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CARIBBEAN DEVELOPMENT BANK



**TECHNICAL ASSISTANCE – STRENGTHENING COASTAL ROAD INFRASTRUCTURE
RESILIENCE TO GEOPHYSICAL AND CLIMATE-RELATED HAZARDS –
ST. KITTS AND NEVIS**

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Considered at the Two Hundred and Seventy-Sixth Meeting of
the Board of Directors on May 22, 2017

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MAY 22, 2017

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CARIBBEAN DEVELOPMENT BANK

TWO HUNDRED AND SEVENTY-SIXTH MEETING OF THE BOARD OF DIRECTORS

TO BE HELD IN THE TURKS AND CAICOS ISLANDS

MAY 22, 2017

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**TECHNICAL ASSISTANCE – STRENGTHENING COASTAL ROAD INFRASTRUCTURE
RESILIENCE TO GEOPHYSICAL AND CLIMATE-RELATED HAZARDS –
ST. KITTS AND NEVIS**

1. APPLICATION

1.01 By letter dated November 1, 2016, the Government of St. Kitts and Nevis (GOSKN), through the Ministry of Finance, submitted a request to the Caribbean Development Bank (CDB) for grant funding to assist in financing a multi-hazard risk assessment and preparation of detailed designs aimed at strengthening coastal road infrastructure resilience to geophysical and climate-related hazards for coastal roads in St. Kitts.

1.02 The beneficiary of this technical assistance (TA) grant will be GOSKN and the project will be implemented by the Ministry of Public Infrastructure, Post, Urban Development and Transport through its Public Works Department (PWD).

2. BACKGROUND

2.01 St. Kitts and Nevis (SKN) is a twin island state, and is part of the Leeward Island chain, situated to the North-West of Antigua and Barbuda. The combined islands have a total land area of 104 mi² (269 km²), with Nevis being the smaller with 36 mi.² (93 km²) in area. The islands are volcanic in nature with central mountain ranges dominating the landscape and radiating downward toward the coasts (see Site Map at Figure 1). At the most recent population census in 2011, the population of the twin island country was recorded at some 47,196, with 34,918 of the population resident in St. Kitts and 12,278 in Nevis. The settlement patterns in both islands consist of dense population centres in and around the capitals with scattered satellite villages along the islands' main coastal roads. Daily commuter demand into and out of the two main town centers is high as residents continue to maintain a close social and commercial/business relationship with institutions in the capitals. This creates heavy traffic in and out of the main arteries.

3. PROPOSAL

3.01 It is proposed that CDB approve a TA grant to GOSKN of an amount not exceeding the equivalent of five hundred and thirty-eight thousand, four hundred and fifty Euros (€538,450) from CDB's Special Funds Resources (SFR) allocated from resources provided under the European Union (EU) Contribution Agreement for the Implementation for the African Caribbean Pacific-European Union-Caribbean Development Bank (ACP-EU-CDB) Natural Disaster Risk Management (NDRM) in CARIFORUM Countries.

3.02 The grant will be used to finance consultancy services to:

- (a) conduct a multi-hazard risk assessment and a climate risk and vulnerability assessment of the coastal road infrastructure in SKN;
- (b) undertake an assessment of relevant policies, plans, strategies, legal and regulatory frameworks to implement resilience measures in the road infrastructure in SKN and to make recommendations for investment needs and solutions for climate and geotechnical hazards resilience in SKN's road network; and
- (c) undertake detailed designs for the rehabilitation of two priority sections determined by GOSKN.

3.03 The scope of works for the consultants is set out in the Draft Terms of Reference (TOR) in Appendix 1.

4. OUTCOME

4.01 The expected project outcome is enhanced capacity of GOSKN to: (a) increase the resilience of the road network to geophysical and climate related hazards; and (b) implement socially inclusive and technically and economically feasible rehabilitation works at two priority sites. The Design and Monitoring Framework for this activity is set out in Appendix 2.

5. JUSTIFICATION

5.01 Each year, transport infrastructure in the Caribbean, and particularly road infrastructure, suffers substantial damage as a result of natural hazard events, with coastal flooding being among the most frequent and costly. Coastal settlements and livelihood characteristics of the area targeted for this study in St. Kitts, are highly exposed to climate and geophysical stressors which may take place in areas that are low lying and vulnerable to upstream flooding, storm surge and sea level rise. Apart from the direct infrastructure repair and rehabilitation costs associated with these natural hazard events, the disruption caused translates into significant social displacement and economic losses.

5.02 According to the *Climate Change Knowledge Portal of The World Bank Group*, "Over 60% of the population in SKN is situated in coastal areas, rendering them vulnerable to sea level rise, storm surge and coastal flooding. Disaster risk priorities should therefore focus on the protection of coastal zones"¹.

5.03 In St. Kitts, the larger of the two-island Federation where 74% of the population reside (comprising 16,866 males and 18,032 females), a significant portion of its road network is coastal and low-lying and as a result vulnerable to climate variability and climate change (CVC) impacts as well as geophysical hazards. These include extreme rainfall events and storm surges associated with tropical storms and hurricanes. There are some areas of the coastal road network which are currently showing signs of being compromised structurally. Two of these areas have been accorded high priority by GOSKN. The first is the northern section of the Old Road Highway where GOSKN engineers have noted increasingly unstable slopes on the inland side and the gradual deterioration of the carriageway which is unprotected from the Caribbean Sea, on the southern side. Additionally, on the Bay Road/Fortlands Road, just south of Basseterre, undermining of the carriageway by the sea has been observed.

¹ http://sdwebx.worldbank.org/climateportal/countryprofile/home.cfm?page=country_profile&CCCode=KNA&ThisTab=ImpactsVulnerabilities

5.04 Failure of these coastal roads, in general, and the two identified sites in particular, will disrupt direct access to the critical facilities and services from the capital especially for residents along the southern coast of the island. Stemming coastal road degeneration at these two sites is critical to SKN's social and economic development and is in keeping with efforts from GOSKN to promote inclusive growth to promote livelihood security through, among other strategies for effective protection of its economic infrastructure, its road transport network from impacts caused by natural hazards and climate change phenomena. GOSKN therefore approached CDB for assistance in undertaking the studies proposed herein, which are not only necessary to inform effective designs towards correcting the two specific sites of concern, but also develop an overall strategy and plan for improving the resilience of the road network as a whole.

5.05 To ensure effective protection of the road sector from the devastating effects of CVC and geophysical hazards, it will be necessary to strengthen national and community-level capacities to support effective stakeholder engagement in mitigation, preparedness, management and coordinated responses to natural hazards and the effects of climate change. Adaptation approaches and tools have been developed by other regional and international agencies, and the studies will draw on these and other established instruments to contribute to strengthening road sector resilience as it relates to assets and infrastructure, policies, plans, strategies and institutions in SKN.

5.06 The proposed TA is consistent with:

- (a) the purpose and objectives of ACP-EU-NDRM, in particular ACP-EU-CDB Result Area 2: Improved local, national and regional resilience through strengthened early warning, national risk profiling and community-based disaster risk reduction (DRR) and climate change adaptation (CCA); and Area 3: Sector resilience strengthened in key public policy sectors, through DRR and CCA mainstreaming.
- (b) CDB's Strategic Objective of supporting inclusive growth and sustainable development within its Borrowing Member Countries (BMCs).
- (c) CDB's Corporate Priorities of: (i) Strengthening and Modernising Social and Economic Infrastructure; and (ii) Promoting Environmental Sustainability (climate change resilience, environmental management and disaster risk management).
- (d) CDB's Climate Resilience Strategy which includes supporting BMCs to design and implement climate-resilient development programmes.
- (e) CDB's TA Policy and Operational Strategy of commitment to strengthening the synergies between TA operations and the Bank's investment lending.
- (f) Sustainable Development Goals (SDG) 9, and 13².

