Government of Saint Lucia

National Emergency Management Organization

Disaster Vulnerability Reduction Project
(DVRP)

TERMS OF REFERENCE

FOR CONSULTING SERVICES

DISASTER INFORMATION MANAGEMENT SYSTEM (DIMS)

June 19, 2020

Revised February 2, 2021

1.0 BACKGROUND

Saint Lucia is a Small Island Developing State (SIDS) which faces many development challenges that include limited geographic space; an open, vulnerable economy; fragile ecosystems; limited human and institutional capacity; and vulnerability to natural phenomena, such as extreme weather. The onset of climate change has increased the frequency with which hydrometeorological climatic events occur with two extreme events (Hurricane Tomas, October 2010 and the Christmas Eve Trough, December 2013) striking the island within the last ten years.

Saint Lucia developed a Strategic Programme for Climate Resilience (SPCR), funded by the Pilot Programme for Climate Resilience (PPCR), which is currently being implemented. Saint Lucia's strategic programme areas are closely interwoven with the broader fabric of disaster risk reduction (DRR). Thus, co-financing under the PPCR is being achieved through a synergistic blend, with financial resources made available under the national and regional components of the Disaster Vulnerability Reduction Project (DVRP) which allows for up-scaling SPCR implementation activities. Two major outcomes expected from Saint Lucia's DVRP include: 1) capacity built to identify and monitor climate risk at the national level; and, 2) reduced vulnerability of key sectors, assets and people to natural disasters[1].

The Department of Economic Development, Transport and Civil Aviation is responsible for the implementation of the DVRP while the Department of Sustainable Development and the Department of Infrastructure, Ports and Energy (DIPE) provide technical support towards implementation of the Project. The Project Coordination Unit (PCU) is responsible for the fiduciary aspects of the Project.

Context

The National Emergency Management Organization (NEMO) is responsible for comprehensive disaster management in Saint Lucia. NEMO is comprised of a diverse membership from the Government, non-government and private sectors, headed by the Prime Minister, and is organized into:

a. the National Emergency Management Advisory Committee (NEMAC)
b. Sector Committees
c. National Committees (structured along functional lines)
d. District Committees
e. the NEMO Secretariat

The NEMO Secretariat coordinates and supports the work of the various Committees and recognizes data as a critical input to enhanced disaster management. At present, the NEMO

[1]PPCR/SC.8/5. Meeting of the PPCR Sub-Committee: Cape Town, South Africa. 28-29 June 2011

Secretariat has limited electronic database systems and primarily depends on hard copy paper files for accessing data.

In order to enhance NEMO's ability to collect, store, access and analyze data to better fulfill its mandate and support data-driven comprehensive disaster management, the Government of Saint Lucia (GoSL) seeks a qualified consulting firm to design and build a comprehensive Disaster Information Management System (DIMS) using existing software packages.

The DIMS developed through this consultancy should include the following functioning, priority applications immediately required for NEMO's work:

- NEMO Contact Management Application
- Volunteer Management Application
- Capacity Building/Training Application
- Memoranda of Understanding (MOU) Application

More information about each application is provided at Appendix 1.

Over time, the DIMS developed through this consultancy will be expanded and enhanced to include the applications detailed in Appendix II. The design and development of the DIMS and its priority applications within the scope of this consultancy should, therefore, cater to accommodating this planned expansion smoothly, including by considering how these future applications would fit within the overall architecture of the DIMS.

2.0 OVERALL OBJECTIVE

The overall objective of this consultancy is to design, develop and operationally validate, through User Acceptance Testing, a Disaster Information Management System (DIMS) and train and support users and administrators in the same to demonstrably improve decision making to enhance disaster risk management (before, during and after an event) in Saint Lucia.

3.0 SCOPE OF SERVICES

In general, the scope of services includes:

(i) determining the immediate and future needs and functional requirements of the Disaster Information Management System (DIMS) and the most appropriate existing software package(s) for development of the DIMS in consultation with the NEMO Secretariat;

(ii) designing the architecture of the Disaster Information Management System, including catering for the future expansion of the System to include the proposed applications detailed in Appendix II;

(iii) developing/building the priority applications of the Disaster Information Management System cited in the Background (context) section using the selected existing software package(s) based on the approved design;
(iv) populating the priority applications of the DIMS with test/sample data provided by NEMO and conducting comprehensive User Acceptance Testing (UAT) of the beta DIMS to ensure full functionality, practicality, utility, stability, and sustainability across all phases of comprehensive disaster management;
(v) revising the beta DIMS based on the UAT findings and implementing the final DIMS version;
(vi) developing manuals to support the DIMS, including a User Manual and an Administration and Maintenance Manual; and
(vii) training the NEMO Staff in the DIMS and providing follow-on remote technical support for a defined period.

