

LEAP Model: Hands-on training

Date: **4-6 March, 2024** | Port Moresby, PNG

Venue : Climate Change & Development Authority, Port Moresby

Background

LEAP, the Low Emissions Analysis Platform, is a widely-used software tool for energy policy analysis and climate change mitigation assessment developed at the Stockholm Environment Institute. LEAP users include government agencies, academics, non-governmental organizations, consulting companies, and energy utilities. It has been used at many different scales ranging from cities and states to national, regional and global applications.

LEAP is fast becoming the de facto standard for countries undertaking integrated resource planning, greenhouse gas (GHG) mitigation assessments, and Low Emission Development Strategies (LEDS) especially in the developing world, and many countries have also chosen to use LEAP as part of their commitment to report under the UNFCCC. More and more countries continue to use LEAP to create energy and emissions scenarios that were the basis for their Nationally Determined Contributions and will track their NDC progress based on regular updates of the model results.

Based on the request from the PNG to **build the capacity of their national experts in using the LEAP modelling**, the CBIT-GSP project intends to address this request by delivering the hands-on in-room training for key specialists from the key ministries and organizations of PNG on LEAP modeling.

Objective

The main objective of the training is to **instruct and guide the participants** from the key organizations dealing with energy development as well as with modelling and scenarios of GHG emissions, on the **practical use of LEAP model**.

It is expected that the participants will acquire practical knowledge on how to operate with the LEAP model and what type of data are needed for processing. The improved knowledge on LEAP will result in better understanding of the NDC implementation progress in PNG for better decision making.

Target Audience

The training will gather staff (around 15 persons) working on different climate change projects in the country such as the third national communications, biennial update reports, biennial transparency reports and NDCs. In these projects LEAP can be used as a tool for modelling and scenario analysis of GHG emissions and mitigation actions. It is expected that the participants will represent participants from the **Climate Change & Development Authority (CCDA) and relevant organisations responsible for preparation of BTRs**.

Capacities in LEAP

LEAP has been used in the preparation of the Long Term Low Emissions Development Strategy (LEDS) that was completed in 2023 however this exercise was done by an international consultant

and capacities are low internally in understanding the model results. The Climate Change Division has however access to the model and model database connected with LEDS report.

Proposed agenda

Day 1: March 4 (Monday)		
09:00 – 09:10	Registration	
09:10 – 09:30	Welcoming remarks	CCDA
09:30 – 10:30	Introduction to LEAP Model <ul style="list-style-type: none"> • Energy Balance, LEAP structure, Reference Energy System, user interface, input data requirements, main outputs. 	UNEP-CCC
10:30 – 10:45	Health break	
10:45 – 12:30	Modelling energy demand with LEAP (Households, Transport, Industry, Services).	UNEP-CCC
12:30 – 13:30	Lunch break	
13:30 – 15:00	Training Exercise №1. Setting Current Accounts and Baseline Scenario for the demand sectors (Households).	All participants
15:00 – 15:15	Health break	
15:30 – 16:45	Training Exercise №1. Setting Current Accounts and Baseline Scenario for the demand sectors (Households). Solution to Applied exercise. Discussion of obtained results.	All participants
16:45 – 17:00	Quiz 1	

Day 2: March 5 (Tue)		
09:30 – 10:30	Modelling energy supply with LEAP: <ul style="list-style-type: none"> • Energy Transformation (electricity generation, oil refineries) 	UNEP-CCC
10:30 – 10:45	Health break	
10:45 – 11.15	Modelling energy supply with LEAP: <ul style="list-style-type: none"> • Resources (Coal mining, oil and gas production) 	UNEP-CCC
11:15 – 12:30	Training Exercise №2. Modelling transformation sectors with LEAP (Electricity transmission and distribution, Electricity generation).	All participants
12:30 – 13:30	Lunch break	
13:30 – 14:30	Training Exercise №2. Modelling transformation sectors with LEAP (Electricity transmission and distribution, Electricity generation). Solution to Applied exercise. Discussion of obtained results	All participants
14:30 – 14:45	Health break	
14.45-15.15	Modelling emissions and assessing mitigation scenarios with LEAP	UNEP-CCC
15:15 – 16:45	Training Exercise №3. Modelling emissions with LEAP. Setting up mitigation scenario with LEAP. Solution to Applied exercise. Discussion of obtained results	All participants
16:45 – 17:00	Quiz 2	

Day 3: March 6 (Wed)		
09:30 – 10:00	Modelling Non-Energy Sectors with LEAP	UNEP-CCC
10:00 – 10:30	Modelling Transport Sector with LEAP	UNEP-CCC
10:30 – 10:45	Health break	
10:45 – 12:30	Training Exercise №4. Modelling Transport Sector with LEAP. Solution to Applied exercise. Discussion of obtained results	All participants
12:30 – 13:30	Lunch break	
13:30 – 14:00	Cost-benefit Analysis with LEAP	UNEP-CCC
14:00 – 15:00	Training Exercise №5. Modelling Refining, Resources and Viewing Energy Balance with LEAP.	All participants
15:00 – 15:15	Health break	
15:15 – 16:00	Training Exercise №5. Modelling Refining, Resources and Viewing Energy Balance with LEAP. Solution to Applied exercise. Discussion of obtained results	All participants
16:00 – 16:15	Evaluation of the training using online questionnaire	All participants
16:00 – 16:30	Presentation on GACMO: An alternative tool for GHG mitigation assessment	UNEP-CCC
16:30 – 17:00	Closing Remarks	CCDA