5.07 Based on CDB's TA Performance Rating System (Appendix 3), the project has been rated highly satisfactory (scored at 3.5). This indicates that the TA has a good chance of meeting its development objectives. The project has also been assessed to have significant potential to contribute to gender equality (with a score of 3). The Gender Marker Analysis is presented at Appendix 4 and the gender marker is summarised in Table 1 below. The project has the potential to contribute significantly to gender equality.

² SDG 9 - Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. SDG 13 - Take urgent action to combat climate change and its impacts.

TABLE 1: GENDER MARKER SUMMARY

| Gender Marker | Analysis | Design | Implementation | Monitoring & Evaluation | Score | Code |
|----------------------|-----------------|---------------|-----------------------|------------------------------------|--------------|-----------------------|
| | 1 | 0.5 | 1 | 0.5 | 3 | GM³ |

6. RISK ASSESSMENT AND MITIGATION

6.01 There are no major risks identified on this project.

7. EXECUTION

7.01 The Ministry of Public Infrastructure, Post, Urban Development and Transport through PWD will implement the Project. It will be a condition precedent to first disbursement of the grant, that GOSKN assign a project Coordinator (PC) from within PWD to be responsible for the day-to-day coordination and management of the Project. PC shall be a civil engineer, whose qualifications and experience are acceptable to CDB. The PC will report to the Director of PWD, who will liaise with the Ministry of Sustainable Development (MOSD). MOSD shall provide general oversight of the project and act as the focal point for communication between the GOSKN and CDB.

7.02 The TOR for the PC is outlined in Appendix 5.

7.03 The TOR for the consultancy is attached at Appendix 1. It is estimated that the consultancy services will be provided over a period of 10 months. The first disbursement will be made by September 30, 2017 and the funds are expected to be fully disbursed by September 30, 2018 (allowing two months for unanticipated delays and final paperwork completion).

8. COST AND FINANCING

8.01 The total cost of the project is estimated at six hundred and thirty-three thousand, four hundred and fifty Euros (€633,450) of which CDB’s contribution will be an amount not exceeding the equivalent of five hundred and thirty-eight thousand, four hundred and fifty Euros (€538,450) from CDB’s SFR allocated from resources provided under EU Contribution Agreement for the “Africa Caribbean Pacific-European Union–Caribbean Development Bank Natural Disaster Risk Management in CARIFORUM Countries”.

8.02 Counterpart funding, equivalent to an amount of not less than ninety-five thousand Euros (€95,000), will be provided by GOSKN.

8.03 The summarised financing plan is set out in Table 3 below and the detailed Budget can be found at Appendix 6.

TABLE 3: FINANCING PLAN FOR CONSULTANCY SERVICES

| Contributors | € | % |
|----------------------|----------------|------------|
| CDB SFR (ACP-EU-CDB) | 538,450 | 85 |
| GOSKN | 95,000 | 15 |
| Total | 633,450 | 100 |

³ Gender Mainstreamed - significant potential to contribute to gender equality.

9. PROCUREMENT

9.01 Subject to paragraph 9.02 below, procurement shall be in accordance with CDB's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (October 2011). The Procurement Plan is set out in Appendix 7. Any revisions to this Plan shall require CDB's prior approval in writing.

9.02 Financing shall be provided under the ACP-EU-CDB-NDRM in CARIFORUM Countries agreement and thus, in accordance with that Agreement, eligibility shall be extended to countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries, in accordance with the EU Eligibility Rules set out in Appendix 8.

10. REPORTING REQUIREMENTS

10.01 The PWD will be required to submit to the MOSD the Consultant's Reports required by the TOR for further submission to CDB (see Appendix 1).

11. RECOMMENDATION

11.01 It is recommended that the Board of Directors approve a grant to GOSKN of an amount not exceeding the equivalent of five hundred and thirty-eight thousand, four hundred and fifty Euros (€538,450) (the Grant), from CDB's SFR to finance consultancy services to strengthen the coastal road infrastructure resilience to geophysical and climate-related hazards in SKN (the Project), on CDB's standard terms and conditions, and on the following terms and conditions:

(1) Disbursement:

- (a) Except as CDB may otherwise agree, disbursement of the Grant shall be made as follows:
 - (i) an amount not exceeding the equivalent of one hundred and seven thousand, six hundred and ninety Euros (€107,690) shall be paid as an advance (the Advance) on account of expenditures in respect of the Grant, following receipt by CDB of:
 - (aa) a request in writing from GOSKN for such funds; and
 - (bb) evidence acceptable to CDB that the conditions precedent to first disbursement of the Grant set out in paragraph (3) below shall have been satisfied; and
 - (ii) the balance of the Grant will be paid periodically, by way of additional advance payments, provided however, that CDB shall not be under any obligation to make:
 - (aa) the first such payment until CDB shall have received an account and documentation satisfactory to CDB in support of expenditures incurred by GOSKN with respect to the Advance;
 - (bb) any subsequent payment until CDB shall have received:

- (i) an account and documentation satisfactory to CDB in support of expenditures financed by GOSKN from the resources of the immediately preceding payment;
 - (ii) a request in writing from GOSKN for the additional advance payment; and
 - (iii) the requisite number of copies of the reports, in form and substance acceptable to CDB, required to be submitted by the consultant to GOSKN and CDB for the time being, in accordance with the TOR; and
- (cc) payments exceeding the equivalent of four hundred and eighty four thousand, six hundred and five Euros (€484,605), representing ninety percent (90%) of the amount of the Grant, until CDB shall have received:
- (i) the requisite number of copies of the final report or other deliverables, in form and substance acceptable to CDB, to be furnished by the consultants to CDB in accordance with the TOR at Appendix 1; and
 - (ii) a certified statement of the expenditures incurred by GOSKN in respect of, and in connection with, the Project.
- (b) The first disbursement of the Grant shall be made by September 30, 2017 and the Grant shall be fully disbursed by September 30, 2018, or such later dates as CDB may specify in writing.

(2) **Procurement:**

- (a) Subject to sub-paragraph (b) below procurement shall be in accordance with the procedures set out and/or referred to in the Grant Agreement between CDB and GOSKN, or such other procedures as CDB may from time to time specify in writing.
- (b) In respect of procurement of goods and services required for the Project, country eligibility shall be extended to countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries, in accordance with EU Eligibility Rules (Appendix 8).
- (c) The Procurement Plan, approved by CDB, is set out at Appendix 7. Any revisions to the Procurement Plan shall require CDB's prior approval in writing.

(3) **Conditions Precedent to First Disbursement:**

- (a) PC referred to in sub-paragraph 4(b)(i) below shall have been assigned; and
- (b) CDB shall have received a signed copy of the contract between GOSKN and the consultants referred to at (4)(b)(ii) below.

(4) **Other Conditions:**

- (a) Except as CDB may otherwise agree, GOSKN shall implement the project through PWD.
- (b) GOSKN shall:
 - (i) assign from within PWD, for the duration of the project, a PC, with qualifications and experience acceptable to CDB, who shall be responsible for the day-to-day coordination and management of the project, with the TOR set out in Appendix 5. The PC will report to the Director of PWD. The qualifications and experience of any person subsequently appointed to the position of PC shall be acceptable to CDB;
 - (ii) in accordance with the procurement procedures applicable to the Grant, select and engage a competent and experienced consultants to carry out the services outlined in the TOR in Appendix 1 and implement such recommendations arising from such consultancies, as may be acceptable to CDB;
 - (iii) assign to the project the additional counterpart staff required during implementation;
 - (iv) collect and store, in a location accessible to the consultants, all existing, maps, reports, drawings, studies and any other relevant documentation required for the consultancy services, including data created as a result of the Project;
 - (v) facilitate and permit, during implementation of the project, and for a period of six (6) years after implementation of the Project, any authorised representative of CDB to conduct investigations of credible suspicion of or actual fraud, corruption or any other financial irregularity, impropriety or wrong doing;
 - (vi) permit CDB, or any person appointed thereby, to audit the expenditures financed by the Grant, and to provide CDB, or the appointed person with all reasonably required assistance, documents and information;
 - (vii) facilitate and permit any authorised representative of CDB or the EU to communicate with and, if necessary, visit PWD and/or the consultant in order to obtain all such information as CDB and EU may require with regard to the progress of the Project;
 - (viii) permit CDB and the EU, or any person appointed thereby, to audit the expenditures financed by the Grant and their eligibility, prior to or after the relevant payments, and to provide CDB and the EU, or the appointed person with all reasonably required assistance, documents and information; and