Specific Tasks

Task 1 – Determine the needs and functional requirements of the Disaster Information Management System (DIMS) and the optimal existing software package(s) which meet(s) the requirements for the DIMS.

The Consultant shall conduct a comprehensive assessment of the immediate and future needs and functional requirements of the DIMS through a combination of a desk top review and an Inception Mission, including meetings and interviews with members of the NEMO Secretariat. The Inception Mission including the consultations, interviews and meetings/interactions can be convened virtually.

The assessment shall build upon the initial assessment of the requirements of the DIMS as set out in Appendix 1 and shall involve:

a. Understanding the current legislative and institutional framework and mandate of NEMO as the basis for determining the needs of the DIMS;
b. determining the applications that should form part of a fully developed DIMS, including a review and agreement on the proposed applications for future development presented in Appendix II;
c. determining the business objectives, processes, and standard operating procedures (SOPs) of the primary proposed DIMS users as it relates to the use and sustainability of the priority DIMS applications to be developed within the scope of this consultancy; and
d. reviewing any existing data management systems utilized by NEMO.

The results of the assessment shall be presented in a DIMS Requirements Report, including:
a) A summary of the business cases, processes and SOPs that will help to inform the requirements and design of the DIMS, in particular its priority applications.
b) A finalized set of minimum requirements for a DIMS specifying:

- the applications to be included in the fully developed DIMS (distinguishing priority and future applications) and the proposed content of each priority application's database, as a conceptual data model.
- the required functionality of the DIMS, including, but not limited to:
    - features to allow data entry from a range of devices, including desktops, tablets and mobile phones (as discussed and agreed with NEMO)
    - features to allow migration of data into a standard Geographic Information Systems (GIS) format, including integration of geospatial data
    - features and communication protocols for interlinkages among the applications that comprise the DIMS, such as automated updating of shared or related data entities across applications
    - search and analysis functions, including keyword search and advanced queries within each application and across all applications that comprise the DIMS
    - reporting capabilities and development of custom reports for each application and across applications within the DIMS
- the required quality assurance features, including, but not limited to:
    - system for logging of edits and changes during CRUD operations
    - data validation requirements for data entities across the DIMS
    - security features, including: access requirements for all applications and associated datasets across the DIMS. The Consultant will determine required access levels and access views associated with each access level in consultation with NEMO
    - remote access protocols for the DIMS
    - permission and security levels for the DIMS
    - security requirements to ensure protection of all data from internal and external breaches, especially protection of personally identifiable information following the security standards/levels as defined in the latest OWASP Application Security Verification Standard (ASVS).

c) Recommendation of specific existing software package(s) for development of the DIMS. In so doing, the Consultant shall consider Microsoft applications as well as leading proprietary and open-source disaster management software packages. In presenting the options and making a recommendation on the best solution, the Consultant shall clearly specify the level of effort required for the maintenance of the proposed solution(s), including number of staff hours and required skills as well as any expected recurring costs. The software package(s) to be used shall be accepted by NEMO before proceeding with design and development of the DIMS.

Task 2 - Develop the Optimal System Design for the DIMS

Based on the DIMS Requirements Report and in consultation with the NEMO Secretariat, the Consultant shall develop the optimal system design for the DIMS, taking into consideration the priority applications to be immediately built and the future applications planned.

The optimal system design for the DIMS shall be presented in a System Design Report (DIMS Design Report) including:

- a description and detailed mapping of the proposed DIMS architecture, including of its various applications, how they interrelate/interact and their functional relationships and connections. This should include a conceptual illustration of how the future applications planned would fit within the proposed architecture;
- data entry forms to support each priority application;
- a discussion of how the proposed DIMS design meets the requirements and is best suited to respond to the business cases identified in Task 1; and
- A detailed maintenance plan and budget for the priority applications of the DIMS developed within the scope of this consultancy.

