Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 24-Nov-2019 | Report No: PIDISDSA26906

BASIC INFORMATION

A. Basic Project Data

Country	Project ID	Project Name	Parent Project ID (if any)
Vanuatu	P167382	Vanuatu Climate Resilient Transport Project	
Region	**Estimated Appraisal Date**	**Estimated Board Date**	**Practice Area (Lead)**
EAST ASIA AND PACIFIC	25-Nov-2019	06-Feb-2020	Transport
Financing Instrument	**Borrower(s)**	**Implementing Agency**	
Investment Project Financing	Republic of Vanuatu	Ministry of Infrastructure and Public Utilities	

Proposed Development Objective(s)

To improve the climate resilience of the Recipient's road network, with emphasis on the selected project road, and in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency.

Components

Component 1: Sectoral and Spatial Planning Tools
Component 2: Climate Resilient Infrastructure Solutions
Component 3: Strengthening the Enabling Environment
Component 4: Contingent Emergency Response

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Project Cost	66.00
Total Financing	66.00
of which IBRD/IDA	66.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	66.00
IDA Credit	35.50

IDA Grant	30.50

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Vanuatu is a small island nation located in the South Pacific about 2,000 kilometers to the east of Australia.** Comprised of 83 islands, it has a total land area of some 12,200 square kilometers scattered over an exclusive economic zone of about 827,000 square kilometers. With an almost entirely Melanesian population of 272,459 in 2016,[1] Vanuatu is the fourth largest country in the Pacific following Papua New Guinea, Fiji, and Solomon Islands. The country is administratively divided into six provinces – Malampa, Penama, Sanma, Shefa, Tafea, and Torba. Shefa Province includes Efate Island with the capital Port Vila, and Sanma Province mostly consists of Santo Island (also known as Espiritu Santo), the largest island with the city of Luganville. With international ports and airports, these two cities are the gateways for most visitors to Vanuatu.

2. **Vanuatu's per capita gross domestic product (GDP) in 2017 was US$3,159,[2] which sits at the lower end for countries in the region.** The service sector contributes about 60-65 percent of Vanuatu's GDP, with the largest portion coming from tourism. Agriculture, fishing and forestry contributes around 22 percent of Vanuatu's GDP. The country's economy was hit significantly by Cyclone Pam in March 2015 especially tourism, agriculture and forestry, causing economic damage equivalent to 64 percent of the country's GDP. Over the past four years, the economy has recovered well from the cyclone and is on track for slow but sustainable growth. The construction industry has been particularly boosted due to the heavy demand for post-cyclone reconstruction. According to the October 2019 forecast by the International Monetary Fund (IMF), the GDP is expected to increase at an annual average rate of 3.1 percent between 2018 and 2024.

3. **The country's poverty rate, based on the national basic needs poverty line, has barely changed from 13.0 percent of the population in 2006 to 12.7 percent of the population in 2010.[3]** A large proportion of the population (20-50 percent) is concentrated marginally above the poverty line and is highly vulnerable to falling back into poverty. The poverty rate is higher in urban areas, at 18.4 percent of the population in Port Vila and 23.6 percent of the population in Luganville, compared to 10.0 percent of the population in rural areas. The country ranks 138th out of 189 on the 2017 United Nations Human Development Index, placing it in the 'medium human development' category.[4]

[1] Vanuatu National Statics Office, Vanuatu: 2016 Post-TC Pam Mini-Census Report, Volume 1, July 2017.
[2] IMF, World Economic Outlook Database, October 2019.
[3] United Nations Development Program (UNDP), Vanuatu Hardship and Poverty Report, Analysis of the 2010 Household Income and Expenditure Survey, 2013. It should be noted that the 2010 Household Income and Expenditure Survey data is the most recent poverty estimates for Vanuatu. A 2018/2019 Household Income and Expenditure Survey is ongoing.
[4] UNDP, Human Development Indices and Indicators, 2018 Statistical Update.

4. **Vanuatu is one of the most vulnerable countries in the world to climate change and natural disaster risks.** The island nation suffers from cyclones, drought, extreme precipitation and flooding, and subsequent landslides. These climatic risks are likely to become more intense because of climate change. Around Vanuatu the rate of sea level rise has been on average 6 millimeter annually over the last two decades based on satellite observations.[5] This has made storm surges, cyclones, strong winds, and tsunamis more damaging than ever before. Among countries which suffer average annual losses ranging between 1 and 10 percent of GDP when extreme events strike, Vanuatu ranks second with annual losses of almost 7 percent. Located in the "Pacific Ring of Fire" and the center of the Pacific "cyclone belt", Vanuatu is also highly exposed to geophysical threats such as volcanic eruptions, earthquakes and tsunamis. In May 2018, the Government of Vanuatu (GOV) was forced to consider permanently evacuating the entire population of Ambae Island due to volcanic eruptions.

5. **Gender constraints in Vanuatu are wide-ranging and entrenched in cultural and historical factors.** Vanuatu is a traditionally male-dominated and largely patriarchal society. In terms of total population, the sex ratio is 105 males to 100 females. Traditional customary law administered by Chiefs and recognized by Vanuatu's Constitution can operate to discriminate against women. Despite ratification of the Convention Against all Forms of Discrimination against Women, several of Vanuatu's laws continue to discriminate against women, for example in relation to matrimonial property, inheritance, and citizenship. Women's political representation in Vanuatu is low, with no women currently represented in national parliament. Only 1.4 percent of members ever elected to parliament have been women. Women and girls do much of the country's agricultural work, representing 96 percent of open-air market vendors, but are under-represented in formal sector employment (36 percent). Current statistics in Vanuatu estimate that 60 percent of Ni-Vanuatu women have experienced physical and/or sexual abuse in their lives. The child sexual abuse rate stands at 30 percent and about 40 percent of young people report that they have exchanged sex for money or gifts.[6] Women and girls are at high risk of assault on public transport. The main service provider to women experiencing or fleeing situations of violence is the Vanuatu Women's Centre (VWC) which currently only has refuges in more populated areas; thus, challenges remain in terms of access for women and girls in remote areas.

