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Report No: PAD4681

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR25.4 MILLION
(US\$35.25 MILLION EQUIVALENT)

TO THE

FEDERATED STATES OF MICRONESIA

IN SUPPORT OF THE

PACIFIC CLIMATE RESILIENT TRANSPORT PROGRAM (PC RTP), SERIES OF PROJECTS

FOR A

STRATEGIC CLIMATE-ORIENTED ROAD ENHANCEMENTS PROJECT (SCORE)

March 4, 2022

Transport Global Practice
East Asia And Pacific Region

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CURRENCY EQUIVALENTS

Exchange Rate Effective January 31, 2022

Currency Unit = United States Dollar (US\$)

SDR 1 = US\$1.39178

FISCAL YEAR

October 1 – September 30

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ABBREVIATIONS AND ACRONYMS

ADB	Asian Development Bank
ARAPs	Abbreviated Resettlement Action Plans
BAC	Blood Alcohol Concentration
Cat-DDO	Catastrophe Deferred Drawdown Option
CBA	Cost-benefit Analysis
C-ESMP	Contractors' Environmental and Social Management Plans
CIU	Central Implementation Unit
CMU	World Bank Pacific Country Management Unit
CRRS	Climate Resilient Road Strategy
DA	Designated Account
DFIL	Disbursement and Financial Information Letter
DoFA	Department of Finance and Administration
DoTC&I	Department of Transportation, Communications and Infrastructure
DPO	Development Policy Operation
DRIVER	Data for Road Incident Visualization, Evaluation, and Reporting
DSSI	Debt Service Suspension Initiative
EIRR	Economic Internal Rate of Return
ENSO	El Niño-Southern Oscillation
EPA	Environmental Protection Agency
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
FMIS	Financial Management Information System
FSM	Federated States of Micronesia
FSMIP	Federated States of Micronesia Maritime Investment Project
GBV	Gender-based Violence
GDP	Gross Domestic Product
GEMS	Geo-Enabling Initiative for Monitoring and Supervision
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Greenhouse Gas
GoFSM	Government of the Federated States of Micronesia
GoPRC	Government of the People's Republic of China
GM	Grievance Mechanism
GRS	Grievance Redress Service
HR	Human Resource
IA	Implementing Agency
ICR	Implementation Completion and Results Report
IDA	International Development Association
IFR	Interim Financial Report
IDP	Infrastructure Development Plan
IOM	International Organization for Migration
KIRMA	Kosrae Island Resource Management Authority
LMP	Labor Management Procedures
M&E	Monitoring and Evaluation
MTR	Mid-term Review

NPV	Net Present Value
ODA	Overseas Development Assistance
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PCRTP	Pacific Climate Resilient Transport Program
PDO	Project Development Objective
PIA	Project Implementation Agreement
PIC	Pacific Island Countries
PIU	Project Implementation Unit
PMU	Program Management Unit
PPA	Programmatic Preparation Advance
PPSD	Project Procurement Strategy for Development
PRIME	Prioritized Road Investment and Management Enhancements
PSC	Project Steering Committee
PTA	Pohnpei Transportation Authority
RAMS	Road Asset Management System
RMI	Republic of the Marshall Islands
RPF	Regional Partnership Framework
RSSAT	Road Safety Screening and Appraisal Tool
SCORE	Strategic Climate-Oriented Road Enhancements
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SH	Sexual Harassment
SIDS	Small Island Developing States
SISRI	Small Island States Resilience Initiative
SOP	Series of Projects
SORT	Systematic Operations Risk-rating Tool
SPD	Standard Procurement Documents
STEP	Systematic Tracking of Exchanges in Procurement
TA	Technical Assistance
TC	Tropical Cyclone
TMP	Traffic Management Plan
U.S.	United States of America
USAID	United States Agency for International Development
USD/US\$	United States Dollar
VA	Vulnerability Assessment
VOC	Vehicle Operating Costs



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DATASHEET

BASIC INFORMATION

Country(ies)	Project Name	
Micronesia, Federated States of	Federated States of Micronesia Strategic Climate-Oriented Road Enhancements	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P177073	Investment Project Financing	Substantial

Financing & Implementation Modalities

☐ Multiphase Programmatic Approach (MPA)	☒ Contingent Emergency Response Component (CERC)
☒ Series of Projects (SOP)	☒ Fragile State(s)
☐ Performance-Based Conditions (PBCs)	☒ Small State(s)
☐ Financial Intermediaries (FI)	☐ Fragile within a non-fragile Country
☐ Project-Based Guarantee	☐ Conflict
☐ Deferred Drawdown	☐ Responding to Natural or Man-made Disaster
☐ Alternate Procurement Arrangements (APA)	☐ Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
25-Mar-2022	31-Aug-2028

Bank/IFC Collaboration

No

Proposed Development Objective(s)

To improve the climate resilience of the Recipient's secondary road network, and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

**Components**

Component Name	Cost (US\$, millions)
Component 1: Spatial and Sector Planning Tools	0.31
Component 2: Climate Resilient Infrastructure Solutions	28.00
Component 3: Strengthening the Enabling Environment	6.94
Component 4: Contingent Emergency Response Component (CERC)	0.00

Organizations

Borrower:	Federated States of Micronesia
Implementing Agency:	Department of Transportation, Communications & Infrastructure

PROJECT FINANCING DATA (US\$, Millions)**SUMMARY**

Total Project Cost	35.25
Total Financing	35.25
of which IBRD/IDA	35.25
Financing Gap	0.00

DETAILS**World Bank Group Financing**

International Development Association (IDA)	35.25
IDA Grant	35.25

IDA Resources (in US\$, Millions)

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount
Micronesia, Federated States of	0.00	35.25	0.00	35.25
National PBA	0.00	35.25	0.00	35.25



Total	0.00	35.25	0.00	35.25
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Expected Disbursements (in US\$, Millions)

WB Fiscal Year	2022	2023	2024	2025	2026	2027	2028	2029
Annual	0.63	1.00	4.00	8.00	10.00	10.00	1.62	0.00
Cumulative	0.63	1.63	5.63	13.63	23.63	33.63	35.25	35.25

INSTITUTIONAL DATA

Practice Area (Lead)

Transport

Contributing Practice Areas

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Moderate
6. Fiduciary	● Moderate
7. Environment and Social	● Substantial
8. Stakeholders	● Moderate
9. Other	● Substantial
10. Overall	● Moderate



COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

☐ Yes ☒ No

Does the project require any waivers of Bank policies?

☐ Yes ☒ No

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

Legal Covenants

Sections and Description



The Recipient shall, prior to the carrying out of any activities under Part 2 of the Project in a Recipient's state, enter into and thereafter maintain throughout the Project implementation period, a Project Implementation Agreement with the State Government of such state on terms and conditions satisfactory to the Association, which shall include, inter alia, the State Government's obligation to facilitate the implementation of the Project activities within its territory in accordance with the provisions of this Agreement, the Project Operations Manual and the Environmental and Social Commitment Plan ("ESCP"). (Section I.B.1 of Schedule 2 to the Financing Agreement)

Sections and Description

The Recipient shall prepare and furnish to the Association, by not later than: (a) four (4) months after the Effective Date (or such later date which, after consideration of the reasons for the delay, the Association has confirmed in writing is acceptable to the Association in its sole discretion); and (b) August 1 of each year for every subsequent year during the implementation of the Project (or such later date which, after consideration of the reasons for the delay, the Association has confirmed in writing is acceptable to the Association in its sole discretion); for the Association's review and no-objection, an Annual Work Plan and Budget, and ensure that the Project is implemented in accordance with the Annual Work Plans and Budgets. (Section I.D of Schedule 2 to the Financing Agreement)

Sections and Description

The Recipient shall carry out, jointly with the Association, not later than three years after the Effective Date, or such other period as may be agreed with the Association, a Mid-Term Review of the Project (Section II.2 of Schedule 2 to the Financing Agreement)

Conditions

Type	Financing source	Description
Effectiveness	IBRD/IDA	The Recipient has updated and thereafter adopted, the Project Operations Manual, with contents and terms satisfactory to the Association. (Article IV. 4.01 of the Financing Agreement)
Type Disbursement	Financing source IBRD/IDA	Description No withdrawal shall be made for Emergency Expenditures under Category (2), unless and until all of the following conditions have been met in respect of said expenditures: (i) the Recipient has determined that an Eligible Crisis or Emergency has occurred and has furnished to the Association a request to withdraw Financing amounts under Category (2); (ii) the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and (iii) the Recipient has adopted the CERC Manual and Emergency Action Plan, in form and substance acceptable to the Association. (Section III.B of Schedule 2 to the Financing Agreement)



I. STRATEGIC CONTEXT

1. **Introduction.** This Project Appraisal Document (PAD) seeks the approval of the Executive Directors to provide an International Development Association (IDA) grant in the amount of SDR25.4 million (US\$35.25 million equivalent) to the Federated States of Micronesia (FSM) in support of the Pacific Climate Resilient Transport Program (PC RTP) Series of Projects (SOP) for a Strategic Climate-Oriented Road Enhancements (SCORE) Project. SCORE is the seventh project in the PC RTP SOP. SCORE will be implemented to improve the climate resilience of the Recipient's secondary road network, and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

A. Country Context

2. **Geography and Demography.** The largest nation in the Micronesian sub-region, the Federated States of Micronesia (FSM), is made up of four semi-autonomous states (Chuuk, Pohnpei, Kosrae and Yap) located between Palau and the Philippines to the west, and the Republic of the Marshall Islands (RMI) to the east. Although its land area covers just 700 square kilometers, FSM consists of more than 600 islands scattered over an Exclusive Economic Zone of about 2.6 million square kilometers.¹
3. As with other Small Island Developing States (SIDS) in the region, FSM faces significant challenges related to its small size, remoteness, geographical dispersion, environmental fragility and exposure to external shocks.² Frequent natural disasters and climate change impose high costs and may even threaten the physical viability of some areas of the main islands³ in each state and the more remote outer islands. Furthermore, such events cause severe damage to infrastructure and other economic assets and have adverse impacts on livelihoods. As an archipelagic nation, FSM's economy is highly dependent on marine resources for international, inter-state and inter-island trade. Citizens of outer islands depend on maritime transport for travel to main and other outlying islands, and for access to education, markets, and health services. Although seven islands have airstrips, only two planes provide domestic air service to the outer islands, one of which is a seven-seater and the other is a nineteen-seater.
4. The overall population of FSM is estimated to be 104,832 (2021), of which approximately 45 percent live in Chuuk, 37 percent in Pohnpei, 11 percent in Yap, and 7 percent in Kosrae. Although the population declined from a high of 107,008 in 2000 to 102,843 in 2010, the trend stabilized in 2012, with slight annual increases continuing through to the current year.⁴ FSM has also experienced considerable internal migration across states, mostly from outer islands to the main islands' urban areas, and especially to Pohnpei, which hosts the Country's capital Palikir, as individuals are particularly drawn to employment with the National Government. Access to basic services is also generally higher in Pohnpei. Each State is diverse in terms of language, cultural norms, environmental and land tenure laws.

¹ An Exclusive Economic Zone is a sea zone prescribed by the United Nations Convention on the Law of the Sea (UNCLOS) over which a state has special rights regarding the exploration and use of marine resources, including energy production from water and wind.

² World Bank, *Systematic Country Diagnostic*, Report No. 102803, World Bank, January 20, 2016.

³ Main islands include Weno Island, Chuuk; Pohnpei Island, Pohnpei; Kosrae Island, Kosrae; and Yap Island Group, Yap.

⁴ FSM Statistics. Available at: <https://www.fsmstatistics.fm/social/population-statistics/>, accessed on August 12, 2021.



FSM is reported to have the highest estimated rates of poverty among the nine small remote islands (PIC9)⁵ covered in the Regional Partnership Framework (RPF) for FY17 to FY21 (extended by the Board of Executive Directors on February 6, 2020 to FY23).⁶ These findings are based on a household income and expenditure survey conducted in 2013/14, which found about 41 percent of FSM's population is struggling to meet basic needs and 10 percent are living below the food poverty line. The survey also documented stark variation across FSM, with the basic needs poverty rate most severe in Chuuk (46 percent), followed by Pohnpei and Yap (39 percent), and Kosrae (21 percent). Using the international poverty line of US\$1.90 (2011 Purchasing Power Parity US\$ per person per day), the headcount poverty rate was estimated at 15.4 percent. According to the Multidimensional Poverty Measure, the rate of poverty was 20.4 percent. Contributing factors are that 28 percent of households have at least one school aged child not enrolled in school and 23.6 percent of the population have no access to electricity. According to the US\$3.20 Lower Middle-Income Class Poverty Line, which reflects living standards across all lower middle-income countries, the incidence of poverty is 38.7 percent. Inequality, as measured by the Gini index, is estimated at 40.1.⁷

5. **Economy and Market Considerations.** Following independence in 1986, FSM entered into a Compact of Free Association (Compact) with the United States of America (U.S.), whereby the U.S. provides yearly financial transfers to the FSM, access to a range of National Government services and programs, and open migration to the U.S. for FSM citizens among other arrangements. In 2003, certain provisions of the Compact were amended, most notably the economic provisions.⁸ The most recent agreement not only supports Compact Sector Grants designed to help sustain the delivery of public services, but also establishes a Compact Trust Fund intended to replace the Sector Grants when they terminate in 2023. Through the Trust Fund, the Compact seeks to prepare FSM for self-sufficiency and economic sustainability post 2023. However, recent projections indicate that the expected value of the Trust Fund corpus in 2023 will not be sufficient to both preserve its real value and provide annual disbursements equivalent to the current level of sector grants – meaning a fiscal adjustment may be required. It will be a major challenge for FSM to carry out such a fiscal adjustment without reducing access to and quality of public services, especially those delivered to the poor.⁹ In 2019, during the FSM Presidential inauguration, the U.S. Secretary of State visited FSM to announce the willingness of the U.S. to negotiate post-2023 Compact Sector Grants continuation. In November 2019, the U.S. conducted a Compact Listening Tour to all three Compact Countries – FSM, Marshall Islands and Palau – to hear what had and what had not worked under the current Compact terms. Compact negotiations began in June 2020 but stalled after little progress due to U.S. elections and the COVID-19 pandemic.
6. **The COVID-19 pandemic has dealt a major blow to the FSM economy.** Following five years of consecutive economic growth prior to COVID-19, closed borders and domestic containment policies have caused a contraction. Services (including hospitality and transportation) and construction contracted sharply. Mobility

⁵ Kiribati, Republic of Nauru, Republic of the Marshall Islands, Federated States of Micronesia, Republic of Palau, Independent State of Samoa, Kingdom of Tonga, Tuvalu, and Vanuatu

⁶ Household income and expenditure survey, 2013/14; World Bank Group, *Regional Partnership Framework for Nine Pacific Island Countries*, FY17-21, Report No. 120479, World Bank, 2016.

⁷ World Bank, *Poverty and Equity Briefs East Asia and Pacific*, World Bank, October 2020.

⁸ The FSM Congress approved the amendments on May 26, 2004 following earlier ratification by the four FSM states. On June 25, 2004, the FSM and U.S. Governments signed documents to officially implement the Compact, as amended.

<http://www.uscompact.org/about/cofa.php>

⁹ World Bank Group, *Regional Partnership Framework for Nine Pacific Island Countries*, FY17-21, Report No. 120479, World Bank, 2016.



restrictions affected movement of personnel and materials, causing delays in investment projects. As a result, real GDP contracted by 1.6 percent in Fiscal Year 2020 (FY, October 1 to September 30 in FSM) from US\$0.41 billion in 2019. Ongoing border closures are expected to further contract output by around 3.7 percent in FY2021. The outlook is uncertain and hinges on the pace of vaccination. While development partner grants helped finance fiscal gaps, tax revenue shortfalls and a decline in fishing license fees shifted the substantive fiscal surplus (15.2 percent of GDP, FY2019) to a deficit of 0.5 percent of GDP in FY2020. Public debt fell from 47 percent of GDP in FY1997 to 17 percent of GDP in FY2019 and 16 percent of GDP in FY2020, in part due to FSM's strong commitment to seeking grant financing and avoiding new non-concessional external borrowing.

7. FSM's economy is highly vulnerable to the impacts of COVID-19 due to a high reliance on Overseas Development Assistance (ODA), which contributes over 20 percent of gross national income. Remittances and inbound tourism each account for approximately seven percent of GDP. The Micronesian diaspora is estimated to be 40,642, with a majority in the United States. Due to the COVID-19 pandemic, the diaspora faces a high risk of job and income loss as unemployment soars in host countries, given low education levels and a large reliance on low-skilled and casual jobs, which have been severely affected by the economic fallout of social distancing measures. Therefore, remittances are expected to decrease, as existing migrant workers either lose their employment in host countries, have their work hours reduced, or return home early at a time when new workers are not taking up employment overseas. The World Bank estimates a three percent decrease of remittance flows to FSM in 2020.¹⁰ For these reasons, poverty may increase in the short term.
8. The ongoing FSM Maritime Investment Project (FSMIP) is utilizing US\$2.5 million through its Contingent Emergency Response Component (CERC) to address urgent COVID-19 emergency response and preparedness needs. The CERC funding is being used to supply medical equipment, pharmaceuticals, and personal protective equipment.
9. **Natural Hazards and Climate Change in FSM.** As with other small island nations in the region, FSM faces significant challenges related to its small size, remoteness, geographical dispersion, environmental fragility, and sensitivity to external shocks.¹¹ Droughts, typhoons, storm waves, flooding and landslides all affect FSM. Rainfall is high on the volcanic islands of Kosrae, Pohnpei and Chuuk primarily from May to November, with annual totals exceeding 400 inches (1,016 centimeters) and up to 22 inches (559 millimeters) in a given day.¹² In fact, Pohnpei is one of the wettest places on earth with annual recorded rainfall exceeding 300 inches. Despite this, drought conditions do occur periodically throughout FSM, especially when the El Niño condition moves into the Western Pacific. In Pohnpei, El Niño tends to bring drier conditions during the dry season, but higher than average rainfall during the wet season, and La Niña tends to bring above average rainfall in the dry season. The West Pacific Monsoon affects the western states of Chuuk and especially Yap more than the eastern states of Pohnpei and Kosrae. Yap frequently experiences drought conditions. The West Pacific Monsoon moves farther east during El Niño resulting in more rainfall, and to a more western position during La Niña resulting in less rainfall.
10. FSM is particularly vulnerable to the impacts of severe weather events. For example, in 2015, Typhoon Maysak,

¹⁰ World Bank. 2020. Pacific Labor Mobility, Migration and Remittances in Times of COVID-19: Interim Report. Available at: <https://documents1.worldbank.org/curated/en/430961606712129708/pdf/Pacific-Labor-Mobility-Migration-and-Remittances-in-Times-of-COVID-19-Interim-Report.pdf>

¹¹ World Bank, *Systematic Country Diagnostic*, Report No. 102803, January 20, 2016.