- (ix) acknowledge that CDB may be obliged to divulge such documents relating to the project and the consultant(s) to any competent EU institution or body in accordance with the relevant mandatory provisions of EU Law.
- (c) Except as CDB may otherwise agree, GOSKN shall:
 - (i) meet or cause to be met:
 - (aa) the cost of the items designated for financing by GOSKN in the budget set out in Appendix 6 (the Budget);
 - (bb) any amount by which the cost of the project exceeds the amount set out in the Budget; and
 - (cc) the cost of any other items needed for the purpose of, or in connection with, the project.
 - (ii) provide or cause to be provided, all other inputs required for the punctual and efficient carrying out of the project not being financed by CDB.
- (d) CDB shall be entitled to suspend, cancel or require a refund of the Grant, or any part thereof, if any part thereof is suspended, cancelled or required to be refunded, except that GOSKN shall not be required to refund any amount of the Grant already expended in connection with the project and not recoverable by GOSKN, unless that amount already expended was misappropriated due to a proven fraudulent, unethical or other activity of wrong doing.

SUPPORTING DOCUMENTATION

- Appendix 1 - Draft Terms of Reference – Consultancy Services – Strengthening Coastal Road Infrastructure Resilience to Geophysical and Climate Related Hazards in St. Kitts and Nevis
- Appendix 2 - Design and Results Monitoring Framework
- Appendix 3 - Performance Assessment Rating System
- Appendix 4 - Gender Marker Analysis
- Appendix 5 - Draft Terms of Reference - Project Coordinator
- Appendix 6 - Budget
- Appendix 7 - Procurement Plan
- Appendix 8 - European Union Eligibility Rules
- Figure 1 - Site Map

DRAFT TERMS OF REFERENCE

**CONSULTANCY SERVICES – STRENGTHENING COASTAL ROAD INFRASTRUCTURE
RESILIENCE TO GEOPHYSICAL AND CLIMATE-RELATED HAZARDS
IN ST. KITTS AND NEVIS**

1. BACKGROUND

1.01 St. Kitts and Nevis (SKN) is a twin island state, and is part of the Leeward Island chain, situated to the North-West of Antigua and Barbuda. Both islands have a total land area of 104 mi² (269 km²), with Nevis being the smaller with 36 mi.² (93 km²) in area. The islands are volcanic in nature with central mountain ranges dominating the landscape and radiating downward toward the coasts. At the most recent population census in 2011, the population of the twin island country was recorded at some 47,196, with 34,918 of the population resident in St. Kitts and 12,278 in Nevis. The settlement patterns in both islands consist of dense population centres in and around the capitals with scattered satellite villages along the islands' main coastal roads. Daily commuter demand into and out of the two main towns centres is high as residents continue to maintain a close social and commercial/business relationship with institutions in the capitals. This creates heavy traffic on the main arteries in and out of them.

2. OBJECTIVE

2.01 The objective of this technical assistance (TA) is to: (a) conduct an evaluation of the susceptibility of the coastal road network in SKN to climate variability and change, and geophysical hazards; and (b) prepare a technically and economically feasible project that will strengthen the resilience of coastal roads in two high priority sites.

2.02 The consultancy outputs will comprise: (a) sector-wide climate risk and vulnerability assessment (CRVA) for both SKN; (b) assessment of the suitability of the Government of St. Kitts and Nevis (GOSKN) sector policies, strategies, legal and regulatory frameworks for the implementation of resilience measures in the road infrastructure sector in SKN; (c) capacity building to strengthen the aforementioned enabling environment through identification of sector investment needs and solutions for climate and geotechnical hazards resilience in SKN's road transport; and (d) a capital project prepared for the two high priority sites.

3. SCOPE OF WORK

3.01 The services are to be conducted in accordance with generally accepted international standards and professional practices acceptable to GOSKN. The scope of work will cover all activities necessary to accomplish the objectives of the consultancy, whether or not a specific activity is cited in these Terms of Reference (TOR).

3.02 The scope of services of the consultant will include, but not be limited to, the following:

Phase 1:

(1) Sector Climate Risk and Vulnerability Assessment

- (a) Carrying out a CRVA, of the coastal road network in SKN including a gender inclusive Community Vulnerability Assessment (CVA) for the two sites of the proposed capital project as per the Scope of Work described below and the agreed outline to be included in the Consultant's Inception Report. The objective of the

CRVA, is to: (i) identify and evaluate the effects of climate change on the coastal roads infrastructure of SKN, including the proposed capital project; (ii) prepare a Climate Resilient Investment Plan to strengthen the resilience of the coastal roads infrastructure; and (iii) to identify resilience measures that should be included in the proposed capital project. Therefore the CRVA is expected to include recommendations of adaptation actions that could include infrastructure design, ecosystem approaches, institutional strengthening, management, maintenance, monitoring and community disaster risk management and emergency planning in response to climate change vulnerabilities. The consultant(s) should undertake a quantitative analysis based on Intergovernmental Panel on Climate Change (IPCC) guidelines, which should include the following:

(2) Initial Scoping and Data Collection

- (a) Reviewing historical reports available from other authorities of SKN including surveys, development strategies and maintenance feasibility studies; any other reports available from e.g. Air and Sea Ports Authority and Departments responsible for disaster risk management, with specific identification of climate variability and climate change (CVC) and geophysical hazards risk analyses in the above reports.
- (b) Organising initial information-gathering and stakeholder engagement workshops with key stakeholders in the affected areas. The workshops should inter alia gather information on the communities' and authorities' historical knowledge of past extreme weather events and how the infrastructure and communities recovered from these events. In addition the workshops should also identify any other ongoing impacts from CVC and geophysical hazards, in order to provide input for the CRVA.
- (c) Inventory of the affected roads sector wide and those identified for the capital project (based on secondary material or an initial scoping study) and condition survey including guard rails and embankment. As well as embankment/cliff side with erosion. The inventory of the roads infrastructure assets should be geo-referenced.
- (d) Initial environment appraisals. The consultant shall also collect data and make an initial assessment of the following variables: (i) geomorphology; (ii) meteorology (rainfall, wind, waves and tides); (iii) CVC surface hydrology; and (iv) marine receiving water quality. Baseline environmental information and land use characteristics shall also be considered.
- (e) Initial Social and Gender Assessment. The consultants shall collect the relevant baseline social data to make an initial assessment of the following variables: (i) population characteristics; (ii) community and intuitional structures; (iii) socio-economic resources; and (iv) potential socio-economic changes and displacement.

(3) Exposure Analysis

- (a) This task involves characterisation of relevant climate variables and establishment of a climate baseline. This could include, *inter-alia*: (i) temperature and precipitation changes (more precisely, maximum 24-hour daily precipitation as the basis for assessing the risk of floods from surface runoff); (ii) mean sea level; and (iii) incidence of hurricanes, tropical storms and associated storm surge levels and wind. Both historical data and future scenarios will be required. The consultant will be expected to provide advice on the appropriate recurrence intervals for meteorological events impacting the proposed design of the infrastructure.
- (b) The exposure analysis should also include: (i) identification of the hydraulic, hydrologic, topographic and bathymetric variables affecting coastal processes and surrounding watershed areas (for example, landslides, including debris slides, debris flows and rock falls, and coastal flooding); and (ii) downscaled climate change scenarios for mid-century and specifically for the relevant time horizon of the Capital Project, specifying the technique used for downscaling.
- (c) Preparation of hazard maps showing the spatially distributed expected levels for different frequencies (50-year, 100-year and 150-year return periods) and for different hazard types (coastal flooding, riverine flooding, landslides, subsidence, gullying, storm surges, sea level rise, volcanic eruptions, earthquakes) including the mapping of the affected communities and social/community resources affected.