6. **Located in the north of Vanuatu, Santo is the largest island in land area and the second largest in population with a total land area of approximately 4,000 square kilometers and a population of 47,899 as of the 2016 mini census.** The island's population has increased at an average rate of 2.0 percent per year between 2009 and 2016. In 2016, the population density of Santo was 12 persons per square kilometer, which is much lower than that of Efate with 93 persons per square kilometer. While the eastern coast of Santo is relatively flat, the western and southern coasts of the island have extensive mountain ranges with several rivers and waterways. Mount Tabwemasana, located on the west coast of Santo, is Vanuatu's highest peak at 1,879 meters. The village of Tasiriki, the western end of the project road, is on the route to the mountain. The annual average rainfall on Santo is approximately 2,300 millimeters with the rainy season from November to April. Santo is a popular tourist destination with 10,349 visitors having travelled to the island in 2018.[7]

Sectoral and Institutional Context

7. **The transport sector is under the overall jurisdiction of the Ministry of Infrastructure and Public Utilities (MIPU).** Established in 2005, the Ministry has the mandate to develop, maintain, and manage the key national

[5] Pacific Climate Change Science Program 2013:4.
[6] Pacific Women Shaping Pacific Development.
[7] Vanuatu National Statistics Office, Statistics Update: International Visitor Arrivals, October 2019.

infrastructure assets in the areas of land transport, maritime transport, aviation and water supply. MIPU consists of: Public Works Department (PWD); Ports and Maritime Department; Civil Aviation Authority; and Corporate Services Unit.[8] PWD is responsible for the road network (including vehicle carriageways, bridges, watercourse crossings, footpaths and drainage systems), outer island air strips, and some water and sanitation facilities. PWD has a total of 153 staff positions, of which 31 are based at the Head Office in Port Vila and 122 are spread across the six PWD's Provincial Divisions. About 20 percent of positions are vacant. MIPU is implementing the ongoing World Bank-funded Vanuatu Infrastructure Reconstruction and Improvement Project (VIRIP).[9]

8. **The Ministry of Climate Change Adaptation (MCCA) is the primary government entity in charge of climate change and disaster risk management.** Established in 2013 as one of the very first ministries of climate change in the Pacific region, MCCA consists of: Vanuatu Meteorology and Geo-hazards Department (VMGD); National Disaster Management Office (NDMO); Department of Energy; Department of Environmental Protection and Conservation; and, Corporate Services Unit. VGMD and NDMO are particularly relevant for the resilience agenda. The objective of VMGD includes 'improve communication and delivery of weather, climate, climate change, flood, volcano, earthquake information, forecasts, services and warnings'; and the NDMO is mandated to 'enhance Disaster Risk Management (DRM) operations preparedness, response and recovery for a safer, secure and resilient Vanuatu'.[10]

9. **MIPU is currently developing the Transport Sector Strategy.** The National Strategic Development Plan (NSDP) 2016 to 2030[11] sets out fifteen goals within society, environment and economy pillars to achieve the National Vision of a stable, sustainable and prosperous Vanuatu. One goal is to improve infrastructure, another to develop climate and disaster resilience, while others refer to improvements in access to markets and services. The Vanuatu Infrastructure Strategic Investment Plan (VISIP) 2015-2024[12] sets out a costed program of works using government and development partner funds to improve transport and other infrastructure. Rehabilitation of South Santo Road is listed in VISIP among the first priority road investments. In the 2018–2020 Corporate Plan,[13] MIPU has formulated an initial program of actions to achieve the NSDP goals and deliver the works in VISIP. The Corporate Plan notes that the implications of the NSDP for transport are that transport systems provide access to services and employment opportunities, and that infrastructure must be resilient and not damage the environment. The actions listed in the Corporate Plan include the development of a Transport Sector Strategy, and the formulation or upgrading of the policies for individual modes, including expansion of the rural roads access policy to cover urban roads and declaration of a national road network, all of which are underway. Other actions in the Corporate Plan include the mainstreaming of gender into infrastructure works and services, revision of the road planning framework to include safety, and development of an asset management system. These are all actions that will be supported by the project. Revision of the organizational structure to better deliver MIPU functions is also listed in the Corporate Plan but is progressing slowly.

[8] There are also six statutory bodies attached to MIPU, including: (i) Airports Vanuatu Limited; (ii) Vanuatu Post; (iii) Ifira Wharf and Stevedoring; (iv) Vanuatu Maritime College; (v) Office of the Maritime Regulator; and, (vi) Commissioner of Maritime Affairs Office.

[9] VIRIP (P156505) was approved on June 17, 2016 with US$25 million equivalent IDA credit and US$25 million equivalent IDA grant. The PDO is to (i) reconstruct and/or improve the disaster and climate resilience of selected public-sector assets in provinces impacted by Tropical Cyclone Pam; and, (ii) provide immediate and effective response to an Eligible Crisis or Emergency.

[10] Vanuatu Ministry of Climate Change and Adaptation Corporate Plan 2016-2018.

[11] Department of Strategic Policy, Planning and Aid Coordination, National Sustainable Development Plan 2016 to 2030 – Vanuatu 2030 The Peoples Plan, November 2016.

[12] GOV, Vanuatu Infrastructure Strategic Investment Plan 2015–2024.

[13] MIPU, Corporate Plan 2018–2020, December 2017.