¹² World Bank. n.d. Climate Change Knowledge Portal. Available at: <https://climateknowledgeportal.worldbank.org/country/micronesia-fed-sts>



affected 29,000 people and caused US\$8.5 million in direct damages (approximately 2.7 percent of the GDP). The impact on the agriculture sector was particularly severe as approximately 90 percent of key agricultural crops in Chuuk and Yap were destroyed.¹³ Climate change increases the likelihood that the country will suffer serious adverse environmental, social and economic losses from severe weather events in the years to come: the population of FSM is vulnerable to storms and increased precipitations and those located close to the coastline, which represent the vast majority of the population, are also exposed to the consequences of sea level rise and coastal erosion. The negative impacts of climate change are already evident in FSM. For instance, saltwater intrusion from rising sea levels damage crops and is contaminating freshwater supplies, while there is an increased incidence of extreme weather events such as storm surges. Formally self-sustaining atoll communities now rely on imported food and water during times of stress. Exacerbated by sea level rise, extreme spring tides, known in FSM as 'king tides', are causing intense marine inundation that damages taro beds, soil, agro-forestry resources, and critical infrastructure along the coast, especially on low atoll islets.¹⁴

11. Climate impacts all aspects of life in FSM and understanding the possible future climate of FSM is important so that people and FSM can plan for changes. The following projections have been gathered by the National Weather Services Offices of FSM and the Pacific-Australia Climate Change Science and Adaptation Planning Program. Projections for all emissions scenarios indicate that the annual average air temperature and sea-surface temperature will increase in the future. By 2050, under a very high emissions scenario, this increase in temperature is projected to be in the range of 1.1–1.9 degrees Celsius relative to the period 1986–2005. Almost all global climate models project increases in average annual and seasonal rainfall over the course of the 21st century. However, there is some uncertainty in the rainfall projections and not all models show consistent results. Models generally suggest a greater increase in wet season rainfall and extreme rainfall days over FSM, and drought frequency is projected to decrease. For a RCP8.5 scenario (very high), with a moderate level of confidence, the rainfall patterns will increase approximately 10 percent on the Western states (Yap and Chuuk) and 125 percent on the Eastern ones (Pohnpei and Kosrae).¹⁵ FSM is in a region where projections tend to show a decrease in typhoon frequency by the late 21st century. Furthermore, sea level is expected to continue to rise in FSM, whereby 2050 under a very high emissions scenario, this rise in sea level is projected to be in the range of 17–35 centimeters. The sea level rise combined with natural year-to-year changes will accentuate the impact of storm surges and coastal flooding.¹⁶
12. **Gender.** For women in FSM there are multiple barriers to having equal opportunities, as well as a life free from violence and coercion. Priority areas of FSM's national gender planning include addressing female unemployment and occupational sex segregation in the labor market, teenage pregnancy, violence against women and girls, and limited access to justice and protection for women. The labor force participation rate for women (ages 15+) in FSM was only 48.4 percent as of 2010, compared with 66.1 percent for men.¹⁷ The number of female wage and salary earners was less than half that of males – and women comprised only 14 percent of the non-agricultural sector workforce.¹⁸ Not only are women less represented in the paid workforce, they are concentrated in lower

¹³ United States Agency for International Development, *Micronesia – Typhoon Maysak Fact Sheet #3, Fiscal Year (FY) 2015, (2015)*, accessed April 23, 2015.

¹⁴ University of Hawaii, *Climate Change in the FSM – Food and Water Security, Climate Risk Management, and Adaptive Strategies*, (2010).

¹⁵ Secretariat of the Pacific Regional Environment Programme, *Federated States of Micronesia State of Environment Report 2018*, (2018).

¹⁶ Pacific-Australia Climate Change Science and Adaptation Planning Program, *Current and Future Climate of the Federated States of Micronesia*, (2015).

¹⁷ Data from the FSM Statistics available at <https://www.fsmstatistics.fm/economics/labor-market-and-participation/>

¹⁸ United Nations Conference on Trade and Development, *Small Island Developing States: Challenges in Transport and Trade Logistics*, (2014).



positions, with comparatively less pay, thereby impacting lifetime earnings.¹⁹ Participation of women at the highest levels of decision making remains very limited, and women continue to be highly under-represented at the legislative and executive levels of government. In addition, FSM only recently (November 2021) appointed its first woman in the national legislature, before which it was one of only four countries worldwide with zero women represented in the National Legislature.²⁰

13. **Sexual Exploitation and Abuse (SEA) and Sexual Harassment (SH).** SEA and SH prevalence levels in FSM are significant: one in three women (32.8 percent) have experienced physical and/or sexual violence by an intimate partner in their lifetime, 18 percent experienced sexual violence by an intimate partner, and eight percent have experienced sexual violence by someone other than a partner. Fourteen percent of women experienced child sexual abuse before the age of 15.²¹ However, support services for survivors of gender-based violence in FSM are extremely limited. Unlike other Pacific countries, in FSM there are no women's organizations (e.g. national crisis centers such as the ones in Fiji, Tonga, and Vanuatu) dedicated to providing support to survivors on a national level. Only in 2020, with support from DFAT, the Chuuk Women's Council (CWC) launched the first violence against women counselling center. In the remaining states, such services remain unavailable, or are entirely driven on a voluntary basis, and coordination between service providers is either absent or ad hoc.²²

B. Sectoral and Institutional Context

14. **Road Infrastructure.** FSM's road network consists of around 388 kilometers of roads, of which 184 kilometers are sealed and 204 kilometers are unsealed²³. Approximately 249 kilometers are considered primary roads and some 139 kilometers are secondary roads²⁴. The condition of the paved road network is generally good, while the condition of the unpaved network is poor.
15. FSM's road network is vulnerable to climate change induced risks such as sea level rise, intensified storm surge, increased precipitation, and flooding. The road network facilitates the movement of goods and services and is therefore of critical importance to the country's economic development, as well as providing access to social services such as schools and health facilities. In addition, most of the population in FSM lives close to the coast, and critical infrastructure including roads, schools, places of employment, port facilities, tourist facilities, power plants and airports, are located primarily in the coastal zone. The road network in FSM is Government owned and maintained, and in general, there is only one circumferential route on the main island of each of the four FSM states. Inadequate drainage and the insufficient maintenance are the main contributors to poor condition.

¹⁹ In 141 countries, the loss in human capital wealth due to lifetime gender income inequality is approximately US\$160.2 trillion. This suggests that globally, human capital wealth could increase by 21.7 percent and total wealth by 14.0 percent, with gender equality in earnings and reduced occupational sex segregation. For further information see Wodon, Quentin, and Benedicte de la Brière. 2018. *Unrealized Potential: The High Cost of Gender Inequality in Earnings*. The Cost of Gender Inequality Notes Series. Washington, DC: World Bank. Accessed September 2019. <https://openknowledge.worldbank.org/handle/10986/29865>.

²⁰ Data available at <https://data.worldbank.org/indicator/SG.GEN.PARL.ZS> from Inter-Parliamentary Union (IPU) (ipu.org).

GoFSM. 2021. Dr. Perpetua S. Konman Declared Official & Certified Winner of the FSM Special Election. Available at: <https://gov.fm/index.php/component/content/article/35-pio-articles/news-and-updates/554-dr-pepetua-s-konman-declared-official-certified-winner-of-the-fsm-special-election?Itemid=177>

²¹ FSM Department of Health and Social Affairs, *Federated States of Micronesia Family Health and Safety Study: A prevalence study on violence against women*. (2014).

²² Pacific Women, *Assessment of EAW Services and Gaps in Services – FSM National Report*, (2017).

²³ The CIA Factbook for FSM

²⁴ FSM States' Department of Transportation and Public Works



Since there is generally only one circumferential route per island, even a few poor or very poor sections can severely interrupt the flow of people, goods, and services. The Prioritized Road Investment and Management Enhancements (PRIME) Project, approved by the World Bank Board in May 2021, will be addressing these issues, among others, for the primary road network to improve its climate resilience. Since the road network has limited to no redundancy and is characterized by high rainfall and undulating terrain, reconstructed and rehabilitated roads should be designed, built, and maintained for all year-round access.

16. **Maintenance and Asset Management.** Ongoing management and maintenance of existing transport infrastructure is severely limited, largely attributed to a lack of proactive asset management and constrained budget allocations. Preventative road maintenance requires roads to be regularly inspected for damage and preventative repairs carried out to avoid accidents or more extensive work in the future, thereby also providing a better financial return than having to renew and rehabilitate infrastructure. For example, a least-cost analysis for sealed roads in Papua New Guinea found that the cost to the government of maintaining the road in a useable condition under a preventative maintenance strategy is four times less than under the build-neglect-rebuild scenario.²⁵ Therefore, a lack of preventative maintenance can (i) be expensive, (ii) potentially put lives at risk as the deterioration of infrastructure, (iii) reduce access to critical services (e.g. schools and hospitals), (iv) reduce network safety and increase crashes, and (v) prevent the further expansion of infrastructure services.²⁶ Though the importance of preventative maintenance is known, there has been little appetite for allocating sufficient and regular budget for this. Compounded with its vulnerability to extreme weather events and climate change, the road network is at risk of rapid deterioration. As a result, the PRIME project will assess current maintenance regimes and industry capacity and implement systems to move toward a more proactive preventative maintenance and rehabilitation program, which will replace the ad-hoc approach that is currently in place. SCORE will apply the systems devised under PRIME.
17. The remote geographical setting of FSM, increasingly harsh climatic conditions, the small populations of states, and unavailability of materials and equipment, all combine to make maintenance and management of infrastructure assets, and road sector assets in particular, a major challenge. Road works are undertaken by a mix of actors including state-owned enterprise, state road agency (via force account), as well as state-based and international private contractors. Like many SIDS, the development of the private contracting industry is curtailed primarily by a lack of reliable and sufficient funding for major works and maintenance. Force account is the primary mechanism used for routine and periodic maintenance. Routine and periodic maintenance of the sealed road network is ad-hoc at best, and non-existent at worst. Currently, only Kosrae has an inventory of its network drainage assets, and no state has an active network management system due to a lack of sufficient funding. PRIME will contribute to the sustainability of road asset management through the development and establishment of a simple asset management system at the national and state level, combined with provision of condition data and traffic measuring tools to enable transport agencies to monitor road condition, prepare effective annual work plans, and submit accurate annual maintenance budgets to state and national parliaments. Again, SCORE will benefit from these upgrades to be delivered through PRIME.
18. The sealed roads in FSM were originally asphalt-surfaced decades ago, with varying approaches to routine and periodic maintenance in each state:
 - (a) Pohnpei – the Pohnpei Transportation Authority (PTA) is a state-owned enterprise that is responsible for

²⁵ Ibid.

²⁶ Pacific Region Infrastructure Facility (PRIF), *Infrastructure Maintenance in The Pacific - Challenging the Build-Neglect-Rebuild Paradigm*, (2013), <https://www.theprief.org/documents/regional/infrastructure-planning-and-management/infrastructure-maintenance-pacific>



road maintenance and management²⁷. It owns an asphalt plant, and aggregate is available from local quarries, so it has capacity, but lack of funding limits its ability to undertake routine maintenance of the network, or periodic maintenance through resurfacing.

- (b) Kosrae – the original asphalt surface has been resurfaced on occasion with double seal surface dressing, with imported materials and equipment through an international contractor, but routine maintenance is limited to pothole patching by force account or through local contractors.
- (c) Yap – a donor-funded project has rehabilitated an asphalt-surfaced part of the network, but the routine maintenance is done by force account. There is a privately-owned asphalt plant on the island; however, for major periodic maintenance interventions, there is a need for all materials and equipment to be imported.
- (d) Chuuk – the original asphalt-surfaced network has severely degraded through lack of maintenance and all recent road reconstruction is in concrete, either through local or international contractors. A local quarry provides aggregate.

19. **Institutions and Functions.** Within the National Government, the Department of Transportation, Communications, and Infrastructure (DoTC&I) has the responsibility for the delivery of transport infrastructure. The DoTC&I manages the overall program and delegates day-to-day project management tasks for ODA-projects to Project Implementation Units (PIUs).

20. At the state level, the Pohnpei State Office of Transportation and Infrastructure, Kosrae Department of Transportation and Infrastructure, Chuuk Department of Transportation and Public Works and Yap Department of Public Works and Transportation (refer Figure 2 below) are responsible for the administration of construction projects, maintenance of infrastructure and regulation of the provision of public transportation within the individual State. Funding for road maintenance and capital road works is allocated annually by the National Government to State Governments. FSM has established a Central Implementation Unit (CIU) within the National Government's Department of Finance and Administration (DoFA), to support all World Bank-financed projects, including environmental and social management, procurement, and financial management support.

21. **Road safety.** FSM is one of the best performing countries in the East Asia and Pacific Region, with the World Health Organization estimating only two road fatalities and 30 serious injuries in 2016.^{28,29} This result is achieved despite FSM having no road safety lead agency, national road safety strategy, national road safety targets and limited crash statistics available. There are no safety regulations restricting the import of new and used vehicles, no national seatbelt laws or blood alcohol concentration (BAC) based national drink driving laws.³⁰ Maximum speed limits for urban and rural roads are set to 40 kilometers/hour, which is likely a significant contributor to the low rate of fatalities and serious injuries.

C. Relevance to Higher Level Objectives

22. SCORE is closely aligned with the World Bank Group's twin goals of ending extreme poverty and boosting shared

²⁷ Other three states do not have similar arrangements.

²⁸ World Health Organization, *Global Status Report on Road Safety 2018*, (2018).

²⁹ Serious injuries have been calculated assuming a ratio of 15:1 (15 serious injuries for every death). World Bank, *Guide for Road Safety Opportunities and Challenges: Low- and Middle-Income Countries Country Profiles*, (2019).

³⁰ World Bank, *Guide for Road Safety Opportunities and Challenges: Low- and Middle-Income Countries Country Profiles*, (2019).



prosperity. SCORE will improve climate resilience and facilitate year-round access to critical infrastructure and services, which is important for poverty alleviation given the evidence of a strong relationship between extreme poverty and lack of accessibility and mobility.

23. The aforementioned RPF for FY17 to FY23 identifies four areas of focus for these PIC9 as: (i) fully exploiting the available economic opportunities; (ii) enhancing access to economic opportunities for all; (iii) protecting incomes and livelihoods; and (iv) strengthening the enablers of growth and opportunities (macro-economic management, infrastructure and addressing knowledge gaps). Investments in the road sector will help build resilience to extreme weather events and improve the reliability of the network. The proposed activities included within SCORE will contribute to enhancing access to employment opportunities and social services, which will help protect incomes and allow people to exploit available economic opportunities.
24. Furthermore, investments and policy reforms to improve transport infrastructure are recognized as important National and State government priorities. SCORE is aligned with relevant strategies and prioritizations of the FSM Strategic Development Plan (2004-2023) and FSM Infrastructure Development Plan (IDP) FY2016-FY2025. The climate resilient infrastructure solutions proposed under SCORE are all identified as priority road and pedestrian projects in the IDP.

II. PROJECT DESCRIPTION

A. Project Development Objective

PDO Statement

25. To improve the climate resilience of the Recipient's secondary road network, and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

PDO Level Indicators

- (a) Improved planning process for transport network investment and maintenance toward climate resilience (Yes/No);
- (b) Length of secondary road upgraded with climate resilience measures (Kilometers);
- (c) Vulnerable strategic secondary roads made more resilient to climate-events (Percentage);
- (d) Enabling environment solutions identified and implemented (Number); and
- (e) Population benefited from climate-resilient road improvements (Percentage)

B. Project Components

26. **SCORE will complement PRIME.** In terms of improving secondary road network climate resilience, SCORE is specifically focusing on GoFSM-identified *strategic secondary roads*, which are selected roads serving a lifeline function that provide vital redundancy to critical primary roads or have significant socioeconomic importance (e.g. providing a connection to critical infrastructure, sites of significant economic activity, and services). Roads categorized as strategic secondary roads (along with primary roads) will be identified and selected through a robust and objective prioritization methodology through the Vulnerability Assessment and Climate Resilient Road Strategy (VA/CRRS) currently being implemented under the recently approved PRIME project. It was always



planned that resulting upgrades to prioritized primary roads would be financed by PRIME, whilst works constructed on the secondary road network would be financed in a future IDA project. SCORE provides a timely opportunity for World Bank to fast-track the implementation of the construction work. The table below shows the activities taking place under PRIME and SCORE reflecting the complementarity of the two projects.

Table 1. Summary of PRIME and SCORE activities

Component	PRIME activities	SCORE activities
<i>Component 1: Spatial and Sector Planning Tools</i>	- Vulnerability Assessment and Climate Resilient Road Strategy (VA/CRRS) - Climate-informed road asset management system (RAMS)	- Road Crash Database - Updates to climate-informed planning tools financed under PRIME
<i>Component 2: Climate Resilient Infrastructure Solutions</i>	Feasibility studies, design, and construction of identified primary road network assets	Feasibility studies, design, and construction of identified secondary road network assets
<i>Component 3: Strengthening the Enabling Environment</i>	- Institutional and Governance Review - Road safety program (road safety and access audits) for primary road network assets - Project Implementation Unit - Driver Licensing Pilot - Capacity Building Initiatives	- Project Management - Road safety program (road safety and access audits) for secondary road network assets - Transport Sector Data Management Unit - Materials Testing Laboratory - Gender Equality and Gender-based Violence (GBV) Initiatives - Sustainable Motorization Management - Emerging Priority Issues
<i>Component 4. Contingent Emergency Response Component</i>	Not applicable	Providing immediate response to an Eligible Crisis or Emergency, as needed

Note: For SCORE, detailed activity descriptions are provided below. For further details on PRIME, refer to the PRIME PAD.

27. **Pacific Climate Resilient Transport Program (PC RTP) Series of Projects (SOP).** SCORE, like PRIME, is included within PC RTP, which has four broad pillars that focus on increasing resilience in the transport sector through: (i) utilizing spatial and sector planning tools; (ii) investing in climate resilient infrastructure; (iii) strengthening the enabling environment; and (iv) supporting post-disaster recovery. The activities under SCORE are aligned with these four broad pillars of support. The value of the programmatic approach is that it will support the systematic improvement of resilience across the countries included within the program to address commonly shared issues. In addition, the program offers a multi-pronged approach to support FSM by considering risks in a holistic manner, through the integration of resilient transport interventions into decision-making and implementation. To match with PRIME, the SCORE project closing date will also be August 31, 2028, resulting in an approximately 6-year project duration. The proposed project components are as follows:



28. **Component 1: Spatial and Sector Planning Tools (US\$0.31 million).** This Component involves technical assistance (TA) to support FSM in the way that climate change is addressed in the road sector through analytical and sector planning tools that enable policymakers to make informed decisions based on the most accurate and up-to-date sector information available. This component includes the following activities:

- a. Updating of systems developed under PRIME. PRIME is already programmed to deliver a robust combination of spatial and sector planning tools (i.e. VA/CRRS and the climate-informed road asset management system) in support of evidence-based decision making regarding the road sector. This subcomponent will finance periodic potential updates (as needed) to those systems or complementary tools and any necessary related training.
- b. Climate-Informed Road Crash Database. Studies undertaken to examine a correlation between road crashes and climate change affirm an increase in road fatalities and injuries with change in temperature, precipitation, storm surge patterns, and sea level.³¹ The establishment of a crash database will allow for the recording and analysis of all road accident data including weather related factors, thereby enabling an evaluation of contributing factors to the crashes. Under this subcomponent, staff hired for the Transport Sector Data Management Unit (under Component 3) would be trained to develop, manage and effectively use a road crash database. The crash database will be linked to the Climate-Informed RAMS being set up under PRIME.