(4) Sensitivity Analysis

- (a) The main task will include an assessment of prospective sites for susceptibility to the effects of projected climate change for the reference variables described above and for different climate scenarios, each ranked accordingly. The expected detail for each critical site (where impacts are likely to occur, based on the exposure analysis) will depend on site specific considerations. The assessment should include consideration of the vulnerability of the surrounding community and supporting infrastructure, including roads, power, telecommunication linkages, water supply, livelihoods etc. For coastal infrastructure and in particular, sites where coastal dynamics are likely to impact roads and other physical and community assets the consultant(s) could use coastal flood assessment methods, erosion models and wave height models. For these critical areas, the consultant should prepare an impacts matrix describing for each relevant climate variable: the outcome (e.g. higher intensity hurricanes leading to extreme storm surges); and the impact on the road asset (e.g., flooding). It will also be important to specify any uncertainties involved, given the wide cost variation this may imply in the application of adaptation measures.

(5) Adaptive Capacity Assessment

- (a) The consultant(s) will make an assessment of the capacity of the relevant government institutions to adapt to climate change and the communities in the vicinity of the two sites for the proposed capital project. The institutional assessment will include: reviewing relevant Policies, Plans, Strategies, Legal and Regulatory Framework Governing the Road Sector; organisations involved in the

road sector (including for maintenance), as well as budgets, to ascertain the main challenges and risks from climate change; and to see how climate risk management could be incorporated. It should identify the main challenges to adaptation and identify the barriers that may constrain the organisations from adapting (legislation, administrative, legal, financial, etc). The consultant will use secondary information and interviews with key stakeholders and knowledgeable individuals in the characterisation of the organisational context in which the adaption planning must take place.

- (b) For the communities at the project sites, different groups of men and women will be engaged to facilitate gender differentiated assessments of existing vulnerabilities and coping strategies and adaptations. Attention should be given to the differential livelihoods and coping strategies of women and men, and vulnerable population groups such as female-headed households, elderly low income households and the differently disabled. The assessment of adaptive capacity should take into account non-climate stressors such as poor land management practices as well as local economic and settlement development patterns. Behavioural changes or adjustments to economic activities might be explored and possible links to increased tourism opportunities identified.

(6) Criticality Matrix:

- (a) In summarising the findings of the risk assessment of the road network, the consultant will prepare a criticality matrix which will identify hotspots and rank key segments of the roads network based on a multi-criteria analysis. A multi-criteria evaluation (MCE) process should be used that will take into consideration a combination of criteria, including physical, social economic and institutional criteria, amongst others, to support the prioritisation of possible investments by means of two parallel activities: (i) the assessment of the road infrastructure criticality; and (ii) the evaluation of the level of hazard and risk posed to the road network. The two would then be integrated to provide an overall ranking.

(7) Adaptation Assessment

- (a) The consultants should identify the most appropriate resilience measures that could be adopted to address the vulnerability of the hotspots on the road network in SKN, identified above, as well as those that should be incorporated into the capital Project. The consultant should consider a range of adaptation options including hard infrastructure, ecosystems based approaches, community/household behavioural change as well as institutional measures. For one of the identified hotspots in the road network, an illustrative socio-economic analysis should be conducted of each technically feasible option, showing the costs and benefits, or a cost-effectiveness analysis if the adaptation options are expected to deliver the same benefits. The adaptation assessment should address different categories such as: (i) design or construction of new or replacement assets (pavement, structures, drainage); (ii) maintenance and management of existing assets; and (iii) managing network operations. The benefits of these measures should be clearly explained.

- (b) Based on the institutional assessments, the consultants should recommend any changes in policies or strategies and suggest actions to build capacity for the relevant organisations to identify and implement resilience measures. For the capital project, arrangements for monitoring and evaluation of the resilience measures should also be proposed inclusive of social and gender monitoring indicators.

Phase 2:

(1) Project Preparation

- (a) Description of the proposed project area (two sites), based on the data collected in Phase 1 - Initial Data Collection and Scoping - above and any additional baseline data required to describe the relevant physical, biological, environmental and social characteristics of the project area.
- (b) Carrying out any additional studies necessary for the elaboration of the scope of work of the Project. The additional studies will include but may not be limited to the following items:
 - (i) *Topographical Survey.* Where appropriate, the consultant will carry out a topographical survey that will be part of the bidding documents and shall allow the bidders to design a detailed, complete and sound technical proposal. Maps and reports resulting from this survey will be included in the bidding documents.
 - (ii) *Geotechnical Survey.* The consultant shall conduct geotechnical surveys for the main civil structures for both project sites and the slope alongside the Old Road in order to determine subsurface conditions (quantification of presence of rocks, etc.), define design bearing capacity of the subsoil and other design parameters. The report and maps of this survey will also be part of the bidding documents.
- (c) Evaluation of project options. Based on the results of the studies and analyses, identifying an optimal option and performing a comparative analysis based on engineering appropriateness, impacts and costs. The results of the CRVA will be used to identify key vulnerable hotspots and potential climate adaptation measures to address the potential impact of climate change on the project components. The consultant will prioritise the identified adaptation measures, conducting an economic analysis of each technically feasible option, showing the costs and benefits, or a cost-effectiveness analysis if the measures are expected to deliver the same benefits. Ensure the compatibility of designs with National Green Economy Policy and the National Environmental Action Plan, use where appropriate the natural, renewable and green energy and ensure preservation of historical heritage in project elements where agreed with SKN heritage protection body. Conduct a life-cycle cost analysis of options, taking into account capital and operational costs. Based on the results of all tasks and recommendations from the Consultants, an optimal option should be selected with support of the managerial, engineering and other operational staff and approved by GOSKN and the Caribbean Development Bank (CDB).

- (d) Conducting a detailed gender inclusive Environmental and Social Impact Assessment (ESIA) in cooperation with the relevant environmental protection and gender/social safeguards and mitigation inclusive of the consideration of natural hazards of proposed works. Distinguish environmental and gender/social impacts at construction and post construction phase impacts, classified as short- and long-term, positive and negative impacts, and direct and indirect. Identify the significant impacts and those that are cumulative, unavoidable, or irreversible. Identify impacts related to the rehabilitation activities. Provide specific feasible and cost-effective mitigation measures for all significant negative environmental and gender/social impacts identified for both the construction and operational phases of the Project. The boundaries of the project area for the assessment, as well as any adjacent areas that should be considered with respect to the Project should be specified. Obtain the approval from the Departments responsible for disaster risk management.
- (e) Preparing a draft Environmental Management Plan (EMP) and Gender Action Plan and Social Mitigation Plan for inclusion in the tender documents. The EMP will include a summary of potential impacts and recommended mitigation measures to prevent or reduce adverse effects of the Project during construction and operations; allocation of resources and responsibilities for implementation; and institutional arrangements proposed for effective implementation of environmental measures proposed in the ESIA. It should specifically address, but not necessarily be limited to, the following: protection of affected areas, including endangered species, traffic management; waste disposal; management of construction materials (transport, storage, and waste disposal); mitigation of dust and noise nuisance; community safety, concerns and relations, ensuring that the Project does not exacerbate the vulnerability of local communities to natural hazard impacts or result in unnecessary physical or financial dislocation. Identify the critical issues requiring monitoring to ensure compliance to mitigation measures. This should include the technical aspects of monitoring and evaluation of the effectiveness of proposed mitigation measures including: measurement methodologies; data analysis; reporting schedules; emergency procedures; and detailed budget.
- (f) Conducting an economic evaluation should be conducted to show the likely economic impacts of possible damage in the absence of adaptation as well as an economic analysis of each technically feasible option, showing the costs and benefits, or a cost-effectiveness analysis if the adaptation options are expected to deliver the same benefits.
- (g) Developing a capital project inclusive of:
 - (i) Detailed designs and specifications as necessary for all civil and structural works installations and items of equipment to be procured. The detailed specifications will be produced in accordance with accepted international standards, such as AASHTO, and in particular, the Caribbean Unified Building Code. The consultants are expected to show details of all calculations for their designs.