10. **The Vanuatu Public Roads Act No. 35 of 2013 classifies public roads that are the responsibility of MIPU.** This classification identifies arterial roads, feeder roads and urban roads.[14] While arterial and feeder roads are found in rural areas on all islands, urban roads are found only in Port Vila and Luganville. As summarized in the following table, the 2,609 kilometers of rural road network consists of 209 kilometers of sealed road network (8 percent), 1,284 kilometers of gravel road network (49 percent), 1,080 kilometers of earth road network (41 percent), and 35 kilometers of concrete road network (1 percent). Approximately 43 percent of the rural road network (including almost all the sealed road network) are in Sanma Province (with Santo Island) and Shefa Province (with Efate Island), which are Vanuatu's two largest provinces. In Sanma, a total of 703 kilometers of road network exists, of which 73 kilometers (10 percent) are sealed, 537 kilometers (76 percent) are gravel, 90 kilometers (13 percent) are earth, and 3 kilometers (0 percent) are concrete roads. There is a clear need for investment in Sanma's road network: Sanma accounts for 20 percent of the national population and 26 percent of the country's road network, but only 10 percent of Sanma's roads are sealed, compared with 28 percent in Shefa. The sealing of the project roads aims to avoid damage due to high rainfall intensities, ensuring year-round access for road users and reducing the need for frequent regrading and regravelling.

Table: Vanuatu Rural Road Network as of December 2018

Province	Sealed	Gravel	Earth	Concrete	Total
Malampa	0.00	268.30	237.42	3.99	**509.70**
Penama	0.00	232.34	210.60	9.89	**452.83**
Sanma	73.35	536.76	89.91	3.40	**703.42**
Shefa	115.80	118.72	166.99	5.42	**406.93**
Tafea	19.92	112.25	338.70	8.97	**479.84**
Torba	0.00	15.68	36.79	3.82	**56.29**
Total	**209.07**	**1,284.05**	**1,080.41**	**35.49**	**2,609.01**

Source: PWD, Road Inventory Management System (RIMS)
Note: This does not include the length of urban roads in Port Vila (171 kilometers) and Luganville (131 kilometers).

11. **Nationwide traffic data collected for the first time in 2016 shows that the road in front of the Vanuatu Agriculture College in Luganville (outside of South Santo Road) has the highest traffic volume on Santo with 1,269 vehicles per day.[15]** Higher traffic volumes (200-500 vehicles per day) are also found in the road corridors near Luganville, including the East Coast Road up to Loreviakarkar and South Santo Road up to Tanovoli. The rest of the road network had low traffic volumes of less than 200 vehicles per day, mostly consisting of small commercial vehicles (pickups).

12. **Due to the overall climatic and geographic features of Vanuatu, the country's road infrastructure is heavily exposed to climate and natural disasters.** This is compounded with the high sensitivity of the road network in Vanuatu towards extreme hazards such as heavy rainfall, flooding, and landslides due to poor structural characteristics and inadequate road maintenance. Out of 2,609 kilometers of rural road network, nearly 90 percent is not sealed, making these roads impassable during heavy rains. Once damaged, gravel roads often do not get timely and adequate maintenance or rehabilitation due to budgetary constraints. In addition, much of the road network is situated on the perimeter of the islands and is only a few meters above sea level, hence extremely vulnerable to cyclones and storm surges. Flood-related disruptions of the road network have

[14] The Act provides for the declaration of public roads along with a fixed road reserve of (i) 15 meters either side of the center line for an arterial road; or, (ii) 10 meters either side of the centerline for a feeder road or an urban road.
[15] PWD, Traffic Data Collection – Survey Report, March 2017.

significant socioeconomic consequences partly because the existing road network has no alternative route in the event of disruptions.[16]

13. **Vanuatu's poor road infrastructure condition – part of which is due to high exposure to frequent natural and climate change disasters – make road safety measures paramount for the well-being of road users.** In 2016, according to the World Health Organization (WHO), the road safety fatality rate was 15.9 fatalities per 100,000 population,[17] with 43 estimated road traffic deaths in Vanuatu that year.[18] According to the Vanuatu Police Force, the primary cause of road accidents in Vanuatu is speeding. Considering strong growth in vehicle registrations, which are increasing at 12.8 percent per year from 2016 to 2018,[19] the number of road deaths and serious injuries will likely increase without mitigating measures being out in place. There is no database on road safety, and WHO highlighted that data is seriously underreported. A Global Road Safety Facility (GRSF)-funded road safety management capacity assessment is currently underway to start to address this issue which includes the need to improve road safety audit practices throughout the road lifecycle. Road safety audits are being introduced on road projects funded by some development partners, including for this project.

14. **Effective road maintenance is crucial to reduce vulnerability to climate change and natural disasters and prevent high costs for rehabilitation and reconstruction.** Road maintenance in Vanuatu is currently insufficient. In 2017, GOV allocated VUV 173.7 million to routine maintenance of rural roads, and VUV 174.5 million to periodic maintenance of rural roads. The annual work programs for maintenance are developed through a consultative selection process for the road sections to be maintained, conducted by PWD provincial and head office engineers using data from the Road Inventory Management System (RIMS) supported by embedded international advisers. With the limited budget available, the focus is on ensuring the roads are passable in all weather conditions and improving the resilience of steep sections and water crossings, to increase the percentage of the population that has year-round vehicular access to markets, services and transport hubs. Traditionally, PWD conducted routine and periodic maintenance through force account. The force account share has been reducing over time and in 2017 only about 14.6 percent of the work value was expected to be carried out through the force account, down from 63 percent in 2013.[20] The bulk of the maintenance is now procured through island-based contractors, with community-based contractors undertaking most of the routine maintenance. Contract values are low and for one year due to the GOV procurement conditions, although an administrative process is underway to increase contract values and permit three-year contracts. It is accepted by PWD that there is a need to incrementally migrate to a road asset management system based on life cycle costing, to increase resilience and provide an evidence-based case for increased budget funding for maintenance.

