PROJECT TITLE	Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Climate-Resilient Food Systems- Phase 1
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REPORT TITLE	**Caribbean Small Island Developing States (SIDS) Multicounty Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS_SOILCARE Phase 1).**
PROJECT OUTPUT/SUB-OUTPUT	Regional Capacity/Training Needs Assessment Report
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Abbreviations and Acronyms

BPOA – Barbados Plan of Action

CCAP – Climate Change Adaptation Programme

COTED – Council for Trade and Economic Development

CSIDS – Caribbean Small Island Developing States

FAO – Food and Agriculture Organization of the United Nations

GEF – Global Environment Facility

GM – Global Mechanism

GSP – Global Soil Partnership

LDN – Land Degradation Neutrality

MEAs – Multilateral Environment Agreements

NAPs – National Action Plans

NSIS – National Soil Information System

PISLM – Partnership Initiative on Sustainable Land Management

RAC on NAT– Regional Research Advisory and Capacity Building Facility on New Adaptation Technologies

RPU – Regional Project Unit

SCCF – Special Climate Change Fund

SDGS – Sustainable Development Goals

SE – Stakeholder Engagement

SEP – Stakeholder Engagement Plan

SIDS – Small Island Developing States

SLM – Sustainable Land Management

SRAP -Sub-regional Action Plans

SSM – Sustainable Soil Management

TOR – Terms of Reference

TSP – Target Setting Programme

UNCCD – United Nations Convention to Combat Desertification

Contents

Acknowledgments

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1.0 Executive Summary

Introduction

Expected outcomes of the Regional Capacity Development

This Capacity/Training Needs Assessment is an output of the PISLM CSIDS-SOILCARE phase 1 project and a deliverable under Component 5: *Mainstreaming SLM and Sustainable Soil Management (SSM), Strengthening Knowledge Management, Enhanced Training and Capacity Development, the Building of Financial Capability to Implement SLM, the Regional LDN Strategy and Monitoring and Evaluation*. This component has been guided, inter alia, by the following expected outcomes:[1]

1. Regional Institutional Capacity Development and Training Programme established.
2. Knowledge Management, Technical Assistance and Communication on SLM and SSM strengthened and enhanced.
3. Regional Cooperation in sustainable land management (SLM) and sustainable soil management (SSM) encouraged and facilitated.
4. Climate Resilient SLM and Regional Land Degradation Neutrality (LDN) Strategy mainstreamed/ integrated into Caribbean Community Regional Policy Frameworks and Decision-Making Processes and in National Level Planning Processes.
5. Promotion of Investment and financing in SLM/SSM and climate resilience with private and public sectors.
6. An effective Gender Sensitive Monitoring and Evaluation Framework in support of project implementation is established.

Moreover, this Capacity/Training Assessment has informed the development of a Regional Capacity Development Plan, while complementing the outcomes under

[1] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS_SOILCARE Phase 1)

component 5 of the CSIDS- SOILCARE project, this aspect will focus primarily on the following outcome and output:[2]

Outcome 5.1: *Regional Institutional Capacity Development and Training Programme established.*

Output 5.1: *Capacity Development of Stakeholders strengthened.*

The specific outcomes relative to the Capacity/Training Needs Assessment are:

1. Capacity/Training Needs of participating countries analysed and documented.
2. Regional Training and Capacity Development Plan established.
3. Training curricula on key thematic areas established.
4. Framework for capacity/training interventions for participating countries established.
5. Mechanism established for ongoing research and capacity development.
6. Monitoring and evaluation framework established.

2.0 Structure of Report

The document is structured to provide a coherent and progressive flow of information. It focuses on results from the Capacity/Training Needs Assessment of the eight (8) PISLM CSIDS-SOILCARE participating countries, Antigua and Barbuda, Barbados, Belize, Grenada, Guyana, Haiti, Jamaica, and St Lucia. This component will share a synthesis of the results from individual countries along with a comparative analysis based on status, trends, and opportunities. Furthermore, it will encompass project background, justification, methodology applied for assessment, assessment results and conclusion.

[2] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS_SOILCARE Phase 1)

3.0 Justification and context of Capacity/Training Needs Assessment

As global leaders battle to curtail the proliferation of environmental degradation, several environmental agreements were developed to protect the earth and the indispensable services it provides. Some of the most notable ones were the three Rio conventions to address biodiversity, climate change and desertification/Land degradation.

- United Nations Convention on Biological Diversity (UNCBD)
- United Nations Framework Convention on Climate Change (UNFCCC)
- United Nations Convention to Combat Desertification (UNCCD)

Furthermore, achieving the Sustainable Development Goals (SDGs 2030), which focuses on reversing environmental degradation, hinges on countries strategically and systematically implementing the requirements of these Conventions and other complementary environmental agreements. Moreover, recognizing the integral role soil plays in fostering life, ensuring sustainability, and combating Climate Change, the focus of this project is on the UNCCD. However, given the nexus between climate change and land degradation, the project also places some emphasis on the UNFCCC.

The issue of land degradation is of high priority for Caribbean Small Island Developing States (CSIDS). CSIDS have several commonalities relative to environmental issues, natural resources, and development, as well as challenges, such as vulnerability and environmental fragility.[3] Consequently, the goal to achieve land degradation neutrality and SDG Goal 15.3 requires a collective, systematic regional approach by CSIDS. It was against this backdrop that GEF has approved funding to execute: *Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS_SOILCARE Phase 1) Project.*

In this regard, an important dimension of the implementing a strategy in Caribbean SIDS in support of LDN will *be "mainstreaming of SLM and Sustainable Soil Management*

[3] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS_SOILCARE Phase 1)

into National and Regional Policy and Legislative Frameworks with the view of strengthening land and agricultural-related policies, programmes, land use planning processes and financing strategies and mechanisms at all levels, as well as improving and enhancing the use of productive lands".[4]

Integral to this process is capacity/training development. Furthermore, fundamental to the goals of the eight (8) participating countries are reversing land degradation, and establishing viable, climate-resilient food systems. However, these interventions can only be effective if the associated training/capacity development needs are adequately identified and addressed. In this regard, component 5 of the project focuses on training and capacity development.

4.0 Technical approach and methodology in preparing capacity needs assessment and development plan.

The primary approach was to conduct a comprehensive capacity/training needs assessment of participating countries. This aimed to enable the identification of gaps, synergies, and overlaps, as well as informed the training and capacity development interventions that are relevant, efficient, and effective. The following outlines the main stages in the methodology:

4.1 Information gathering – this was the first step in conducting the analysis and needs assessment. This step entailed a comprehensive review of the project documents relative to PISLM CSIDS-SOILCARE Phase 1. It captured the project goals, objectives, and the role of key partners. This step also sought to clarify project activities, outputs, outcomes, gaps, and opportunities. In addition to the literature review, participation in project meetings/workshops also served as a relevant and effective form of

[4] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDS_SOILCARE Phase 1)

information gathering. Furthermore, a needs assessment survey (questionnaire) was developed and administered and interviews/meetings with team members also aided in information gathering.

4.2 Analysis of information – The information collected from the various sources was corroborated, analysed, and synthesized.

4.3 Drafting of Regional Capacity Development Plan – The information informed the development of a Regional Capacity Development Plan. The plan focuses on the addressing the deficiencies in training/capacity building needs of participating countries through strategic training/capacity building interventions appropriate to meet the needs of diverse stakeholders necessary to achieve the project outputs and outcomes.

5.0 Project Background

The health and well-being of society is heavily dependent on soil; however, the proliferation of land degradation exacerbated by climate change is an imminent threat to the sustainability of CSIDS. The commonalities among CSIDS including environmental challenges, developmental issues and risks to natural resources coupled with their fragile ecosystems and vulnerability make CSIDS of top priority to Agenda 21, 17G[5].