- (ii) Bills of quantities and detailed cost estimates for the proposed works, based on the designs and specifications above. Current costs for similar works in SKN will be used as a basis for all unit rates and detailed costings.
- (iii) Standard bidding documents for the contract to allow GOSKN to solicit bids from prequalified international, regional and local contractors or joint ventures of local/regional/international contractors. In this regard, the consultant(s) are referred to CDB's Standard Bidding Documents for Procurement of Works. The bid documentation will contain the following:
 - (aa) Instructions to Bidders.
 - (bb) General and Special Conditions of Contract with particular reference to FIDIC Multilateral Development Bank conditions¹.
 - (cc) Bid Drawings.
 - (dd) Technical Specifications (general and specifications peculiar to local conditions).
 - (ee) Bills of Quantities.
 - (ff) Forms of Securities.
- (h) Provision must be made by the Consultant for two engineering professionals from the Public Works Department (PWD) to be assigned to work as interns with the consultants on the Project. In addition, Consultant is expected to provide training sessions for two engineers from PWD in their offices in order to participate in the design process. All costs to be covered by the Consultant.

4. QUALIFICATIONS AND EXPERIENCE

4.01 It is the consultant's responsibility to ensure that their team has an appropriate mix of key and non-key experts required to satisfy the full requirements of the TOR. All of the members of the consulting team must have excellent communication and interpersonal skills and must be fluent in oral and written English and possess relevant computer skills.

4.02 The Team Leader will lead in the preparation of the investment plans and in the preparation of summary profiles of proposed investments. He/she will assist in the preparation of cost estimates for capital and recurrent costs related to road sector project. He/she will ensure that the all aspects of the Project are addressed, such as: technical, institutional and social, indicative costs (including capital and maintenance costs, user charges, etc.), environmental compliance, disaster risk reduction, climate resilience, and economic and financial viability. In addition, the Team Leader will lead in the review of existing government policies, institutional and regulatory framework together with familiarity with international donors' procurement guidelines. The Team Leader shall be responsible for the tasks and responsibilities mentioned in these TOR, as well as for liaison with GOSKN. He/she must attend meetings as required and explain the design criteria and answer any relevant questions. As a guide only, it is considered that the

¹ <http://www.caribank.org/wp-content/uploads/2013/05/FIDIC-MDB-conditions-of-contract-for-construction.pdf>

consulting team is likely to need to include the following key experts, from which a Team Leader shall be selected and proposed.

(a) Key Expert No.1: Roads Engineer

- (i) The Roads Engineer should have preferably a minimum of 15 years in road engineering, including at least 5 similar assignments both in nature, value and under similar conditions and investment programmes.
- (ii) Education: Preferably a Master's Degree in highway civil engineering or similar from a recognised university.

(b) Key Expert No. 2: Climate Risk Management and Environmental Specialist

- (i) The Specialist should have preferably a minimum of 10 years' relevant professional experience in: (aa) the area of climate change impacts adaptation and mitigation is required, including the conduct of detailed climate vulnerability and adaptation assessment; and (bb) environmental assessment. Experience with ESIA/EIS procedures is a requirement. The Specialist will be responsible, *inter-alia*, for: identifying the climate change parameters to be assessed; collection of relevant local historical climate data and climate change projections; identify the probabilities of specific climate change occurrences; conduct field investigations with local stakeholders to identify existing vulnerabilities (such as areas prone to flooding); and, in consultation with other team members, contribute to the identification of adaptation options, including their costs and benefits and prioritisation.
- (ii) Education: Preferably a Master's Degree in environmental science with specialism in Climate Change from a recognised university.

(c) Key Expert No. 3: Coastal Civil Engineer

- (i) The Specialist will be responsible for designing coastal protection infrastructure. He/she will have preferably a minimum of 10 years' relevant experience, including at least 5 similar assignments both in nature, value and under similar conditions.
- (ii) Education: Preferably a Master's Degree in Civil or Coastal Engineering with specialism in coastal protection design from a recognised university. Construction management qualification.

(d) Key Expert No. 4: Social and Gender Analyst

- (i) The Specialist will be responsible for the stakeholder analysis, effective engagement of all groups of stakeholders, assessing the baseline social and gender conditions and the main factors affecting social development, conducting the gender/social impact assessment, and identifying the gender/social monitoring parameters of the proposed project. He/she should have preferably a minimum of 10 years' experience in the impact assessment as well as in the gender/social monitoring and evaluation of development projects. Living standards and access

to services and the level of service provided should be assessed in qualitative and quantitative terms to the extent practicable within the assignment.

- (ii) Education: Preferably Master's Degree in social sciences, anthropology or similar relevant discipline with training in stakeholder engagement and facilitation of participatory assessments. Formal training in gender assessment/analysis is also a requirement.

(e) Key Expert No. 5: Geotechnical Engineer

- (i) Preferably a minimum of 10 years' work experience in the area of geotechnical analyses. The Specialist must have the ability to complete geotechnical testing, analysis, design and stabilisation of slopes, verify the design and implement the design during construction. The Specialist must have experience in ground engineering, slope stabilisation and rock fall protection. He/She should also have the ability to complete geotechnical structure designs.
- (ii) Education: Preferably a Master's Degree or equivalent in geotechnical engineering.

(f) Other Specialist

- (i) In addition to the aforementioned Key Experts, the inclusion of an **Economist/Financial Analyst** will be an asset to the consulting team. This Specialist will have primary responsibility for preparing the prioritisation methodology and the funding strategy for the project. He/she should have preferably a minimum of 10 years' experience in resource allocation, and economic and financial analysis of infrastructure programs as well as in preparing procurement and financial documents. The Specialist should also have considerable experience in government financial and budget preparation processes, as well as project costing and financial viability assessment. The Specialist must have experience relevant to the Caribbean.
- (ii) Education: Preferably a Master's Degree in economics or related discipline from a recognised university.

5. OUTPUTS/DELIVERABLES

5.01 The consultant(s) will present five copies of each report, four copies to GOSKN and one copy to CDB. The reports shall also be submitted in 'PDF' format as complete documents, as well as in Microsoft Word and Excel and/or other formats used in their creation. A copy of all data used in the preparation of the reports shall also be submitted to CDB. These Reports are as follows:

- (a) Inception Report: This Report will be presented within four weeks after the signing of the contract, and it will include: (i) initial findings, including details of existing *status quo* and the needs assessment; (ii) consultants' detailed work plan and methodology, including the schedule and scope of all activities to be undertaken, including provisions for CRVA; (iii) proposed outlines for further reports; and (iv) the review and assessment of how and whether CVC aspects and geophysical hazards were covered in the existing documentation and how the overall climate vulnerability of coast and coastal communities will be

assessed.

- (b) CRVA Report. The consultant will deliver a report on the climate risk assessment for the national road network that will include options for increasing resilience; and a report on the vulnerability assessment of the two sites for the capital project, including the recommended adaptation measures (see below under Project Preparation). The draft final report on the national road network will be presented at a workshop to be organised by CDB and the final package would incorporate the feedback received from this workshop. The materials shall be prepared in a manner to facilitate electronic dissemination/access by website, etc., as agreed to with CDB.
- (c) Road sector assessment Report: Within 18 weeks of commencing the works, the consultants will submit a report inclusive of: (i) CRVA of the roads network for SKN inclusive of an assessment of policies, plans, etc. and recommendations for integrating resilience measures into the sector; and (ii) a package of guidance resources, technical materials, technologies, techniques, etc., for the integration of climate resilience into the roads sector in SKN.
- (d) Feasibility Report: Within 18 weeks of commencing the works, the consultants are required to submit the Feasibility Report, inclusive of the CRVA of the specific capital project sites. The Report will review the feasibility study's technical and financial conclusions and outline design options (including resilience measures) with in-depth analysis of all pros and cons as well as make recommendations on the final project elements. The Feasibility Report should also include draft training recommendations for the employees in the institutions responsible for project planning and implementation. Sufficient time to be allowed for consultations with all relevant government agencies and ministries. Upon reception of comments from GOSKN, the consultant shall finalise the training plan and content outline within two weeks.
- (e) Technical Specification Report: The consultant shall submit a Draft Technical Specifications Report (including the detailed studies, plans, surveys, notices, etc.) within 26 weeks after the commencement of the service. The Report should also include a comprehensive ESIA, taking into account implications of localities within National Parks and CRVA for SKN, including also the corresponding Extreme Weather Management Plans. Upon reception of comments from GOSKN, the consultant shall finalise the documents within four weeks;
- (f) Draft Design Report: The Draft Report will be submitted within 34 weeks after the signing of the contract, but not before all elements of the consultancy are completed. The Report should include full tender documents acceptable to GOSKN. Upon reception of comments from GOSKN, the consultant shall finalise the tender documents within 2 weeks and provide the client with 15 copies.
- (g) Final Design Report: The Final Report will be submitted within four weeks after receiving all the comments on the draft version from GOSKN, and having incorporated the results of those comments. A full copy of all raw data, copies of Reports and other information collected by the consultants must be submitted to PWD for future references.
- (h) the consultant is expected to make a presentation to PWD, summarising the project development process from the first principles and the resulting design.