Task 3 - Produce the Beta Disaster Information Management System

The Consultant shall:

- Based on the approved DIMS Requirements Report and System Design Report, develop/build the beta DIMS (including the application interoperability architecture) using the selected software package(s). The beta DIMS shall include the priority applications listed in the Background (Context) section of this TOR.
- Test the functionality of the DIMS and identity potential bugs by populating the DIMS with test/sample data provided by NEMO and conducting comprehensive User Acceptance Testing (UAT) of the beta DIMS to ensure full functionality, practicality, utility, stability, and sustainability across all phases of comprehensive disaster management.

Upon completion of this task, the Consultant shall deliver the beta DIMS to the Client for review, accompanied by a Quality Assurance/Quality Control Report (QA/QC) showing how the System meets the requirements, highlighting any issues identified by the UAT and specifying how the issues will be resolved. The DIMS and Quality Assurance/Quality Control Report will be subject to testing and verification by a third-party, independent IT Specialist contracted by the Client before finalization.

Task 4 – Produce the Final Disaster Information Management System

The Consultant shall revise the beta DIMS based on the UAT findings and its QA/QC Report and that of the independent IT Specialist, including fixing any deficiencies in functionality and debugging the DIMS, to produce the final DIMS version.

Upon completion of this task, the Consultant shall deliver the final DIMS to the Client for review, accompanied by a revised Quality Assurance/Quality Control Report showing how all issues previously identified have been resolved. The final DIMS and revised Quality Assurance/Quality Control Report will be subject to test and verification by a third-party, independent IT Specialist contracted by the Client before approval.

Task 5 – Develop Manuals to Support the Disaster Information Management System

The Consultant shall:

- Develop an illustrated User Manual with step-by-step instructions on the use of the DIMS. At minimum, the User Manual should include the following sections:
    - General Information, including a System overview and an outline of the how the Manual is organized;
    - System Summary, including System configuration, user access levels and contingencies;
    - Getting Started, including installation and log in, System menu, changing user ID and password and how to exit the System;
    - Using the System, including details for each of the specific application functions in the DIMS; and
    - Reporting, including capabilities and detailed procedures on how to output files for sharing external to the DIMS application.

- Based on the Maintenance Plan developed in Task 2, develop an illustrated Administration and Maintenance Manual which will include:
    - Standard Operating Procedures (SOP) for the DIMS, including procedures and cycles for collecting and updating data to ensure data integrity and currency as well as performance indicators to be met
    - Guidance and procedures for maintenance of the underlying DIMS software package(s), including software updates, troubleshooting and debugging.

Final edits, as necessary, should be made to the User Manual and the Administration and Maintenance Manual based on trainee feedback received during the Training.

Task 6 – Conduct Training on the Disaster Information Management System and Provide Remote Technical Support

The Consultant shall conduct the following trainings:

- User Training
    - This training will target up to 30 end users of the DIMS sourced from the NEMO Secretariat and wider NEMO organization. Training on the use of the DIMS shall cover all matters treated in the User Manual; System access; data preparation, population, deletion and editing; elimination of data redundancy; conducting searches; report generation; analysis of data and all other core System functions.
    - Training will be conducted immediately after delivery of the final DIMS. The Training shall be conducted virtually, unless relaxation of travel restrictions due to COVID-19 allow for travel to Saint Lucia in which case the contract will be amended to reflect the cost implications of in-person training. The training shall include two rounds of 2-day training, with each round having up to 15 persons.
- Administrator Maintenance Training
    - This 2-day training will target up to 6 persons who have a background and knowledge in database administration and maintenance. Training will cover

maintenance of the underlying DIMS software package(s), including software updates, troubleshooting and debugging.

- Training will be conducted immediately after delivery of the final DIMS. The Training shall be conducted virtually, unless relaxation of travel restrictions due to COVID-19 allow for travel to Saint Lucia in which case the contract will be amended to reflect the cost implications of in-person training.

The Consultant shall ensure that all trainings, including in-person trainings, are professionally video recorded in such a way as to capture all instructional details required to allow repetition of any task demonstrated by the trainer. The video recordings shall be shared with the Client by an agreed electronic transfer means.