In this regard, a Partnership Initiative was formulated as an integral part of the Technical Programme of the Caribbean SIDS Programme; an initiative adopted in Decision 4, of the XIV Forum of Ministers of the Environment for Latin America and the Caribbean held in 2003.[6]

Consequently, the PISLM received the support and guidance of the 25th Special Meeting of the Council for Trade and Economic Development (COTED) [Environment], held in April 2008. As a result, the decision was made for PISLM to be used as the framework for the implementation of the United Nations Convention to Combat Desertification

[5] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDSSOILCARE Phase 1)
[6] Extracted from: PISLM Terms of Reference, Capacity/Training Assessment Specialist

(UNCCD), and the Land Management components of the Barbados Programme of Action (BPOA) and the MSI/BPOA in Caribbean SIDS, to the extent practicable.[7]

The mission of PISLM is to harmonize policies, provide innovative solutions and capacity building in collaboration with CSIDS and meet their obligations on SLM and soil health[8].

The major components of PISLM are: the elaboration of National Action Plans (NAPs), the establishment of a Regional/Sub-Regional Platform for the implementation of the UNCCD, including the building of complementarities with other Multilateral Environmental Agreements (MEAs); the elaboration of integrated Sub-regional Action Plans (SRAP); the development of methods and tools for monitoring and measuring land degradation; the training, research, capacity development, and policy analysis; South-South Cooperation; Targeted GEF Interventions; and the harmonization of Public Policies on Land Degradation and Land Management.[9]

The five (5) components under which PISLM is being implemented are:

1. Update and strengthen national and regional soil information, technical capacity, and coordination as a basis for improved decision making including Sustainable Soil Management (SSM) and Sustainable Land Management (SLM).

2. Addressing the drivers of land degradation through the rehabilitation of land and soil degraded areas and the promotion of integrated landscape management and restoration and the identification and implementation of livelihood alternatives for communities.

3. Resilience building to land degradation, natural disasters, and climate change through climate-smart agriculture and enhanced drought risk management.

4. Enhancement of food systems and alternative livelihoods through the promotion of innovations in agriculture and livestock production systems and mobilization of the private sector in support of LDN Special Climate Change Fund (SCCF).

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[7] Extracted from: PISLM Terms of Reference, Capacity/Training Assessment Specialist

[8] (James, 2022): Orientation presentation, Mission of PISLM

[9] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDSSOILCARE Phase 1)

5. Mainstreaming SLM and SSM, strengthening knowledge management, enhanced training, and capacity development, building financial capability to implement SLM, the Regional LDN Strategy, and monitoring and evaluation.

6.0 Purpose and Scope of Capacity/Training Needs Assessment Analysis

6.1 Purpose

The purpose of the capacity/training needs assessment was to identify the training/capacity development needs of participating countries, analyse, and synthesize the information into a Regional Capacity Development Plan.

6.2 The specific objectives were to:

1. Identify deficiencies/gaps in the needs of participating countries.
2. Identify key stakeholders and appropriate mechanisms for knowledge transfer.
3. Ascertain the existing institutional and legal framework of participating countries to support capacity building/training needs.
4. Determine the level of administrative and technical support required to maximize project benefits.

7.0 Tabular Project Profile of Participating Countries

Table 1: Focus areas of participating countries in the PISLM CIDS -SOILCARE project[10]

Country	Project focus and invention sites
Antigua and Barbuda	PISLM CSIDS-SOILCARE will support the implementation of the following measures included in the country's LDN commitments: • Incorporate LDN as an innovative land use planning tool in Antigua & Barbuda. • Encourage the DCA Board and Ministry of Agriculture to improve productivity by implementing agricultural production systems, peragricultural district, using best available and affordable technologies. • Strengthening of existing framework at the DCA that governs decision making on the LDN prescriptions, policies and land allocation and involve relevant agencies (Survey & Mapping Division, Forestry, DOE, Lands Division, National Parks Authority, National Housing Development and Urban Renewal Co Ltd., CHAPA, Barbuda Council).
Belize	• In Belize project intervention actions will be concentrated in the northern districts of Belize,

[10] Extracted from project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDSSOILCARE Phase 1)

	often referred to as the Northern Sugar Belt of Belize. • The project sites are the communities of **Libertad and Patchacan situated in Northern Belize** in the District of Corozal in the sugar belt. Most of the residents in the communities are dependent on sugarcane cultivation. Farmers are faced with declining sugarcane yield and soil degradation.
Barbados	• In Barbados the project interventions will be concentrated in the communities of **Bawdens, Turners Hall and Carrington** all located in the parish of St. Andrew in the Scotland District. These communities are engaged in and are promoting organic food production. • Focus will also be placed on identified degraded areas within the National Park of Barbados Area. The project will target approximately 2,000 ha. • Further, the Demonstration Model Farm will focus on the **Nature Fun Ranch** located within the National Park at Bruce Vale, St. Andrew. Results from the model farm are expected to upscaled to 3,000 ha.

Haiti	• The interventions in Haiti will be concentrated at **Marion River watershed**, the area of which is estimated at approximately 21,592 hectares. • The second site is **the Samana River watershed**, the area of which is estimated at approximately 15,203 hectares.
Grenada	• The project intervention will target 2,000 hectares of forest in **Les Avocate** forms part of the **Grand Etang Forest Reserve** on the south-eastern portion of Grenada in the parish of St. David's. The area is well known for its ecosystem services as an upland watershed which provides a water production and distribution supply for NAWASA at the Minorca Water Treatment Plant. • The model farm site is the **Chambord/Rose Hill** Area on the main island of Grenada. Results from model farm are expected to upscaled to 3,000 ha in Grenada.

	• **In Carriacou**, focus will be placed on addressing the challenges of land degradation - soil erosion and soil fertility decline due to overgrazing and poor pasture.
Guyana	• In Region 1- **Port Kaituma**, the project will target approximately 4,000 hectares of degraded agricultural lands. • Climate Smart Demonstration Agriculture Model Farms will be implemented in Region 10 – the **Intermediate Savannahs**, North-East Guyana. • The **Mahaica Mahaicony Abary** area in Region 5, which extends east of the Mahaica River to the west bank of the Berbice River is another selected site. • Results from the model farm are expected to be upscaled to 4,000 ha in Guyana.
Jamaica	• In the case of Jamaica activities will focus on the agro-economic zone at the Holland Estate, a government owned property. • The soil in the former sugarcane estate has been degraded in many ways, which include low nitrogen and organic content, acidification, soil erosion, and soil compaction.

St Lucia	• Activities will be undertaken in **Grande Riviere, Dennery at the Sir Arthur Lewis Community College Agricultural Division.** • **Roseau, Quarter of Anse La Raye** an agricultural area consisting of several abandoned banana farms in which farmers are trying to identify alternative crops to sustain their livelihoods. • The Demonstration Model Farm will be in **Bois Den Jacmel** an intensely farmed agricultural area where extensive land degradation is occurring.

8.0 National Priorities of Participating Countries

Cross-Cutting Priority Issues of Participating Countries

The national priority issues identified in table 2 were based on the synthesis of information presented in capacity/training assessment surveys. The assessment revealed that 75% of participating countries have systems in place to engage with various categories of stakeholders, however, specific to the training/capacity development required under this project, they require technical assistance to develop training concepts for some areas and implement training. Additionally, all participating countries (100%) lack financial resources to effectively engage with target stakeholders. The survey instrument found in Annex G was administered and completed by the eight (8) participating countries.

Table 2: National Priorities of participating countries relative to training and capacity development.

