Initiative for Climate Action Transparency
St. Kitts and Nevis Project

LEAP Training Sessions (In-person) Training Report

29th July, 2024

Submitted to

The Government of St. Kitts and Nevis

Prepared by

Caribbean Cooperative Measurement, Reporting & Verification Hub

DISCLAIMER

PREPARED UNDER

The Initiative for Climate Action Transparency (ICAT), supported by Austria, Canada, Germany, Italy, the Children's Investment Fund Foundation, and the ClimateWorks Foundation.

Supported by: Federal Foreign Office on the basis of a decision by the German Bundestag

Federal Ministry Republic of Austria Climate Action, Environment, Energy, Mobility, Innovation and Technology

Environment and Climate Change Canada / Environnement et Changement climatique Canada

The ICAT Secretariat is managed and supported by the United Nations Office for Project Services (UNOPS)

St. Kitts and Nevis Transport Climate Action Data Tool (TraCAD) Training Report

Initiative for Climate Action Transparency – ICAT

Deliverable # D– Output 1.1.2

AUTHORS

Kalifa Phillip, CCMRVH

Ahyana Bowen, CCMRVH

Benise Joseph, CCRMVH

29th July, 2024

Table of Contents

Introduction 5
Participants 5
Methodology and Approach 8
Summary of the sessions and materials provided 6
Outcomes 8
Results of the Feedback Form 8
Summary 10
Annexes 11

List of Figures

Figure 1: Knowledge before and after training 9
Figure 2: Training Facilitators Kalifa Phillip (Left) and Benise Joseph (Right) 11

Acronyms

CCMRVH	Caribbean Cooperative Measurement Reporting and Verification Hub
DOE	Department of the Environment
EV	Electric Vehicle
GHG	Greenhouse Gas
ICAT	Initiative for Climate Action Transparency
LEAP	Low Emission Analysis Platform
NDC	Nationally Determined Contribution

Introduction

The Government of St. Kitts and Nevis' through the Ministry of Sustainable Development, Environment, Climate Action and Constituency Empowerment (hereafter referred to as the Ministry of Sustainable Development) with support from the **Initiative for Climate Action Transparency (ICAT)** is developing and institutionalizing a framework to track St. Kitts and Nevis Nationally Determined Contribution (NDC) Actions and build capacity in relevant areas to conduct projections of greenhouse gas (GHG) emissions and support sustainable NDC tracking and reporting for the electricity generation and transport subsectors.

As such, a four-day capacity-building workshop on modelling using the Low Emissions Analysis Platform (LEAP) was held in person from the 27th to the 30th, May 2024. This training supports the actualization of a framework for projections of emissions and NDC tracking indicators for the energy sector and is the second training being conducted as part of the capacity-building component of this project. The training is being facilitated by the Ministry of Sustainable Development and consultants from the Caribbean Cooperative Measurement Reporting and Verification Hub (The MRV Hub). The "MRV Hub" (www.mrvhub.org) is a unique, sustainable, and country-driven partnership designed to foster regional technical excellence and generate stronger policy-relevant carbon accounting.

Over the course of the training sessions, LEAP's functionality was extensively explored, with emphasis placed on model development and scenario analysis. The sessions combined both theoretical discussions and practical guided exercises. Participants engaged in replicating the thought processes necessary for creating different models and comprehending their applicability to the national context with a focus on the energy sector. The capacity-building workshop comprised the following topics:

Day 1 – The role of models in climate change Mitigation & Introduction to LEAP

Day 2 – Introduction to Demand & Demand Analysis

Day 3 – Introduction to Transformation Analysis & Modelling Emissions & Scenario Analysis

Day 4 – Demand Analysis in the Transport Sector & Mitigation Analysis

Participants

Stakeholders were identified by the Ministry of Sustainable Development. These consisted of mainly public stakeholders from key institutions and departments that were expected to either contribute to the data collected for data analysis within LEAP, use the software for mitigation analysis or projections for the transport sector or use LEAP for other purposes like data collection and storage. Participants were expected to have a basic familiarity with concepts related to energy statistics and greenhouse gas (GHG) emissions accounting. The total participant's disaggregation by gender was 68% male and 32% female.