29. **Component 2: Climate Resilient Infrastructure Solutions (US\$28.00 million).** This Component involves feasibility studies, design, supervision and construction of identified priority strategic secondary road assets to improve their resilience to climate-related hazards and/or events. The integration of climate change considerations into infrastructure activities will help strengthen the resilience of assets and improve functionality of the road network. The VA and CRRS under PRIME will guide the investments to be included within this Component. All roads are single carriageway and any increase in the width of road formations will be limited to (i) lane widening to meet current design standards, (ii) addition of shoulders, (iii) addition of longitudinal drainage where required, and (iv) widening of fill embankments and/or cuttings to reduce slopes. The climate resilient infrastructure solutions will be informed by Road Safety Audits under component 3b and designed with appropriate safety measures that consider all road users. Measures to strengthen climate resilience may include, but not necessarily be limited to:

- Pavement and surface strengthening – periodic maintenance, repairs, rehabilitation or reconstruction of existing road pavement layers and/or surfacing, including provision of sealed shoulders and raising road levels;
- Drainage improvements – provision, reinstatement, resizing and/or lining of longitudinal drainage, replacement and/or increasing capacity of cross drainage culverts, improving open or covered outfalls, provision of subsoil drainage and cut-off drains;
- Spot slope stabilization – widening and/or reducing slope of cuttings and fill embankments to reduce landslide risk, soil bioengineering and biotechnical stabilization techniques, and anchoring of unstable rock slopes;
- Rock wall revetment strengthening – for protection of coastal road sections; and
- Improvements to causeways and bridges – repairs or reconstruction of existing crossings and/or

³¹ DOT Center for Climate Change and Environmental Forecasting. 2017. The Potential Impacts of Climate Change on Transportation. Available at: <http://www.bv.transports.gouv.qc.ca/mono/1083088.pdf>



provision of new crossings to provide safe, all weather access for vehicles and pedestrians.

30. **Component 3: Strengthening the Enabling Environment (US\$6.94 million).** This Component will help to strengthen coordination among relevant institutions, will look at ways in which road sector management can be improved, and will address any emerging priority issues that can help support the Government in addressing climate change risks. Considering SCORE is an extension of the PRIME project, the same PIU and CIU staff involved in PRIME will also be involved in the preparation and implementation of SCORE. This component includes the following activities:

- a. Project Management. This Sub-component will cover PIU project management support to be recruited and operating costs for SCORE-related travel and communications costs. This Sub-component also includes the provision of technical assistance activities to assess environmental and social risks, its impacts and the preparation of environmental and social safeguard instruments that enhance the sustainability of SCORE's climate resilient road sector activities in accordance with the World Bank ESF and the laws and policies of FSM.
- b. Road Safety Program. This Sub-component will provide technical assistance to improve road safety. This will include baseline and detailed design stage road safety audits and post-construction road safety audits for all climate resilient road works. The road safety audits will also include access audits³² for persons with disabilities to help ensure the climate resilient road works provide enhanced access to all users. The audits will systematically analyze the potential risks, due to lack of investment and maintenance and the climate change, making the infrastructure unsafe. The recommendations arising out of these audits will inform the detailed design of the works to mitigate the hazards and resolve safety problems associated with poor drainage and flooding. Follow-up technical assistance to implement the recommendations of the PRIME *Road Safety Diagnostic* may also be financed under this Sub-component.
- c. Materials Testing Laboratory. Geotechnical investigations during design of climate resilient road and bridge improvements require a range of materials tests, and construction works contracts require extensive testing, by both contractor and employer, of granular materials for pavement layers, bituminous and asphaltic materials for flexible surface layers, and concrete and steel for structures and concrete pavements. Currently FSM has no accredited materials testing laboratory, and samples have to be sent to the U.S. for testing, involving high costs and long delays to roads design and construction activities. The project will provide technical assistance and equipment for the establishment and initial operation of a government-owned materials testing laboratory in FSM.
- d. Transport Sector Data Management Unit. This Sub-component will establish a Transport Sector Data Management Unit housed within DoTC&I. With the strengthening of resilience-focused sectoral and spatial planning tools and more robust data-driven analysis there is a clear need for a dedicated team with requisite technical skills to gather and maintain vital data to help GoFSM manage a more resilient transport sector. The Unit would focus on, but not necessarily be limited to, collecting and managing data for the establishment and/or maintenance of the Climate-informed Road Crash Database, the Road Network Vulnerability Assessment and Climate Resilient Road Strategy, and the Climate-informed Road Asset Management System. It is expected that SCORE would initially fund five posts – one junior level officer for each state and a senior consultant under DoTC&I (the first two years of project implementation), after which time the funding source for these positions would then transition to

³² The access audits will identify areas of concern and recommend related improvements to selected infrastructure for persons with disabilities.



GoFSM budget.

- e. Gender Equality and GBV Initiatives. SCORE would complement activities under PRIME that enhance women's representation in technical roles within the DoTC&I and provide technical assistance and training to DoTC&I's Gender Equality Program. The new Transport Sector Data Management Unit presents an opportunity to hire new technical staff and can be leveraged to secure an increased number of women employees. SCORE will also provide support to address potential SEA and SH concerns related to Project implementation. The following support will be provided to reduce SEA and SH prevalence levels in FSM: (i) provide training to Project workers; (ii) conduct community awareness raising activities; (iii) support GBV survivors through support for strengthening of services for local service providers; and (iv) establish a referral pathway for GBV survivors.
- f. Sustainable Motorization Management. This sub-component comprises technical assistance that would recommend policy interventions, such as the establishment of more stringent emissions standards, and implementation arrangements to assist GoFSM to better manage what vehicles are allowed into the country, how these vehicles are operated and maintained throughout their lifecycle, and what to do with vehicles when they are considered to have reached end-of-life- status. Better managing the motorized vehicle fleet is important for both climate change mitigation and adaptation because used vehicles that are old and poorly maintained tend to contribute disproportionately to the transport-related local air pollution, greenhouse gas (GHG) emissions, road injuries and fatalities. Therefore, improving the environmental and safety standards of vehicle fleets; improving regulations around the trade of used vehicles; and transitioning to more sustainable motorization is critical.
- g. Emerging Priority Issues. Provide technical assistance to the Recipient to strengthen its capacity to address emerging priority issues that could have an impact on the Recipient's ability to manage a climate resilient road network.

31. **Component 4: Contingent Emergency Response Component (CERC).** This component is designed to provide swift response in an event of an Eligible Crisis or Emergency³³, by enabling GoFSM to request the World Bank to re-allocate project funds to support emergency response and reconstruction.

C. Project Beneficiaries

32. The beneficiaries of SCORE are those residing on the principal island for each of the four States: Pohnpei, Chuuk, Kosrae and Yap. This is estimated to be approximately half of the FSM population (i.e., 57,658 people or about 55 percent of the total population in 2021). The physical improvements to the secondary road networks and the robust package of technical assistance supporting all states will make road travel safer and more reliable for all road users.
33. **Persons with disabilities.** Road safety access audits will be undertaken (Sub-component 3b) to inform the design of roads and bridges under SCORE to better consider the needs of persons with disabilities. The incorporation of accessibility features, such as ramps and appropriate signage, will enhance inclusion of all users of the road network.

³³ 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", Paragraph 12, Bank Policy: Investment Project Financing, Projects in Situations of Urgent Need of Assistance or Capacity Constraints.



34. **Gender.** Gender gaps represent significant development challenges in the FSM. These gender issues are addressed within SCORE in two different ways: creating economic opportunities and addressing GBV.
35. **Economic Opportunities.** Women represent less than a third of paid employees in the country and less than 15 percent of persons employed in the transport sector.³⁴ Looking at Science, Technology, Engineering and Mathematics (STEM) occupations, less than ten percent of science and engineering professionals and associate professionals in the country are female. This pattern is particularly prominent in the DoTC&I and the state transport agencies, where there is only one female employee among the 183 technical positions.³⁵ The project will aim to enhance women's employment opportunities in two ways:
- a. At least 20 percent of wage employment generated by project activities is expected to be filled by women. It is expected that this will be achieved in part by DoTC&I aiming to hire at least 50 percent women for planned staff positions in the Transport Sector Data Management Unit to be established under SCORE. DoTC&I will aim to meet this target through strengthened and targeted outreach efforts. Non-discrimination and harassment employment provisions in place, including sexual harassment code of conduct training for all employees.
 - b. The project will complement activities supported under PRIME, which aims to enhance women's representation in technical roles within DoTC&I. In coordination with other development partners, it will support the transport department's gender equality program in the preparation of the 10-year strategic development program for the establishment of the FSM Women in STEM Institute. The program will be developed based on collection of nation-wide data and consultations with key stakeholders (students, teachers, principals, women's organizations) across the country, which are currently underway. The goal of this plan will be to map out activities aimed at increasing women's participation in STEM education and careers.

D. Results Chain

36. The Results Chain outlining the activities of the program is included in Figure 1.

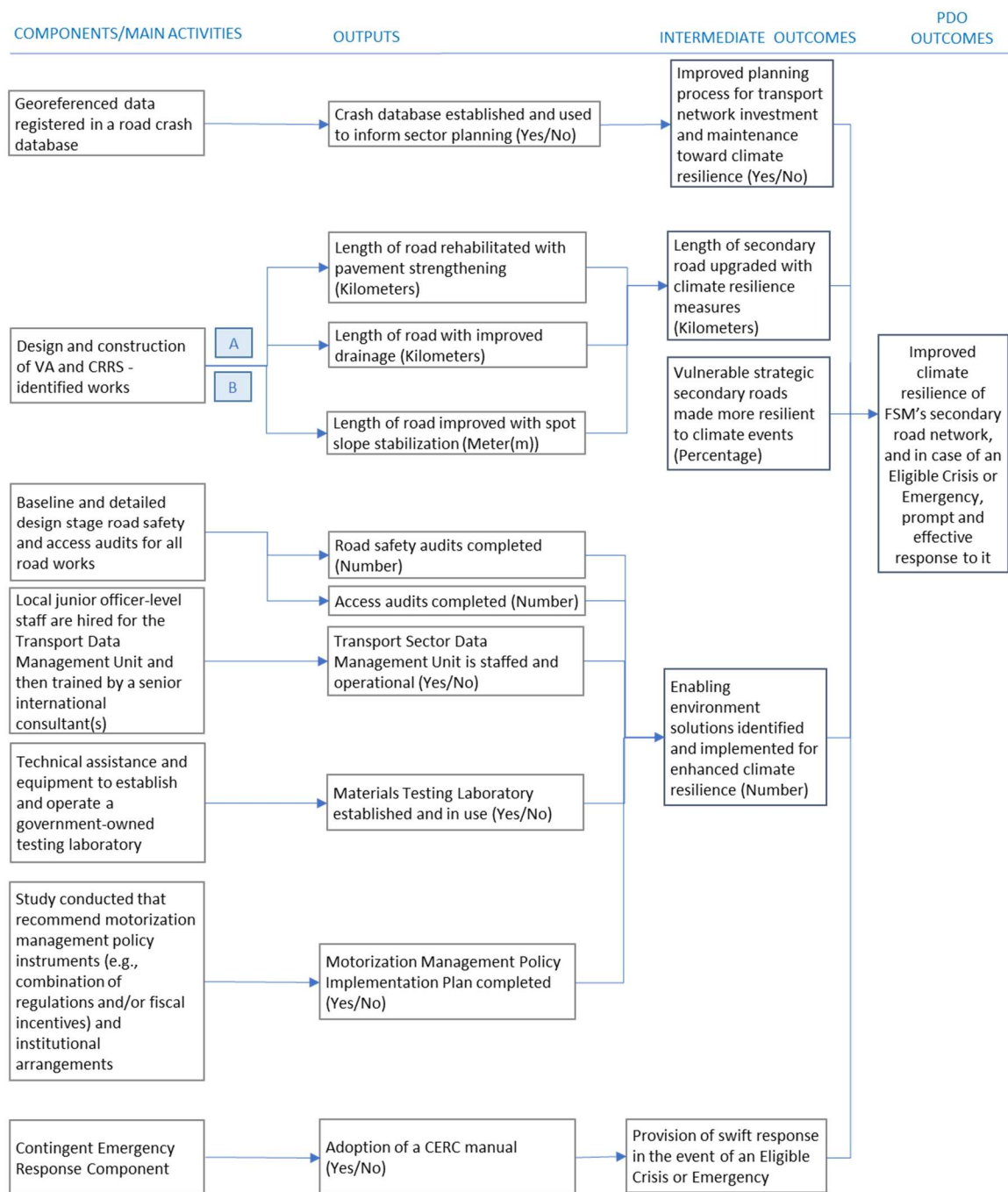
³⁴ Source: Email exchange with DoTC&I, 2021.

³⁵ Ibid.



Figure 1. Results Chain

Problem Statement: Low climate resilience of secondary road infrastructure in FSM



CRITICAL ASSUMPTIONS:

- A. The design of works will follow a participatory design approach to ensure that the design consultant works closely with landowners and communities so that the road improvements and mitigation measures for loss of any properties moved from the roadsides are acceptable and supported by affected persons.
- B. Timely agreement by GoFSM of VA and CRRS -identified works to design and construct



E. Rationale for Bank Involvement and Role of Partners

37. **Rationale for World Bank Involvement.** The road network in FSM is extremely vulnerable to climate change and natural disasters, such as landslides, flooding and coastal inundation, making reliable transport even more critical in the event of a natural disaster. The availability of efficient, reliable, safe and affordable transport services is considered essential for the country's basic economic and social functions, for achieving FSM's national development plans, and enhancing resilience to the impacts of climate change. Investments under PRIME are designed to improve the safety, resilience, and efficiency of road services, which will help sustain the delivery of basic goods and access to critical services.
38. The World Bank has supported resilience-focused projects across sectors in Pacific SIDS in line with the Small Islands States Resilience Initiative, which draws on the experience of Global Facility for Disaster Reduction and Recovery (GFDRR) members. In addition, the World Bank has considerable Pacific experience in the transport sector including, but not limited to: supporting clients' infrastructure investment and upstream analytics, and advising on institutional and regulatory strengthening measures. This includes the resilience-focused PC RTP SOP, which now has active projects in Kiribati, Samoa, Tonga, Tuvalu Vanuatu, and FSM. SCORE will be the seventh project in the PC RTP SOP and will benefit from lessons learned from PRIME as well as other projects already under implementation. SCORE is aligned with the overall objective of other PC RTP projects by adopting a common approach to improving the resilience of the transport sector. Specifically, SCORE includes the following activities: (i) using planning tools to improve the climate resilience of the road sector; (ii) constructing climate resilient road investments; (iii) strengthening the enabling environment by improving the capacity of GoFSM to manage a more climate resilient road sector; and (iv) post-disaster recovery support through a CERC.
39. The World Bank's engagement in the FSM transport sector adds value in several ways, including: (i) bringing global experience of road infrastructure investments and associated technical assistance – particularly around enhancing resilience to the impacts of climate change; (ii) by improving secondary roads under SCORE, it will deepen the development impact of PRIME by more comprehensively improving access for citizens and communities in selected areas/road corridors; (iii) participating further in sector-related donor coordination; (iv) providing best practices in climate resilient transport solutions; (v) integrating road safety assessments into design; and (vi) helping the government address environmental and social management issues, including mitigating risks of SEA and SH related to the Project and reducing gender inequalities. Transferring this expertise will be key to supporting the GoFSM to prepare and implement the proposed Project efficiently and effectively.
40. Private sector financing is not available to undertake a road sector project of this nature in FSM. Public sector financing is the appropriate vehicle for financing the proposed road works because the construction costs cannot be recovered through tariffs.
41. **Role of Partners.** The GoFSM has received recent assistance from and is preparing new projects with various donors for investments in the road sector including the U.S. Government, the International Organization for Migration (IOM), the Asian Development Bank (ADB), and the Government of the People's Republic of China (GoPRC).
- (a) **U.S. Government.** The U.S. Government provides funding for infrastructure projects under the Compact. However, the focus is on social infrastructure and, at present, there are no projects in the roads sector. The State of Kosrae is preparing an application for funding under the Compact to upgrade the



Mutunennea to Sialat Inner Road (about 3 miles) to support heavy traffic associated with a water bottling factory to be re-activated and expanded under an agreement that has been signed between the Government of Kosrae and a private company. The funding request is expected to be about US\$4.0 million.

- (b) **IOM.** In March 2018, the State of Pohnpei experienced heavy rains, landslides and floods which resulted in substantial damage to the road infrastructure. In response, IOM, in partnership with the United States Agency for International Development (USAID) supported the rehabilitation of roads, bridges and culverts. A total of eighteen sub-projects were implemented with a total cost of US\$4.0 million. The project was completed in July 2020.
- (c) **ADB.** GoFSM and the Asian Development Bank ADB are currently preparing a “Sustainable Road Infrastructure Investment Project”. ADB is expecting to use the recommendations from the PRIME financed *Climate Vulnerability Assessment and Climate Resilient Road Strategy* to help determine the roadworks that ADB will finance. World Bank and ADB are and will continue to have periodic conference calls together to ensure that their respective projects complement each other.
- (d) **GoPRC.** GoPRC has been providing development assistance for the improvement of road infrastructure in the FSM since 2012. The Okat Bridge in Kosrae was the first major road infrastructure project in the FSM funded by GoPRC. The Okat Bridge, with a length of approximately 96 meters, was completed in 2015 and was funded through a grant of approximately US\$9.0 million. A second bridge (the Kahmar Bridge in Pohnpei) has recently been completed and was handed over in August 2020. The Kahmar Bridge has a length of approximately 57 meters and was funded through a grant of approximately US\$3.2 million. In addition to the two bridges, GoPRC is also supporting the design and construction of 5.2 miles of secondary roads in Pohnpei with a grant of approximately US\$13.3 million. This project is expected to be completed in FY21. In addition, the GoPRC is providing complementary financing for FSM’s secondary road network. World Bank will continue to work with GoFSM to ensure effective coordination and complementarity of investments.

F. Lessons Learned and Reflected in the Project Design

- 42. **Project designed following simplified and phased approach.** The World Bank has gained considerable experience in strengthening transport infrastructure and in responding to and building resilience against natural disasters in SIDs in the Pacific. Lessons from engagements elsewhere include the need for a simple phased approach, whereby the most basic infrastructure shortcomings are addressed up front, while building the local capacity to plan and manage rehabilitation and maintenance. The adequacy of laws, regulations and institutional capacity often needs to be assessed, with analytical work carried out early on to identify shortcomings and recommend options for their resolution and strengthening in the longer term. SCORE has been designed to address both aspects – urgent road improvements required to maintain a basic level of road connectivity and safety for the main island of each state, followed by a program of prioritized roadworks to enhance the resilience of each state network; and a review of institutional and governance structures.
- 43. **Conservative cost contingencies incorporated into the project design.** The remoteness and dispersion of many



Pacific Island Countries (PICs) has a significant, and sometimes unpredictable, impact on costs.³⁶ Lessons learned from other World Bank-supported projects in small island states in the Pacific, such as Kiribati, have shown that cost contingencies should be factored into project design, where feasible. For SCORE, the estimated costs in this Project Appraisal Document (PAD) are based on preliminary assessments of the scope of works and services to be undertaken in each sub-component and are subject to further refinement in the scope and design, including following the outcome of the VA and CRRS that informs Component 2, and that precede the detailed design. Consequently, cost estimates include price and physical contingencies. In addition, the VA and CRRS will prioritize activities taking into consideration the SCORE budget and economic evaluation in addition to other factors.