Key: Is a priority issue  ; Is not a priority issue 

Priority issues	Antigua & Barbuda	Belize	Barbados	Grenada	Guyana	Haiti	Jamaica	St Lucia
1. Capacity to engage with stakeholders								

2. Existing education platform for information sharing								
3. Financial capacity to engage								
4. In country capacity to facilitate training								
5. Co-management systems								
6. Availability of Technology/infrastructure								
7. Require assistance to develop training concepts								
8. Require assistance to facilitate training								

9.0 Cros-Cutting Priority CSIDS-SOILCARE Capacity Development Issues.

Fig. 1 highlights the capacity development issues identified by the PISLM CIDS-SOILCARE, phase 1, project document as highlighted in the Capacity Development Scorecard in Annex H are as follows:

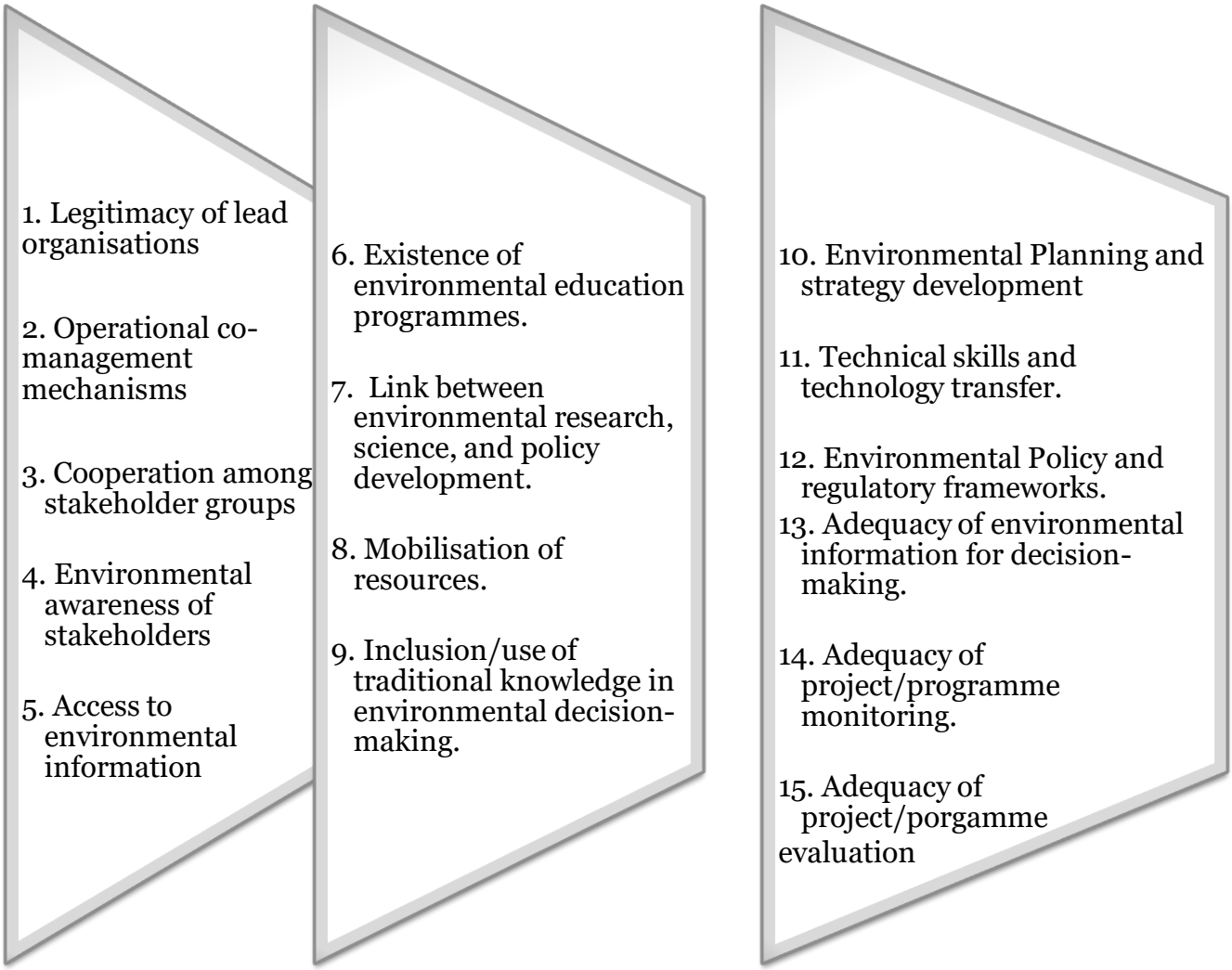

Fig. 1: Cross-cutting priority areas identified by the PISLM CSIDS-SOILCARE phase 1 project.

10.0 Supporting Legislative and Institutional Framework

At the Regional level, the PISLM CSIDS-SOILCARE project is supported by several existing policy frameworks. The participating countries have ratified the Revised Treaty of Chaguaramus Establishing the Caribbean Community including the Caricom Single Market and Economy (CSME). [11] Furthermore, several regional policy frameworks applicable to this project have been identified, these include inter alia:[12]

Fig. 2: Some regional policies which complement the project.

[11] Extracted from the project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDSSOILCARE Phase 1)

[12] Extracted from the project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDSSOILCARE Phase 1)

11.0 Regional Projects/Programmes which support synergies.

Some regional projects/programmes upon which PISLM CSIDS-SOILCARE can build as highlighted in the project document.

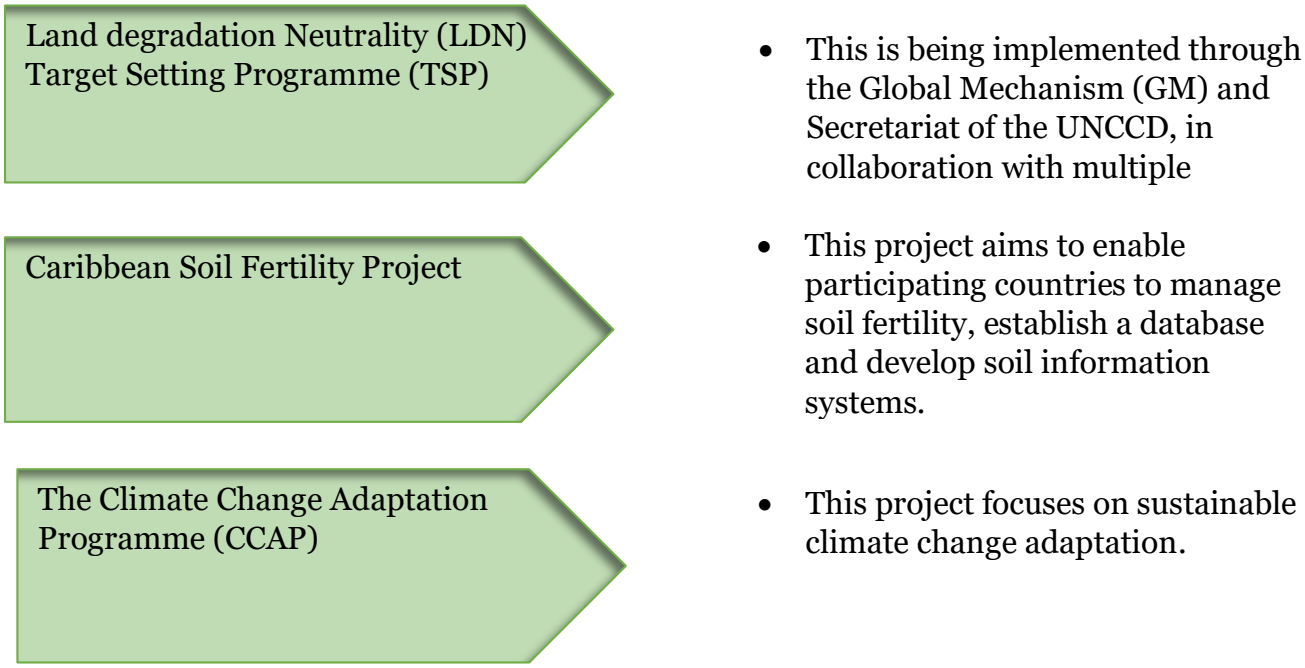

Fig 3: Regional Projects/programmes which support synergies.

12.0 Supporting National Legal Frameworks.

The participating countries have several national legal frameworks supporting PISLM CSIDS-SOILCARE phase 1 project implementation, such as policies, strategies, and action plans. These include inter alia policies for environmental protection and management, climate change and climate resilience, land use, biodiversity conservation and agriculture adaptation, amongst others. All of the participating countries also have national strategies which outline their holistic vision and goals for a stipulated period. Notably, participating countries have been continuously working to align their national legal frameworks to meet their obligations under regional and international agreements. In this regard, the Caribbean land/soil Policy Report (2023) provides extensive details on the existing institutional and legal framework within participating countries which can provide impetus for the implementation of project activities.[13]

[13] Osborne, 2023. Caribbean land/soil Policy Report

13.0 Summary of Priority Capacity/Training Needs.

1. 75% of participating countries have the capacity to engage as well as an existing education and awareness platform.
2. All participating countries lack the financial capacity to engage.
3. Less than 50% of participating countries have the capacity to facilitate training under PISLM CSIDS - SOILCARE project (38%).
4. Five (5) of the eight (8) participating countries have a co-management mechanism in place.
5. All participating countries (100%) have the technology/infrastructure in place to facilitate stakeholder engagement.
6. All participating countries except for St. Lucia require assistance to develop concepts and facilitate training.
7. Seven (7) of the countries must make provisions for vulnerable stakeholder in their engagement plan; Barbados is unsure whether any of the target stakeholders are vulnerable.
8. Participating countries favoured quarterly engagements for most categories of stakeholders.
9. All participating countries have legal and institution frameworks in place to support the implementation of CSIDS SOILCARE phase 1 project.