6. DURATION OF CONSULTANCY

6.01 The consultancy is expected to be conducted over a period of approximately 10 months.

7. COORDINATION AND FACILITIES

7.01 The project is being implemented through the PWD of Ministry of Public Infrastructure, Post, Urban Development and Transport. The consultant(s) shall report to the Project Coordinator, appointed/assigned within PWD. The Ministry will assist the consulting Team in establishing contacts and arrangements for meetings, as well as facilitate the issuance of any permits required for the consultant(s) to carry out the assignment and make available all relevant, existing reports, documents, maps and data. The consulting(s) are expected to bring their own computers. The Ministry of Public Infrastructure, Post, Urban Development and Transport will provide office space for the consultant(s), while based in SKN, as well as arrange internet access, meeting rooms, conference rooms for presentations and stakeholder meetings. The Ministry shall designate counterpart personnel whom the consultant(s) shall mentor in all aspects of the assignment.

7.02 GOSKN will facilitate and permit any authorised representative of CDB or the EU to communicate with and, if necessary, visit PWD and/or the consultant(s) in order to obtain all such information as CDB and EU may require with regard to the progress of the project.

DESIGN AND RESULTS MONITORING FRAMEWORK

| Design Summary | Performance Targets/Indicators | Data Sources/ Reporting Mechanisms | Critical Assumptions |
|---|--|---|--|
| Impact: Capital project which will contribute to reduction of vulnerability to long term impacts of natural hazards by rehabilitating the coastal road infrastructure. | | | |
| <p>Outcome:</p> <p>Enhanced capacity of GOSKN to: (a) increase the resilience of the road network to geophysical and climate related hazards; and (b) implement a socially inclusive and technically and economically feasible rehabilitation works at two priority sites.</p> | Acceptance by GOSKN/PWD of project proposal, including gender and social interventions by December 31, 2018. | PC Reports. | <ol style="list-style-type: none"> 1. GOSKN priorities remain unaltered. 2. Recommendations of the Consultants accepted by GOSKN/PWD and other stakeholders. |
| <p>Outputs:</p> <ol style="list-style-type: none"> 1. A multi hazard risk assessment and a sector-wide CRVA for SKN. 2. Assessment of and proposed improvements to relevant, policies, plans, strategies, legal and regulatory frameworks to implement resilience measures in the road infrastructure in SKN. 3. Capacity building through identification of sector investment needs and solutions for climate and geotechnical hazards resilience in SKN's road transport. 4. Detailed designs for road rehabilitation works to identified sections along the road network. | Detailed design report accepted by GOSKN, PWD and CDB by August 31, 2018. | <ol style="list-style-type: none"> 1. Consultants' Reports. 2. PC Reports. 3. CDB Supervision Reports. | |
| Total Inputs (€) | | | |
| Item | CDB | GOSKN | Total |
| Consultants | 489,500 | - | 489,500 |
| General Support | - | 95,000 | 95,000 |
| Contingencies (10%) | 48,950 | - | 48,950 |
| Total | 538,450 | 95,000 | 633,450 |
| | | CDB disbursement records. | |

PERFORMANCE ASSESSMENT RATING SYSTEM

| Criteria | Score | Justification |
|----------------------------|--------------|---|
| Relevance ¹ | 4 | <p>The justification for addressing resilience to disaster risks and climate change impacts is made on the basis of damage experienced and potential risks faced. Increasing the resilience of roads, bridges and other elements of roads transport infrastructure to climate change impacts is a sustainable development priority for CDB’s BMCs, as is accessing resources to do so.</p> <p>Supporting inclusive growth and sustainable development within its BMCs is one of the CDB’s strategic objectives.</p> <p>The Bank is committed to strengthening the synergies between TA operations and the Bank’s investment lending, which is in line with the TA policy and operational strategy.</p> <p>Assistance to BMCs to implement strategies and investment programmes to address climate resilience and deliver on their sustainable development objectives supports the Bank’s strategy for strengthening climate resilience among BMCs.</p> <p>Strengthening and modernising social and economic infrastructure and promotion of disaster risk management and climate change mitigation and adaptation; both support the Corporate Strategy.</p> <p>Growth through an improvement of the business environment, complemented by a social growth through improving access to health and education at all levels is in line with SKN development objectives.</p> <p>Environmental Sustainability and Climate Change is a strategic theme in CDB Strategic Plan 2015-2019.</p> |
| Effectiveness ² | 3 | <p>The objective of the TA is expected to be fully achieved. The well-prepared Project will provide support to the country’s long-term development, which is in line with the economic growth strategy.</p> <p>The use of qualified and experienced consultants across the varying relevant fields of expertise will also lend to the effectiveness of this project. The participatory approach to developing the Project will be another factor leading to buy-in and support from stakeholders.</p> |

¹ This criterion is assessed by how well the following are ensured: (a) adequacy of sector analysis and identification of the problem or issue required to establish the rationale for the TA; (b) consistency with CDB’s strategic objectives, its corporate objectives, and SDF Contributor’s Report; (c) consideration of alternative responses to the identified problem or issue; (d) consistency with country developmental priorities; (e) consideration of lessons learned from related TAs and other operations in the country; (f) consideration of constraints to the achievement of results; (g) appropriateness of TA outcome and outputs; (h) appropriateness of the timing of the TA; and (i) extent to which stakeholders see the TA as their own.

² This criterion is assessed by how the objectives of the TA are going to be achieved.

| Criteria | Score | Justification |
|-----------------------------|--------------|--|
| Efficiency ³ | 3 | <p>The description of undertakings and analyses required for the Project preparation will be a guiding factor in selection of the multi-discipline consultancy and will aim at maximising their expert resources. The information gathering workshops for stakeholders will also contribute to the quality and versatility of the background information driving the development.</p> <p>In that instance, outputs will be provided according to schedule and the quality will be closely monitored by the CDB, as well as a high degree of client satisfaction will be ensured.</p> |
| Sustainability ⁴ | 4 | <p>The TA is expected to provide a long-term framework for rehabilitation and upgrade of the sea defences in critical locations and is linked to the country's development strategy. It will, therefore:</p> <ul style="list-style-type: none"> (a) be a safeguarding tool for the efficient implementation of the capital project; (b) provide an example of a well prepared project enabling PWD to plan and similar projects for years ahead; and (c) enhance the awareness of climate change impact on the coastline and cost implications related to incorporation of mitigation and adaptation measures. <p>Participation in the development of the TA through support and management of Consultants is expected to contribute to long-term institutional capacity enhancement in the relevant departments of the Ministry.</p> |
| Total | 3.5 | Highly Satisfactory. |

HS Highly Satisfactory > 3.25 and ≤ 4.00
S Satisfactory > 2.50 and ≤ 3.25
MUS Marginally Unsatisfactory > 1.75 and ≤ 2.50
US Unsatisfactory > 1.00 and ≤ 1.75

³ This criterion is assessed by how well the delivery of inputs and conduct of activities and quality of outputs and outcomes are going to be achieved.