44. **Capacity limitations in FSM acknowledged and incorporated into project planning.** Experience from other World Bank-supported projects in SIDS in the Pacific have highlighted key considerations around capacity limitations, including the need for realistic timelines, limited capacity of local project implementation teams, and the need for intensive implementation support.³⁷ Though DoTC&I has experience with World Bank-supported projects, including through the ongoing FSMIP, after PRIME, SCORE is the second World Bank-supported road project in FSM, and likely risks need to be mitigated. For example, there are often delays in importing materials and civil works contracts should anticipate a “time” contingency in the implementation schedule. Secondly, the success of a project is also dependent on the PIU and the PIU Project Manager.
45. **Complementary capacity building functions by CIU embedded in design.** Experience from other FSM projects indicates that the burden of carrying out donor-financed projects often rests on one or two overworked individuals in relevant implementing agency(ies) (IAs). Avoiding overburdening existing implementation capacity has become an ongoing priority of World Bank projects in FSM, along with ensuring that sufficient capacity is available for proper design and implementation of each project. To address this problem, FSM has established a CIU, to support all World Bank-financed projects. Staff in the CIU will support, advise, and guide the national and state agencies as they proceed to carry out SCORE project implementation functions. CIU staff will also provide support to the PIU drawing on lessons from other World Bank projects under implementation. Lastly, an increased level of CIU and World Bank support during the first two years of implementation is also anticipated, given that this will be the second project in the road sector.
46. **Programmatic Preparation Advance (PPA) provided to support implementation readiness.** Implementation is often slow to begin in PICs due to difficulties in recruiting key personnel; lack of familiarity with preparing procurement, safeguards and operational documents; and difficulties in carrying out needs assessment and estimating costs. For FSM projects, delays in developing core safeguards instruments, delays in procurement and poor contract management have been recurring problems. To mitigate these delays, similar to the approach followed by PRIME, SCORE will utilize the FSM PPA to provide the financial means to jump-start project preparation. The PPA has already been utilized to finance preparation of the environmental and social documentation and pre-appraisal stakeholder consultations; and additional preparatory activities may be financed. More information is provided in Annex 1: Implementation Arrangements and Support Plan.
47. **Coordination among the National Government, four States and departments.** SCORE is designed to work with the National Government and with each of the four State Governments. Each state has its own transport agency. Experience from the existing FSMIP suggests that ensuring the appropriate representation of all parties in the

³⁶ World Bank, *Implementation Completion and Results Report for the Kiribati Road Rehabilitation Project*, Report No, ICR00004673, (2019).

³⁷ Ibid.



Project Steering Committee (PSC) will be critical for success (refer to Annex 1: Implementation Arrangements and Support Plan for more information on the PSC).

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

48. DoTC&I, as it was for PRIME, will be the IA of Components 1, 2 and 3. DoFA will trigger the Component 4 CERC and then decide which agency to lead the implementation of the CERC based on the nature of the emergency. As SCORE roads fall under the jurisdiction of the relevant State Governments, Project Implementation Agreements (PIAs) with each of the States will be required. For FSMIP, PRIME and other World Bank projects in FSM, PIAs or similar have been utilized, where the World Bank has signed a Financing Agreement with DoFA; and DoTC&I, as the IA, has entered into separate PIAs with the State agencies. Under this arrangement, which is also proposed for SCORE, signed procurement contracts will be between the National Government and the contractors. These PIAs provide greater clarity regarding the expected roles, responsibilities, and accountabilities, and create binding contractual relationships between the National Government and the State agencies. The State agencies will also appoint local coordinators to manage state-specific activities under SCORE. To ensure the four States are adequately represented in decision making, both PRIME and SCORE will have the same PSC.
49. The CIU and DoTC&I Project Management Unit (PMU) are relatively young and performing competently. Considering SCORE is effectively an extension of the PRIME project, SCORE will be prepared and implemented by the already established PRIME PIU (from here onwards referred to as the *Roads* PIU), which is a sub-unit of the DoTC&I PMU. Therefore, SCORE's implementation arrangements will mirror those of PRIME. The Roads PIU is currently staffed by a PIU Project Manager, based in Pohnpei, however additional Roads PIU project management support may be recruited, as needed. Experience from other World Bank-supported projects in PICs have highlighted key considerations around capacity limitations, including the need for realistic timelines, limited capacity of local project implementation teams, and the need for intensive World Bank implementation support.
50. **PIU Implementation Support.** The PIU will be responsible for day-to-day management and implementation of the Project. The PIU will coordinate the implementation of PRIME and SCORE with DoTC&I management, DoTC&I PMU, CIU, State focal points, and the State transport agencies in a manner that is to be set forth in the PIAs that outlines the roles of each organization. The PIU will also be responsible for preparing and implementing SCORE in accordance with annual work plans and budgets, which are to be prepared by not later than four months after the effective date of the Financing Agreement and August 1 of each subsequent year during project implementation and which will detail SCORE's activities and eligible expenditures. The PIAs will clarify, among other things, the necessary state and intra-government cooperation and support necessary for SCORE. The Project Manager, who leads the PIU, will be responsible for working collaboratively with all stakeholders to facilitate implementation by providing technical support and by working with the CIU to facilitate the procurement, budgeting, and work programming process. The PIU will also comprise, at a minimum, a Project Officer, and will be supported by specialists from the CIU.
51. **CIU Implementation Support.** The already established CIU, within DoFA, is a functional unit that supports the implementation of the World Bank portfolio. The World Bank portfolio in FSM has grown quickly and is anticipated to expand even further over the next few years. FSM identified the need for strong implementation of the World



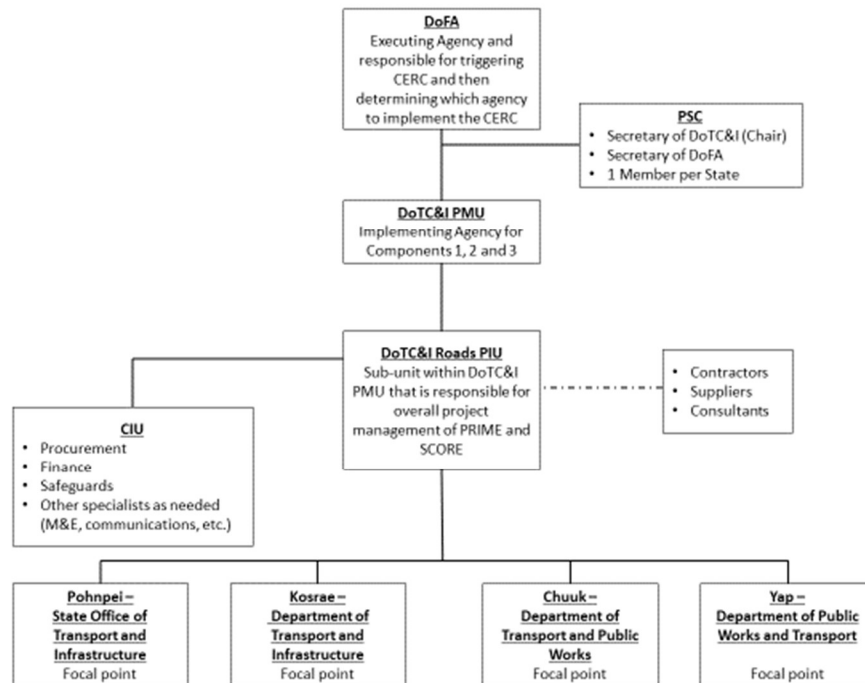
Bank portfolio and to look for ways to maximize efficiencies. The CIU provides support on core implementation functions needed for all projects. Under SCORE, the CIU will provide project implementation support to the IA and include staff performing the following key functions in support of the Project: project management, procurement, financial management, social and environmental standards, monitoring and evaluation, as well as outreach and communications. The individuals responsible for these functions report to the CIU Program Manager and provide services and hands on support to the IA for preparation, implementation, and capacity building activities. Project implementation responsibilities however remains with the IA.

52. **Role of DoTC&I and States with respect to contract signing and invoicing.** All contracts with consultants, contractors and suppliers will be signed by the DoTC&I Secretary, with the administration and contract management tasks of the contract being implemented by the PIU as their day-to-day responsibility. DoTC&I Secretary will sign off on all consultant and contractor invoices and authorize CIU to make payments. However, before doing so, the PIU will consult with each State focal point to ensure services and works have been completed and are satisfactory, where necessary.
53. **Role and Composition of the PSC.** To ensure the four states are adequately represented in decision making, PRIME and SCORE will both utilize a PSC chaired by DoTC&I. The Secretary of DoFA or designee will be a member, along with a member appointed by the Governor of each of the four states. The PSC will provide general oversight and policy direction to SCORE stakeholders during project implementation, convene key stakeholders in the event of disagreement, and periodically review project progress. The PSC will have a role in identifying priorities for allocating project funds after the completion of the VA and CRRS. Further details of the PSC will be reflected in the Project Implementation Agreements and the Project Operations Manual.



The proposed implementation arrangements are depicted in Figure 2 below:

Figure 2. SCORE Implementation Arrangements



B. Results Monitoring and Evaluation Arrangements

54. Project M&E will be conducted via periodic monitoring through semi-annual reports that track progress in terms of distribution of inputs, disbursement of funds, and achievement of targeted indicators as outlined in the Results Framework (Section VI). The PIU will be responsible for M&E against agreed indicators as presented in the Results Framework, including the provision of timely monitoring reports with operational data, with support from the CIU where required. Each project report will be submitted to the World Bank not later than one month after the end of each semester. SCORE will utilize field-appropriate digital tools for collection, and analysis of geo-tagged data will be used for example through the World Bank Geo-Enabling Initiative for Monitoring and Supervision (GEMS) information and communications technology capacity-building approach, or something similar.

C. Sustainability

55. SCORE aims to enhance the sustainability of road assets through:
- Careful design and specification of road works that will minimize maintenance – e.g. use of rigid pavements and surfacing where appropriate, climate change informed design specifications for pavement, surfacing and drainage;
 - Training and capacity building for technical and managerial staff at national and state level implementing



institutions covering the Climate-informed Road Crash Database and any updates to the VA and CRRS and Climate-informed RAMS (the latter which will support effective routine and periodic maintenance methodologies to enhance the sustainability of secondary road assets); and

- (c) Knowledge transfer to decision-makers on the critical importance of providing sufficient and predictable annual funding for routine and periodic maintenance to avoid the premature deterioration of valuable assets within the secondary road network.

IV. PROJECT APPRAISAL SUMMARY

A. Technical and Economic Analysis

56. **Technical Analysis.** The technical solutions proposed involve the design and construction of works, and the provision of software and hardware, all based on tried and tested technology that will be adapted to suit local FSM conditions. The recommendations of the VA and CRRS will provide further guidance on SCORE's technical design. Under Component 1, technical work by specialist consultants and GoFSM counterparts will focus on developing sectoral and spatial planning tools, which will enable policymakers to make informed decisions on the road sector based on the most accurate and up-to-date information. The establishment and operation of the climate-informed road crash database system is a key activity.³⁸
57. SCORE will make significant investments in a range of climate resilient infrastructure solutions under Component 2. Design of civil works will conform to international design codes of practice such as *Austroroads* for road and bridge design. Specifications for all works and materials will also be in accordance with international standards, making use of innovative materials and approaches if they will enhance climate resilience.³⁹ Activities will involve the investigation, design and construction of strategic secondary road sector assets to improve their resilience to climate-related hazards and/or events. Along vulnerable sections of coastal roads, these are likely to include raising the road level, strengthening the road profile, and improvements to longitudinal and cross drainage, with slope stabilization and drainage improvements on critical inland road sections. Water crossing improvements will be achieved at vulnerable sites through repair or replacement of bridges or causeways, working within corridors of existing secondary roads.
58. **Economic Analysis.** As a small island state, FSM has large needs for support in making its infrastructure more resilient to climate change and natural disasters. Roads are among the most vulnerable infrastructure assets, and severe damage to networks can have disruptive effects for all users, including a loss of access to other critical infrastructure (e.g. hospitals, schools, port facilities, power plants, and airports) and services. To address this challenge, SCORE aims to finance activities to systematically improve the resilience of the FSM secondary road network to natural hazards and climate change. In addition, by supporting safer and more reliable road transport infrastructure, the livelihoods and quality of life of FSM citizens will be improved. The social benefits of an improved road network include reduced travel times to reach schools, health, and other public service centers; expanded access to markets and work opportunities; reduced risk that connectivity is affected during or after severe weather events through enhanced resilience; and improved road safety. Periodic and routine road

³⁸ No state currently has an active network management system.

³⁹ A recent World Bank study has found that there is substantial promise for concrete pavements to be used for low-volume (<400 vehicles a day) roads in Pacific Island Countries. The report considers the strengths, weaknesses, and operations and maintenance implications of four different types of concrete pavement. Refer to Johnson, Sam; Faiz, Asif; Visser, Alex. *Concrete Pavements for Climate Resilient Low-Volume Roads in Pacific Island Countries*, (World Bank, 2019).



maintenance are the key tools to overcome the tradition of the build-neglect-rebuild scenario.

59. The economic analysis was conducted based on a standard methodology applied for appraisal of infrastructure works, which demonstrates the overall economic internal rate of return (EIRR) of 12.6 percent and Net Present Value (NPV) of US\$7.69 million at a discount rate of 7 percent. The economic evaluation focuses on Component 2, which has a selection of road works in accordance with the recommendations from the VA and CRRS.
60. A Cost-Benefit Analysis (CBA) was conducted to calculate the EIRR and the NPV of SCORE covering a period of 20 years (2021-2041). The discount rate is assumed to be 7 percent, and standard conversion factor of 0.85. The major economic benefits of Component 2 arise from: (a) vehicle operating cost (VOC) savings; (b) travel time savings; (c) avoided emergency maintenance and reconstruction; and (d) road accident reduction.⁴⁰ Since the precise roads to be upgraded are currently not known, the EA takes conservative estimates for both costs and benefits. In addition, data limitations have prevented scenario analysis for road-specific benefits such as those arising from reduced network disruptions. However, to test the impact of selecting particular roads on the EA, one scenario looking at potential benefits from increased tourism through upgradation of the Nan Madol Road in Pohnpei was modelled (Table 2), which showed a significant positive impact to the EIRR and NPV of the project.
61. The analysis adapts an HDM-4 model to calculate the VOCs under different levels of road condition to determine VOC savings – which is estimated to be about US\$0.0445 per vehicle-kilometer. The time savings are calculated from improving average speed (from current average of 20 kilometers/hour to around 32 kilometers/hour, depending on the road section). The model assumes that to maintain a certain level of serviceability of the project roads in the absence of climate resilient improvements, approximately 10 percent of the roads would need annual repairs (comprising of 5 percent of pothole patching and isolated repairs and 5 percent of emergency repairs) and that, after 10 years, 75 percent of the road would need to be re-constructed due to a severe climate event. The avoided repairs and reconstruction costs are estimated based on civil works costs in FSM. The additional tourism benefits in the scenario analysis assume that with upgradation of road access to Nan Madol, an archaeological site adjacent to the eastern shore of the island of Pohnpei, 50 percent of the estimated tourists visiting Pohnpei (but not Nan Madol) and 30 percent of business visitors would be inclined to spend one extra day in Pohnpei (at an estimated cost of US\$250).
62. A sensitivity analysis was also performed to assess the rebatement of economic benefits in different cost increase and traffic variation scenarios (Table 1).
63. The sensitivity of the EIRR was also tested against three cost variation scenarios and their combinations. The results of the sensitivity analysis are illustrated in the Table 1.

Table 1: CBA results and Sensitivity Analysis

Scenario 1	Component 2	
	EIRR (%)	NPV (\$m)
Base case	12.6	7.69
Investment cost increases by 20%	9.9	4.39
Benefits are 20% lower than expected	9.3	2.85

⁴⁰ Road accident reduction calculated using the World Bank Road Safety Screening and Appraisal Tool (RSSAT).



Both investment costs increase by 20% and benefits are 20% lower than expected	6.7	-0.45
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Table 2: CBA results and Sensitivity Analysis with inclusion of Nan Madol Road

Scenario 2	Component 2	
	EIRR (%)	NPV (\$m)
Base case	15.3	11.91
Investment cost increases by 20%	12.3	8.61
Benefits are 20% lower than expected	11.7	6.23
Both investment costs increase by 20% and benefits are 20% lower than expected	8.9	2.93

64. **A separate road safety impact appraisal was conducted using the Road Safety Screening and Appraisal Tool (RSSAT).** The Project is forecast to marginally increase the number of fatalities from 2 persons to 3 persons over the 20-year period. This increase in risk is driven by the increase in operating speed from 20 kilometers per hour to 32 kilometers. Correspondingly, the overall road safety disbenefits are estimated to be over US\$1.052 million during the infrastructure lifecycle. A road safety audit will be conducted as part of the project to identify and implement road safety infrastructure to reduce the road safety risk.
65. **Greenhouse gas (GHG) emissions.** An analysis of GHG emissions was undertaken based on the fuel consumption rate at different speeds under with-project and without-project scenarios. Without the Project, the road's deteriorated condition limits vehicle speed and leads to higher fuel consumption per vehicle-kilometer compared to the with-project scenario. With the Project, improved road condition leads to improved speed, and hence lower fuel consumption and lower VOCs. Gross GHG emissions under the with-project scenario is estimated to be 11,558 tCO₂e. Total Net GHG emissions are estimated to be -292 tCO₂e. This is a net reduction over the evaluation period (20 years). The Annual Average Net GHG emissions are -15 tCO₂e/year. The social benefit from GHG reduction is estimated to be US\$26,355, based on social cost of emission reduction from the World Bank's Guidance Note on Shadow Price of Carbon in Economic Analysis.⁴¹

B. Fiduciary

66. **Financial Management (FM).** An FM assessment was carried out in accordance with the *Principles Based Financial Management Practice Manual* issued by the World Bank on February 4, 2015, and as further elaborated in the World Bank Guidance *Financial Management in World Bank-Financed Investment Operations* issued by the World Bank on February 24, 2015. Under World Bank Policy Investment Project Financing with respect to projects financed by the World Bank, the borrower and the project implementing agencies are required to maintain FM arrangements—including planning and budgeting, accounting, internal controls, funds flow, financial reporting,

⁴¹ World Bank, *Guidance Note on Shadow Price of Carbon in Economic Analysis*, (2017), <http://pubdocs.worldbank.org/en/911381516303509498/2017-Shadow-Price-of-Carbon-Guidance-Note-FINAL-CLEARED.pdf>



and auditing arrangements—acceptable to the World Bank to provide reasonable assurance that the proceeds are used for the purpose for which they were granted. Overall, the proposed project FM arrangements meet the minimum requirements of the World Bank. The FM Project risk is assessed as Moderate as DoFA has gained good experience with managing World Bank projects and the establishment of the CIU to manage the financial management of the Project with experienced and qualified staff has reduced the assessed FM risk for FSM projects. The POM will include a section on budgeting, disbursement, financial management arrangements and monitoring and reporting. The sharing of services by the CIU with other World Bank projects will require processes to ensure that expenditures are properly recorded and documented and associated project funds flow closely monitored. Training on the FM requirements for SCORE will be conducted by the CIU for the PIU and monitoring of compliance to FM processes will be a regular part of the World Bank review missions.