14.0 Target Beneficiaries

The capacity/training assessment and CSIDS-SOILCARE phase 1 project document identified various categories of stakeholders who are expected to benefit from the implementation of the Capacity Development Plan. Some critical categories of stakeholders include UNCCD focal points, committees established by the project, project teams, and organisations with responsibility for agriculture and climate change. These capacity building interventions will seek to increase the knowledge and technical capacities of participating countries to reverse the incidences of land degradation within the identified project site as well as, build a robust and effect national and regional system to address land degradation and achieve land degradation neutrality. While there are many stakeholders such as school children and members of the public who will also benefit from the project in the long-term, some directly and others indirectly, the primary beneficiaries within the participating countries are:

1. Members of Regional Soil Support Group
2. Laboratory/Soil Scientists
3. Agriculture Extension Officers
4. Representatives from National Focal Point
5. Technical Officers from government Ministries
6. Farmers
7. Women's groups
8. PISLM project team
9. Technical Experts
10. Academia

15.0 Training/Capacity building of CSIDS-SOILCARE Stakeholders

The capacity building proposed in this plan will be in tandem with component 5 of the project and will seek to address the gaps identified by the project. The extensive list of proposed areas for training can be referenced in Box 3. Below are some categories of stakeholders and recommended capacity-building interventions.

Some of the critical focus areas for capacity building /training identified by participating countries are:

Box 1: focus areas for training and capacity based on needs assessment.

1. Sustainable soil management, sustainable land management, and land degradation neutrality
2. Soil survey, sampling, and testing
3. Soil analysis and interpretation of results
4. Soil data management
5. Soil Chemistry
6. Plant Physiology
7. Maintenance of Laboratory equipment
8. Mapping of soil productivity, land cover and soil organic carbon
9. Carbon emission and sequestration trapping
10. Land suitability assessments
11. Land capability assessments
12. High Nature Value Farming Index
13. Assessing land degradation
14. Climate Smart agricultural practices
15. Best practices for agriculture production
16. National and Regional Soil information systems
17. Development/updating o national soil data.
18. Implementation of GLOSOLAN SOPs
19. Intellectual property rights
20. Traditional knowledge and sustainable agriculture

16.0 Stakeholder Engagement

16.1 Summary of most appropriate days for engagements

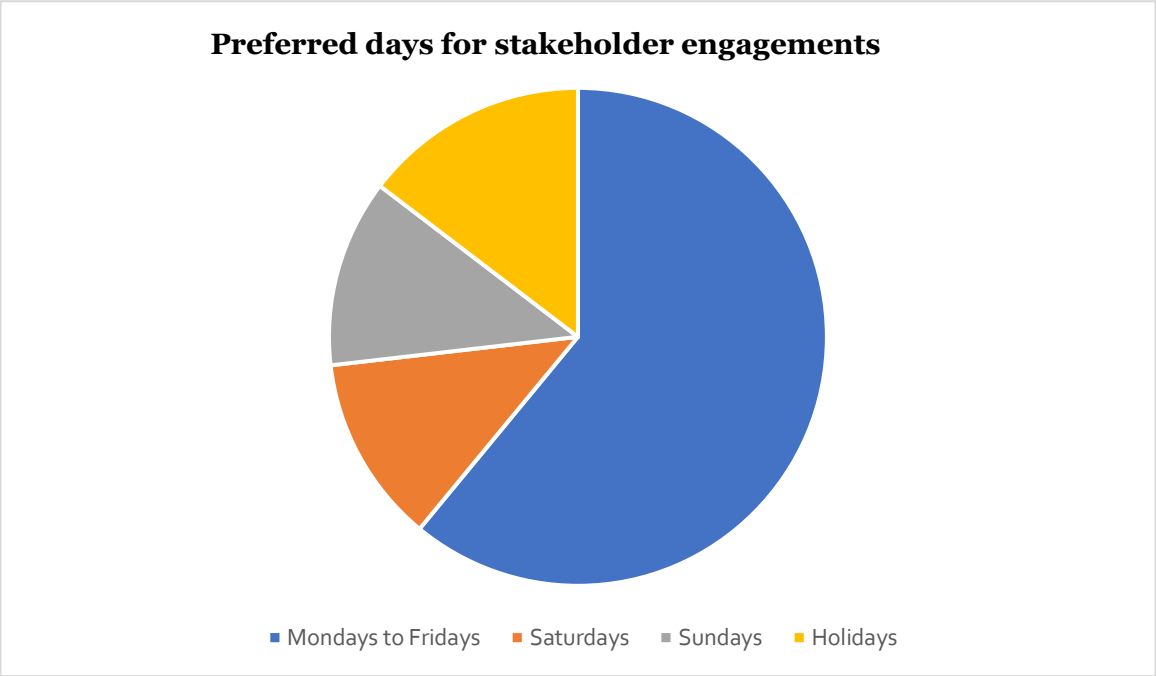

Fig. 4: Most appropriate days for engaging stakeholders

16. 2 Stakeholders' groups and frequency of engagement

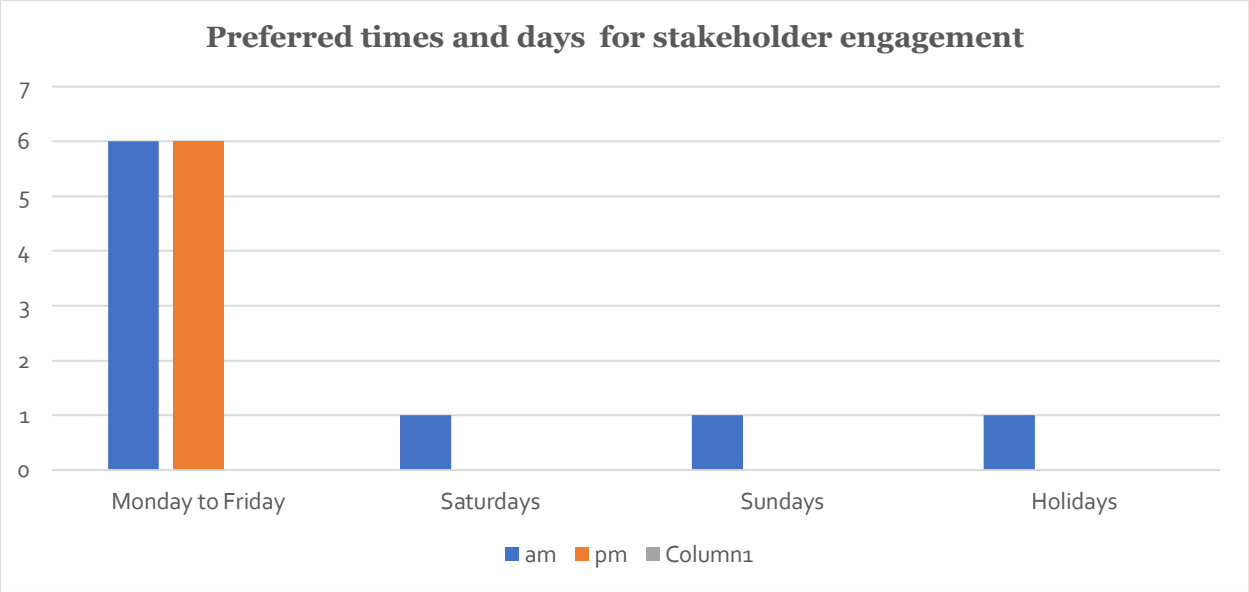

Fig 5. Preferred times and days for stakeholder engagement activities

17.0 Analysis of capacities to engage.

17.1 Recommended frequency of intervention for various categories of stakeholders

The survey sought to garner from participating countries, the proposed frequency of intervention for/with various categories of stakeholders. Quarterly and half yearly was the trend observed for most categories of stakeholders within participating countries. Annual interventions ranked third and a few countries, Belize, Grenada, and Guyana recommended monthly, bimonthly, and annual interventions for some categories of stakeholders. Additionally, a few categories of stakeholders did not apply to some of the participating countries.