15. **For the proposed World Bank support under VCRTP, GOV has given priority to South Santo Road[21] which**

[16] For example, the approximately 200-meter water crossing at Navaka River on South Santo Road never had a bridge. The crossing becomes impassable during heavy rains (it has an even wider floodplain evidenced by banks set well back from the braided channel). When Cyclone Hola hit the area in February 2018, two children were reportedly swept away by the fast-moving river when returning home from school.

[17] The road fatality rate is below that in Tonga (16.8) and the Solomon Islands (17.4) but higher than that in Fiji (9.6), Samoa (11.3), and Papua New Guinea (14.2).

[18] WHO, Global Status Report on Road Safety 2018, Geneva.

[19] According to the National Statistics Office, Quarterly Statistical Indicator January–March 2019, the registration of new motor vehicles in Port Vila and Luganville increased from 1,300 vehicles in 2016 to 1,653 vehicles in 2018.

[20] DFAT, Vanuatu Roads for Development Phase Two, Investment Design Document, September 2018.

[21] The Official Gazette No. 42 dated August 27, 2019 indicates that the road between Luganville and Tasiriki (i.e., South Santo Road) has been declared and classified as an arterial public road under the Public Roads Act No. 35 of 2013.

is the only road connecting the southern and western part of the island with Luganville. South Santo Road plays an important role for Santo, linking its east to its west, while also serving transit traffic between its northwest via Tasiriki and Luganville, which functions as a gateway for the northern part of the country (i.e., Torba, Penama, and Sanma Provinces). The road is critical for transportation of fishery and agriculture produces to market in Luganville, as well as for access to employment, health, education, and social services. There are also several tourist sites accessible via the road. Of Sanma's two main arterial roads, East Coast Road between Luganville and Port Olry has been upgraded from gravel to paved road in 2010 with assistance from the Millennium Challenge Corporation, while no major upgrading work has been undertaken for South Santo Road. Upgrading of South Santo Road has therefore been given a high priority in VISIP.

C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

To improve the climate resilience of the Recipient's road network, with emphasis on the selected project road, and in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency.

Key Results

PDO Level Indicators

16. Progress will be measured against the following PDO-level results indicators:
    (a) Identified planning tools adopted and being used to improve climate resilience of roads (Number);
    (b) Length of road upgraded with climate resilience measures (Kilometers);
    (c) Number of bridges constructed with climate resilience measures (Number); and,
    (d) Identified enabling environment solutions adopted and implemented (Number).

D. Project Description

17. VCRTP consists of the following four components that incorporate the four pillars of the PCRTP SOP.

18. **Component 1: Sectoral and Spatial Planning Tools (estimated cost US$0.28 million equivalent).** This component will upgrade the existing RIMS at PWD and its affiliated data collection tools to a Road Asset Management System (RAMS) to enable MIPU better capture, store, update, and utilize road asset data for effective decision making. The RAMS will introduce a system module that systematically integrates climate and disaster risk profiles of the road network as a part of asset inventory (e.g., criticality). These risk profiles will enable PWD to prioritize road maintenance investment based on the level of exposure and sensitivity of road assets to climatic and seismic hazards along with conventional parameters such as road conditions. The RAMS (including the data collection tools) will equip MIPU's budgeting and planning process with accurate and up-to-date asset information, hence increasing the effectiveness of its resource deployment. This component will be informed by the ongoing GFDRR-funded Resilient Transport in Small Islands Developing States (RTSIDS), which assesses the existing road asset management system in Vanuatu and prepares a transition plan to transform the current RIMS into a modernized and risk-informed RAMS.

19. **Component 2: Climate Resilient Infrastructure Solutions (estimated cost US$60.75 million equivalent).** This component will finance design, physical works, and maintenance of South Santo Road to improve its resilience to climate-related hazards and seismic disasters using innovative materials, technologies, and

adaptation measures. The investments will include: (i) sealing of the existing 60 kilometers of gravel road between Saint Michel and Tasiriki to enhance road resilience and connectivity during rainy seasons; (ii) construction of ten new bridges to address loss of connectivity issues resulting from previous climatic and seismic disasters; (iii) repair of four existing bridges with improved traffic safety; (iv) construction of 102 single and multicellular box culverts to adapt to the forecasted increases in rainfall volumes and intensities; (v) construction of other ancillary structures to improve climate resilience, such as coastal protection, masonry covered drains, unvented drifts, and gabion retaining walls; and, (vi) procurement of Bailey bridges for traffic diversion and emergency response. The investments will be accompanied by consulting services for detailed design and supervision of civil works (including the establishment of a small-sized quality control laboratory near the project site); and, piloting of multi-year performance-based maintenance contracts on the project road after the defect liability period.

20. **Component 3: Strengthening the Enabling Environment (estimated cost US$4.97 million equivalent).** This component will strengthen the MIPU-PWD's institutional and regulatory functions for road sector asset management using an asset lifecycle-based approach, and thereby systematically improve the climate resilience of Vanuatu's road network. This will also provide project management support to MIPU-PWD. Proposed sub-components include:

(a) **Sub-component 3.1: Technical Assistance (estimated cost US$1.52 million equivalent).** This will include technical support to MIPU-PWD to: (i) undertake a road condition assessment on the selected road network to assist the MIPU/PWD with monitoring, planning and programming of road works using the RAMS; (ii) update technical specifications based on the 2016 Vanuatu Resilient Road Manual; (iii) improve its construction material testing laboratory in Port Vila, facilitating the utilization of local materials and accreditation of the laboratory for improved quality assurance; (iv) implement the transition plan to put the RAMS into operation; (v) strengthen road maintenance supervision capacity of PWD; (vi) improve practical road management capacity of PWD through piloting the lifecycle-based asset management and undertaking road safety audits and road safety awareness-raising on the Santo's road network outside South Santo Road; and (vii) build climate change capacity within MIPU in collaboration with MCCA through the hiring of a Climate Change Specialist to MIPU-PWD. This subcomponent will also support activities to address the identified gender gap and gender-based violence (GBV)/violence against children (VAC) by implementing the Gender Action Plan (GAP) and the GBV/VAC Strategy prepared for VCRTP.