67. **Procurement.** Procurement under SCORE will be carried out in accordance with the *World Bank Procurement Regulations for IPF Borrowers for Goods, Works, Non-Consulting and Consulting Services*, dated November 2020. SCORE will be subject to the World Bank's Anticorruption Guidelines, dated October 15, 2006, revised in January 2011, and as of July 1, 2016. The project will use the Systematic Tracking of Exchanges in Procurement (STEP) to plan, record, and track procurement transactions. A Project Procurement Strategy for Development (PPSD), including a draft Procurement Plan for the first 18 months of implementation has been prepared by the PIU with support from the CIU Procurement Specialist.
68. Procurement activities under SCORE include: (i) consulting services (e.g. technical assistance, feasibility studies, design and supervision of works); (ii) individual consultants; (iii) goods and non-consulting services and (iv) works (i.e. construction of secondary road assets).
69. A procurement assessment was carried out and completed during appraisal. The PIU for PRIME is also the PIU for SCORE. The PIU is experienced in the selection of consulting firms and individuals, however, they are not experienced in carried out the procurement process of civil works. The procurement risk before mitigation is assessed as substantial and after mitigation is assessed as moderate. The main risk relates to potential contract implementation challenges. Specifically, materials for civil works in the country are limited. Meanwhile, the global pandemic has led to shipment delays and in country procurement capacity is limited. Combined, these aspects may delay project implementation. In addition, mobilization of consultants has been difficult due to limited flights into the country with border restrictions. The World Bank will provide relevant procurement training and implementation support. The existing Procurement Specialist in the CIU at DoFA is providing support, advising and guiding the national and state implementing agencies as they proceed to carry out implementation functions under the World Bank-financed projects.

C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

D. Environmental and Social

70. The overall environmental risk is assessed as Substantial. Project activities will primarily take place within the



existing secondary road corridors, or immediately adjacent to the road to improve erosion protection, drainage or safety features. Project risks are likely to be identifiable, localized, short term or small scale, not irreversible or unprecedented, and can be addressed through conventional mitigation and management measures. Since site-specific physical works will be defined during Project implementation, an Environmental and Social Management Framework (ESMF) has been prepared to describe the risk screening process once infrastructure investments are identified as priorities for funding. The ESMF covers both the PRIME and SCORE projects. Further environmental and social assessments and consultations will be completed during concept and detailed design of the discrete infrastructure improvement activities. The site specific Environmental and Social Management Plans (ESMP) will be prepared and cleared by the World Bank in the design phase and form part of the tender documentation for contractors. A Generic ESMP will be prepared and cleared by the World Bank during project implementation as an instrument for low to moderate risk physical works where there are no unique issues to manage. Contractors will be required to prepare Construction-ESMPs for clearance prior to works starting. The ESMF also provides the requirement to include the World Bank Environmental and Social Standard requirements into the terms of reference and outputs of technical advisory contracts. The PRIME-SCORE ESMF was disclosed on the World Bank website on December 20, 2021.

71. The main environmental risks and impacts are related to infrastructure rehabilitation and maintenance activities and include the management of erosion and sedimentation from earthworks and construction, especially those near coastal areas, freshwater bodies or other sensitive environments. These risks and impacts can be readily managed through standard mitigation measures such as silt fences, sediment treatment and restrictions on heavy machinery movements. Off-site activities include quarrying and asphalt plant operations which, if not managed properly, may cause localized adverse impacts. Longer term environmental issues such as modifying adjacent habitats and stormwater pollution will be enhanced, avoided, or mitigated through good design and good maintenance procedures.
72. The overall social risk is assessed as Substantial. Social risks and impacts relating to road construction and improvement activities include the health and safety risks for workers and the community (noise, dust, traffic), the management of temporary foreign work forces and the risk of increased gender-based violence through sexual exploitation and harassment, and marginal involuntary resettlement impacts. These risks can be managed through effective environmental and social management plans for road works, training of workers, and good supervision of mitigation measures. Early engagement with landowners, local communities, vulnerable groups and their traditional or local leaders (including indigenous groups) will be critical to ensuring agreement to the removal of property encroaching in project works areas. The design of road improvements will prioritize works within the corridors of existing secondary roads and minimize the loss of private property, where technically feasible. A Resettlement Framework (RF) has been prepared for both the PRIME and SCORE projects, setting out requirements for minimization and mitigation of impacts. There will be an emphasis on participatory design approach whereby local communities and affected landowners and occupiers participate in the decisions related to the design of road improvements that affect them. The PRIME-SCORE RF also provides protocols for voluntary land donation as well as entitlements for compensation and assistance where involuntary resettlement impacts cannot be avoided. The PRIME-SCORE RF was disclosed on the World Bank website on December 20, 2021. A PRIME-SCORE Stakeholder Engagement Plan (SEP) including a Grievance Mechanism (GM) and the PRIME-SCORE Labor Management Procedures (LMP) have also been prepared and were disclosed on the World Bank website on December 20, 2021. Site-specific land due diligence reports, voluntary land donation agreements and Abbreviated Resettlement Action Plans (ARAPs) will be prepared as required during Project implementation. The Government of FSM has provided a commitment letter to the World Bank ensuring to meet all required funds for compensation



and assistance associated with resettlement issues as needed.

73. **SEA and SH.** The Project was screened using the World Bank's 'Gender-Based Violence (GBV) Risk Assessment Tool' and was classified within the "Moderate Risk" category. *In line with the World Bank's Good Practice Note: Addressing SEA and SH in Investment Project Financing Involving Major Civil Works,*⁴² SCORE will undertake actions to prevent, mitigate and address risks of SEA and SH related to the Project:
- i. GBV service providers, who practice a survivor-centered approach and are accessible at each Project site, will be identified to refer survivors of GBV if a complaint is made to the Project. Though SCORE is not required to provide services, the Project will include financing to resource GBV service providers given the limited number of GBV services in FSM. This will help ensure that should there be any reports of SEA or SH to the Project, there will be services available for referral. Under FSMIP, a Needs Assessment on GBV is being undertaken to identify the availability of services, and the recommendations will be used to inform PRIME and SCORE with regards to supporting local GBV service providers. In addition, a World Bank portfolio-wide SEA and SH assessment is planned to be undertaken;
 - ii. A specific Grievance Mechanism (GM) pathway will be established for SEA and SH complaints to ensure survivor-centered approaches are applied, including the involvement of local GBV service providers;
 - iii. All Project workers will sign a Codes of Conduct that specifically prohibits SEA and SH and complete training on the SEA and SH components of the Code of Conduct;
 - iv. Information, Education, Communication materials will be displayed in worksites and Project-affected communities on the Code of Conduct; and
 - v. Awareness raising will be conducted with the communities around project sites to ensure that they understand the Code of Conduct
74. **Citizen engagement.** The SEP includes measures for engaging with communities in their preferred language and respecting their cultural needs, ensuring private land access is voluntary and involves all relevant landowners, ensuring all eligible households and businesses are aware of impending works (particularly vulnerable households), and ensuring stakeholders are fully engaged in the design of SCORE's works and various institutional strengthening activities. Engagement will continue throughout the Project including during the planning and design, construction, and post construction phases of physical works, for technical assistance, and institutional strengthening activities. As noted above, there will be an emphasis on participatory design whereby local communities and affected landowners and occupiers participate in the decisions related to the design of road improvements that affect them. The Project will monitor this through the indicator: "Length of road upgraded using participatory design approaches".
75. A variety of mechanisms will be utilized to consult with the identified stakeholders throughout the Project including village meetings, separate meetings with specific interest groups, and informal conversations with passers-by, transport users and other interested parties near work sites. To ensure broader participation, consultations are to be undertaken at venues, times and in language that do not disadvantage any particular groups (e.g. women, or vulnerable households). Vulnerable groups are to be targeted through representative organizations including women, disability and youth associations. Remote communities which are often low income will be included through their traditional (e.g. chiefs) and formal representatives (e.g. senators).

⁴² World Bank, Good Practice Note: Addressing Sexual Exploitation and Abuse and Sexual Harassment in Investment Project Financing involving Major Civil Works (2020) <http://pubdocs.worldbank.org/en/632511583165318586/ESF-GPN-SEASH-in-major-civil-works.pdf>



Pedestrians and cyclists and other vulnerable road users will be identified through community consultations and observations / surveys. Consultations were held during project preparation to help inform the Project, with the records contained in the PRIME-SCORE SEP. Feedback will also be collected and addressed throughout implementation through the Project GM (see below). The Project will monitor feedback and address grievances through the indicator: "Grievances registered related to delivery of project benefits that are addressed".

76. **Grievance Mechanism (GM).** A GM has been established for SCORE to register and manage all grievances, relaying them to the appropriate party for resolution, and advising the complainant of the outcome. A specific GM pathway will be established for SEA and SH complaints to ensure survivor-centered approaches are applied, including the involvement of local GBV service providers. A separate labor grievance mechanism has been prepared in the LMP for worker-related issues. The GM is described in detail in the Project SEP which was disclosed on the Bank's website.
77. A GM and Referral Pathway Plan that is agreed by all members of the PSC will be finalized and appended to the POM by no later than three months after the Effective Date. The GM and Referral Pathway Plan will provide detail as to the GM and referral arrangements and the respective roles and responsibilities of the organizations involved in SCORE. The PIU, CIU and state agencies will ensure that the GM is well-publicized with Project-affected people during consultations, in public places and online. Statistics on grievance and complaint resolution will be collected and provided through the SCORE progress reports.

V. GRIEVANCE REDRESS SERVICES

78. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

VI. KEY RISKS

79. **Overall risk rating – Moderate.** The risk ratings for SCORE have been identified using the Systematic Operations Risk-Rating Tool (SORT). The main concerns involve: (i) environmental and social risk, and (ii) other risk, discussed in detail below.
80. **Environmental and social risk – Substantial.** The overall environmental risk is assessed as Substantial and the overall social risk is assessed as Substantial. The substantial environmental risks relate primarily to road infrastructure rehabilitation and maintenance activities. Activities such as resealing, realignment, demolition, erosion protection works, water crossings and drainage infrastructure could create adverse impacts on coastal areas, freshwater bodies, private land, mangroves from discharges of waste (hazardous, solid, and liquid wastes),



erosion and discharges of sediment and habitat disturbances from heavy machinery. Sensitive areas include estuaries, lagoons, coral reefs, cultural heritage sites, springs, streams, and areas of food gathering or other ecosystem services. Other risks relate to the health and safety of workers and the community during civil works. Impacts can be managed through standard mitigation measures such as sediment and erosion control measures, good engineering design, minimizing earthworks and avoiding working in wet areas where possible, training of workers, occupation health and safety (OHS) measures prescribed within standard procurement documents and ESMPs, and good supervision and oversight of construction activities. Long-term impacts of improved road infrastructure, such as stormwater drainage discharges to ground or to water bodies, will be improved or mitigated through good engineering design and maintenance.

81. Offsite activities, such as quarrying and asphalt plant operations, if not managed properly, can cause localized adverse impacts. These can be managed through the implementation of ESMPs, avoiding unsustainable sources of aggregates and ensuring imported materials meet strict biosecurity precautions and clearance for imported materials. Transport impacts associated with heavy vehicles along haul routes are noise, dust, road safety and damage road surface condition and the safe management of traffic around work areas can be managed through the preparation and implementation of a robust Traffic Management Plan (TMP), incorporated into the Contractors' Environmental and Social Management Plans.
82. Environmental permitting is controlled at the state level and carried out by the relevant State Environmental Protection Agency (EPA) and the Kosrae Island Resource Management Authority (KIRMA); however, enforcement of EPA/KIRMA laws is weak. Ongoing support from the CIU and oversight by the World Bank will be needed to ensure relevant State laws are complied with. All environmental and social impacts will be screened, assessed and managed using processes defined in the PRIME-SCORE ESMF.
83. The social risks are rated Substantial and relate primarily to resettlement impacts for private structures and assets located within the road corridors. The State Governments have a system of acquiring easements for road assets, but do not have legislation or practice requiring compensation for new road easements and affected property. Primary roads have been constructed on easements negotiated between the State Government and landowners. Such easements are entered into voluntarily with no compensation paid to the landowners. The easement agreements are not consistently documented and weakly enforced with encroachment of private property near to the road edges common in many areas. Landowners' cooperation with previous State Government requests to remove property from roadsides to enable works is reported to be variable. Secondary roads considered during the preparation of SCORE, generally do not have legally established easements nor have existing easement agreement documents with the adjacent landowners that defines the outer boundaries of land vested in the roads. The width of the formation of the secondary roads that would identify the road corridor varies considerably from narrow with encumbrances relatively near the road edges to roads having wide bases with unoccupied verges either side of the road. Planning improvement works will adopt a participatory design approach with adjacent landowners and local communities to ensure that designs, including any road widening, are acceptable and supported.
84. To promote understanding and support from communities, local stakeholders and potentially affected landowners and occupiers, SCORE will incorporate a process of social preparation and meaningful consultation throughout implementation as well as active participation of affected landowners and communities in the works



design process. This is described in the RF as well as the Stakeholder Engagement Plan (SEP).

85. Three of the four states, Yap, Chuuk and Pohnpei, have traditional leadership structures. The Project will need to ascertain their roles and ensure their appropriate involvement in the consultation and grievance processes and incorporate this in the SEP.
86. The design of road investments under Component 2 will need to minimize loss of property where technically feasible in achieving its objectives and will also need to work closely with the Government to ensure that involuntary resettlement impacts, especially where these have the potential to adversely affect living standards, are properly mitigated. A RF has been prepared to describe the process for participatory approaches to engage landowners and occupiers in the design phase, protocols for voluntary land donation and the process of identifying and compensating Project-affected people impacted by land requirements for the project. Adequate social specialist resources to facilitate participatory design will be included in the Design and Supervision Consultant and GoFSM implementation support with the outcome of the participatory design process documented in the relevant involuntary resettlement instrument prior to the Bank's agreement.
87. Other social risks relate to the potential of health and safety hazards for workers, road users and bystanders during construction and from the use of upgraded road assets. Road safety assessments will be integrated into the design and construction processes. Appropriate mitigation measures are documented in the ESMF and will be included in site-specific ESMPs. Contractor TMPs will address safety management around road works. An LMP has been prepared and documents the fair and safe workforce management procedures in compliance with ESS2.
88. SCORE will be the second road project in FSM prepared under the World Bank ESF and the third transport project prepared by the implementing agency. DoTC&I is familiar with the World Bank safeguards policies and the Environmental and Social Framework from implementation of the Palau-FSM Connectivity Project, FSMIP, Digital FSM and PRIME. The CIU Safeguards Team has been operating successfully for three years providing support across the World Bank Portfolio, with experience in the safeguards policies and the Environmental and Social Framework. Due to the growing portfolio and the E&S risk management demands of SCORE there is insufficient capacity in CIU to support DoTC&I and the respective State Governments' transport agencies to implement the Project and the team will require additional staff to screen and assess impacts, prepare instruments and supervise instrument implementation. The travel restrictions among the four States and into and out of FSM due to COVID-19 is a significant constraint to preparing site-specific environmental and social assessments, consultations, monitoring and site supervision which means future environmental and social risk management work during implementation could be delayed or could require novel approaches, as described below in 'Other risk'. Prior to appraisal, the following instruments will have been prepared and disclosed: (i) ESMF, (ii) SEP (including the GM), (iii) RF, (iv) LMP and (iv) Environment and Social Commitment Plan (ESCP). Other instruments, such as ESMP and ARAP, will be prepared during Project implementation.
89. **Other risk – Substantial.** This risk has been triggered and is rated as Substantial due to the COVID-19 pandemic, which presents an unprecedented challenge for FSM and FSM is still in an official State of Emergency.⁴³ Responding to the pandemic is the priority of both FSM and the World Bank and may result in unavoidable delays to SCORE due to the travel restrictions as international consultants cannot enter the country with ease. Alternative and novel arrangements, such as using local counterparts, drones and remote imagery, may be

⁴³ State of Emergency declared on January 31, 2020.



employed.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Micronesia, Federated States of
Federated States of Micronesia Strategic Climate-Oriented Road Enhancements

Project Development Objectives(s)

To improve the climate resilience of the Recipient's secondary road network, and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
To improve the climate resilience of the Recipient’s secondary road network								
Improved planning process for transport network investment and maintenance toward climate resilience (Yes/No)		No	No	No	Yes	Yes	Yes	Yes
Length of secondary road upgraded with climate resilience measures (Kilometers)		0.00	0.00	0.00	6.00	6.00	13.50	13.50
Vulnerable strategic secondary roads made more resilient to climate events (Percentage)		0.00	0.00	0.00	20.00	20.00	40.00	40.00
Enabling environment solutions identified and		0.00	1.00	5.00	5.00	5.00	5.00	5.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
implemented for enhanced climate resilience (Number)								
Population benefited from climate-resilient road improvements (work and/or technical assistance) (Percentage)		0.00	0.00	0.00	25.00	25.00	55.00	55.00

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Component 1: Spatial and Sector Planning Tools								
Road Crash database established and used to inform sector planning (Yes/No)		No	No	No	Yes	Yes	Yes	Yes
Component 2: Climate Resilient and Safe Infrastructure Solutions								
Roads rehabilitated (CRI, Kilometers)		0.00	0.00	0.00	6.00	6.00	13.50	13.50
Roads rehabilitated - rural (CRI, Kilometers)		0.00						13.50
Roads rehabilitated - non-rural (CRI, Kilometers)		0.00						0.00
Length of road rehabilitated with pavement strengthening (Kilometers)		0.00	0.00	0.00	6.00	6.00	13.50	13.50



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
Length of road with improved drainage (Kilometers)		0.00	0.00	0.00	3.00	3.00	7.00	7.00
Length of road improved with spot slope stabilization (Meter(m))		0.00	0.00	0.00	60.00	60.00	135.00	135.00
Number of direct and indirect beneficiaries having enhanced access to road transport services (Number)		0.00	0.00	0.00	26,208.00	26,208.00	57,658.00	57,658.00
Climate resilient design packages completed (Number)		0.00	1.00	1.00	1.00	1.00	1.00	1.00
Component 3: Strengthening the Enabling Environment								
Road safety audits completed (Number)		0.00	2.00	2.00	2.00	2.00	2.00	2.00
Access audits completed (Number)		0.00	2.00	2.00	2.00	2.00	2.00	2.00
Transport Sector Data Management Unit is staffed and operational (Yes/No)		No	Yes	Yes	Yes	Yes	Yes	Yes
Percentage of Transport Sector Data Management Unit staff who are female (Percentage)		0.00	50.00	50.00	50.00	50.00	50.00	50.00
Materials Testing Laboratory established and in use (Yes/No)		No	No	No	Yes	Yes	Yes	Yes
Percentage of wage		0.00	0.00	20.00	20.00	20.00	20.00	20.00



Indicator Name	PBC	Baseline	Intermediate Targets					End Target
			1	2	3	4	5	
employees in project activities who are female (Percentage)								
Strategic 10-year plan for women in STEM established (Yes/No)		No	No	No	No	Yes	Yes	Yes
Percentage of contractor staff trained on SEA and SH components of the Codes of Conduct (Percentage)		0.00	0.00	100.00	100.00	100.00	100.00	100.00
Motorization Management Policy Implementation Plan completed (Yes/No)		No	No	Yes	Yes	Yes	Yes	Yes
Citizen Engagement								
Length of road upgraded using participatory design approaches (Kilometers)		0.00	0.00	0.00	4.00	4.00	8.80	8.80
Grievances registered related to delivery of project benefits that are addressed (Percentage)		0.00	75.00	75.00	75.00	75.00	75.00	75.00
Component 4: Contingent Emergency Response Component								
Adoption of a CERC manual (Yes/No)		No	Yes	Yes	Yes	Yes	Yes	Yes