Methodology and Approach

The four-day LEAP training aimed to provide a comprehensive understanding of the techniques and procedures involved in model development using the LEAP software, utilizing nationally specific material for these sessions.

The main details of the workshop were:

- To give a thorough overview of the techniques and process needed to develop different models using the LEAP software, drawing on exercises designed specifically by the MRV Hub for the sessions. All national data and exercises were provided to participants in advance via a One Drive cloud link. LEAP subscriptions were made available to participants for one month from the start of the training.

- To have participants create LEAP models inputting prepared country-specific data into baseline scenarios and mitigation scenarios, subsequently analysing the obtained results for the energy sector.

- To provide participants with practical experience through hands-on training which featured "learn by doing" exercises. Participants actively engaged with the software and were involved in designing models using country-specific data. Each main topic area featured PowerPoint presentations with pertinent information which aided model development and the participants' overall understanding, question and answer opportunities, and the development of models using the data provided. In some instances, participants were also provided with preliminary models as starting points to enable them to focus on the specific daily learning exercises. Each model developed was a precursor to the subsequent exercise.

- The workshop focused on demonstrations that showcased the step-by-step process of model development. Participants were encouraged to gain practical experience by working directly with the software alongside peers, which allowed them to better understand the intricacies involved in developing the model. They gained valuable insights into decision-making processes, understanding national contexts, formulating assumptions, identifying the data necessary for building a model, and understanding the role of LEAP during the decision-making process.

Summary of the sessions and materials provided

The training was held in person at a conference room in the Department of Information Technology in Basseterre, St. Kitts and Nevis from 27th – 30th May 2024. Each session was facilitated by Ms. Benise Joseph, the lead modelling expert and trainer with assistance from Ms. Kalifa Phillip, co-facilitator and trainer, both from the Caribbean Cooperative Measurement Reporting and Verification Hub (CCMRVH).

During the four-day LEAP training, participants were taken through a comprehensive overview of the LEAP software and its functionalities, with a focus on building mitigation models and conducting

analysis to support decision-making for St. Kitts and Nevis' energy and transport-related climate targets.

Day 1: The first day commenced with opening remarks from Ms. Phynora Ible, ICAT Project Coordinator, from St. Kitts where she highlighted the overall purpose of the workshop. This was followed by a more detailed introduction to the workshop, a background on the consulting organization for the ICAT project (CCMRVH), participant introductions, scene setting and logistics, and software set-up. The day's objectives included introducing climate change mitigation and the role of models and modelling software in conducting these assessments and an introduction to the LEAP software and the "key assumptions" and "historical and projections branches" necessary for building a model, as well as the data required to input into these. They gained insights into various methods for importing, exporting, and updating data within the LEAP model. In the first exercise guided participants through the input of demographic and economic data and were provided with instructions which also aided their understanding of the fundamentals of key assumptions and drivers in the LEAP software.

Day 2: On the second day, the training began with an overview of day 1 activities and continued with a presentation on an introduction to demand modelling in LEAP which was supplemented with a second exercise in the afternoon session which provided participants with a practical understanding of demand analysis. The second exercise focused on populating data available for the residential sector.

Day 3: Like the previous day, the third day began with a recap of the previous days. This was followed by a presentation which covered the theory aspect of Transformation Analysis, understanding the production of energy to meet the demand. This also involved concepts on transitioning from traditional fossil fuel-based energy sources to renewable energy sources, assessing the implications of shifting energy consumption patterns to reduce greenhouse gas emissions. In addition, this session featured a presentation outlining the theoretical aspect of emissions modelling and scenario analyses in LEAP. Participants delved into the basics of transformation and emissions analysis within LEAP through the completion of hands-on training exercises.