The Consultant shall provide up to 10 hours of remote technical support until the end of the contract following the delivery of the training. Such support will include regular checks to ensure all functions are working properly, immediate fixing of any bugs identified during such checks or reported by the Client, and email/phone support for Client queries on the use, administration or maintenance of the system. The Consultant shall respond to Client reports and queries within 24 hours.

After successful completion of both trainings, the Consultant shall produce a Training Report, including the training plan and agenda for each, copies of presentations and other training materials used to conduct the trainings, a record of persons trained and an assessment of the outcome of the trainings, including an assessment of competencies acquired and participants' evaluation of the trainings.

Task 7 – Final Reporting

The Consultant shall submit a Final Report summarizing outcomes of the consultancy (including the trainings and follow-on remote support), discussing implementation challenges and providing recommendations for further development of the DIMS. The Consultant shall also seek to address any additional issues with the DIMS identified during the training and remote support period and document how these issues were addressed in the Final Report.

4.0 DELIVERABLES

#	**Deliverable**	**Timeline** ***(from start of contract)***
Task 1 - Determine the needs and functional requirements of the Disaster Information Management System (DIMS) and the optimal existing software package(s) to develop the DIMS based on those requirements in consultation with NEMO		
1	DIMS Requirements Report	0.5 months
Task 2 - Develop the Optimal Design for the DIMS		
2	DIMS Design Report	2 months

Task 3 – Produce the Beta Disaster Information Management System		
3	DIMS Quality Assurance/Quality Control Report This report will ensure the quality of work completed under Task 3 to: - develop/build the beta DIMS - Test the functionality of the DIMS and identity potential bugs	4.5 months
Task 4 - Produce the Final Disaster Information Management System		
4	Revised DIMS Quality Assurance/Quality Control Report This report will ensure the quality of work completed under Task 4 to: - revise the beta DIMS based on the UAT findings and wider QA/QC Report, including fixing any deficiencies in functionality and debugging the DIMS, to produce the final DIMS version.	6 months
Task 5 - Develop Manuals to Support the Disaster Information Management System		
5	User Manual	6 months
6	Administration and Maintenance Manual	6 months
Task 6 – Conduct Training on the Disaster Information Management System and Provide Remote Technical Support		
7	User and Administrator Training Report	6.5 months
Task 7 – Final Reporting		
8	Final Report	7 months

5.0 REPORTING

All reports and other deliverables shall be submitted electronically in English in Microsoft Word, PDF or other relevant formats. Client comments on each deliverable, including comments by the Client's independent IT specialist and members of a Technical Working Group formed to review outputs, must be submitted to the Consultant within two weeks of submission of each deliverable and a final version of each deliverable addressing Client comments submitted for approval.

All reports, documents and data collected relevant to the Consultant's services shall become the property of the Government of Saint Lucia.

6.0 WORKING ARRANGEMENTS AND LOGISTICS

The Client is the Department of Economic Development, Transport and Civil Aviation (DEDTCA) with the National Emergency Management Organization (NEMO) Secretariat serving as the Client's representative. The NEMO Secretariat will engage an independent IT specialist and form a Technical Working Group to provide technical support in reviewing deliverables.

In its role, the NEMO Secretariat will:

a) Ensure timely review of reports and other deliverables submitted by the Consultant and collate feedback from all parties within two weeks of receipt of deliverables;

b) Initiate the consultation and cooperation of key staff and other agencies required to provide input to the Consultant for realization of the relevant aspects of the assignment;

c) Provide access (including remote access as required) to the existing data and information required to facilitate the consultancy in a timely manner; and

d) Provide a training room with COVID-19 protocols in place and supporting presentation equipment (or a virtual meeting room if required) as well as refreshments to facilitate the required trainings should these be conducted in person.

The Consultant will:

a) Execute the tasks outlined in Section 3 above with due diligence and efficiency and in accordance with the highest standards of professional competence, ethics and integrity,

b) Submit reports and other deliverables within the timeframes stipulated in these Terms of Reference,

c) Submit all underlying source files used in the consultancy in agreed formats,

d) Be responsible for the provision of software, equipment, materials and transportation required to undertake the consultancy, and

e) Execute the services in accordance with the laws, customs and practices of Saint Lucia and use the appropriate international/regional standards for preparation of technical information.

6.0 DURATION

The consultancy shall be conducted over a period not more than 8 months (35 weeks). The person-months for the team of experts is expected to not exceed 6 person-months.