(b) **Sub-component 3.2: Project Implementation Support (estimated cost US$3.45 million equivalent).** This sub-component will finance Project Implementation Unit (PIU)/Project Support Team (PST) contracted staff and operating costs associated with implementation of the project, and yearly audits of the project accounts that MIPU will submit to the World Bank. It is proposed that a PIU, will be established in PWD from the unit currently implementing the World Bank-funded VIRIP as well as several projects funded by other development partners, to implement VCRTP. A PST will be set up and embedded in the PIU to support MIPU in the implementation of the project.

21. **Component 4: Contingent Emergency Response (US$0 million).** Since Vanuatu will remain vulnerable to climate change and severe weather events, even with the successful implementation of the first three components, supporting post-disaster recovery is an important feature of VCRTP. This zero-dollar component is

designed to provide swift response in the event of an Eligible Crisis or Emergency,[22] by enabling GOV to request the World Bank to reallocate project funds to support emergency response and reconstruction.

E. Implementation

Institutional and Implementation Arrangements

22. The Ministry of Finance and Economic Management (MFEM) will be the Executing Agency for VCRTP, while MIPU will be the Implementing Agency. MIPU will implement the project through a PIU to be established within PWD.

23. MCCA will be supporting MIPU with the climate change aspects of the project, including the collection, analysis and sharing of data and in the development of a disaster response and recovery mechanism for the road sector. A memorandum of understanding (MOU) will be signed between MIPU (PWD) and MCCA (VMGD/NDMO) covering these aspects, as MCCA has done for inter-ministerial collaboration on other climate change initiatives, including under an ongoing GCF-funded Climate Information Services for Resilient Development Project to improve the use of climatic information service for key sectoral planning.[23] It is noted that there is an existing MOU between departments within MCCA and MIPU under the GCF-funded project. The ongoing GFDRR-funded RTSIDS will also provide recommendations and data to inform activities to be implemented under VCRTP. A CERC Project Operations Manual (POM), harmonized with the CERC POM for VIRIP, is being prepared to assist in the implementation of Component 4. The CERC POM must be adopted to be implementation of contingent emergency response activities under Component 4.

24. As noted, a PIU will be established within PWD to implement the project. The PIU will be developed from the unit currently implementing VIRIP, as well as several projects funded by other development partners. The PIU Head will be a PWD Deputy Director on secondment[24] with experience in project management of World Bank and/or other donor funded projects. The PIU Head will be supported by the Road and Bridge Engineer/PST Coordinator. The other members of the PIU will comprise current PWD staff, local consultants on contract to PWD and the international consultants that make up the PST. The overall PIU will include: a Finance Manager (PWD staff), two Procurement Specialists (one international, one local), two Environmental Safeguards Specialists[25] (one international, one local), two Social Safeguards Specialists (one international, one local), a Gender Specialist (local),[26] a Community Liaison Officer (PWD staff), a Financial Management (FM) Specialist (international), Project Accountant (local), Administrative Officer (local), and a Team Assistant (local).[27]

25. A PST, a team of international specialists will be set up and be embedded in the PIU to work with the other members of the PIU to support MIPU-PWD in the implementation of the project. The PST will be composed of

[22] Defined as "an event that has caused, or is likely to imminently cause, a major adverse economic and/or social impact associated with natural or man-made crises or disasters", OP/BP 8.00, *Rapid Response to Crises and Emergencies.*

[23] The accredited entity for the work is the Secretariat of the Pacific Regional Environment Programme (SPREP).

[24] The PWD Deputy Director will be working full time on the project on managing project implementation and will be completely separated from sector management which will remain the responsibility of PWD Director.

[25] It is proposed that the Environmental Safeguards Specialists will be responsible to support climate change-related project elements.

[26] The Gender Specialist (with GBV/VAC and workplace experience) will support MIPU-PWD to implement the GAP and GBV/VAC Strategy.

[27] The PWD members of the PIU are current staff. The local specialist consultants are currently working on similar projects on contract to PWD. The international consultants will be contracted for VCRTP to the extent possible from consultants currently working on VIRIP or other projects in Vanuatu.

five international consultants: (i) a Road and Bridge Engineer/PST Coordinator; (ii) a Procurement Specialist, (iii) an FM Specialist; (iv) an Environmental Safeguards Specialist; and (v) a Social Safeguards Specialist. The role of the international specialists will be to provide (with other PIU members) project operational support to MIPU-PWD, capacity development to the other PIU members and technical assistance on system development. Some of these international specialists (as well as specialists providing support in other areas such as Monitoring and Evaluation - M&E), may provide inputs on an intermittent basis and be shared with other projects funded by the World Bank or other development partners.