Day 4: The final day focused on creation of mitigation scenarios, and environmental loading/emissions scenario results analyses as well as advanced demand modelling in the transport sector, using the stock turnover method. The session was geared at ensuring participants had a clear understanding of transport demand modelling and learnt concepts surrounding conducting a mitigation analysis using LEAP. The session explored mitigation scenarios which included the adoption of more energy efficiency measures and introduction of renewable energy technology. Participants engaged in hands-on exercises, analysing, and inputting proposed mitigation actions into baseline and various mitigation scenarios linked to policy targets. Emphasis was placed on the significance of projecting GHG emissions under various mitigation scenarios. Moreover, participants were taught how to interpret the results generated by a completed LEAP model effectively. The training concluded with practical guidance on analyzing and exporting LEAP results to support policy-making decisions and track national targets such as Nationally Determined Contributions (NDCs). The closing remarks were made by the training hosts and certificates were distributed virtually to all participants who met the criteria, following the completion of the training.

Outcomes

A total of twenty-five (25) participants attended the training session throughout the four days, out of which 68% were male and 32% female. The participants engaged actively throughout the theory sessions, asking many critical questions which helped further their understanding of key concepts. This was supplemented with practical hands-on sessions where they delved deeper into the software itself. Further practice was encouraged after the training session to become better acquainted with the software. The participants demonstrated eagerness and progressive confidence in understanding the general concepts of the software, and the importance of quality data collection and analysis. They were able to operate the software and build models on their own, and with improved accuracy by the last day of the training.

Many participants were able to correlate the work in training sessions to their current workplaces for data requests and data storage. The training stimulated valuable questions and discussions on the improvement of institutional data-sharing practices, quality and level of detail of data collected, data storage options, and the LEAP software.

Results of the feedback form

Feedback forms were provided to participants to assess the usefulness of the workshop by ICAT. In addition to general demographic data, participants were asked to respond to questions and/or statements to assess the following categories:

- Knowledge before training
- Knowledge after training
- Key Takeaways
- Overall workshop rating
- Areas for improvement

The responses for the entirety of the training were generally positive responses across all sections:

Survey completion rate:

84% survey completion, with a total of 21 responses received.

Overall training rating:

- Very Poor – 4.8%
- Poor – 0 %
- Average – 9.5 %
- Good – 47.6 %
- Very Good – 38.1 %

Knowledge before the training was:

- Very Poor- 23.81%
- Poor – 38.10 %

- Average – 19.05 %
- Good – 19.05 %

Knowledge after the training was significantly improved:

- Average – 33.33 %
- Good – 47.62 %
- Very Good - 19.05 %

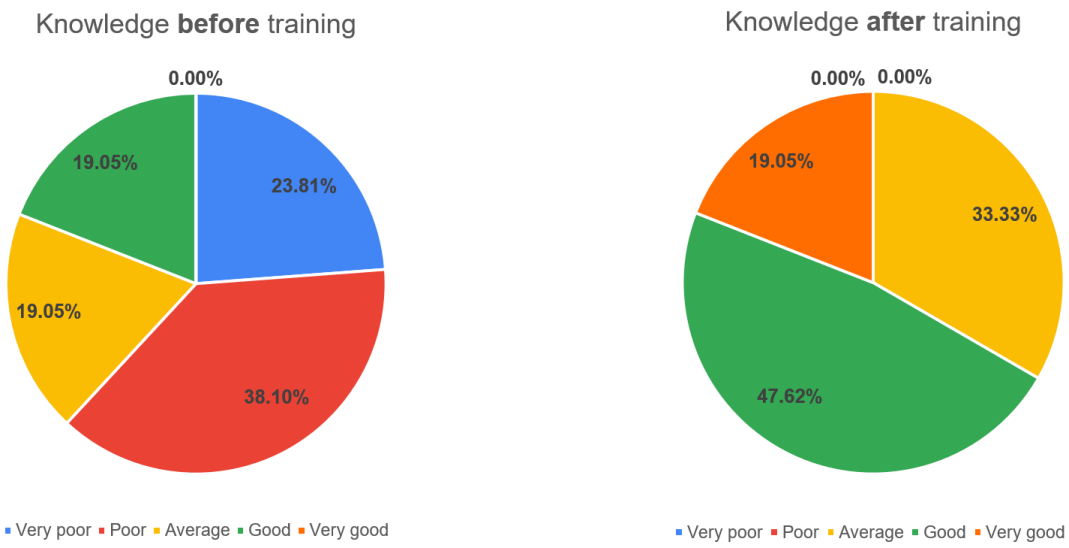

Figure 1: Knowledge before and after training

Key Takeaways:

Generally, participants learnt valuable skills and techniques when utilizing a broad rande of functions available in LEAP. They highlighted the overall flexibility of LEAP in aiding countries with completing their mitigation models for managing emissions, thus improving decision making. In addition, participants noted key aspects such as scenario creation, results generation, differences between top down and bottom-up approach and general steps to building a model. The training was heavily focused on data, and participants highlighted an increased understanding of the specific data requirements needed to conduct meaningful analyses, as well as how data can be manipulated using formulas in the LEAP software.

Knowledge and skills acquired to put into practice:

Participants gave varied responses in terms of how they would apply their LEAP knowledge in practice due to the wide-ranging stakeholder representation in the sessions. Generally, participants highlighted LEAP's usefulness in general planning, implementation, and post implementation activities related to sustainable development goals, climate action initiatives and climate change information, including financing. Participants with data analytic backgrounds noted that their knowledge of LEAP would help in their generation of more meaningful information/data which could then be shared with the actual users of LEAP within SKN. Other participants saw it as a useful tool for

data storage and data sharing among agencies as well as the identification of future data needs. Participants saw it as a useful tool to directly model the energy sector in SKN and could be used for decision-making, especially within this sector.

Generally, most participants felt that their new knowledge would be applied in some way as shown:

- Not at all (4.8 %)
- To a small degree (57.1%)
- Regularly (33.3%)
- Daily (4.8%)

Improvements identified:

56% of the participants who completed the survey indicated that there was room for improvement in the following aspects:

- ***Training Duration***: Most respondents noted that there was not enough time to effectively cover all the training content, and some felt it was a bit rushed. Due to the technical nature of the training, it is important that more time is dedicated to understanding the content as well as the practical aspects, which can be done with an increased number of training days. One participant suggested an additional two training days, and that the first two days be solely focused on theory.
- **Additional Content and guidance**: A few participants noted that viewing an online training video of the program which provides step by step instructions to using LEAP, prior to the training would have been helpful in preparation for the actual training exercises. In addition, one participant noted that the training could have featured a 1-page glossary or appendix which outlines key terms/syntax to aid participant understanding throughout the training. One participant also noted that an aspect of the training could include the interlinkages between LEAP and the SDG indicators for SKN, however it should be noted that another training component within the project will focus on indicator development and tracking.
- **Engagement:** One participant expressed interest in a slightly different level of engagement among trainees, where more collective efforts would be used to complete the exercises (perhaps with group activities), which would also encourage knowledge sharing. It should be noted that many participants naturally engaged in completing exercises within groups, and the faster learners were also able to assist the slower ones.

Summary

The participants' overall feedback on the in-person training was positive. Throughout the training, participants remained actively engaged, contributing valuable insights, and posing pertinent questions during the guided exercises and instructional sessions. The training team expressed immense satisfaction with the feedback received and intends to incorporate this valuable input into future training sessions delivered in person. Annex 1 contains photos from the live training sessions.

The team extends its gratitude to the Ministry of Sustainable Development for their assistance in coordinating this workshop.