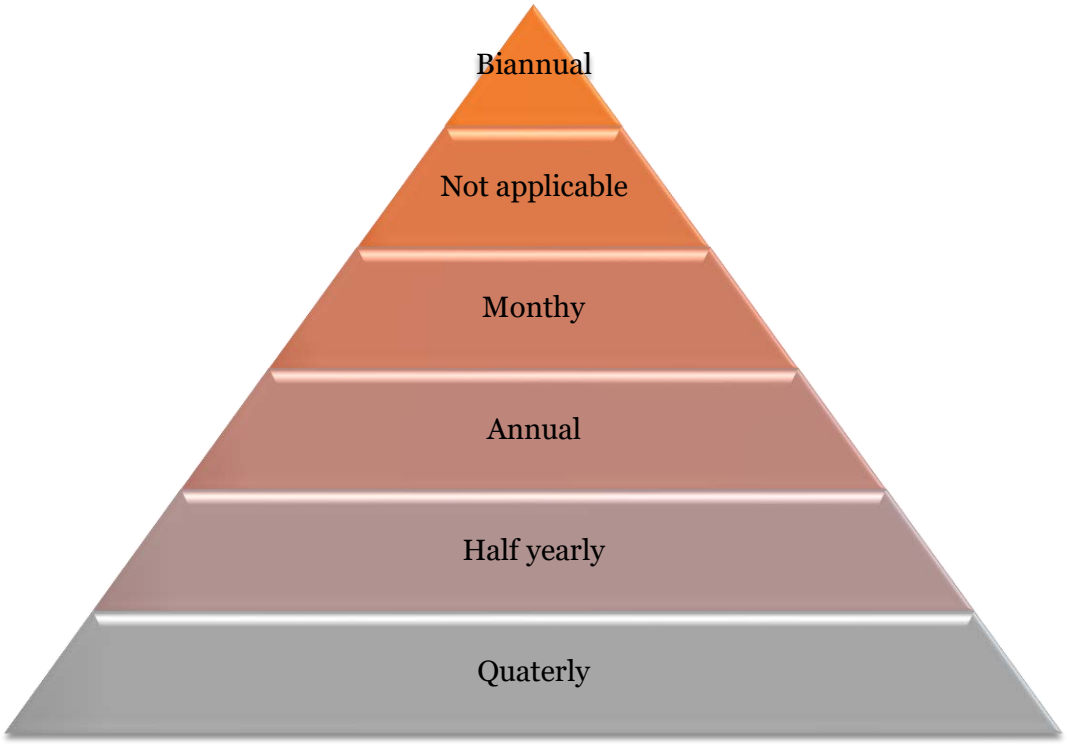

Fig. 6: Frequency of intervention for various categories of stakeholders

18.0 Capacities to generate, access and use information and knowledge.

Approaches to stakeholder engagement

The extensive list of approaches can be found in Annex A. Most of the approaches identified in the capacity/training needs assessment applies to all participating countries, however, this approach utilized in each country would vary based on country dynamics, the amount of resources which are available and the category of stakeholder. Hence, the approach will have to be adapted and relevant to each participating country.

19.0 Capacities for strategies and legislation development: institutional and Legal framework for training/capacity building

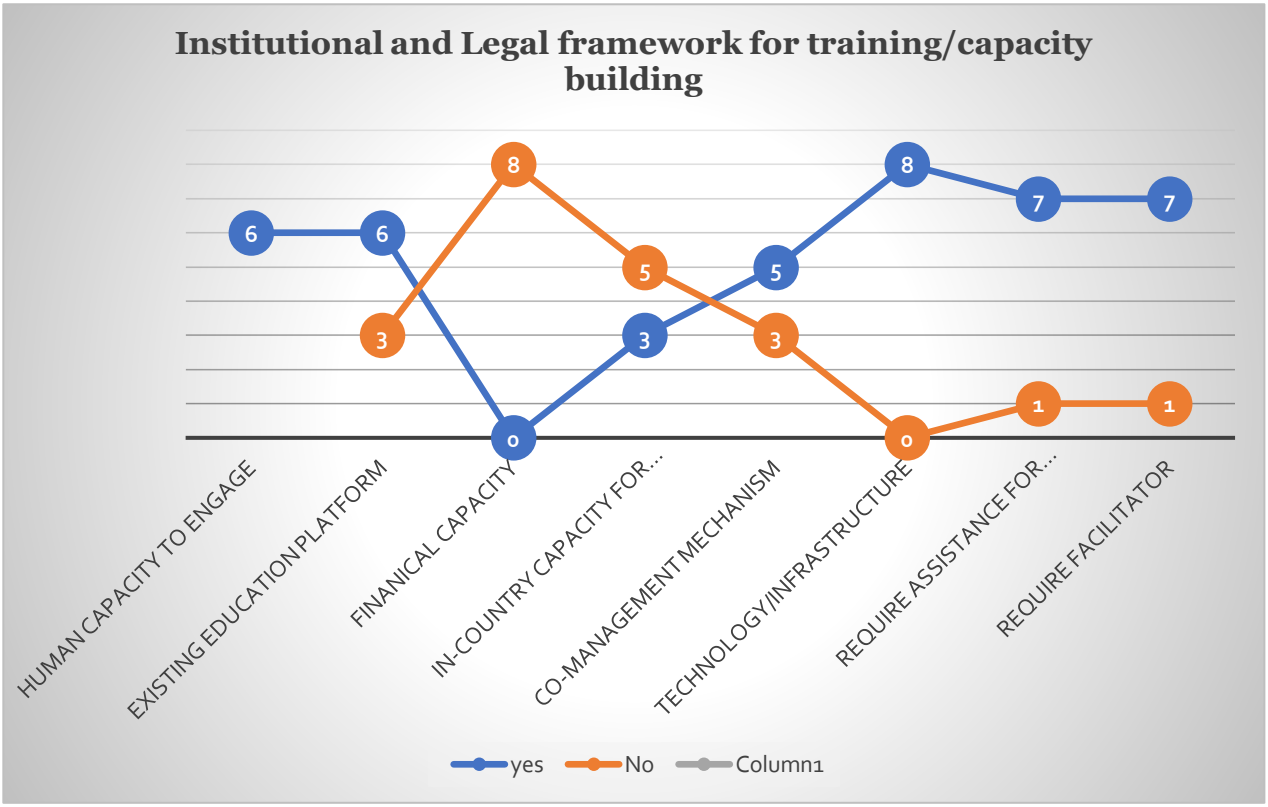

Fig 7: Institutional/legal framework for training/capacity building

20.0 Capacities to monitor and evaluate.

Table 3: Summary of capacities to monitor and evaluate.

Key: Tick yes (√); x (no)

Capacity	**Country**							
	Antigua & Barbuda	Belize	Barbados	Grenada	Guyana	Haiti	Jamaica	St Lucia
Require strengthening of monitoring evaluation systems	√	√	√	√	√	√	√	√
Needs to develop monitoring plan	x	√	√	√	√	√	√	√
Adequate in -country systems to facilitate frequent monitoring	x	x	unsure	x	√	√	x	x
Systems to ensure effective, timely and accurate evaluation	√	x	unsure	x	√	√	x	x
Institutional and legal framework for data to inform decision-making	√	x	unsure	√	√	√	x	√

21.0: Barriers to sustainable land and soil management

Box 2: Barriers to sustainable land and soil management[14]

Barriers to sustainable land and soil management

1. Limited Soil Data and Soil Carbon Data and information and Policy fragmentation
2. Insufficient trained human resources in key areas, such as Soil Scientists and Climate Smart Agriculture Tools and Methods to Implement Sustainable Agricultural practices.
3. Inadequate and lack of proactive planning to address changes in the international trading regime and its implications in the productive landscape.
4. Lack of sufficient integration of SLM issues practices and processes in the Caribbean Community Policy and decision-making frameworks.
5. Weak Institutional and Legal frameworks and Public Education on SLM and its importance at National and Regional Development.