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F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The project is located on Santo Island in Sanma Province. South Santo Road starts at Luganville, Vanuatu's second largest city, and runs along the lowland area of the south coast before turning inland. The road goes west through more hilly terrain before reaching Tasiriki on the south west corner of the island. The road crosses several rivers that have their origins in the highlands to the north. Santo's shape with two northward extending peninsulas means that most rivers have small catchments. The south-easterly trend in drainage pattern is controlled by prominent features of the mountain ranges. Rivers draining the south of the island have extensive lowland valley sections, with meandering alluvial channels that have built floodplains and terraces comprising fine sediments. Navaka is an example of a braided river. It consists of numerous wide, shallow and fast-flowing sediment transporting channels that subdivide and re-join repeatedly around bars and islands, forming an intertwining structure. The key features of sediment deposition in the river system include: (i) the steep upland slopes encourages active erosion of gravel; (ii) regular earthquakes have triggered many landslides in the highlands providing sources of fresh sediments; (iii) the regular passage of tropical cyclones produces large and powerful river floods; and, (iv) marine gravels underlie much of the lower basin, the exposure and reworking of which has provided abundant coarse gravels to form the channel bars and braid islands in between the shifting channels. The project alignment traverses through land that is under customary land ownership. Vanuatu is an ethnically diverse country with 113 indigenous languages being used. In Vanuatu, all land access and public infrastructure works consider the fundamental right that under the nation's constitution all land in Vanuatu belongs to the indigenous custom owners and their descendants. Roads often also sit within a complex social structure and environment as they run through villages and provide access to shared natural resources, which in turn require development projects to be cognizant of the way in which benefits and costs of the respective communities are perceived and addressed. This is particularly the situation in Melanesia more generally including in Vanuatu. The key to managing these risks is meaningful consultation and citizen engagement throughout the project cycle.

G. Environmental and Social Safeguards Specialists on the Team

Vivianti Rambe, Environmental Specialist
Craig Andrew Clark, Social Specialist
Rachelle Therese Marburg, Social Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	The proposed activities and investments included under VCRTP are focused on improving the climate resilience of road infrastructure along the 65 kilometers of South Santo Road. Component 1 will involve a Technical Assessment (TA) investment with an objective of enabling policymakers to make informed decisions based on the most accurate and up-to-date information available. All TORs of this TA-related activities, where relevant, will be reviewed by the Safeguards Specialist to ensure that the requirements of the World Bank safeguards policies are effectively integrated. Component 2 will include upgrading of gravel to paved road along the corridor, construction of bridges to improve connectivity which are usually lost in the rainy season, and coastal reinforcement to protect the road. These activities are not likely to cause significant or irreversible environmental impacts. Some of the potential adverse environmental impacts could be: soil erosion, decreased water quality, loss of vegetation, fauna disturbance, deposition of solid wastes, and dust emission. Social impacts are related to loss of access to land and loss of property as well as risks of resource use conflict, community health and safety, and GBV. Risks of marginalization of indigenous people need to be addressed through free, prior and informed consultation and sensitive grievance redress mechanism (GRM) design. Mitigation measures have been addressed in the Environmental and Social Management Plan (ESMP) which will then

		be used to guide the preparation of appropriate outcome-based specifications in accordance with the World Bank's procurement policy. The ESMP will also serve as the basis for the Contractor's ESMP (CESMP). Component 3 will focus on institutional strengthening, capacity building and provisions for in-country human resource to support VCRTP in meeting its intended objective. Relevant TORs will be reviewed by the Safeguards Specialist to ensure alignment with the ESMP and allow due consideration of potential safeguards implications. Component 4 will be implemented in accordance with the rapid response procedures and a CERC-ESMF will be included in the CERC Project Operations Manual. This will indicate the kinds of emergency response actions that can proceed with no additional environmental and social assessment, and which ones would require assessment (and at what level) prior to being initiated. To assess potential environmental and social impacts and risks, as well as to identify mitigation measures, an Environmental and Social Impact Assessment (ESIA), the ESMP, and an Abbreviated Resettlement Action Plan (ARAP) have been prepared.
Performance Standards for Private Sector Activities OP/BP 4.03	No	Not relevant to the proposed project.
Natural Habitats OP/BP 4.04	Yes	The targeted road includes 14 river crossings and a section of coastal reinforcement. While it is documented that the terrestrial environment along the road network is not comprised of natural habitat, the Navaka River system is considered as a natural habitat under the definition of OP/BP 4.04. There have been ongoing human activities at the site (annual gravel extraction and small-scale harvesting of freshwater species for subsistence and aquaculture); however, the area's primary ecological functions have not essentially been modified. The freshwater species as described in the ESIA are largely native. In addition, the ESIA describes that there is one registered Community Conservation Area (CCA) along South Santo Road. CCAs have been

		introduced to Vanuatu as a more successful approach to resource management and conservation than formal protected area management. CCAs function to both conserve native species/habitats and to support sustainably managed use of natural resources. None of the areas identified fall within a gazette protected area or National Park. The ESMP includes measures for addressing potential negative impacts on natural habitats and CCAs.
Forests OP/BP 4.36	No	No impacts on natural forests will result from works on any of the project sites as all works will be carried out within the existing boundaries. Construction materials will be sourced from existing quarries that are approved by both the Ministry of Mining and Ministry of Environment.
Pest Management OP 4.09	No	The project will not require the use of pesticides. Accordingly, this OP is not triggered.
Physical Cultural Resources OP/BP 4.11	No	No impacts on Physical Cultural Resources will result from works on the project sites as all works will be carried out within the existing boundaries. A chance find procedure requiring works to stop in specific location of unearthed artefacts or site. The area will be fenced to limit access and notify the PIU and Supervision Engineer immediately for instruction to proceed. Relevant ministries will be contacted. Traditional leaders indicated taboo sites to be marked out in maps. This process will need to be ongoing during detailed design.
Indigenous Peoples OP/BP 4.10	Yes	In Vanuatu, all public infrastructure works take into account the fundamental right that under the nation's constitution all land in Vanuatu belongs to the indigenous custom owners and their descendants. Accessing land is a complex mixture of fundamental traditional and legal rights. The project traverses 15 villages, with 14 villages under customary land tenure. Customary lands are lands belonging to a tribe or a clan, owned by numerous families with ownership is passed down through families without formal registration. The project will improve usability of the road in all weather conditions and access to market and social services, including health and education, for indigenous communities along the road.

