypass); and iii) is located in the immediate vicinity of the routes, but not in the public domain strip (scheduled to be carried out up to 1 year before the start of operation of RN-2).

4.6 Biodiversity Conservation and Management of Natural Resource

4.6.a General

The Project does not cross protected natural areas or those in the process of becoming so; nor does it affect critical habitats or have any impact on endemic species. However, in order to preserve the flora, SOE, following the guidelines set out in the ESMP and in observance of the legislation in force, has proceeded to plant native species of trees in specific areas.²¹

4.6.b Protection and Conservation of Biodiversity

The criteria for felling trees, permit processing, the information to be provided to the owners, the planning and modality of tree felling activities are included in the IMS procedure "Tree felling". The activities associated with tree planting and maintenance are specified in the "Forestry Compensation" procedure of the IMS.

To implement the above, SOE has built a forest nursery and since October 12, 2020 has been carrying out forest compensation activities with native species such as *lapacho*, *cedar*, *timbo*, *yvyrapyta*, *kurupa'y*, *guajayvi*, *jacaranda*, and *yvyra hû*.

4.6.b.i Modified Habitat

The Project is developed in highly anthropized areas whose primary ecological functions have been significantly modified, turning these areas into places of little significant biodiversity value.

4.6.b.ii Natural Habitat

Due to their high anthropization, the few patches of secondary forest along the project's route are natural habitats of little biological or ecological significance.

²¹ For urban properties, in accordance with Law 4928/2013 on urban trees, ten seedlings must be planted for each affected tree; for non-urban sites, the number planted is coordinated on a case-by-case basis with the municipal authorities and the Project's environmental oversight body.

4.6.b.iii Critical Habitat

The project does not intersect critical habitats.

4.6.b.iv Legally Protected Areas and Internationally Recognized Areas

The Project does not intersect any local or international legally protected areas or areas in the process of becoming so.

4.6.b.v Invasive Alien Species

The project will not introduce invasive alien species. The recovery of disturbed areas (revegetation) and reforestation activities will use native species.

4.6.c Management of Ecosystem Services

Due to its characteristics and location, the Project will not generate material impacts to ecosystems that require specific management activities.

4.6.d Sustainable Management of Living Natural Resources

The Project's impacts on living natural resources are considered to be low. Therefore, except for restrictions included in the ESMP to minimize vegetation cutting and restoration tasks (revegetation and reforestation), no additional management of these resources will be required.

4.6.e Supply Chain

The Project, through its general procedure "Management of Acquisitions and Contractors" requires that its primary input and service suppliers ensure that the extraction, transformation and transportation processes of their products do not result in biodiversity deterioration. However, this task becomes more complex when secondary and tertiary suppliers are considered, over which the Project has no direct control.

4.7 Indigenous Peoples

The Project layout does not cross the lands of indigenous communities. As a result, free, prior and informed consultation was not required, in accordance with the provisions of Law 904/81, INDI²² Resolution 2019/10 and ILO Convention No. 169.

The results of the census conducted by the MOPC identify the following indigenous communities in the vicinity of the layout of RN-2, but not in its area of influence: i) the Indigenous community Mandu'ara, located in the district of Caaguazú, in the Walter Insfran Colony at kilometer 174 (23 families); ii) the "El Refugio" Community, located in the Walter Insfran Community of the District of Caaguazú at kilometer 173 (9 families);

²² INDI: Instituto Paraguayo del Indígena (Paraguayan Indigenous Institute)

iii) the Mbya Guaraní Community of the Guayaki Park, located at kilometer 159 (25 families); and iv) the San Isidro Community of Arroyo Guazú, located at kilometer 154 on 101 hectares of land (53 families).

SOE has prepared and adopted the "Manual for Information and Relationship with Indigenous Peoples", which is part of the IMS, to manage the relationship with indigenous peoples and establish information and conflict resolution strategies, both for the construction and operation stages. The manual foresees that claims that cannot be resolved by SOE should be transferred to the MOPC, and eventually to the committee formed by the MOPC and the INDI, for resolution. In this regard, SOE is in ongoing communication with the indigenous community leaders. SOE also carries out awareness-raising activities on road safety issues with the communities adjacent to RN-2.

Similarly, MOPC delegates routinely hold informative meetings with representatives of the indigenous communities to disseminate the nature and scope of the construction activities and, above all, to listen to their concerns. The latter are shared with SOE to attend to those within its scope of action.

4.8 Cultural Heritage

With the exception of possible archaeological chance finds, no other type of cultural heritage components have been identified that could be affected by the Project construction works.

It should be noted that the Itacurubí de la Cordillera bypass, which is being designed and is not part of the Project, could eventually affect several springs in that region, which are considered cultural heritage assets by the inhabitants of this locality.

4.8.a Protection of Cultural Heritage in Project Design

The treatment of any heritage material that may be discovered through earthworks will follow the procedures laid down in Law No. 5621 for the Protection of Cultural Heritage.

4.8.a.i Chance Find Procedures

In order to prevent the discovery of heritage remains that may occur during excavations at construction sites, and to specify the actions to be implemented prior to such chance events, SOE has prepared the "Management of archaeological chance finds" procedure. This procedure includes the following aspects to be taken into account by Construction Consortium personnel: i) criteria for identifying heritage remains; ii) steps to be taken in the event of a find, including stopping earthworks until the relevant authority has evaluated it;²³ iii) information to be transmitted to the relevant authority; iv) recording of the find; v) extraction and labeling (only in the presence of the relevant authority or with its prior authorization); and vi) delivery of the materials to the relevant agency. SOE has engaged an archaeologist to carry out specific tasks indicated in the above-mentioned procedure.

²³ General Directorate of Cultural Heritage, under the National Secretariat of Culture.

4.8.a.ii Consultation

As part of the public consultation process, the community participated in sessions to identify locations where archaeological or cultural finds could potentially be reported. These processes made it possible to determine the importance for the community of the springs that could be impacted by the construction of the Itacurubí de la Cordillera bypass.

Community access, as well as the removal and use of reproducible cultural heritage, will be governed by local legislation.

5 Local Access of Project Documentation

The documentation relating to the project can be accessed at the following link:
<http://www.rutasdeleste.com.py>