[14] Extracted from the project document: Caribbean Small Island Developing States (SIDS) Multicountry Soil Management Initiative for Integrated Landscape Restoration and Sustainable Food Systems: Phase 1 (CSIDSSOILCARE Phase 1)

22.0 Opportunities for Synergies

The inclusivity and expansive nature of the PISLM CSIDS-SOILCARE phase 1 project provides opportunities for promoting synergy, these include regional, national, institutional, and legal frameworks, as well as activities for addressing the obligations of the UNCCD and UNFCCC Convention. Moreover, the project has several activities aimed at fostering synergies among UNCCD focal points at the community level, national level, regional level, and international level. Additionally, table 13 highlights previous training which can be used at a launching pad to strengthen synergies for further capacity development interventions.

In this regard, to maximize the available opportunities for synergies, the following systems must be in place.

- Institutional structures must be goal oriented and goal specific.
- National Priorities must be supported by the institutional arrangements.
- Specific activities, such as the following, promote synergy among institutions:
    - awareness raising, education, public participation, research, training, data gathering and inventories.
- The enabling environment, including appropriate framework legislation, delegation of authority, and leadership at the highest levels.

22. 1 Synergies in training/capacity building

The list of training highlighted in table 4 is not an exhaustive list, however, it identifies knowledge transfer opportunities upon which the project can build.

Table 4: Some previous training related to CSIDS-SOILCARE focus areas.

Country	Previous capacity building
Antigua and Barbuda	• Information Workshop: Country Status on Legacy Soil Data and Laboratory Capacity • Regional Laboratory Meeting • Digital Soil Mapping • Inaugural Meeting Caribbean Soil Support Group
Barbados	• Digital Soil Mapping
Belize	• ECLAC - Generating Climate Change and disaster indicators for policy decision-making in Belize • UNESCO Water Management Training • Training on Belize's Online MRV Platform
Grenada	• UNDP Climate Resilient Agriculture Bamboo Eradication and use of Chainsaw • Wetlands Conservation (RAMSAR) • Country status on legacy soil data and laboratory capacity • Developing the baseline for effective mapping of Caribbean Soils
Guyana	• Training of crop extension officers in soil sample collection and preparation for chemical analyses.

	• Training of secondary school teachers in soil sample collection. • Training of farmers in Good Agricultural Practices. • Use of SEPAL platform for assessment and monitoring of land degradation and restoration activities • Training on Land Cover Classification System & geospatial technology for national & regional land cover legend & land cover dataset in Guyana
Haiti	• Mitigation and adaptation to climate change • Land development and landscape restoration • Extraction of land cover, land productivity and soil organic carbon data from Trends. • Nature-Based Adaptation. • Perspectives on Land degradation. • Promoting the improvement of a sustainable management strategy for the forestry and agroforestry sectors in Haiti. • Sustainable soil management (SSM) protocol.
Jamaica	• Inception Workshop Country Status on Legacy Soil Data and Laboratory Capacity July 2022 • Sustainable Soil Management Protocols for Assessment of Sustainable Soil Management (SSM).
St. Lucia	• Fundamental of Hydrometeorology in collaboration with the Government of Mexico.

	• Improvement of Hydrometeorological datasets in collaboration with the Government of Mexico. • Training session (theoretical and practical) to review remote sensing as a tool for data infilling in collaboration with the government of Mexico. • Review of water quality monitoring operations in collaboration with the government of Mexico. • Review of datasets of WRMA for statistical adjustments in collaboration with government of Mexico.

23.0 Existing complementary projects in CSIDS-SOILCARE participating countries.

Participating countries have several existing projects which can support the implementation of PISLM CSIDS-SOILCARE phase 1 project. These projects have opportunities for capacity building, as well as the provision of pertinent data and information to inform the outputs and outcomes of various components of the CSIDS SOILCARE project. In this regard, collaboration with existing projects in participating countries will be necessary to ensure efficient use of resources, promote buy-in and extend reach. Some of the more common complementary projects are:

- Capacity Building Initiative for Transparency (CBIT) project
- UNDP EnGenDer
- UNDP Climate Resilient Agriculture Project
- UNDP CRA PROJECT for ILM
- OECS ILM Project/OECS BIOSPACE Project
- Climate Smart Agricultural and Rural Enterprise Programme (SAEP)
- Integrated Use of Bio-Inoculants and Biochar as a Strategy for Improving Crop Production on Marginal Soils.
- Production and use of rhizobium inoculant for use in legume cultivation. Production of mychorrhiza to enhance nutrient uptake by plants.
- Nutrient studies in cherry and soursop cultivations.
- USAID and UNDP Programmess
- PMDN/MARNDR
- FAO Programmes
- Soil Fertility Mapping Project

- Consultancy services for preparation of Designs for checking Dams and riverbank stabilization for Vieux Fort River and capacity building for Hydrometric Monitoring - under the Vieux Fort Water Redevelopment Project.

24.0 Special considerations

Integral to this Capacity Development Plan is the aim to foster sustainable soil management and sustainable land management with the goal of achieving land degradation neutrality in participating countries. Reconciling that gender consideration and the role of vulnerable groups are integral to the success of the project; efforts will be made to ensure women and other vulnerable participate fully in all stages of the project. In countries where the project can impact indigenous groups, special provisions will be made to ensure indigenous people benefit from appropriate capacity-building/training and awareness programmes.

25.0 Counterparts Capacity support

The project is supported by the national 'Focal Points' through the governments of the participating countries. However, there are Project Assistants employed by PISLM, working with participating countries to execute applicable components of the project. Coordination of all Regional training will be conducted through RAC/NAT. National authorities will design and implement national training/capacity building which they can be shared with RAC/NAT for input. Any specific skill or resources required to conduct training will be requested of RAC/NAT through the Project Director/ Manager. The National Focal Points will be provided with additional counterpart support by other appropriate agencies organisations under the project.

26.0 Risks

Given the multifaceted and complex nature of the project, there are some risks that can hinder the anticipated rate of implementation both at the level of RAC/NAT, as well as at the national level within participating countries. Inadequate coordination and timing of project activities at both the regional and national levels can slow implementation. Ineffective communication systems among project teams, focal points, project assistants, and local stakeholders can lead to a lack of coordination. Inadequate in-country capacity to execute certain technical components of the project. Inadequate communication on project goals, objectives, and outcomes with key stakeholders can stimulate a lack of commitment. Poor project management can result in delays in the release of project funds, timely completion of activities, and outputs, and loss of skills. Inadequate opportunities for monitoring, continuous education, awareness, training, and capacity building can affect the sustainability of the project.

27. 0 Conclusion and Recommendation

All participating countries have made strides in addressing the issues of SSM, SLM, and LDN, however, there still exist some systemic and capacity gaps which have been alluded to in this document. Most of the countries have benefitted from initial capacity building relative to PISLM CSIDS-SOILCARE phase 1 or related capacity building from which they have garnered transferable knowledge and skills. Participating countries also have existing projects and programmes upon which CSIDS-SOILCARE can build to maximize resource use and expand reach for greater impact. Additionally, the categories of stakeholders including vulnerable stakeholders, areas for capacity-building interventions, and approaches to stakeholder engagement are all consistent among participating countries.

On the other hand, participating countries need to leverage the resources and opportunities available under this project to strengthen their institutional and legal frameworks, build and sustain technical capacities to establish, manage and sustain Soil Information Systems; and leverage the resources to make scientifically sound informed decisions on SSM, SLM and land degradation matters. Additionally, countries should work collaboratively and efficiently to ensure the outputs and outcomes under this

CSIDS-SOILCARE project are accomplished and inform national and regional development.

All participating countries posited challenges with financial resources. Moreover, the existing monitoring and evaluation mechanisms are inadequate. In this regard, a Capacity Development and Action Plan were developed for this project, which will be implemented by RAC/NAT. Therefore, participating countries needs to ensure their national goals are aligned and working in tandem with the regional vision.