⁴ This criterion is assessed by how well the following are ensured: (a) long-term availability of sufficiently trained personnel for continued management and operation; (b) adequacy of financial support (revenues/benefits exceed operational costs); (c) maintenance arrangements; (d) impact on poverty; (e) impact on the environment; and (f) any other impacts (direct/indirect; intended/unintended) ensuing from implementation of the intervention.

GENDER MARKER ANALYSIS

| Project Cycle Stage | Criteria | Score |
|--|--|-----------------------|
| <p>Analysis: Introduction/ Background/ Preparation</p> | <p>Consultations with relevant categories of males and females and relevant gender-related public/private sector organisations and Non-Governmental/Community-Based Organisations will take/have taken place.</p> <p>Relevant categories include groups of males and females differentiated by age, ability, geographic location, occupation Gender-related organisations encompass the National Gender Bureau, networks of women’s, men’s organisations, labour unions. Socioeconomic, Sector and/or Institutional analysis considers gender risks and/or gender disparities that impact the achievement of project outcomes.</p> <p>Socioeconomic analysis considers socioeconomic conditions or traditional role models that lead to disadvantages for males and females in participation in project activities or in the distribution of benefits.</p> <p>Sector analysis considers specific/possible gender issues in the sector that constrain productivity as well as access to opportunities, resources and services.</p> <p>Institutional analysis considers:</p> <ul style="list-style-type: none"> (a) Laws and regulations that constrain gender equality, e.g. labour laws, lack of National Gender Policy, trade policies. (b) Gender gaps in capacities and operational systems of the implementing and executing agency – such as data, planning, implementation and monitoring systems as well as gender awareness. (c) Workplace policies that promote equality in: recruitment and staff ratios, access to jobs and wages and occupational health and safety; and address sexual harassment and sexual and reproductive health issues. | <p>0.5</p> <p>0.5</p> |
| <p>Design: Project Proposal/ Definition/ Objective/ Description</p> | <p>Project interventions/policies address existing gender disparities.</p> <p>Interventions are designed that lead to a reduction in gender disparities and/or project intervention mitigates against gender risks. The effect on gender equality is direct.</p> <p>Project objective/outcome includes the enhancement of gender equality or the design of gender-responsive policies or guidelines.</p> | <p>0.5</p> |

| Project Cycle Stage | Criteria | Score |
|--|--|-----------------------|
| | The Objective/Outcome of the Project should be clearly related to the enhancement of gender equality. | |
| Implementation: Execution | <p>Implementation arrangements include either:</p> <p>(a) Capacity building initiatives to enhance gender mainstreaming of the executing and/or implementing agency.</p> <p>Capacity building initiatives include gender expertise and/or measures for training in gender analysis, participatory planning, gender-responsive budgeting, gender mainstreaming of corporate policies (workplace, customers, occupational health and safety, etc.). The effect on gender equality outcome of the project is indirect.</p> <p>Or</p> <p>(b) Active participation of representatives of gender-relevant stakeholders in project execution.</p> <p>Project Steering Committee includes or engages with gender-relevant stakeholders such as National Gender Bureau, Representatives of Women’s and Men’s groups/Community based/Youth Organisations in the Project Communities, relevant Non-Governmental Organisations.</p> <p>TOR of consultancy/project coordinating unit/project management unit includes responsibilities and resources, including budgets for gender mainstreaming.</p> <p>TOR of Project Coordinator include responsibility for ensuring that gender equality and gender components are given attention e.g. promotion of equal hiring practices by contractors; reporting on gender results; ensuring that gender components are implemented in a timely fashion.</p> <p>TOR of consultancy includes tasks related to the enhancement of gender equality in scope of works.</p> | <p>0.5</p> <p>0.5</p> |
| Monitoring and Evaluation: Results-Monitoring-Framework (RMF) | <p>Sex-disaggregated data included in the baselines, indicators and targets of the RMF</p> <p>Or</p> <p>Collection of sex-disaggregated data is part of the project.</p> | 0.5 |

| Project Cycle Stage | Criteria | Score |
|----------------------------|---|--------------|
| | <p>Sex-disaggregated data measure results for males and females separately. If possible link sex-disaggregated data to RMF Level 1 and 2 of the Strategic Plan 2015-2019.</p> <p>At least one gender-specific indicator at the outcome and/or output level in the RMF or included in tranche releases of Policy-Based Loans.</p> <p>A gender-specific indicator measures a gender disparity, e.g. a male to female ratio in retention rates or in participation and influence over decision-making; or guidelines, policies or curricula that are gender-responsive. It is intended to monitor targets that close gender gaps e.g. in leadership capacity, representation, access to opportunities and resources and service provision.</p> | |
| Maximum Score: | | 3 |

DRAFT TERMS OF REFERENCE

PROJECT COORDINATOR

1.01 The Project Coordinator (PC) will have day-to-day responsibility for project coordination and implementation, arranging contacts with all government and other personnel, project-related discussions, and supervision of the consultants.

1.02 PC will be responsible for coordinating and monitoring all aspects of the implementation of the project, including the following:

- (a) reviewing and finalising of the Terms of Reference (TOR) for consultancy services to be undertaken in the Project;
- (b) ensuring that gender analysis resulting in proposed interventions to enhance gender equality is undertaken as part of the TOR;
- (c) coordinating the selection and engagement of consultants;
- (d) collecting all relevant background studies and information;
- (e) supervising the implementation of the consultancy;
- (f) organising stakeholder consultations;
- (g) preparing and submitting claims to the Caribbean Development Bank (CDB) for disbursement/reimbursement;
- (h) submitting to CDB reports prepared by the consultants;
- (i) updating the procurement plan as necessary;
- (j) submitting to CDB a report each quarter summarising progress, disbursement activities and forecasted expenditures to Project Completion; and
- (k) preparing a Project Completion Report.

1.03 The assigned Project Coordinator should have a minimum of a Bachelor's Degree or equivalent in Civil Engineering, Construction Management or Project Management with a minimum of 10 years' experience in the management and implementation of civil engineering projects.

BUDGET
(€)

| Item | CDB | GOSKN | Total |
|--------------------------------|----------------|---------------|----------------|
| A. <u>Consultancy Services</u> | 489,500 | 34,000 | 523,500 |
| Contingencies | 48,950 | - | 48,950 |
| Sub-total | 538,450 | - | 572,450 |
| B. <u>General Support</u> | - | 61,000 | 61,000 |
| Total | 538,450 | 95,000 | 633,450 |
| Percentage | 85 | 15 | 100 |

PROCUREMENT PLAN

I. General

1. Project Information:

Country: SKN

Grant Recipient: GOSKN

Project Name: Strengthening Coastal Road Infrastructure Resilience to Geophysical and Climate Related Hazards in SKN

Project Implementing Agency: The Ministry of Public Infrastructure, Post, Urban Development and Transport, through its PWD.

2. Bank's Approval Date of the Procurement Plan: May 22, 2017

3. Period Covered By This Procurement Plan: May 2017 – May 2018

II. Goods and Works and Non-Consulting Services:

1. Reference to (if any) Project Operational/Procurement Manual: CDB's Guidelines for Selection and Engagement of Consultants (October, 2011)

2. Any Other Special Procurement Arrangements:

(a) Financing shall be provided under ACP EU-CDB-NDRM in CARIFORUM Countries and thus eligibility be extended to CARIFORUM Member Countries and countries which are eligible for procurement under EU-funded projects, which are not CDB Member Countries, in accordance with the EU Eligibility Rules (Appendix 8).