Monitoring & Evaluation Plan: PDO Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Improved planning process for transport network investment and maintenance toward climate resilience	A measure of the uptake of spatial and sectoral planning tools (i.e., climate-informed road crash database) that improves the way that climate change is addressed in FSM's road sector.	Semesterly	Project Progress Reports	Stocktake of the planning tools in use	PIU
Length of secondary road upgraded with climate resilience measures	A cumulative measure of the kilometers of road upgraded with at least one of these climate resilience measures: pavements and surface strengthening; drainage improvements; spot slope stabilization; rock wall revetment strengthening and road safety improvements.	Semesterly	Project Progress Reports	Site inspection	PIU
Vulnerable strategic secondary roads made more resilient to climate events	"More resilient" will be determined when resilience enhancements - recommended by the VA Consultant and/or Design Consultant and measured as intermediate outputs of the project – are undertaken through project works and the improved road is in use.	Semesterly	Project Progress Reports	Site inspection	PIU



	Vulnerability will be assessed as a function of three main factors: • Exposure: Presence of infrastructure elements in a place likely to suffer damage. • Sensitivity: The degree to which a system is influenced, positively or negatively, by natural hazards, climate variability or climate change. • Adaptive capacity: The potential or capacity of a system to respond appropriately to climate change and variability. It includes adjustments in terms of behaviour and resources and technologies. The VA Consultant will define some numerical threshold above which a strategic secondary road is formally defined as "vulnerable" status.				
Enabling environment solutions identified and implemented for enhanced climate	An 'enabling environment solution' is defined as a	Semesterly	Project Progress	Stocktake of contracts completed	PIU



resilience	consulting service or goods contract that delivers outputs that strengthen institutional and regulatory functions.		Reports		
Population benefited from climate-resilient road improvements (work and/or technical assistance)	Measured by population who both directly and indirectly gain benefits from improvement of project interventions per total country population	Semesterly	Project Progress Reports	Site inspection	PIU

Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Road Crash database established and used to inform sector planning	A road crash database is created, maintained and used to inform sector planning, investment and maintenance	Semesterly	Project Progress Reports	Verification with FSM State Government counterparts	PIU
Roads rehabilitated		Semesterly	Project Progress Reports	Site Inspection	PIU
Roads rehabilitated - rural		Semesterly	Project Progress Reports	Site inspection	PIU
Roads rehabilitated - non-rural					



Length of road rehabilitated with pavement strengthening	Measurement of the length of road that have received periodic maintenance, repairs, rehabilitation or reconstruction of existing road pavement layers and/or surfacing, including provision of sealed shoulders and raising road levels.	Semesterly	Project Progress Reports	Site inspection	PIU
Length of road with improved drainage	Measurement of the length of road that has provision, reinstatement and/or lining of longitudinal drainage, replacement and/or increasing capacity of cross drainage culverts, improving open or covered outfalls, provision of subsoil drainage and cut-off drains	Semesterly	Project Progress Reports	Site Inspection	PIU
Length of road improved with spot slope stabilization	Measurement of the length of road that have been improved with spot slope stabilization, including widening and/or reducing slope of cuttings and fill embankments to reduce landslip risk, soil bioengineering and biotechnical stabilization techniques, and anchoring of unstable rock slopes.	Semesterly	Project Progress Reports	Site Inspection	PIU



Number of direct and indirect beneficiaries having enhanced access to road transport services	Number of direct and indirect beneficiaries having enhanced access to road transport services as a result of interventions supported by the World Bank Group (including highways, secondary roads, rural roads): - Direct beneficiaries typically include the current and new users (normal, diverted, and generated traffic) of the road who will benefit from reductions in cost and time to travel and/or improvements in safety, quality, comfort. This would be reported as ADT, multiplied by an appropriate contextual occupancy factor per passenger car unit (PCU). - Indirect beneficiaries would include residents who live in the immediate hinterland of the road (within 2 km using the improved RAI methodology) who will benefit from improved safety along the	Semesterly	Project Progress Reports	Review of latest census data	PIU
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	road, higher environmental standards along the road, and the potential for increased access to local markets, job opportunities, and health and education services.				
Climate resilient design packages completed	Completion of climate resilient design packages to inform the works	Semesterly	Project Progress Reports	Review of detailed designs	PIU
Road safety audits completed (Number)	Number of road safety audits conducted. Baseline, design and post-construction audits will be carried out for each site.	Semesterly	Project Progress Reports	Review of audit reports	PIU
Access audits completed	Number of access audits conducted. Baseline, design and post-construction road safety audits will be carried out for each site. The access audits will be part of the process and identify areas of concern and recommend related access improvements to selected infrastructure for persons with disabilities.	Semesterly	Project Progress Reports	Review of audit reports	PIU
Transport Sector Data Management Unit is staffed and operational	Local junior officer-level staff are hired for the Transport Data Collection Unit and then trained by a	Semesterly	Project Progress Reports	Verification with FSM State Government counterparts	PIU



	senior international consultant(s)				
Percentage of Transport Sector Data Management Unit staff who are female	A measure of the percentage of Transport Sector Data Management Unit staff who are female	Semesterly	Project Progress Reports	Count of men and women employed	PIU
Materials Testing Laboratory established and in use	Establishment and operation of a government-owned road materials testing laboratory in FSM.	Semesterly	Project Progress Reports	PIU	Review of Final Report
Percentage of wage employees in project activities who are female	Wage employment generated by project activities allocated to females.	Semesterly	Project Progress Reports	Count of men and women employed	PIU
Strategic 10-year plan for women in STEM established	In coordination with other development partners, support is provided to the transport department's gender equality program in the preparation of the 10-year strategic development programme for the establishment of the FSM Women in STEM Institute. The programme will be developed based on collection of nation-wide data and consultations with key stakeholders (students, teachers, principals, women's organisations) across the country, which	Semesterly	Project Progress Reports	Review of the final report	PIU



	are currently underway. The goal of this plan will be to map out activities aimed at increasing women's participation in STEM education and careers.				
Percentage of contractor staff trained on SEA and SH components of the Codes of Conduct	Percentage of contractor staff trained on SEA and SH components of the Codes of Conduct	Semesterly	Project Progress Reports	Review of supervision consultant report	PIU
Motorization Management Policy Implementation Plan completed	The proposed study would recommend motorization management policy instruments (e.g., combination of regulations and/or fiscal incentives) and institutional arrangements that if implemented will help FSM achieve the development outcomes including reduced environmental pollution and improved safety. The recommended policy instruments for implementation will consider the institutional arrangements and political economy in FSM.	Semesterly	Project Progress Reports	Review of Final Report	PIU
Length of road upgraded using participatory design approaches (Kilometers)	Participatory design approaches to engage landowners and occupiers in	Semesterly	Project Progress Reports	Site inspection to verify completed works against approved	PIU



	the design phase are described in the Resettlement Framework. The sites where such processes are used to inform the design will be recorded and the kilometer lengths combined.			detailed designs	
Grievances registered related to delivery of project benefits that are addressed	A measure of citizen engagement. Corporate requirement.	Continuous (project website); Semesterly (Project progress reports)	Project website and Project progress reports	Count of grievances registered	PIU
Adoption of a CERC manual	Adoption of a CERC manual	Every 6 months	Project progress reports	Verification of receipt of WB No Objection to SCORE CERC-OM and to any updates to the manual	DOFA



ANNEX 1: Implementation Arrangements and Support Plan

COUNTRY: Micronesia, Federated States of Federated States of Micronesia Strategic Climate-Oriented Road Enhancements

Project Institutional and Implementation Arrangements

1. SCORE will be implemented over a six-year period following Project effectiveness. National DoTC&I will be the IA for Components 1, 2 and 3, working closely with each of the States. DoFA will trigger the Component 4 CERC and then decide which agency to lead the implementation of the CERC based on the nature of the emergency. As each transport agency is under its respective State's control, and to ensure good technical coordination, focal points will be appointed in each State to work on and manage day-to-day SCORE activities associated with its land transport sector, and to liaise with the National DoTC&I.
2. Considering SCORE is effectively an extension of the PRIME project, SCORE will be prepared and implemented by the already established PRIME PIU (from here onwards referred to as the *Roads PIU*), which is a sub-unit of the DoTC&I PMU. Therefore, SCORE's implementation arrangements will mirror those of PRIME. The Roads PIU is currently staffed by a PIU Project Manager, based in Pohnpei, however additional Roads PIU project management support may be recruited, as needed. All contracts with consultants, contractors and suppliers will be signed by the DoTC&I Secretary, with the administration and contract management tasks of the contract being implemented by the PIU as their day to day responsibility. DoTC&I Secretary will sign off on all consultant and contractor invoices and authorize DoFA CIU to make payments. However, before doing so, the PIU will consult with each State focal point to ensure services and works have been completed and are satisfactory, where necessary. These arrangements will be detailed in the POM that FSM will adopt within three months of the effective date of the Financing Agreement.
3. To ensure the four States are adequately represented in decision making, a PSC will be established and chaired by DoTC&I through SCORE. The Secretary of DoFA will be a member, along with a member appointed by the Governor of each of the four States. The PSC will provide general oversight and policy direction to both PRIME and SCORE stakeholders during Project implementation, convene key stakeholders in the event of disagreement, and periodically review Project progress.
4. Prior to the commencement of Project activities under Component 2 in a State, GoFSM, acting through DoTC&I, will execute a PIA with the State Government of such State to ensure clarity and agreement between the parties on implementation roles and responsibilities. Four PIAs will be required to help govern the SCORE activities in each State, with one PIA for each of the following groups:
 - (a) GoFSM acting through its DoTC&I, and the Government of Kosrae State acting through its Kosrae Department of Transport and Infrastructure;
 - (b) GoFSM acting through its DoTC&I, and the Government of Pohnpei State acting through its Pohnpei State Office of Transport and Infrastructure;
 - (c) GoFSM acting through its DoTC&I, and the Government of Chuuk State acting through its Chuuk State Department of Transport and Public Works; and
 - (d) GoFSM acting through its DoTC&I, and the Government of Yap State acting through its Department of Public Works and Transportation.



Financial Management

5. An FM assessment was carried out in accordance with the *Principles Based Financial Management Practice Manual* issued by the World Bank on February 4, 2015, and as further elaborated in the World Bank Guidance *Financial Management in World Bank-Financed Investment Operations* issued by the World Bank on February 24, 2015. Under World Bank Policy Investment Project Financing with respect to projects financed by the World Bank, the borrower and the project implementing agencies are required to maintain FM arrangements—including planning and budgeting, accounting, internal controls, funds flow, financial reporting, and auditing arrangements—acceptable to the World Bank to provide reasonable assurance that the proceeds are used for the purpose for which they were granted. Overall, the proposed project FM arrangements meet the minimum requirements of the World Bank. The FM risk is assessed as Moderate as DoFA has gained good experience managing World Bank projects and the establishment of the CIU to manage the financial management of the Project with experienced and qualified staff has reduced the assessed FM risk for FSM projects. The POM will include a section on budgeting, disbursement, financial management arrangements and monitoring and reporting. The sharing of services by the CIU with other World Bank projects will require processes to ensure that expenditures are properly recorded and documented and associated project funds flow closely monitored. Training on the FM requirements for SCORE will be conducted by the CIU for the PIU and monitoring of compliance with FM processes will be a regular part of the World Bank review missions.
6. **FM Implementation Arrangements.** The existing institutional structure in the CIU established to provide cross-cutting functions, including FM, to all World Bank-financed projects will be used to carry out the FM and disbursement functions for the Project. This includes the existing budgeting, accounting, financial reporting, internal controls, and external audit arrangements currently in place for all World Bank projects. The CIU is headed by a Program Manager with a Program Assistant, a Finance Supervisor and three Finance Officers/Assistants. The CIU is well-staffed and would be able to carry-out the FM requirements for this Project.
7. **Budgeting.** DoTC&I PIU will be responsible for preparing and monitoring the Project budget with support from the CIU. Foreign-assisted projects greater than US\$50,000 are reviewed by Congress for approval by resolution. When the resolution is passed, allotments are entered into GoFSM's accounting system.
8. DoTC&I will prepare an annual work plan and budget with appropriate levels of detail (for example, Component or Category, whichever is deemed most relevant and useful).⁴⁴ The CIU will support the DoTC&I by reviewing this document and reporting on the analysis of budget versus actual expenditure, consolidate and incorporate this into the Project reports for each fiscal semester for SCORE. The CIU will submit an Interim Financial Report (IFR) for each fiscal semester along with the annual work plan and budget to the World Bank.
9. **Accounting Arrangements.** GoFSM currently maintains financial accounts in FundWare, a software with the following fully integrated modules: accounts payable, accounts receivable, payroll and general ledger. The chart of accounts enables segregation of Project transactions and classification by component. While it is envisaged that a new financial reporting system will be introduced by GoFSM during the life of SCORE, this will not reduce the capacity of the current reporting requirements. A new chart of accounts will be developed for the new Financial Management Information System (FMIS) and the SCORE accounts will be incorporated

⁴⁴ In no case will detailed information regarding criminal investigations be provided.



in the new system. A separate cost center will be opened to account for transactions under the components to be implemented under SCORE. The new FMIS will include capability to account for World Bank-supported projects and it is anticipated that there will be a transition period during which both the existing Fundware and the new FMIS will be running in parallel after which the Fundware system will be decommissioned. Project transactions will be entered by the CIU directly into the GoFSM's accounting system.

10. **Internal Controls.** The FSM Financial Management Regulations dictate GoFSM's internal control framework and provide adequate segregation of duties, asset controls, and approval and authorization controls. The POM will include a section on budgeting, disbursement, and financial management arrangements that will reference relevant government legislation and procedures. The POM will provide guidance on project internal controls either specifically required for the Project or not covered in sufficient detail in the Regulations. The CIU has also prepared a guidance note to be included in the POM on the role and responsibilities of the CIU for the areas of FM and procurement to ensure consistency across the portfolio. For the FM section, this will include a template for performance reviews, process for approving operating costs, monitoring and management of travel advances as well as general processes for transactions.
11. **Funds Flow.** One segregated designated account will be opened in US\$ in a commercial bank or financial institution acceptable to the World Bank. The World Bank funds will flow from the World Bank directly into the designated account (DA), to be managed by DoFA. Project expenditures will be tracked through GoFSM's accounting system and paid from the treasury account. Prior to completing a replenishment Withdrawal Application, the equivalent funds expended from the treasury account will be transferred from the DA into the treasury account, hence the DA will be replenished by that amount. Adequate documentation will be required to be maintained to ensure easy reconciliation of payments made from the treasury account to payments authorized by SCORE. For larger project payments, the direct payment disbursement method can be chosen by DoFA and the Withdrawal Application enables funds to flow directly from the World Bank to the supplier. Where direct payments are used as the disbursement method, the transactions must be incorporated into the Project accounts. To facilitate the tracking of multiple projects, and the associated funds management aspects, the 'statement of expenditure' will be used for documenting project expenditures and replenishing the DA.
12. **Periodic Financial Reporting.** Financial reporting will be fully integrated into GoFSM's accounting system. SCORE will be allocated a cost center, and sub-accounts will be created to reflect the specific activities. Reports will initially be generated from the FundWare accounting system and will ultimately be generated by the new FMIS. The financial reports will include an analysis of actual expenditure for the current period, year to date, and for the cumulative to date, plus outstanding commitments, compared against the total project budget. The CIU will prepare IFRs in US\$ and in the format agreed with the World Bank, to be submitted no later than 45 days after the end of each semester. Such reports will be uploaded by the CIU in Client Connection for review and to comply with the new submission of financial and audit reports guidelines effective from August 1, 2020.
13. **External Audit.** The Audit of project funds will be part of the auditing of National Government accounts as project funds will be fully integrated therein. Audited National Government Accounts will be submitted to the World Bank within nine (9) months of the end of each fiscal year. Subject to the inclusion of the agreed notation in the national accounts produced during the life of SCORE, no separate project audit will be required. The audited financial statement along with a separate management letter will be uploaded in Client



Connection to comply with the Financing Agreement requirement of the World Bank. The World Bank reserves the right to request additional information to supplement information provided in the National Government Accounts and to request a project audit if the required note is not included in the National Government Accounts. Currently, the audit of the National Accounts is sub-contracted by the Public Auditor to a private contractor. DoFA, the Public Auditor, and the World Bank will agree on the information required to be disclosed. The National Accounts will be published on the Office of the Auditor General's website.

Disbursements

14. **Disbursement Methods and Supporting Documentation Arrangements.** Disbursements under SCORE may be under any of the following methods: (a) advances into and replenishment of the DA; (b) direct payment; (c) reimbursement; and (d) Special Commitment. Direct payments will be used solely for large contracts.
15. **DA.** Project funds will be disbursed directly into a DA in a commercial bank, acceptable to the World Bank. The DA will be operated on an advance basis and the initial advance will be made through the completion and submission of a withdrawal application. The DA will be held in US\$. Subsequent replenishments will be made through the submission of withdrawal applications, along with details on the use of funds previously advanced, based on Statements of Expenditures. The ceiling of the designated account, minimum application size for reimbursement, direct payment and special commitment, and supporting documentation are spelled out in the Disbursement and Financial Information Letter (DFIL). Retroactive financing is not included under the project.
16. The disbursement table showing categories of expenditure and amounts eligible for financing is shown below and is also found in the Financing Agreement. Please note in the case of discrepancy, the version referred to in the Financing Agreement takes precedent over the table shown below.

Table 1.1 Eligible Expenditures

Category	Amount of the Grant Allocated (Expressed in SDR)	Amount of the Grant Allocated (Expressed in US\$ equivalent)	Percentage of Expenditures to be Financed (Inclusive of Taxes)
(1) Goods, works, non-consulting services, consulting services, Operating Costs, and Training for the Project	25,130,000	34,882,000	100%
(2) Contingent Emergency Response Component (CERC)	0	0	0%
(3) Refund of Preparation Advance	270,000	368,000	100%
Total amount	25,400,000	35,250,000	

17. **PPA.** A PPA is in place for FSM that covers carrying-out activities necessary for the preparation of pipeline



projects and US\$368,000 has been allocated to SCORE. The PPA has already been utilized to finance preparation of the environmental and social documentation and pre-appraisal stakeholder consultations; and additional preparatory activities may be financed.

18. **Disbursement Conditions.** No withdrawals should be made for payments made prior to the Signature Date.

Procurement

19. **Institutional Arrangement for Procurement.** The IA will be responsible for the procurement implementation of the Project. The CIU will provide support through its Procurement Specialist, Procurement Officer and a pool of procurement specialists as necessary.
20. **Applicable Procurement Regulation.** Procurement for the proposed Project will be carried out in accordance with the World Bank Procurement Regulations for IPF Borrowers (Procurement Regulations), dated November 2020, and the provisions stipulated in the Financing Agreement. Procurement activities will use the World Bank's Standard Procurement Documents (SPD) where required or templates developed for SCORE. A Project Implementation Guidance (ProcGuide) prepared for fragile and small states in the Pacific will also provide useful references and documents for use in the procurement implementation.
21. **Procurement Risk Assessment.** A procurement risk assessment has been carried out (refer to section V. *Key Risks*), and key procurement risk areas include:
- (a) Limited capacity hinders procurement and contract management and leads to delays in procurement processes which leads to delays in Project implementation;
 - (b) Limited pool of locally based experts in World Bank procurement processes; and
 - (c) Poor response to market approaches for civil works packages.
22. To help mitigate these risks, the Procurement Specialist, the Procurement Officer and a reserve pool of specialists in the CIU will provide support to SCORE, although the task of managing and coordinating procurement activities in the Project will be the responsibility of the SCORE Project Manager.
23. **Procurement Types.** The various types of procurements to be financed by the proposed IDA grant and indicative cost estimate are detailed in the following table.