Annexes

- **Annex 1: Photo of Participants**

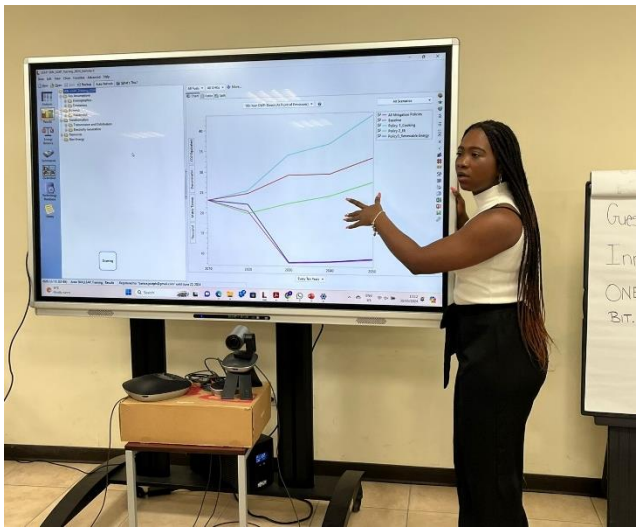

Figure 2: Training Facilitators Kalifa Phillip (Left) and Benise Joseph (Right)

- **Annex 2: Workshop Agenda**

St. Kitts and Nevis Initiative for Climate Action Transparency (ICAT)

Development and Institutionalization of a Framework to Track NDC Action and Build Capacity in Relevant Areas

LEAP Training Sessions

IT Department, St. Kitts & Nevis (In-person)

Agenda

27th-30th May 2024

Introduction

The Government of St. Kitts and Nevis' through the Ministry of Sustainable Development, Environment, Climate Action and Constituency Empowerment with support from the **Initiative for Climate Action Transparency (ICAT)** is developing and institutionalizing a framework to track St. Kitts and Nevis Nationally Determined Contribution (NDC) Actions and build capacity in relevant areas to conduct projections of greenhouse gas (GHG) emissions and support sustainable NDC tracking and reporting for the electricity generation and transport subsectors.

As such, a four-day capacity-building workshop on modelling using the Low Emissions Analysis Platform (LEAP) is scheduled to be held in person from the 27th to the 30th, May 2024. This training supports the actualization of a framework for projections of emissions and NDC tracking indicators for the energy sector and is the second training being conducted as part of the capacity-building component of this project. The training is being facilitated by the Ministry of Sustainable Development, Environment, Climate Action and Constituency Empowerment and the Caribbean Cooperative Measurement Reporting and Verification Hub (The MRV Hub). The "MRV Hub" (www.mrvhub.org) is a unique, sustainable, and country-driven partnership designed to foster regional technical excellence and generate stronger policy-relevant carbon accounting.

As part of the training, participants are expected to complete assignments and assessments. Trainers will be available for 30-minute sessions after the scheduled time for further question and answer sessions, which will be optional.

Please **complete this training** Registration Form **no later than Friday 24th May 2024** to provide trainers with an understanding of participants' knowledge and experience.

Objective of the workshop: To explore the functionalities of the LEAP software, and understand model development and mitigation analysis using the software.

Target Learners: Stakeholders include but are not limited to officers, or analysts involved in climate change mitigation, energy planning, policymakers, GHG inventory compilers, model developers, and officers in the climate change divisions of the government, focused on mitigation within the energy sector and implementation and tracking of the St. Kitts and Nevis nationally determined contributions.

Training Details

Dates	27-30 May 2024
Modality	In-person
Venue	IT Department, St. Kitts
Times	Mon - Thurs: 9 am - 3 pm (with optional Q&A until 3:30 pm)
Trainers	Benise Joseph, Senior Programme Associate, Caribbean Cooperative MRV Hub Kalifa Phillip, Technical Support Associate, Caribbean Cooperative MRV Hub
Training materials	An online repository with training materials will be available here:

Agenda

Day 1: Monday, 27th May, 2024	
Time	**Topic**
Session 1	**Opening & Workshop Objectives**
9:00 - 9:30	**Registration**
9:30 – 9:45	**Opening Ceremony** • Opening remarks • Introductions
9:45 – 10:00	Workshop Overview & Objectives
10:00 – 10:15	**Break / Photo Session**
Session 2	**The Role of Models in Climate Change Mitigation**
10:15 – 11:05	• Introduction to climate change mitigation modelling
11:05 – 11:10	Questions and Answers
Session 3	**LEAP Introduction**
11:10 – 12:10	**Introduction to LEAP** • Understanding the key characteristics of the LEAP modelling tool • Understanding the structure of a representative LEAP Analysis • Software demonstration
12:10 – 12:15	Question and Answer Session
12:15 - 13:15	**Lunch**
Session 4	**Demand Analysis**
13:15– 13:50	Demand Analysis Overview • Definitions, concepts and methods • Q&A
13:50 – 14:00	Questions and Answer Session
Session 5	**Practice Session**
14:00 - 14:50	Overview of Exercises (Hands-on) – Practice & Assessment
14:50 - 15:00	Review, Next Steps, Stakeholder Feedback
Session 5	**Self–Paced Practice**
15:00 -15:30 (Optional)	Self-paced work

Day 2: Tuesday, 28th May, 2024	
Time	**Topic**
Session 1	**Welcome & Recap**
9:00 - 9:30	Questions from the previous day, review of the day's agenda and objectives
Session 2	**Demand Analysis**
9:30 – 10:30	**Demand Analysis** Continuation of exercises in Demand Analysis (Baseline)
10:30 – 10:45	**Break**
Session 3	**Transformation Analysis**
10:45 - 12:00	**Energy Supply/ Transformation Analysis** • Modeling energy supply in LEAP: definitions, concepts and methods
12:00 – 12:30	Overview of Exercises (if Possible)
12:30 - 13:30	**Lunch**
Session 4	**Practice Session: Transformation Analysis**
13:30 - 14:50	Overview of Exercises – Practice & Assessment
14:50 -15:00	Review, Next Steps, Stakeholder Feedback
Session 5	**Self – Paced Practice**
Optional 15:00 -15:30	Self-paced work on Assignments (Homework)

Day 3: Wednesday, 29th May 2024	
Time	**Topic**
Session 1	**Welcome & Recap**
9:00 - 9:30	Questions from the previous day, review of the day's agenda and objectives
Session 2	**Transformation Analysis**
9:30 - 10:30	Practice Session (continued)
10:30 - 10:45	**Break**
Session 3	**Modelling Emissions and Scenarios with LEAP**
10:45 - 11:45	Modelling Emissions and Scenarios in LEAP
11:45 – 11:55	Question and Answer Session
11:55 – 12:30	Overview of Exercises – Practice & Assessment
12:30 – 13:30	**Lunch**
Session 4	**Practice Session: Emissions and Scenario Modelling**
13:30 - 14:50	Overview of Exercises – Practice & Assessment (Cont)
14:50 -15:00	Review, Next Steps, Stakeholder Feedback
Session 5	**Self – Paced Practice**
Optional 15:00 -15:30	Self-paced work on Assignments (Homework)

Day 4: Thursday, 30th May 2024	
Time	**Topic**
Session 1	**Welcome & Recap**
9:00 - 10:30	Questions from the previous day, review of the day's agenda and objectives
Session 2	**Demand Analysis in the Transport Sector**
9:30 – 10:20	Demand Analysis in the Transport Sector
10:20 -10:30	Questions and Answer Session
10:30 – 10:45	Break
Session 3	**Practice Sessions**
10:45 – 12:15	Overview of Exercises – Practice & Assessment
12:15 - 12:30	Question and Answer Session
12:30 – 13:30	Lunch
Session 4	**Mitigation Analysis in LEAP**
13:30 - 14:15	Review of Mitigation Analysis • Graphs • Exporting tables • Reports
14:15 – 14:30	Question and Answer Session
14:30 -14:45	Training Review & Next Steps & ICAT Training evaluation
Session 5	**Workshop Closure**
14:45– 15:00	**Closing Ceremony** • Closing remarks • Certificate Information

- **Annex 3: Training Materials**

The training materials can be accessed via this link provided by the Ministry of Sustainable Development's One Drive Folder