7.0 QUALIFICATIONS

In general, the consulting firm must have:

- At least 3 years of experience in design and development of information management systems. Experience in design and development of information management systems for disaster management applications is preferred.

- Successfully completed at least one similar assignment during the past 5 years; that is development of an information management system to serve the needs of an organization

- Demonstrated expertise in the following fields: database management, data and software security, information and communications technology (ICT), remote data collection and analysis, real-time data collection and analysis, and programming for mobile platforms.

- Experience with, and demonstrated knowledge of, data sharing agreements for public and private entities would be an asset.

The consulting firm must provide a team of experts with the skills mix required to fulfill the scope of services presented above. All experts must have:

- the ability to work effectively and efficiently in a team
- strong time management skills and demonstrated ability to meet project deadlines
- excellent analytical skills
- excellent verbal and written communication skills in English
- excellent work ethic, including being self-driven, innovative, resourceful and having a high level of integrity

The team of experts must at a minimum include:

Disaster Management Systems Specialist

The Disaster Management Systems Specialist shall be responsible for leading the determination of the needs and functional requirements of the Disaster Information Management System (DIMS) as well as the development of the optimal system design for the DIMS, supported by the Software Developer/Applications Specialist as required. The Disaster Management Systems Specialist will also be responsible for User Acceptance Testing and User Training in the DIMS.

The Disaster Management Systems Specialist must have the following minimum qualifications:

Academic

- At least a bachelor's degree in Information Science, Business Administration or another field relevant to the assignment
- Professional qualification in Business Analysis would be an asset

- Academic qualification in Disaster or Emergency Management would be an asset

Experience and Skills

- At least 3 years of professional experience with requirements elicitation and design for the development of Web applications for information management
- successful completion of at least one similar assignment in the past 5 years
- experience determining needs for, designing, maintaining or managing information systems for disaster management applications is preferred
- analytical and problem-solving skills
- demonstrated professional experience designing and delivering training programs
- demonstrated professional experience mapping and developing business processes and workflows.

Software Developer / Applications Specialist

The Software Developer/Applications Specialist shall provide technical support to the Disaster Management Systems Analyst in the determination of the needs and functional requirements of the Disaster Information Management System (DIMS) as well as the development of the optimal system design for the DIMS and carrying out of User Acceptance Testing as required.

The Software Developer/Applications Specialist will lead the development/building and debugging of the DIMS, Quality Assurance/Quality Control testing and reporting, training for administrators and remote technical support. The Software Developer/Applications Specialist should specialize in software or application design, programming or management, and understand the full process of designing, creating, testing and implementing applications.

The Software Developer / Applications Specialist must have the following minimum qualifications:

Academic

- At least a bachelor's degree in Computer Science, Computer Engineering, Information Management Systems or a related field
- Certification in Microsoft Technologies for Software Developers is desired. Microsoft Certified Solutions Developer certification is preferred.

Experience and Skills

General professional experience

- At least 3 years of professional experience in development and customization of information management systems
- Knowledge and experience in standard Microsoft information management software, such as Microsoft Office, Dynamics and PowerApps, as well as proprietary and opensource software packages for disaster management information management

- Demonstrated experience developing budgets and maintenance plans for software applications
- Demonstrated experience providing software training.

Specific professional experience:

- Demonstrable professional experience with the development of applications as per client requirements
- Demonstrable professional experience with the testing of software applications to ensure compliance with requirements and a stable and secure final product
- Professional experience with the use of standard APIs (REST/SOAP) for integration of applications is required
- Knowledge of the principles of data protection and application security. Knowledge of the OWASP ASVS is an asset
- Demonstrable experience with applications dealing with the secure management of personally identifiable information
- Demonstrable professional experience with the creation of secure and user-friendly CRUD applications with reporting capabilities
- Strong computer programming skills and knowledge in development software such as C, C++, and Java
- Experience with standard GIS data formats is an asset
- Knowledge of SQL and SQL-based relational databases is an asset

Required competencies

The Software Developer / Applications Specialist must be able to communicate effectively in English. They must be able to work independently and with teams and must have the following core competencies:

- ***Complex Problem Solving*** — identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- ***Systems Evaluation*** — identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- ***Problem Sensitivity*** — the ability to tell when something is wrong or is likely to go wrong.
- ***Quality Control Analysis*** - conducting tests and inspections of products, services, or processes to evaluate quality or performance.
- ***Troubleshooting*** - determining causes of operating errors and deciding what to do about it
- ***Technology Design*** - generating or adapting equipment and technology to serve user needs
- ***Critical Thinking*** - using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.