Table 1.3 Procurement Types and Selection Methods

Type of Procurement	Selection Methods
1. Works	RFP, RFB, RFQ
2. Goods and Non-consulting Services	RFB, RFQ, DIR
3. Consulting Services – Firms	QCBS, QBS, FBS, CQS, & CDS
4. Consulting Services – Individuals	INV (Open, Limited, and Direct)

24. **Procurement of Works.** Activities to be prioritized by the VA and CRRS to strengthen climate resilience, may include but are not necessarily limited to: pavement strengthening, drainage improvements, spot slope



stabilization, rock wall revetment strengthening, and improvements to causeways and bridges.

25. **Procurement of Goods.** This may include asset management hardware, road safety equipment, and other goods (with prior World Bank approval) that can be utilized to improve the resilience of FSM's road network or enable GoFSM to manage the road network more effectively.
26. **Procurement of Consulting Services (Firms and Individuals).** This may include, but not necessarily be limited to updates to the VA and CRRS and Climate-informed RAMS, feasibility studies, design and supervision of secondary road network assets to improve their resilience to climate-related hazards, Climate-informed Road Crash Database, Transport Sector Data Management Unit, Materials Laboratory consultant(s), and project management.
27. **Frequency of Procurement Supervision.** In addition to the prior review to be carried out by the World Bank, implementation support missions will be undertaken at least once per year. One in five procurement packages not subject to World Bank prior review will be examined ex post on an annual basis.
28. **Procurement Plan.** A draft Procurement Plan for the first 18 months has been prepared for SCORE. Once SCORE is effective the Procurement Plan will be updated to cover the next 12 months and will be regularly updated at least once every 12 months. This is consistent with the arrangement detailed in the Project Procurement Strategy for Development (PPSD).

Environmental and Social (including safeguards)

29. Environmental and social safeguards will be the responsibility of the PIU, supported by the CIU Safeguards Team. The CIU Safeguards Team will work with the PIU Project Manager and the State focal points to ensure that sub-projects are screened and scoped, environmental and social assessments are carried out prior to the completion of detailed designs, environmental and social clauses and the relevant safeguards instrument are included in bid documents and consultant's Terms of Reference environmental and social protection and mitigation measures are implemented by contractors, and that monitoring, grievance management, incident management and other activities are carried out in accordance with the safeguards instruments.
30. The CIU will require an additional social specialist and an additional environmental specialist to support SCORE as it will produce a significant workload for the CIU on top of a growing portfolio. Specialist consultants may also be engaged on an ad hoc basis by the PIU, supervised by the CIU safeguards team, to prepare environmental and social assessments, safeguards instruments and/or to conduct specialist supervision or monitoring services. They may form part of the 'Design and Supervision' consultants' team or be independent consultants.

M&E

31. Project M&E will be conducted via periodic monitoring through semi-annual reports that track progress in terms of distribution of inputs, disbursement of funds, and achievement of targeted indicators as outlined in the Results Framework (Section VI).
32. The World Bank will provide implementation support for SCORE on an on-going basis and visit FSM to monitor



and evaluate progress. In country mission support or virtual support will be provided every 3 – 6 months.

33. SCORE will undergo a mid-term review no later than three years after the effective date of the Financing Agreement, or such other period as may be agreed.

Strategy and Approach for Implementation Support

34. The support plan is based on previous experience from other projects in FSM as well as the Project's risk profile. GoFSM has had experience with World Bank projects and is familiar with the procedures and requirements. Additional support will be provided through the DoFA CIU.
35. DoFA, in consultation with DoTC&I, will determine the appropriate timing of semi-annual reviews, taking into consideration the availability of participants. The World Bank implementation review will cover non-technical aspects of the support including: (a) FM; (b) procurement; (c) implementation arrangements; and (d) environmental and social risk management. In addition, field visits will also be undertaken to Project sites. To the greatest extent possible, the World Bank team will accommodate any written request for 'as-needed' support for SCORE, including fiduciary aspects.
36. Each implementation review mission will result in the production of a joint Aide-Memoire that will be discussed at a wrap-up meeting to be chaired by DoTC&I. It is envisaged that the Aide-Memoire will provide an overall view of the current situation relating to Project implementation, including findings and observations from the World Bank. Representatives from the relevant government departments will be invited to attend the wrap-up meetings. Furthermore, any adjustment requiring more frequent reviews will be discussed, agreed upon, and documented in the Aide-Memoire.
37. A mid-term review mission will be held not later than three years after the effective date, or such other period as may be agreed, and provides an opportunity to review the Project and take stock of implementation progress. GoFSM shall prepare and furnish to World Bank, at least one month before the date of the mid-term review, a report, integrating the results of the monitoring and evaluation activities performed and, on the progress, achieved in the carrying out of SCORE during the period preceding the date of such report and setting out the measures recommended to ensure the efficient carrying out of SCORE and the achievement of the objectives.
38. Following the mid-term review, adjustments to project support may be required, including a project restructuring and/or possible additional financing from any other sources based on the implementation experience. The World Bank task team will work with DoFA and DoTC&I to clarify the requirements necessary to effect any changes. Any changes to SCORE that require amendments to the Financing Agreement will require a formal request from GoFSM's signatory to the Financing Agreement.
39. Six months prior to the closing date of SCORE, GoFSM will commence the preparation of its Implementation Completion and Results Report (ICR). The World Bank ICR author will participate in the final implementation review and will gather the necessary information to help prepare the ICR.

Implementation Support Plan and Resource Requirements



40. Missions to support implementation for SCORE will be carried out every 3 – 6 months, either in country or virtually. At least once per year the missions will include technical, fiduciary, environmental and social team members, who will provide input into infrastructure design and construction, carry out post reviews on contract management, review safeguards compliance, and provide formal training where required. The implementation support plan will be reviewed annually to ensure that it meets the support needs of SCORE. The estimated level of annual support needed to implement SCORE is identified in the table below.

Table 1.4 Implementation Support Plan

Time	Focus	Skills Needed
First 12 months	Project launch and start-up	Task Team Leader Co-Task Team Leader Procurement Specialist Senior Project Engineer Project Engineer Asset Management Specialist Road Maintenance Engineer Financial Management Specialist Environmental Specialist Social Specialist GBV Specialist Administrative Support
12-60 months	Project implementation	Task Team Leader Co-Task Team Leader Procurement Specialist Senior Project Engineer Project Engineer Asset Management Specialist Road Maintenance Engineer Financial Management Specialist Environmental Specialist Social Specialist GBV Specialist Administrative Support

Table 1.5 Skills Mix Required

Skills needed	Number of staff weeks	Number of trips
Task Team Leader	8 per year	3 per year
Co-Task Team Leader	8 per year	3 per year
Procurement Specialist	4 per year	2 per year
Senior Project Engineer	4 per year	2 per year
Project Engineer	4 per year	2 per year
Asset Management Specialist	4 per year	2 per year
Road Maintenance Engineer	4 per year	2 per year



Financial Management Specialist	3 per year	2 per year
Environmental Specialist	3 per year	2 per year
Social Specialist	3 per year	2 per year
GBV Specialist	3 per year	2 per year
Administrative Support	3 per year	0.5 per year



ANNEX 2: Detailed Project Description

COUNTRY: Micronesia, Federated States of Federated States of Micronesia Strategic Climate-Oriented Road Enhancements Project

SCORE Investments and Activities

1. The SDR25.4 million (US\$35.25 million equivalent) Project will improve the climate resilience of the secondary road network in FSM , and in case of an Eligible Crisis or Emergency, respond promptly and effectively to it.
2. It is important to note that the extent of the works that can be completed under SCORE will depend on the results of the Vulnerability Assessment (VA) and Climate Resilient Road Strategy (CRRS) currently ongoing under Component 1 of the PRIME project. As such, the cost of proposed investments will not be known until SCORE is under implementation, and the available funding may not be sufficient to finance all VA and CRRS proposed investments.
3. **Component 1: Spatial and Sector Planning Tools.** This Component involves technical assistance that will directly support FSM by bringing about transformative change in the way that climate change is addressed in the road sector. The following activities are proposed under Component 1:
 - a. **Updating of systems developed under PRIME.** PRIME is already programmed to deliver a robust combination of spatial and sector planning tools (i.e. VA/CRRS and the Climate-informed RAMS) in support of evidence-based decision making regarding the road sector. This subcomponent will finance periodic potential updates (as needed) to those systems or complementary tools and any necessary related training.
 - b. **Establishment of a climate-informed road crash database:** The impacts of climate change and severe weather events can and have had negative outcomes for road safety in FSM. Studies undertaken to examine a correlation between road crashes and climate change affirm an increase in road fatalities and injuries with change in temperature, precipitation, storm surge patterns, and sea level.⁴⁵ The establishment of a crash database will allow for the recording and analysis of all road accident data including weather related factors, thereby enabling an evaluation of contributing factors to the crashes. It could test whether the occurrence of a severe weather event and the condition of the road has an evidence-based link to the accident rates, thereby enabling pinpointing of where future investments should be focused, thereby support climate adaptation efforts in the FSM This would most likely use the DRIVER software developed by the World Bank for the Philippines, and now rolled out to 10 other countries, or similar open-source software. The crash database will be linked to the Climate-informed RAMS that is being set up under PRIME. Under this subcomponent, staff hired for the Transport Sector Data Management Unit (under Component 3) would be trained to develop, manage and effectively use the road crash database.
4. **Component 2: Climate Resilient Infrastructure Solutions.** This Component involves feasibility studies, preliminary and detailed design, supervision and construction of improvements to identified priority strategic secondary road assets to increase their resilience to climate-related hazards and/or events. The integration

⁴⁵ DOT Center for Climate Change and Environmental Forecasting. 2017. The Potential Impacts of Climate Change on Transportation. Available at: <http://www.bv.transports.gouv.qc.ca/mono/1083088.pdf>



of climate change considerations into infrastructure activities will help strengthen the resilience of assets and improve functionality of the road network.

- a. **Works informed by the VA and CRRS (including design and supervision)**⁴⁶ The physical works to be financed under SCORE will be determined in accordance with the recommendations of the VA and CRRS that will conduct a robust prioritization process. Works under SCORE will be restricted to the existing secondary road corridors, i.e. no greenfield projects will be financed. All roads are single carriageway and any increase in the width of road formations will be limited to (i) lane widening to meet current design standards, (ii) addition of shoulders, (iii) addition of longitudinal drainage where required, and (iv) widening of fill embankments and/or cuttings to reduce slopes. The climate resilient infrastructure solutions will be informed by Road Safety Audits under component 3b and designed with appropriate safety measures that consider all road users. Interventions are expected to include measures to strengthen climate resilience, including but not necessarily limited to:
 - Pavement and surface strengthening – periodic maintenance, repairs, rehabilitation or reconstruction of existing road pavement layers and/or surfacing, including provision of sealed shoulders and raising road levels;
 - Drainage improvements – provision, reinstatement, resizing and/or lining of longitudinal drainage, replacement and/or increasing capacity of cross drainage culverts, improving open or covered outfalls, provision of subsoil drainage and cut-off drains;
 - Spot slope stabilization – widening and/or reducing slope of cuttings and fill embankments to reduce landslip risk, soil bioengineering and biotechnical stabilization techniques, and anchoring of unstable rock slopes;
 - Rock wall revetment strengthening – for protection of coastal road sections; and
 - Improvements to causeways and bridges – repairs or reconstruction of existing crossings and/or provision of new crossings to provide safe, all weather access for vehicles and pedestrians.
5. **Component 3: Strengthening the Enabling Environment.** This Component will help to strengthen coordination among relevant institutions, will look at ways in which road sector management can be improved, and will address any emerging priority issues that can help support the Government in addressing climate change risks. Considering SCORE is an extension of the PRIME project, the same PIU and CIU staff involved in PRIME will also be involved in the preparation and implementation of SCORE. This component includes the following activities:
- a. **Project Management.** This Sub-component will cover PIU project management support to be recruited and operating costs for SCORE-related travel and communications costs to strengthen DoTC&I's capacity to manage a more climate resilient road network. This Sub-component also includes the provision of technical assistance activities to assess environmental and social risks, its impacts and the preparation of environmental and social instruments that enhance the sustainability of SCORE's climate resilient road sector activities in accordance with the World Bank Environmental and Social Framework and the laws and policies of FSM. Activities will be determined based on gap analysis of sector-based capacity but may include: audits of quarries; training for construction workers and quarry operators, sector-based guidelines and State and Federal policy and law reviews.

⁴⁶ It is expected that physical works will not commence until year 2 of the Project.



- b. **Road Safety Program.** Provision of technical assistance activities to improve road safety of a more climate resilient road network. This will include baseline and detailed design stage road safety audits and post-construction road safety audits for all road works. The road safety audits will also include access audits for persons with disabilities. The purpose of these road safety audits is to identify areas of concern for the safety of all road users. The audits will systematically analyze the potential risks, due to lack of investment and maintenance and the climate change, making the infrastructure unsafe. The recommendations arising out of these audits will inform the detailed design of the works to mitigate the hazards and resolve safety problems associated with poor drainage and flooding. Follow-up technical assistance to implement the recommendations of the PRIME Road Safety Diagnostic may also be financed under this Sub-component.
- c. **Materials Testing Laboratory.** There has long been a need to establish a materials testing laboratory in FSM to carry out testing of materials used in road and bridge construction. Geotechnical investigations during design of road and bridge resilience improvements require a range of materials tests, and construction works contracts require extensive testing, by both contractor and employer, of granular materials for pavement layers, bituminous and asphaltic materials for flexible surface layers, and concrete and steel for structures and concrete pavements. Current practice requires that testing equipment is either temporarily imported for each design assignment or construction contract, or samples are flown out to foreign commercial laboratories. Currently FSM has no accredited materials testing laboratory, and samples have to be sent to the US for testing, involving high costs and long delays to roads design and construction activities. The project will provide technical assistance and equipment for the establishment and initial operation of a government-owned materials testing laboratory in FSM. An initial study will consider the spatial, financial, recruitment and training needs of the laboratory.
- d. **Development of a Transport Sector Data Management Unit.** The unit would be housed within DoTC&I that includes at least one individual to support each state. With the strengthening of resilience-focused sectoral and spatial planning tools and more robust data-driven analysis, there is a clear need for a dedicated team with requisite technical skills to gather and maintain vital data relevant to help GoFSM manage a more climate resilient transport sector. The Unit would focus on, but not necessarily be limited to, collecting and managing data for the establishment and/or maintenance of the Climate-informed Road Crash Database, The Road Network Vulnerability Assessment and Climate Resilient Road Strategy, and the Climate-informed Road Asset Management System. It is expected that SCORE would initially fund five posts – one junior level officer for each state and a senior consultant under DoTC&I (the first two years of project implementation), during which time the individuals will be employed under contract to GoFSM. It is expected that these will be mostly local junior officer-level positions trained by a senior international consultant(s) and SCORE would finance these positions for the first two years of project implementation then the funding source for these positions would then transition to Government budget. DoTC&I will aim for Transport Sector Data Management Unit to be comprised of 50 percent female team members.
- e. **Gender Equality and GBV initiatives.** This is expected to include the following activities:
 - i. SCORE will also provide support to address potential SEA and SH concerns related to Project implementation. To reduce SEA and SH prevalence levels, the project will: (1) provide training to Project workers; (2) conduct community awareness raising activities; (3) support GBV survivors through strengthening of services by local service providers; and (4) establish a referral pathway for GBV survivors.



- ii. At least 20 percent of wage employment generated by project activities is expected to be filled by women. It is expected that this will be achieved in part by DoTC&I aiming to hire at least 50 percent women for planned staff positions in the Transport Sector Data Management Unit to be established under SCORE. DoTC&I will aim to meet this target through strengthened and targeted outreach efforts. Non-discrimination and harassment employment provisions will be in place, including sexual harassment code of conduct training for all employees.
 - iii. Support to DoTC&I Gender Equality Program. SCORE would complement activities under PRIME that enhance women's representation in technical roles within the DoTC&I. In coordination with other development partners, SCORE will support the transport department's gender equality program in the preparation of the 10-year strategic development program for the establishment of the FSM Women in STEM Institute. The program will be developed based on collection of nation-wide data and consultations with key stakeholders (students, teachers, principals, women's organizations) across the country, which are currently underway. The goal of this plan will be to map out activities aimed at increasing women's participation in STEM education and careers.
 - f. **Sustainable Motorization Management Pilot.** The number of vehicle imports is growing rapidly in FSM and while this growth is currently generating improved mobility and accessibility, it is also associated with increased congestion, air pollution and vehicle scrap. Currently, GoFSM has no vehicle import restrictions, and disposal is unregulated.^{47,48} Consequently, vehicles that are near the end of their useful life, unsafe and with poor fuel economy and emissions performance may be imported into the country. While these second-hand vehicles are relatively cheap to purchase, their lifecycle costs to the individual, government and the environment may be high and require greater attention. Better managing the motorized vehicle fleet is important for both climate change mitigation and adaptation because used vehicles that are old and poorly maintained tend to contribute disproportionately to the transport-related local air pollution, GHG emissions, road injuries and fatalities. Considering the political economy and institutional arrangements in FSM, the pilot comprises technical assistance to examine the challenge in FSM and recommend policy interventions for sustainable motorization management such as the establishment of more stringent GHG emissions standards. Depending on the outcomes of this, a second phase may be included that supports GoFSM with the implementation of the policy interventions, which may lead to a reduction in GHG emissions intensity per vehicle km for new vehicles imported. The pilot will complement the adaptation efforts implemented in other sub-components of SCORE and PRIME.
 - g. **Emerging Priority Issues.** Provide technical assistance to the Recipient to strengthen its capacity to address emerging priority issues that could have an impact on the Recipient's ability to manage a climate resilient road network.
6. **Component 4: Contingent Emergency Response Component (CERC).** Due to the vulnerable nature of PICs to climate change and severe weather events, even with successful implementation of the first three components, supporting post-disaster recovery remains an important feature of SCORE. This component is

⁴⁷ JapaneseCarTrade.com. (2021). Used Cars Import Procedure and Regulations. Retrieved September 30, 2021, from <https://info.japanesecartrade.com/content-item/524-micronesia-import-regulation-for-japan-used-cars>

⁴⁸ Secretariat of the Pacific Regional Environment Programme (2018). FSM State of Environment Report 2018. Retrieved from <https://www.sprep.org/publications/federated-states-of-micronesia-fsm-state-of-environment-report-soe-2018>



designed to provide swift response in an event of an Eligible Crisis or Emergency, by enabling GoFSM to request the World Bank to re-allocate project funds to support emergency response and reconstruction.