		There will be land acquisition impacts affecting an estimated five indigenous households as a result of realigning access roads to three bridges. The impacts will result in marginal loss of productive land, loss of structures and crops that will be fully mitigated through the ARAP. The project GRM described in the ESIA, ESMP and ARAP provides for participation of traditional leaders in the process to promote accessibility and effectiveness of the process. Project preparation consultations indicated broad support for the project from traditional leaders and customary land owners. Representatives of customary land owners of the proposed three bridge re-alignment sites gave their consent for the realignment through their lands. A Stakeholder Engagement Plan (SEP) has been prepared for the project in which traditional leaders and customary land owners are required to be consulted throughout project implementation. The SEP is included in the ESIA and ESMP and is required to be updated and detailed at the commencement of the project.
Involuntary Resettlement OP/BP 4.12	Yes	Identified impacts relate to the realignment of the approach roads for three bridges and the associated permanent acquisition of an estimated 2.85 hectares of farming land, loss of two houses along with trees and crops affecting three customary land owners. The impacts represent marginal losses and do not require resettlement or livelihood restoration measures. The losses of land represent less than 10 percent of total productive landholdings and affected houses can be rebuild on remaining land owned by the affected households. Mitigation for the loss of land is planned through replacement land of the existing road alignments to be replaced and through customary in-kind gifts from the Government and compensation for non-land assets at replacement cost. The land owners have been consulted and are agreeable to the proposed land acquisition and restoration measures.

		Involuntary resettlement impacts are not anticipated for other project activities based on preliminary design. Road upgrading, construction of box culverts and replacement of another seven river crossings are planned to be on existing alignments and existing road and bridge footprints. Due diligence of all components will need to be reassessed based on detailed design during implementation.
Safety of Dams OP/BP 4.37	No	Not relevant to the project
Projects on International Waterways OP/BP 7.50	No	Not relevant to the project
Projects in Disputed Areas OP/BP 7.60	No	Not relevant to the project

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

VCRTP is a Category B project under the World Bank environmental and social screening guidelines as the activities and investments are not likely to cause significant or irreversible environmental impacts, or negative social impacts. Potential environmental and social impacts can be mitigated. Potential major environmental impacts and proposed mitigation measures are listed below; while potential moderate and minor environmental impacts are described further in the ESIA and ESMP:

a) Water Resource Quality. There is a risk to structural integrity of upgraded road in areas of high ground water table increases with projected climate change impacts. Potential impacts also include overtopping and deterioration of road surface from elevated water levels. To mitigate the impact, design process will take elevated water table into account and consider elevating roads above the current level – to match the achievements of other sections of South Santo Road which have previously been elevated above ground water table level.

Another potential impact includes changes to the Navaka River from poorly planned river gravel extraction schedules. Proposed mitigation measures include: (i) undertaking study on the historical extraction, existing volumes and replenishment of the Navaka River gravels. Study will determine maximum amount of gravel to be extracted annually for this project; (ii) recommended extraction rate based on study shall not be exceeded; (iii) extraction will only happen under valid permit from the Department of Geology and Mines which is subject to approval of an Environmental Mitigation Management Plan by the DEPC; (iv) gravel should be removed during the dry seasons only; (v) if feasible, required volume should be extracted in a staged way – total volume for extraction should be split across dry seasons and stockpiled until needed; and, (vi) reducing the overall amount of river aggregate needed by design solutions which maximise use of coronous aggregates.

b) Geological Resources (construction aggregates, sand, soils). Changes in the riverbank profile from use of machinery during river crossing construction potentially lead to instability or erosion of banks. Proposed mitigation measures

include: (i) setting conservative working areas along the rivers and ensure that no machinery works outside these areas; and, (ii) replanting native species on the riverbank on completion of work.

An over extraction of gravel from the Navaka River beyond its natural replenishment rate would lead to a change in the natural ecosystem function of the braided river. Proposed mitigation measures include: (i) undertaking study on the historical extraction, existing volumes and replenishment of the Navaka River gravels. Study will determine maximum amount of gravel to be extracted annually for this project; (ii)recommended extraction rate based on study shall not be exceeded; (iii) extraction will only happen under valid permit from the Department of Geology and Mines; (iv) gravel should be removed during the dry seasons only; (v) if feasible, required volume should be extracted in a staged way – total volume for extraction should be split across dry seasons and stockpiled until needed; and, (vi) reducing the overall amount of river aggregate needed by design solutions which maximize use of coronous aggregates.

c) River Hydrology (construction aggregates, sand, soils). Ongoing changes to the flow path of the Navaka River could result in any bridge becoming undermined over time as the river moves towards and even beyond the footings. The Navaka River plain is flat and easy channeled by the river, placement of bridge footings on the alluvial plain has the potential to interrupt the natural river changes. To mitigate the impact, Engineer Design Team will conduct a detailed study of the Navaka River to determine riverbank characteristics, trends of the river course changes and a variety of different bridge locations and widths to identify the most climate resilient option.

d) Land Acquisition. Land acquisition for the realignment of approach roads to three river crossings will require the acquisition of approximately 2.8 hectares of customary land. To mitigate the impact, land loss will be compensated through land-for-land replacement with land from the existing alignment that will be replaced in addition to customary in-kind compensation. Productive trees and crops will be compensated in cash at replacement cost.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:
Potential long-term impact due to anticipated future activities under VCRTP is related to climate vulnerability. Vanuatu, like many other pacific nations, are already experiencing the effects of increased temperatures and rising sea level. Climate change projections for 2030, 2055 and 2090 were reviewed by the Pacific Climate Change Science Program to determine the most plausible representations of future climate in the Pacific. The program makes the following climate change predictions for Vanuatu: increases in temperatures, more very hot days – increases in average temperatures will also result in a rise in the number of hot days and warm nights and a decline in cooler weather, changing rainfall patterns – projections generally suggest a decrease in dry season rainfall and an increase in wet season rainfall, more extreme rainfall days, and less frequent but more intense tropical cyclones.