APPENDIX I
Priority Applications to Form Part of the Disaster Information Management System (DIMS)
(the final features and requirements of each application are to be discussed and determined during Task 1 of this Consultancy)

Application	Business Cases	Access Requirements and Permissions	Existing Data and Sources
NEMO Contact Management Application *(Applies to all key personnel and members of the National Emergency Management Organization (NEMO))* - Name - Affiliated agency/committee, - Position and supervisor, - Assigned NEMO function, - Contact details - Home address (including GPS coordinates)	- Enhancement of communication within NEMO during and outside of disaster events	• Access by NEMO Secretariat and agencies, District Disaster Committees • Remote/online access required • Certain data fields (e.g. personal cell numbers) limited to select individuals	All required data exists, but has to be sourced from individual agencies comprising NEMO
Volunteer Management Application *(Applies to all registered NEMO volunteers)* - Name and key biographic information of volunteers - Home address (including GPS coordinates) - Contact details - Skills/qualifications/	- Identification of the best person(s) to respond to a particular event - Identification of capacity gaps in the volunteer system - Development of training and recruitment plans	• Access by NEMO Secretariat • Remote/online access required • Access limited to identified senior staff	The following data fields are available for most volunteers from NEMO hard copy files: - Name - Age - Cell phone - Email address - NIC# - Home Address

Application	Business Cases	Access Requirements and Permissions	Existing Data and Sources
certifications - Volunteering capacity (including Committee attached to) - Assigned role(s) - Volunteer service history - Insurance coverage - Medical condition / fitness level - Psychological condition - Background check data - Employment details - Details on dependents - Availability for call out - Access to transportation	- Identification of insurance coverage needs and development of insurance coverage policies - Identification of transportation support needs - Identification of candidates for incentives/awards/ recognition		- Emergency Contact and Relationship - Emergency Phone - Occupation - Employer - Health limitations - Physical and mental condition declaration - District Disaster Management Committee attached to - Affiliation with other disaster relief agencies - Special skills and/or vocational/disaster training in the following areas: o Medical o Communications o Office Support o Services o Structural o Transportation o Labour o Equipment
Capacity Building/Training Application *(applies to all NEMO Secretariat Staff,*	- Analyzing existing capacity within the NEMO system	• Access by NEMO Secretariat	The following data fields are available for trainees from NEMO's hard copy attendance registers for

Application	Business Cases	Access Requirements and Permissions	Existing Data and Sources
NEMO Committee members and volunteers) - Name and key biographic information - Contact details - Skills/qualifications/ certifications - Assigned role(s) - Medical condition /fitness level - Psychological evaluation - Employment details - Certified trainer qualifications	- Identifying gaps and informing training/capacity building plans and programmes - Enhancing placement of resource persons within the NEMO system based on qualifications and capacities	• Remote/online access required • Access limited to identified senior staff	past trainings. The training registers indicate the title of each training: - Name - Organization - Contact No. - Email - Gender
Memoranda of Understanding (MOU) Application *(Applies to all MOUs and informal working arrangements for disaster preparedness and response, including those with private and public sector partners and international agencies).* - Partner/agency name - Key contact persons and contact details - Location (address and GPS coordinates) - MOU (as attachment)	- Identification of best suppliers to meet specific needs post disaster based on various criteria defined at the time – location will be a key determining factor in most cases. - Maximizing assignment, management and leveraging of private and public sector partners in a disaster context - Determination of gaps in MOUs	• NEMO Secretariat and agencies, District Disaster Committees • Remote/online access required • Limited to select individuals	The following details are available for most MOUs from NEMO hard copy files: *Private sector MOUs (with grocery stores, fuel stations, hardware suppliers)* - Relief items supplied, including item description, size, price estimate per unit - Entry into force, amendment and duration