7. The estimated costs of each Component and Sub-component are summarized in the following table.

Table 2.1 Project Cost Breakdown by Component and sub-Component

Proposed Activities and Cost Estimates (US\$ million)			
		Base Cost	Expected Implementation Period
COMPONENT 1 - Sectoral and Spatial Planning Tools		0.31	
1a	Climate-Informed Road Crash Database	0.23	Year 1 to 6
1b	Updates to Climate-Informed Planning Tools	0.08	Year 1 to 6
COMPONENT 2 - Climate Resilient Infrastructure Solutions		28.00	
2	Works informed by VA and CRRS (including design and supervision)	28.00	Year 1 to 6
COMPONENT 3 - Enabling Environment		6.94	
3a	Project Management	2.58	Year 1 to 6
3b	Road Safety Program	0.12	Year 1 to 6
3c	Materials Testing Laboratory	1.01	Year 1 to 6
3d	Transport Data Management Unit	1.01	Year 1 to 2
3e	Gender Equality and GBV Initiatives	0.83	Year 1 to 6
3f	Sustainable Motorization Management	0.51	Year 1 to 6
3g	Emerging Priority Issues	0.88	Year 1 to 6
TOTAL		35.25	



ANNEX 3: Economic Analysis

COUNTRY: Micronesia, Federated States of Federated States of Micronesia Strategic Climate-Oriented Road Enhancements

1. The economic analysis was conducted based on a standard methodology applied for appraisal of infrastructure works, which demonstrates the overall EIRR of 12.6 percent and NPV US\$7.69 million. The economic evaluation focuses on Component 2, which constitutes a selection of road works in accordance with the recommendations from the VA and CRRS undertaken as part of Component 1 under PRIME.
2. The analysis focuses on the road improvement that will start in Year 2 of Project implementation. The discount rate is assumed to be 7 percent. The CBA was conducted to calculate the EIRR and NPV of the Project covering the period of 20 years (2022-2041), assuming the road maintenance continues over the full study period.
3. **Economic Evaluation Assumptions.** Table 3.1 shows the details of traffic data and basic assumptions based on road characteristics. The estimated unit cost for Asphalt-Concrete (AC) road improvement follows DoTC&I's historical costs.

Table 3.1 Component 2 key input data

	Length (m)	Width (m)	Estimated number of road users per day ⁴⁹
Roads in Component 2	13,500	6	700

4. Component 2 of the Project covers approximately 13.5 kilometers of roads. There is no detailed traffic data by section, but the estimated traffic is around 350 vehicles per day. To be conservative, it is assumed that the traffic on these roads does not grow over time. The estimated unit cost for climate resilient road improvements is US\$1.8 million per kilometer. The specific road sections that will be improved are not yet known but will be drawn from a list of GoFSM-identified *strategic secondary roads*. These are roads that serve a lifeline function that provide vital redundancy to critical primary roads or have significant socioeconomic importance (e.g. providing a connection to critical infrastructure, sites of significant economic activity, and services). To test the potential impact of selecting specific roads to the EA, one scenario analysis was conducting that examined the potential benefits from increased tourism through upgradation of the Nan Madol road in Pohnpei. The results in Table 3.3 show a significant positive impact to the base EIRR and NPV of the project. Other scenarios could not be modelled due to data constraints.
5. Key benefits estimated include: (a) vehicle operating cost (VOC) savings; (b) travel time savings; (c) avoided emergency repairs/maintenance and reconstruction costs; and (d) road accident reduction. The analysis adapts an HDM-4 model to calculate the vehicle operating costs under different levels of road condition to determine VOC savings. It is assumed that the surface treatment will improve vehicle operations equivalent to the improvement of IRI from 10 to 4 m/kilometer. Based on the HDM-4 calculation, this is about US\$ 0.0445 per vehicle-kilometer. The time savings are calculated from improving average speed (from current average

⁴⁹ Based on World Bank technical expert opinion.



of 30 kilometers/hour to around 32 kilometers/hour, depending on the road section). The avoided emergency repairs are calculated based on: (i) without-project annual repair expenditures at a unit cost rate of US\$ 2,400,000 per km for 10 percent (i.e. 5 percent of pothole patching and isolated repairs and 5 percent of emergency repairs) of the road sections under the Project; and (ii) reconstruction needs for 75 percent after 10 years at the unit cost rate of US\$ 1,000,000 per km. The avoided emergency repairs and reconstruction costs are estimated based on civil works costs in FSM. The standard conversion factor is assumed to be 0.85. The road safety benefits are derived from RSSAT. The additional tourism benefits in the scenario analysis assume that with upgradation of road access to Nan Madol, an archaeological site adjacent to the eastern shore of the island of Pohnpei, 50 percent of the estimated tourists visiting Pohnpei (but not Nan Madol) and 30 percent of business visitors would be inclined to spend one extra day in Pohnpei (at an estimated cost of 250USD).

6. Economic Evaluation Results. Based on the cost-benefit analysis, the investment in roads under Component 2 yields the EIRR of 12.6 percent and NPV of US\$7.69 million.
7. The sensitivity of the EIRR was also tested against three cost variation scenarios and their combinations. The results of the sensitivity analysis are illustrated in the Table 3.2.

Table 3.2 CBA results and Sensitivity Analysis

Scenarios	Component 2	
	EIRR (%)	NPV (\$m)
Base case	12.6	7.69
Investment cost increases by 20%	9.9	4.39
Benefits are 20% lower than expected	9.3	2.85
Both investment costs increase by 20% and benefits are 20% lower than expected	6.7	-0.45

Table 3.3: CBA results and Sensitivity Analysis with inclusion of Nan Madol Road

Scenarios	Component 2	
	EIRR (%)	NPV (\$m)
Base case	15.3	11.91
Investment cost increases by 20%	12.3	8.61
Benefits are 20% lower than expected	11.7	6.23
Both investment costs increase by 20% and benefits are 20% lower than expected	8.9	2.93

8. **GHG Accounting.** An analysis of GHG emissions was undertaken based on the fuel consumption rate at different speeds under with-project and without-project scenarios. Without the Project, the road's deteriorated condition limits vehicle speed and leads to higher fuel consumption per vehicle-kilometer compared to the with-project scenario. With the Project, improved road condition leads to improved speed, and hence lower fuel consumption. Gross GHG emissions under the with-project scenario is



estimated to be 11,558 tCO₂e. Total Net GHG emissions are estimated to be -292 tCO₂e. This is a net reduction over the evaluation period (20 years). The Annual Average Net GHG emissions are -15 tCO₂e/year. The social benefit from GHG reduction is estimated to be US\$26,355, based on social cost of emission reduction from the World Bank's Guidance Note on Shadow Price of Carbon in Economic Analysis.⁵⁰

⁵⁰ World Bank, *Guidance Note on Shadow Price of Carbon in Economic Analysis*, (2017), <http://pubdocs.worldbank.org/en/911381516303509498/2017-Shadow-Price-of-Carbon-Guidance-Note-FINAL-CLEARED.pdf>



ANNEX 4: Series of Projects

COUNTRY: Federated States of Micronesia

Federated States of Micronesia Strategic Climate-Oriented Road Enhancements

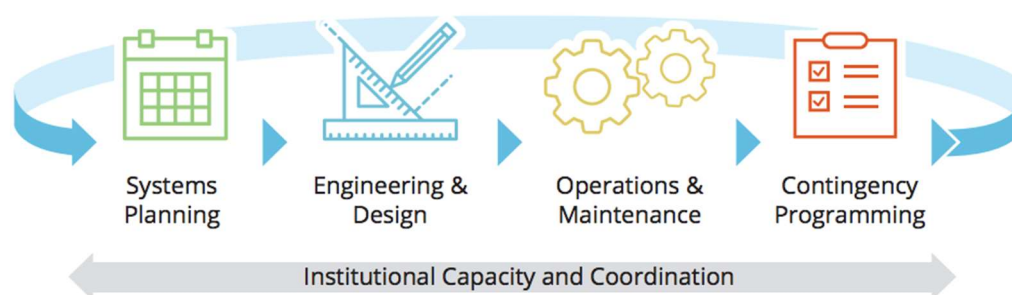
1. The PC RTP SOP includes a series of independent projects to multiple Recipients who are facing a common set of development issues. The SOPs share a common design to finance activities to systematically improve the resilience of transport networks in PICs to natural hazards and climate change, while recognizing and providing flexibility to address the fundamental differences and needs of the countries included within the SOP. This means that though each project in the SOP follows the common design and is aligned with the overall program objectives, each project can be adapted to reflect the local realities and can move forward at its own pace. Each SOP therefore includes activities and investments at the country-level, with each of the country projects being self-standing.
2. A key characteristic of this SOP approach is that each project in the series is self-standing once the template has been designed. This means that each project design in the series follows the program template but may be adapted to support the specific requirements from each individual country according to local realities and to move forward at its own pace (each country follows its own path based on its readiness). Most importantly, each of the projects is justified on its own merits even if the other projects under the program do not materialize.
3. **Development objectives.** The goal of the series is to: (i) support the Recipients in improving the resilience of their transport sector; and (ii) in the event of an Eligible Crisis or Emergency, to provide an immediate response to the Eligible Crisis or Emergency. The programmatic series will focus on the road, maritime and aviation sectors, which have been identified as vulnerable in PICs. Each project in the SOP will have a PDO that feeds into the overarching development objective of the program.
4. **Rationale for World Bank involvement.** The World Bank is already supporting numerous climate resilient investments in the transport sector in the Pacific; however, the approaches taken are often distinct on a country-by-country comparison. This series, rather than distinct country-specific projects, will help provide consistency and to systematically address the way that challenges are addressed in the transport sector by the World Bank, its clients, and participating donor partners by providing a project template (framework) approach to address specific issues that are commonly shared by different countries in the Pacific. Specifically, PICs' populations are among the most vulnerable to disasters and the impacts of climate change, and experience high social impacts. Transport is among the most vulnerable sectors throughout the region, as it not only constitutes a large share of public assets and Government budgets, but many transport sector assets (primary roads, airports and ports) are located within the coastal zone and there is often limited redundancy in the network because of lacking space, small populations and limited financial resources. Within the transport sector, a significant share of Government and international aid finances construction or rehabilitation of road networks, with an increasing emphasis to make roads more resilient to natural disasters and climate change.
5. Transport programs that employ a multi-pronged approach to climate resilience by improving sectoral and spatial planning, utilizing climate resilient infrastructure solutions, strengthening the enabling environment and supporting post-disaster recovery can help reduce future asset loss and improve well-being, and reduce service disruptions. For example, upgrading construction standards can reduce the impacts from more intense and frequent events, infrastructure maintenance can reduce damage and reduce the costs of repair or



reconstruction, and asset management systems help save resources (financial, human) associated with rehabilitation.

6. The SOP will support Recipients through integrating risks in a holistic manner, through the integration of resilient transport interventions into decision-making and implementation. A World Bank 2017 SIDS report outlines an infrastructure lifecycle that includes four key aspects for institutional capacity and coordination: (i) systems planning; (ii) engineering and design; (iii) operations and maintenance; and (iv) contingency programming (Figure 4.1).

Figure 4.1: Transport Infrastructure Lifecycle⁵¹



7. **Program components.** PC RTP consists of the following four pillars:

- a. **Pillar 1: Sectoral and Spatial Planning Tools.** This involves technical assistance to support countries by bringing about transformative change in the way that climate change is addressed in the transport sector. New tools are now readily available to PICs and have the potential to work well in low capacity environments. For instance, all governments can mitigate the impact of climate change and extreme weather events by assessing the level of hazard frequency and severity and map this against major points of vulnerability along their transport network. Examples of potential technical assistance that countries may consider include: (i) tools that enable stakeholders to identify vulnerabilities and design and evaluate appropriate interventions to make roads, airports, and ports more resilient; and (ii) climate resilient transport strategies that identify measures to enhance resilience and prioritize investments to balance vulnerability reduction against cost implication. This will involve using best available climate change and natural hazard risk information to identify key hazard types and risk levels, such as sea-level rise, tropical cyclones, extreme rainfall and temperature events, tsunamis, etc., and then assessing the likely severity and timing of risk impacts for all major links of the transport network.
- b. **Pillar 2: Climate Resilient Infrastructure Solutions.** Complex design solutions are often not fit-for-purpose in PICs due to their limited resources (human, fiscal and material). In most PICs, even vital, basic drainage is largely absent due to limited capital. Limited material resources create cost and environmental challenges when repairing, rehabilitating or building infrastructure. For example, some PICs need to import aggregate from other domestic islands while others import from other countries, over a thousand kilometers away. In addition, some PICs rely on desalination facilities for water. This

⁵¹ World Bank, Climate and Disaster Resilient Transport in Small Island Developing States: A Call for Action. 2017.



component will also finance designs that consider more innovative and resilient civil engineering solutions, for example geosynthetics such as the use of geocells for low-volume roads.⁵² Finally, coastal infrastructure may also be strengthened to help protect ports, and adjacent airports and roads. A menu of hard and soft options for coastal protection will be available to PICs.⁵³ Traditional engineering approaches may focus on construction of seawalls, breakwater and groins. Greener options to replace or complement hard coastal infrastructure may also be financed such as living shorelines and recovery of coastal habitats for mangrove replanting. The choice between hard and soft options ultimately depends on availability of capital and the relative balance of technological and labor resources. All these examples are fit-for-purpose in the Pacific because the designs can be readily implemented in low capacity environments and they are generally more affordable than complex resilience solutions more appropriate for large countries with greater capacity and resources.

- c. **Pillar 3: Strengthening the Enabling Environment.** Measures to strengthen the enabling environment include capacity building, and legal and regulatory reform. Investment in capacity building is essential because a consequence of PICs' small populations is that few ministries have even one member of staff focusing on climate resilience and many working in infrastructure are not fully informed of the risks that climate change and severe weather events pose to transport infrastructure. Therefore, project management support within key implementing entities will be a core component of delivery for all resilience projects. Support may include the provision of Climate Resilient Transport Advisers/Consultants to Ministries of Infrastructure or road authorities and resilience-related training and/or workshop(s) for relevant ministries and civil society organizations that deliver climate change related services for the transport sector. Key skills targeted for capacity building include: coastal engineering, geographic information system (GIS) and database analysis, hydrodynamic modeling, geomorphology, project management, and monitoring and evaluation. The enabling environment will also be strengthened through new and amended legal frameworks that enable PIC governments to appropriate funding and create programs to strengthen resilience. On the regulatory side, reform will focus on updating design and planning standards and maintenance procedures, considering expected climate change. Creating incentives to support resilience-focused maintenance and fostering stakeholder engagement in the design of regulations are crucial for success. Possible measures include: fit-for-purpose obligations,⁵⁴ performance-based standards, technical standards, and codes of practice.
- d. **Pillar 4: CERC.** Since PICs will remain vulnerable to climate change and severe weather events even with the successful implementation of the first three pillars, supporting post-disaster recovery will remain essential. Therefore, this component will focus on emergency repairs to infrastructure (e.g., roads, wharves, jetties, runways, bridges, seawalls) in case of a disaster event by including a "zero-dollar" CERC in the project design.

⁵² Geocell pavements are an intermediate technology between interlocking paving stones and surface dressing used to construct durable concrete pavements which can have a lower cost than conventional alternatives. The following report provides the strengths, weaknesses, and O&M implications of four different types of concrete pavement, including geocell concrete in the PIC context: Johnson, Sam; Faiz, Asif; Visser, Alex. 2019 *Concrete Pavements for Climate Resilient Low-Volume Roads in Pacific Island Countries*. 2019. © World Bank

⁵³ Examples include: (i) PRIF, Affordable Coastal Protection in the Pacific Islands, February 2017; and (ii) PRIF, Guidance for Coastal Protection Works in the Pacific Island Countries, November 2017.

⁵⁴ An obligation that binds a counterparty to ensure works are designed and constructed for their intended purpose. A consultant or contractor then would be liable to the client (i.e., country) in a situation where it has not met the obligation (e.g., ensuring a road has been constructed to handle current and future climate change and severe weather events).



8. It is important to note that each project within the SOP will be aligned with the overall program's objectives but should be adapted to support the specific requirements from each individual country. For example, if a preparatory gap analysis suggests that a country already has robust spatial and sector planning tools (i.e., Pillar 1) in place, then that project may require very limited or no investments in that area but may instead focus more heavily on activities that fall under the other pillars. Similarly, alongside investments in climate resilience, a project under this SOP may focus on other sector priorities best addressed through that project (e.g., improving safety of transport assets or improving access) based on countries' respective needs.
9. PC RTP currently consists of two phases. A first phase (Phase 1) includes a series of projects for Samoa, Tuvalu and Tonga, all of which were approved by the Board in 2018 with a closing date of 2024. After PRIME, SCORE will be the seventh project in the programmatic approach and the fourth project under a second phase (Phase 2) of PC RTP. The total cost of PC RTP is estimated to amount to US\$246.45 equivalent including US\$233.02 million in IDA financing and US\$13.43 million in Other Sources of Financing (Table 4.1).

Table 4.1: Overview of PC RTP SOP

	Project	Project Number	Project Cost (US\$ million equivalent)	IDA Financing (US\$ million equivalent)	Other Sources of Financing (US\$ million equivalent)	Approval Date	Closing Date
1.	Samoa Climate Resilient Transport Project (SC RTP)	P165782	35.75	35.75	N/A	September 14, 2018	January 31, 2024
2.	Tonga Climate Resilient Transport Project (TC RTP)	P161539	27.25	26.02	1.23 (Road Fund)	November 29, 2018	December 31, 2024
3.	Tuvalu Maritime Investment in Climate Resilient Operations (MICRO)	P161540	20.20	20.00	0.20 (GFDRR Grant)	December 18, 2018	January 31, 2024
4.	Vanuatu Climate Resilient Transport Project (VC RTP)	P167382	66.00	66.00	N/A	January 23, 2020	December 31, 2025
5.	Kiribati Outer Islands Transport Infrastructure Investment Project (KOITIIP)	P165838	42.00	30.00	12.00 (ADB)	March 12, 2020	June 30, 2026



6.	Federated States of Micronesia Prioritized Road Investment and Management Enhancements Project (PRIME)	P172225	40.00	40.00	N/A	May 17, 2021	August 31, 2028
7.	Federated States of Micronesia Strategic Climate-Oriented Road Enhancements Project (SCORE)	P177073	35.25	35.25	N/A	May 30, 2022 (Planned)	August 31, 2028
Total			266.45	253.02	13.43		

10. **Lessons learned and reflected in program design.** The design of the PC RTP pillars has taken into consideration the lessons learned from other World Bank projects within the region. For example, the program includes measures to strengthen the existing implementation and institutional agencies recognizing the capacity constraints in participating countries. In addition, given the vulnerabilities of the transport sector to extreme weather and climate change impacts, lessons learned from other climate resilience projects and disaster risk management have been used to inform the design of the program components.
11. **Results M&E.** Responsibility for overall M&E progress for each project towards the country project objectives and outcomes is the responsibility of the IAs in each country. Where feasible, indicators will be harmonized across projects participating in the series in alignment with the four-pillared approach, but the results framework may be adapted to support the specific requirements from each individual country. For example, a country not in need of Pillar 1 activities or that focuses more on other activities aligned with other pillars would not have indicators related to Pillar 1. In addition, a project that has an objective other than just climate resilience may incorporate additional indicators to monitor and evaluate progress related to that objective.



ANNEX 5: Maps of FSM

COUNTRY: Federated States of Micronesia

Federated States of Micronesia Strategic Climate-Oriented Road Enhancements Project