ANNEXES

Annex A: Recommended approaches to stakeholder engagement for participating countries.

Table 5: Approaches for stakeholder engagement based on capacity needs assessment.

Recommended approaches identified by country. 

	Antigua and Barbuda	Barbados	Belize	Grenada	Guyana	Haiti	Jamaica	St. Lucia
Development of education materials	✓	✓	✓	✓	✓	✓	✓	✓
Virtual meetings	✓	✓		✓	✓	✓	✓	✓
Training workshops	✓	✓	✓	✓	✓	✓	✓	✓

Capacity development sessions								
Demonstration sites								
Hybrid sessions								
Awareness/sensitization sessions								
Focus group meetings								
Social Media platforms/groups								

Institutionalizes training								
Community meetings								
Information hub								
One on one engagements								
Displays and exhibitions								
Training of Trainers								

Utilization of mass media								

Annex B: Beneficiaries of past complementary capacity building /training initiatives

Antigua and Barbuda	Barbados	Belize	Grenada
• Ministry of Agriculture, Fisheries and Barbuda Affairs. • Ministry of Foreign Affairs, Agriculture, Trade Immigration & Barbuda Affairs.	• Lands and Surveys Department. • Ministry of Agriculture and Food Security. • Project Assistant for CSIDS SOILCARE Phase 1 Project in Barbados.	• Ministry of Agriculture	• Government of Grenada

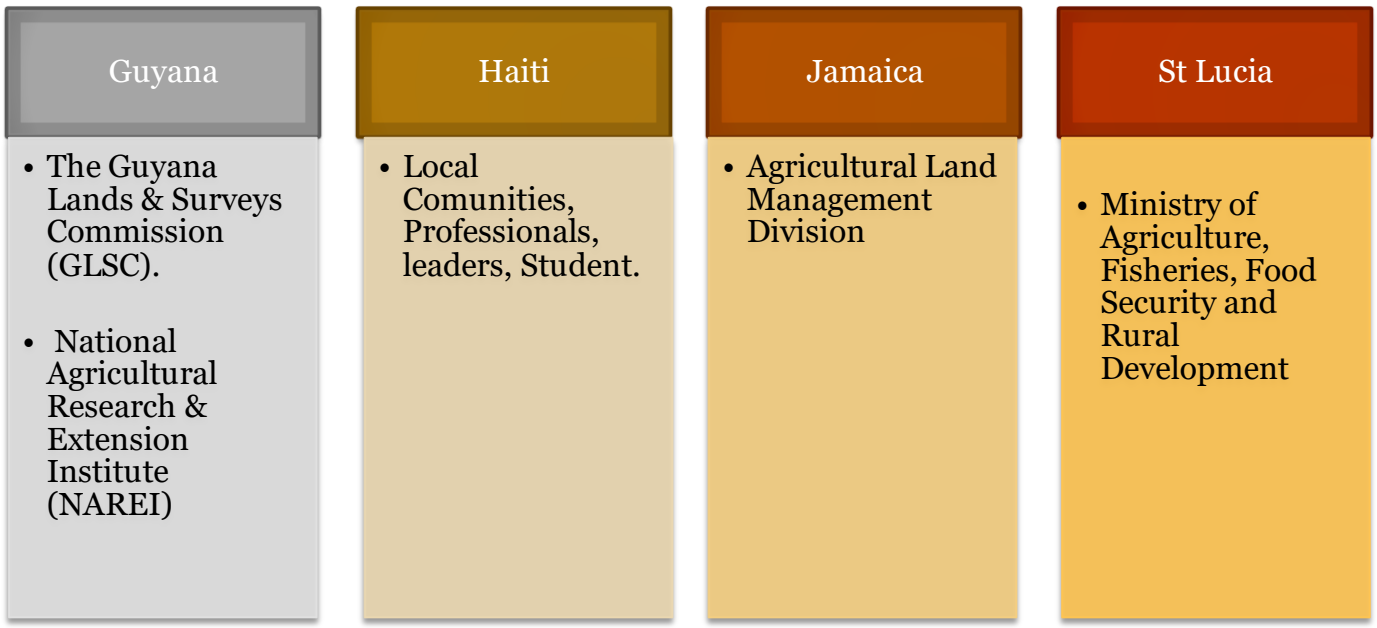

Fig. 8: Beneficiaries of past complementary capacity building/training initiatives

Annex C: Monitoring and Evaluation (M& E) Framework[15]

The capacity development scorecard developed for the project will be used as the basis for the monitoring and evaluation framework for the project. Monitoring and evaluation will be an ongoing process of observation, supervision, revision, and documentation of activities relative to the objectives, expected results and resources allocated under the capacity development component of the PISLM CSIDS-SOILCARE project. M & E is critical to identifying problems, opportunities, deviations from the expected outputs or

[15] Information extracted from: Bellamy, Jean-Joseph and Kevin Hill (2010), "Monitoring Guidelines of Capacity Development in Global Environment Facility Projects", Global Support Programme, Bureau for Development Policy, United Nations Development Programme, New York, USA.

outcomes, contributes to sustainability of the project and plan for future activities. It is essential at all three levels of capacity development, individual, institutional, and systemic. An effective monitoring system is measured by the degree to which it fulfills its objectives. On the other hand, evaluation will aid in improving ongoing project activities as well as provide support for decision-making and future activities. In the PISLM CSIDS-SOILCARE project, capacity development is vital to the success of the project; and supports the decision-making process.

In this regard, an effective monitoring system will do the following:

1. Provide a record of how the objectives addressed the priority issues.
2. The design and methodology used.
3. Resources used.
4. Activities conducted.
5. Results/outputs verses indicators; and
6. Generate reports for internal and externals use.

The monitoring system should include the following six essential components:

1. Collection of information.
2. Processing and analysis of information.
3. Information storage.
4. Production and distribution of reports.
5. decision-making based on information collected; and
6. Actions to be taken.

Annex D: Implementation of Stakeholder Engagement Plan

This plan captures specific actions which are required to implement an effective SEP. Table 19 below highlights important considerations for SE based on whether the goal is

to inform, engage or involve. Given the nature of this project, these are the critical levels of engagement necessary for implementation at this stage.

Table 6: Considerations and actions for SEP under the CSIDS-SOILCARE Project

Components	Sub-components	Design option
Stimulating public interest and involvement	Aiding attendance in public participation	● Use simple, local language. ● Include contact information on all print and non-print materials. ● Make non-technical project documents available and easily accessible. ● Have a designated telephone line or appropriate platform which the public can utilize to access information and provide feedback on project activities. ● Collaborate with specialized project staff to coordinate the SEP implementation. ● Decide for transportation where required.

Influencing the decision-making process	Considering public comments, concerns, and recommendations.	● Public comments should be captured as part of the SEP by designated members of the project team.
Responsibilities for Stakeholder Engagement	Facilitating stakeholder participation.	Key actors facilitating citizen engagement can include: ● Special groups under the project. ● Project Specialist/Consultants ● Focal Points ● Academia ● Competent Authorities ● Interested or affected stakeholders
	Access to project information	Information relative to the project can be made available based on recommendations from the Needs Assessment.
Stakeholder participation procedures	Procedural guidance	Procedural guidance should be available to stakeholders.
	Establishing Timeframes	Establish statutory timeframe in accordance with the project schedule and work plans.
Recording and documentation of SE	Documentation/recording of information	At the Regional level RAC/NAT has the responsibility to ensure

		the information is collected, analyzed, and disseminated appropriately. At the national level the Project Assistants in participating countries will execute this responsibility.