Application	Business Cases	Access Requirements and Permissions	Existing Data and Sources
<u>Additional fields:</u> *Private sector MOUs (with grocery stores, fuel stations, hardware suppliers)* - Relief items supplied, including item description, size, price estimate per unit - Entry into force, amendment and duration *Other Private Sector, Public Sector and International Agency MOUs* - General areas of cooperation - Respective responsibilities of the parties - Timeframe for action - Legal liabilities of parties - Entry into force, amendment and duration	- Identification of strategic areas requiring greater collaboration/ partnership		*Other Private Sector, Public Sector and International Agency MOUs* - General areas of cooperation - Respective responsibilities of the parties - Timeframe for action - Legal liabilities of parties - Entry into force, amendment and duration

APPENDIX II
Applications for later development and addition to the Disaster Information Management System (DIMS)

Application	Business Cases	Access Requirements and Permissions	Existing Data and Sources
Shelter Management Application *(To be designed to accommodate all data obtained from the standard CDEMA form for assessment of shelters. Database fields to be fashioned based on the Dominica model to be provided to consultant and including detailed data fields within the following categories:)* - Identification data - Assessment data - Management and Contact data - Use Compatibility - Accessibility (Evacuation from Home) - Safe Area – hazard exposure (environment of shelter) - Area available for shelter - Occupancy - Accessibility (in the shelter – people with disabilities) - Walling	- Shelter monitoring and assessment - Enhancing shelter maintenance and management - Determining needs for upgrading or construction of new shelters - Linking persons with disabilities and special needs to the most appropriate shelter(s)	• NEMO Secretariat and agencies, District Disaster Committees • Remote/online access required • Limited to select individuals	The following data fields/types are available for most shelters from NEMO hard copy files: - Identification data - Management and Contact data - Structural Condition - Water Supply - Electrical Supply

- Roofing - Drinking water - Restrooms - Ventilation - Lighting - Power Supply - Cooking - Storage - E-Communication - Sanitary Conditions - Recreation Area - Parking - Camp Area - Community Shelter Needs - General Recommendations and Comments			
Natural and Manmade Hazards Application - Location and scale of landslides (including mapping) - Extent and depth of community flooding (including mapping of areas) - Extent and depth of coastal flooding from storm surge (including mapping of areas) - Wind speeds at various stations island wide during tropical cyclones	- Updating of hazard maps - Conducting Hazard and Vulnerability Assessments (HVAs) and multi-hazard analyses - Damage and needs projections for impact events of various intensities	• Access by NEMO Secretariat and agencies, District Disaster Committees (potentially the public, if a crowdsourcing approach to information gathering is used) • Remote/online access required • Limited to select individuals	Some examples of available natural hazard maps/inventories include: - Landslide Inventory Map - Landslide Susceptibility Map - Flash Flood Hazard Map - Coastal Flood Hazard Atlas (2006) - Wind Hazard Atlas (2006) - Risk Register (2006)

- Earth shaking potential during earthquakes - Location of other natural hazards (e.g. volcanoes) - Location and mapping of coastal reclamation - Location of manmade hazards (e.g. gas stations, hazardous waste sites, landfills, chemical storage sites etc.)	- Development of Community Risk Profiles - Development of Disaster Management Plans, including identification of best evacuation route(s) in communities		
Damage Assessment Application - Type, intensity, duration of impact event - Geographic extent of impact - Standard data collected in damage and loss assessments and post disaster needs assessments	- Identification of community resilience projects - Hazmat response	• Access by NEMO Secretariat and agencies, District Disaster Committees • Remote/online access required • Limited to select individuals	Data is available on past events from the following sources - Damage and Needs Assessments - After Action Reports - Situation Reports - NEMO's Annual Report (Soft copies available for more recent events/years and hard copies available otherwise)
Community Profile Application - Physical, social and economic characteristics of communities pertinent to disaster management planning and response - Infrastructure characteristics - Condition of housing stock and built environment		• Access by NEMO Secretariat and agencies, District Disaster Committees • Remote/online access required • Limited to select individuals	Data is available on communities from the following electronic sources: - 2010 Census - Ongoing 2020 Building Use Survey - Country statistics available at

			https://www.eccb-centralbank.org/statistics/dashboard-datas/ - Country Economic Review 2018 – Saint Lucia - Economic and Social Review 2018 (2019 expected) - Quarterly Labour Force Survey current to December 2019 - Survey of Living Conditions (2015/2016) - Household Budget Survey (2015/2016) - Poverty by Settlement Map