The projected design life for the tar sealing is 10 to 15 years for South Santo Road, and the concrete road surfaces is 25 to 30 years. Therefore, the climate change projections for 2055 best reflect the scenario that the entire investment most adequately. Along the length of the road, the majority of runoff from rain events goes to natural soakage and this does have implications for localized flooding depending on impermeable surfaces and the ability of the rainfall to percolate into the ground. Detailed design work may require flood hazard modelling and this should allow for predicted changing rainfall patterns.

South Santo Road is mostly coastal; therefore, the proposed design solution will need to consider the likely future

impact on the coastline where it runs along South Santo Road and suggest design solutions which provide climate resilience.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

Without upgrade and sealing work to South Santo Road to provide sealed and uninterrupted access between Luganville and Tasiriki (including all river crossings), the communities of south and west Santo will continue to suffer from periods of time where they are unable to travel the road and will remain cut off from the main urban, administrative and economic center of Santo. Economic and social development of the southern and western areas is dependent on that access to Luganville (and beyond via the airport and port). Without the VCRTP works, this development will be hampered and extremely difficult in the face of increasing impacts from climate change. The 'No Project' option is not considered to be a viable alternative.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The implementing agency for VCRTP is MIPU through its PWD. PWD is responsible for the road network, staffed with 153 personnel of which 31 are based at the Head Office in Port Vila and 122 are spread across the six PWD's provincial divisions. About 20 percent of positions are vacant. MIPU is also implementing the ongoing World Bank-funded Vanuatu Infrastructure Reconstruction and Improvement Project (VIRIP). Lessons learned on safeguards implementation of VIRIP suggest that additional technical support is needed to operate an effective safeguards system due to lack of human resources (personnel availability and technical capacity). A full time International Safeguards Specialist was hired to supervise the implementation of environmental and social safeguards instruments including drafting the site-specific environmental management plans. The recent VIRIP Mid-Term Review highlights that performance on safeguards compliance is considered satisfactory as adaptive management measures are being applied through continuously improved and standardized safeguards instruments. For the remainder of VIRIP, there will be increased need for overseeing and monitoring safeguards implementation. This is where the International Safeguards Specialist would find it challenging as the safeguards position in PWD (national staffs) are currently vacant as they are being rotated to cover another role and/or move to a different department.

To cope with human resources issues, GOV has delegated the delivery and management of VCRTP to a dedicated Project Implementation Unit (PIU) which has been resourced with personnel specifically tasked to manage project implementation. As such, the PIU carries much of the institutional capacity required by GOV to implement the project and to monitor the works for compliance. The PIU will be resourced with, among other positions, two Environmental Safeguards Specialists (one international, one local), two Social Safeguards Specialists (one international, one local), a Community Liaison Officer (PWD staff), and a Gender Specialist (with GBV/VAC and workplace experience) who will be responsible for monitoring for compliance with the ESMP, World Bank policies and GOV legislation.

Successful implementation of the project will depend among others on the effective implementation of the environmental and social management measures outlined in the ESMP. Training and capacity building will be necessary for the key stakeholders in order to ensure effective implementation of the ESMP. Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding skills and access to information, knowledge and training that enables them to perform effectively. Therefore, it should also include awareness-raising and sensitization, besides technical training: (i) Awareness-raising: for stakeholders who need to appreciate the significance/relevance of environmental and social issues throughout the project life cycle. (ii) Sensitization: for stakeholders that need to be familiar enough with the issues so that they can make informed and specific requests for technical assistance. (iii) Technical training: for stakeholders who will need to use the ESMP tools, analyze potentially adverse environmental and social impacts, to

prescribe mitigation approaches and measures, and to prepare and supervise the implementation of management plans. It is the responsibility of the Contractor to ensure that all workers have sufficient technical training to be able to implement the provisions of the ESMP through their CESMP. The Contractor is to ensure that they have the budget provision to conduct identified training for their workers and that sufficiently skilled resources are made available to deliver the relevant training.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The key stakeholders are: (i) those in close proximity to South Santo Road, including traditional leaders, chiefs, customary land owners, small business holders/market stall holders and others; and, (ii) those living on Santo, especially the communities along the project road. A community consultation plan is included; outlining guidelines for public disclosure and engagement in project preparation and implementation.

A Stakeholder Engagement Plan has been prepared to guide the project in its consultation and communication requirements through various phases of the project design and implementation. Modes of consultation, information dissemination and disclosure include public consultation meetings, specific group/individual consultations, public media including newspapers, radio and notice boards.

B. Disclosure Requirements

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
28-Oct-2019	21-Nov-2019	

"In country" Disclosure

Vanuatu

21-Nov-2019

Comments

Disclosed on the PWD website

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank	Date of submission for disclosure
28-Oct-2019	21-Nov-2019

"In country" Disclosure

Vanuatu

21-Nov-2019

Comments

Disclosed on the PWD website

Indigenous Peoples Development Plan/Framework

Date of receipt by the Bank	Date of submission for disclosure
28-Oct-2019	21-Nov-2019

"In country" Disclosure

Vanuatu
21-Nov-2019

Comments
Disclosed on the PWD website

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?
Yes
If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?
Yes
Are the cost and the accountabilities for the EMP incorporated in the credit/loan?
Yes

OP/BP 4.04 - Natural Habitats

Would the project result in any significant conversion or degradation of critical natural habitats?
No
If the project would result in significant conversion or degradation of other (non-critical) natural habitats, does the project include mitigation measures acceptable to the Bank?
NA

OP/BP 4.10 - Indigenous Peoples

Has a separate Indigenous Peoples Plan/Planning Framework (as appropriate) been prepared in consultation with affected Indigenous Peoples?
NA

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?
Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?
Yes

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?
Yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?
Yes

All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?
Yes

Have costs related to safeguard policy measures been included in the project cost?
Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?
Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?
Yes

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