Annex E: Synergies among the convention on Climate change and Desertification

Table 7: Synergies among the Conventions on Climate Change and Desertification

Activity	UNCCD	UNFCCC
National and Regional Action plans	Articles 9,10 Article 15 Annex III "REGIONAL IMPLEMENTATION ANNEX FOR LATIN AMERICA AND THE CARIBBEAN" Articles 3 and 4	Article 4(1)(b)
Identification & Monitoring	Article 16	
Research	Articles 17, 19(b)	Article 5
Public Education	Article 5(d), Article 19(b)	Article 6
Clearing house for technical information	Article 18	
Public Participation	Article 19(4)	Article 6(i)(a)(iii)
Exchange Information	Article 16(f)	Article 7
Training	Article 19	Articles 6,7,12
Data Collection	Article 16(b)	
Technology Transfer and Development	Article 18	
Kyoto Article 10 (c) Regional Action Plan for Latin America and Caribbean Articles 5(d) and (e)	Article 17(1)(c)	

Annex F: Capacity and Training Needs Assessment Survey

This survey is intended to assess the training/capacity developing needs of countries participating in the project: **CSIDS-SOILCARE Phase 1: Caribbean Small Islands Developing States (SIDS) multi-country soil management initiative for Integrated Landscape Restoration and Climate-Resilient food systems.**

Furthermore, this consultancy is being implemented under component 5 of the project, which focuses on *"Mainstreaming Sustainable Land Management (SLM) and Sustainable Soil Management (SSM), Strengthening Knowledge Management, Enhanced Training, and capacity development, the Building of Financial Capability to Implement SLM, and the Regional LDN Strategy and Monitoring and Evaluation*

The objectives of this survey are to:

1. identify deficiencies/gaps in the needs of participating countries.
2. identify key stakeholders and appropriate methodology for engagement.
3. ascertain the existing institutional and legal framework of participating countries to support capacity building/training needs.
4. determine the level of administrative and technical support required to maximize project benefits.

This survey is divided into 6 sections, each focusing on assessing specific components of the training/capacity development needs of participating countries. The results of this survey will be analyzed and synthesized along with other project research to inform the development of a Regional Climate Resilient Soils and Sustainable Land Management Plan. It will also contribute to the development of a training and capacity development plan for the Regional Research, Advisory and Capacity Building Facility on New Adaptation Technologies (RAC).

The survey is required to be completed by the National Focal points of Antigua and Barbuda, Barbados, Grenada, Guyana, Haiti, Jamaica, and St. Lucia. I will take approximately 10minutes to be completed.

Section 1: Country Profile	**This section will assess the status of participating countries to undertake the training/capacity development under the project.**			
Name and designation of person/persons completing this capacity/training assessment survey				
Name of Country:		**Did the country participate in any capacity/training relative to SSM, SLM, or Climate Change in the past year**	Yes ☐	No ☐
Please list the training/capacity-building activities conducted to-date	1. 2	3. 4.	5. 6.	
Who were the beneficiaries of past capacity-building/training initiatives?				
Does your country have existing projects/programmes with which SOILCARE can collaborate for capacity-building?	Yes	No	If yes, please state the title of the projects/programmes 1. _____ 2. _____ 3. _____	

			4. _____					
What are the most appropriate periods for stakeholder engagement?	Mondays to Fridays am ☐ pm ☐		Saturdays am ☐ pm ☐		Sundays am ☐ pm ☐		Holidays am ☐ pm ☐	
Section 2: CR 1: Capacities for engagement	This section is intended to identify key stakeholders who would require training/capacity building along with recommended approaches for engagement. Kindly tick (√) the stakeholders who apply to your country from the list below based on whether they will be impacted by the project, are interested in the project, or can influence the project outcome. If there are additional stakeholders, please add them under others. Kindly indicate the frequency of the proposed training/capacity building for identified stakeholders.							
Key Stakeholders	**Frequency: Please tick (√) the proposed frequency of intervention for the various categories of stakeholders. If the stakeholder category doesn't apply to your country, please tick (√) not applicable (NA).**							
	Monthly	**Bimonthly**	**Quarterly**	**Half Yearly**	**Annual**	**biannual**	**Other**	**NA**
1. Farmers and Farmers' organisations								
1. Women's group								
2. Youth Organisations								
3. Agriculture Extension Officers								
4. Laboratory Scientists/Technicians								
5. Ministries of Agriculture, Forestry, and Environment								

6. National Focal Points (UNCCD)								
7. Regional Soil Support Groups								
8. Local communities/community-based organisations								
9. Technical Experts								
10. Academia (The University of the West Indies, University of Guyana, and University of Belize								
Vulnerable stakeholders – Would the training/capacity building require the participation of any of the vulnerable groups of stakeholders?								
11. Indigenous Peoples and Organisations								
12. Elderly people								
13. Persons with disabilities								
14. Single mothers								
15. Unemployed persons								
16. Other/s								
Focus areas for Capacity building/training needs of participating countries	**Please identify the areas where training/capacity building is required; and tick (√) all that apply.**							
Training Topics Checklist			**Yes**		**No**			
1. Sustainable soil management, sustainable land management & Land degradation neutrality								

2. Soil Survey, sampling, and testing		
3. Soil analysis and interpretation of results		
4. Soil Chemistry		
5. Plant Physiology		
6. Maintenance of Laboratory equipment		
7. Mapping of soil productivity, land cover, and soil organic carbon		
8. Carbon emission and sequestration trapping		
9. Land Suitability Assessment		
10. Land Capability Assessments		
11. High Nature Value Farming Index (HVNI)		
12. Assessing land degradation		
13. Climate Smart Agricultural practices		
14. Climate change resilient methods and approaches		
15. Climate change adaptation best practices		
16. Research methodologies		
17. Best practices for agriculture		
18. Training on national and regional soil information systems focused on data collection, harmonization, mapping, and modeling		
19. Development/updating of national soil data		
20. Training on the implementation of GLOSOLAN SOPs		
21. Training on the execution of internal quality control		

22. Traditional knowledge and sustainable agriculture		
Section 3: CR 2: Capacities to generate, access, and use information and knowledge: Recommended method/s of engagement. Tick (√) all that applies.		
Approaches to stakeholder engagement		
Checklist of approaches to stakeholder engagement	Yes	No
1. Development of training materials		
2. Virtual meetings		
3. Training workshops		
4. Capacity development sessions		
5. Demonstration sites		
6. Hybrid sessions		
7. Awareness/sensitization sessions		
8. Focus group meetings.		
9. Social media platforms/groups		
10. Institutionalized training		
11. Community Meetings		
12. Institutionalized training		
13. Information Hub		

14. One-on-one engagements		
15. Displays and exhibitions.		
16. Training of Trainers		
17. Utilization of mass media		

Section 4: CR 3:	**Capacities for strategy, policy, and legislation development: Institutional and legal framework for Training/Capacity Building. Tick (√) all that applies**		
	Checklist	**Yes**	**No**
1. Does the country have the human capacity to effectively engage with stakeholders?			
2. Does the country have any existing education platform for information sharing?			
3. Does the country have the financial capacity to engage with stakeholders?			
4. Is there adequate in-country capacity to facilitate training?			

			If not, what resources are needed? _____ _____
5. Does the country have mechanisms for co-management in place?			
6. Does the country have technology/infrastructure in place to facilitate stakeholder engagement?			
7. Does the country require assistance in the development of the Training concepts for engaging with the various stakeholders?			
8. Does the country require assistance in facilitating the sessions?			
Section 5: CR 4:	**Capacities for management and implementation: Systems for information sharing**		
	Checklist	**Yes**	**No**
1. Are there existing social media platforms/groups that can be utilized to share project information?			
2. Are there existing national websites that can be utilized?			
3. Does the country have a National Soil Information system			
4. Are there existing Clearing Houses that can be utilized to share project information?			
5. Do the vulnerable stakeholders have access to any of the information-sharing platforms?		If yes, which are the most common ones? _____ _____ _____ _____ _____ _____ _____	

6. Does your country have the legal and institutional framework to meet project outcomes?		If not, what are the immediate needs? _____ _____ _____ _____	

Section 6: CR 5:	**Capacities to monitor and evaluate**			
		Yes	**No**	**Comment**
Monitoring and Evaluation capacity checklist	7. Does the country require training in strengthening monitoring and evaluation systems?			
	8. Does the country need to develop a monitoring plan?			
	9. Does the country have systems to ensure frequent monitoring?			
	10. Does the country have systems to ensure effective, timely, and accurate evaluation?			
	11. Does the country have the institutional and legal framework to use monitoring and evaluation data to inform decision-making?			

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