3. Procurement Packages with Methods and Time Schedule:

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----------------|--|---------------------------|-------------------------|------------------------------------|--|-----------------|
| Ref No. | Assignment (Description) | Estimated Cost (€) | Selection Method | Review by Bank (Prior/Post) | Expected Proposal Submission Date | Comments |
| 1. | Strengthening Coastal Road Infrastructure Resilience to Geophysical and Climate Related Hazards in St. Kitts and Nevis | — | QCBS | Prior | July 31, 2017 | |

4. **Summary of Proposed Procurement Arrangements:**

| Project Component | CDB (€000) | | | | | | | | | NBF (€000) Country | Total Cost (€) |
|---------------------------------------|---------------|-----------|-----|-----|----------|----|----|------|-----|--------------------------|-------------------|
| | Primary | Secondary | | | Other | | | | | | |
| | ICB | NCB | RCB | LIB | Shopping | DC | FA | QCBS | CQS | | |
| 1. Consultancy | - | - | - | - | - | - | - | - | - | - | - |
| 2. Office Accommodation | - | - | - | - | - | - | - | - | - | - | - |
| 3. Local Transport and Communication | - | - | - | - | - | - | - | - | - | - | - |
| 4. Local Counterpart Staff | - | - | - | - | - | - | - | - | - | - | - |
| 5. Public Consultations/ Workshops | - | - | - | - | - | - | - | - | - | - | - |
| 6. Contingencies | - | - | - | - | - | - | - | - | - | - | - |
| Total | - | - | - | - | - | - | - | - | - | - | - |

CQS - Consultant Quality Selection LIB - Limited International Bidding
 DC - Direct Contracting NBF - Non-Bank Financed
 FA - Force Account NCB - National Competitive Bidding
 FBS - Fixed Budget Selection QCBS - Quality and Cost-Based Selection
 ICB - International Competitive Bidding RCB - Regional Competitive Bidding

5. **Implementing Agency Capacity Building Activities with Timescale** CDB will assist GOSKN to identify several strategies and actions that will contribute towards enhancing national capacity for project implementation and undertake procurement in accordance with CDB's guidelines. Additionally, a procurement e-learning module has been prepared by CDB's Procurement Unit and is accessible online to all BMCs.

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

EUROPEAN UNION ELIGIBILITY RULES
**(Africa Caribbean Pacific - European Union - Natural Disaster Risk Management in
CARIFORUM Countries)**

Participation in Procedures for the Awarding of Procurement Contracts or Grant Contracts

1. Participation in procedures for the award of procurement contracts financed under the EU Contribution Agreement for the Implementation for the Action entitled: “Africa Caribbean Pacific-European Union-Caribbean Development Bank (ACP-EU-CDB) Natural Disaster Risk Management in CARIFORUM Countries” (ACP-EU-NDRM Resources), is open to international organisations and all natural persons who are nationals of, or legal persons who are established in, an eligible country.

2. Eligible countries¹ are deemed to be:

(a) Caribbean Development Bank member countries:

Anguilla, Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Canada, Cayman Islands, China, Columbia, Dominica, Germany, Grenada, Guyana, Haiti, Jamaica, Italy, Mexico, Montserrat, St Kitts and Nevis, Saint Lucia, St Vincent and the Grenadines, Suriname, The Bahamas, Trinidad and Tobago, Turks and Caicos Islands, the United Kingdom and Venezuela.

(b) Members of the “African, Caribbean and Pacific (ACP) Group of States”²:

Africa:

South Africa³, Angola, Benin, Botswana, Burkina Faso, Burundi, Central African Republic, Cameroon, Cape Verde, Chad, Comoros Islands, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Djibouti, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Equatorial Guinea, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritius, Mauritania, Mozambique, Namibia, Niger, Nigeria, Uganda, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, Sudan, Swaziland, Tanzania, Togo, Zambia and Zimbabwe.

Caribbean:

Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

¹ Note some countries may be eligible by virtue of more than one category.

² Cotonou Partnership Agreement of June 23, 2000 (as amended by the provisional application of Decision No 1/2000 of the ACP-EC Council of Ministers of July 27, 2000, Decision No 1/2000 of the ACP-EC customs cooperation committee of October 18, 2000, Decision No 1/2001 of the ACP-EC customs cooperation committee of 20 April 2001, Decision No 2/2001 of the ACP-EC customs cooperation committee of April 20, 2001, Decision No 3/2001 of the ACP-EC customs cooperation committee of 10 May 2001, Decision No 4/2001 of the ACP-EC customs cooperation committee of June 27, 2001, Decision No 5/2001 of the ACP-EC customs cooperation committee of December 7, 2001, Decision No 2/2002 of the ACP-EC customs cooperation committee of October 28, 2002, Decision No 1/2003 of the ACP-EC Council of Ministers of 16 May 2003, Council Decision (EC) of 19 December 2002, Decision No 1/2004 of the ACP-EC Council of Ministers of 6 May 2004, Decision No 2/2004 of the ACP-EC customs cooperation committee of 30 June 2004 and Decision No 4/2005 of the ACP-EC customs cooperation committee of 13 April 2005).

³ Natural and legal South African persons are eligible to participate in contracts financed by the 10th/11th EDF. However, the 10th/11th EDF does not finance contracts in South Africa.

Pacific:

Cook Islands, East Timor, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, the Solomon Islands, Western Samoa, Tonga, Tuvalu, Vanuatu.

Overseas Countries and Territories:

Anguilla, Antarctic, Netherlands Antilles, Aruba, British Indian Ocean Territory, British Virgin Islands, Cayman Islands, Falkland Islands (Malvinas), French Polynesia, French Southern Territories, Greenland, Mayotte, Montserrat, New Caledonia, Pitcairn, Saint Helena, Saint Pierre and Miquelon, South Georgia and South Sandwich Islands, Turks and Caicos, Wallis and Futuna Islands.

(c) **A Member State of the European Union:**

Austria, Belgium, Bulgaria, Croatia, Czech republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

An official candidate country of the European Union:

The Former Yugoslav Republic of Macedonia, Turkey, Iceland, Montenegro.

A Member State of the European Economic Area: Iceland, Lichtenstein, Norway.

(d) **All natural persons who are nationals of, or legal persons who are established in, a Least Developed Country as defined by the United Nations:**

Afghanistan, Angola, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Central African Republic, Chad, Comoros, Dem. Rep. Congo, Equatorial Guinea, Eritrea, Ethiopia, Guinea, Guinea-Bissau, Haiti, Kiribati, Lao PDR, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Djibouti, Solomon Islands, Somalia, South Sudan, Sudan, Tanzania, The Gambia, Timor-Leste, Togo, Tuvalu, Uganda, Vanuatu, Yemen, Rep. and Zambia.

(e) **Participation in procedures for the award of procurement contracts or grants financed from the Facility shall be open to all natural persons who are nationals of, or legal persons established in, any country other than those referred to in paragraph 1, where reciprocal access to external assistance has been established. Reciprocal access in the Least Developed Countries as defined by the United Nations (UN) shall be automatically granted to the OECD/DAC members: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, United States.**

3. Services under a contract financed from the Facility may be provided by experts of any nationality, without prejudice to the qualitative and financial requirements set out in the Bank's procurement rules.

4. Supplies and materials purchased under a contract financed from the Facility must originate in a State that is eligible under paragraph 1. In this context, the definition of the concept of ‘originating products’ shall be assessed by reference to the Bank’s prevailing procurement guidelines/procedures, and supplies originating in the EU shall include supplies originating in the Overseas Countries and Territories.

5. Whenever the Facility finances an operation implemented through an international organisation, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons who are eligible under paragraph 1, care being taken to ensure equal treatment of all donors. The same rules apply for supplies and materials.

6. Whenever the Facility finances an operation implemented as part of a regional initiative, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons who are eligible under paragraph 1, and to all natural and legal persons from a country participating in the relevant initiative. The same rules apply for supplies and materials.

7. Whenever the Facility finances an operation co-financed with a third entity, participation in procedures for the award of procurement contracts or grants shall be open to all natural and legal persons eligible under paragraph 1, and to all persons eligible under the rules of the third entity. The same rules shall apply to supplies and materials.

Caveat: The Bank and EU eligibility requirements are subject to change by the Bank and the EU. The applicant is responsible for checking whether there have been any updates on the eligibility requirements, as well as the UN’s list of Least Developed Countries.

FIGURE 1

SITE MAP

