Ministry of National Development Planning/Bappenas Republic of Indonesia

LOW CARBON DEVELOPMENT INDONESIA

UK International Development
Partnership | Progress | Prosperity

Oxford Policy Management

Terms of Reference

Scenario Planning Training Using System Dynamics for Provincial Governments

for Provincial Governments and Bappenas

1. Background and Rationale

Indonesia's commitment to climate change mitigation and green economy transformation is embedded in the National Long-Term Development Plan (RPJPN) 2025-2045 and the National Medium-Term Development Plan (RPJMN) 2025-2029. These frameworks include targets on greenhouse gas (GHG) emissions intensity reduction and position low-carbon development (*Pembangunan Rendah Karbon/PRK*) as a strategic pathway to balance economic growth with environmental sustainability.

Achieving PRK targets requires consistent implementation across all levels of government, particularly at the sub-national level where development programmes are designed and executed through provincial planning instruments such as RPJMD and RKPD. However, low-carbon development policy implementation involves complex cross-sector interactions (e.g., energy, land use, agriculture, waste, transport, and blue carbon), long feedback loops, delayed effects, and potential trade-offs among development objectives. These dynamics often make it difficult for planners to anticipate unintended consequences and to identify policy leverage points using conventional linear planning tools.

A systems-based approach is therefore essential. System thinking and system dynamics provide a practical analytical framework to understand cause-effect relationships, feedback mechanisms, and long-term behavioural patterns in complex development systems. Through system dynamics modelling, planners can explore alternative scenarios, test policy assumptions, and generate more robust and integrated strategies for low-carbon development.

This training is designed as a targeted capacity strengthening intervention to support provincial government planners, particularly Bappeda, by equipping them with foundational knowledge and applied skills in system thinking and system dynamics to support scenario-based planning for low-carbon development.

2. Objectives

The training programme will:

a. Strengthen participants' understanding of system thinking and system dynamics concepts and their relevance for low-carbon development planning at provincial level.

b. Build practical skills to translate provincial low-carbon development challenges into system representations (problem framing, system boundary, key variables).

c. Enable participants to develop an initial Causal Loop Diagram (CLD) and/or Stock and Flow Diagram (SFD) relevant to their provincial context.

d. Introduce scenario planning logic using system dynamics and support participants to interpret model structures for policy insight and decision support.

3. Scope of Work

The selected organisation/consultant will design, facilitate, and deliver a three-day, practice-oriented training on system dynamics for scenario planning. The training is expected to be delivered in-person in Jakarta.

The training programme must:

a. Be contextualised to Indonesia's planning environment, including linkages to RPJPN 2025-2045, RPJMN 2025-2029, and provincial planning instruments (RPJMD/RKPD).
b. Apply practice-oriented methods, combining short conceptual inputs with structured exercises, group work, facilitated discussions, and peer feedback.
c. Use real-world examples relevant to low-carbon development (cross-sector linkages, trade-offs, and long-term dynamics).
d. Ensure participants leave with tangible outputs, notably draft CLD/SFD products and a clear understanding of how model structures support scenario thinking.
e. Address the following core content areas:
    - System Thinking & System Dynamics Foundations: Concepts of systems, feedback loops, delay, nonlinearity, leverage points, and relevance for PRK planning.
    - Problem Framing & Model Boundary Setting: Techniques to define policy questions, system boundaries, and key variables for provincial low-carbon development issues.
    - Causal Loop Diagram (CLD) Development: Building causal structures, identifying reinforcing/balancing loops, and validating logic with stakeholders.
    - Stock and Flow Diagram (SFD) Introduction and Development: Translating CLD into quantifiable structures (stocks, flows, auxiliaries, parameters) at an introductory level.
    - Scenario Logic & Interpretation for Policy Insights: How system dynamics structures inform scenario design and how outputs/structures can be communicated for planning decisions.

4. Deliverables

The selected organisation/consultant will produce:

a. Training Design Package (submitted prior to delivery):

- Agenda (three-day detailed schedule)
- Session plan and learning objectives
- Training materials (slides, worksheets, templates for CLD/SFD)

b. Training Delivery
   - Three-day in-person training facilitation
   - Group exercises and guided modelling sessions

c. Participant Outputs
   - Draft CLD and/or SFD per group/province theme (minimum: group-level outputs), documented in a standard template.

d. Post-Training Documentation (submitted after delivery)
   - Brief training report (2–5 pages): participant profile, sessions delivered, summary of outputs, key observations, and recommendations for follow-up capacity support.

All materials and reports must be delivered in English, with key participant-facing materials available in Bahasa Indonesia where appropriate.

5. Timeline and Duration

a. Training delivery: 24 - 26 February 2026 (three full days)
b. Training design document submission: by 10 February 2026
c. Final report submission: by 5 March 2026

6. Required Expertise and Organisational Profile

The selected organisation must demonstrate:

a. **Proven experience in system thinking and system dynamics capacity building**
Demonstrated experience in designing and delivering training or capacity development programmes on system thinking, system dynamics, or systems-based policy analysis for government institutions, policy organisations, academic institutions, or development agencies. Experience working with public-sector planners or policy analysts is strongly preferred.

b. **Technical expertise in low-carbon development and policy analysis**
Strong understanding of low-carbon development, climate mitigation, green economy, or sustainable development policy, with the ability to apply system dynamics approaches to analyse cross-sectoral interactions, policy trade-offs, and long-term development impacts.

c. **Understanding of Indonesia's planning and institutional context**
Familiarity with Indonesia's national and sub-national development planning systems (including RPJPN, RPJMN, RPJMD, and RKPD), inter-sectoral coordination challenges, and policy decision-making processes, or demonstrated capacity to rapidly contextualise training materials to Indonesia's institutional environment.

d. **Qualified training and facilitation team**
A multidisciplinary team including a lead facilitator with strong expertise in system

dynamics and systems-based policy analysis, supported by facilitators with experience in participatory modelling, scenario planning, or policy-oriented analytical tools. Curriculum vitae (CVs) of all proposed trainers and facilitators must be provided.

e. **Practice-oriented and adult-learning training methodology**
Proven track record in delivering interactive, practice-oriented training programmes using adult-learning approaches, including hands-on modelling exercises, group work, facilitated discussions, and application of real-world policy cases, rather than purely lecture-based instruction.

f. **Organisational capacity and governance**
A registered organisation (not an individual consultant) with demonstrated organisational capacity, including project management systems, quality assurance processes, financial management capability, and prior experience delivering donor-funded or government-commissioned programmes in line with value-for-money principles.

7. Budget and Logistics

The contract will cover:

a. Professional fees for training design, preparation, facilitation, and delivery over three training days.
b. Development and finalisation of all training materials, including presentation slides, worksheets, modelling templates (e.g. CLD/SFD), and reference materials.
c. Facilitation of hands-on exercises and group work during the training.
d. Preparation of pre-test, post-test and a post-training report summarising activities, participant outputs, key observations, and recommendations for follow-up.
e. Coordination, project management, and communication with the organising team before, during, and after the training.

Bappenas and LCDI will separately arrange:

a. Venue, accommodation, and meeting package for participants
b. Local transportation for participants
c. Administrative and logistical support during training delivery

Proposals should clearly itemise costs and demonstrate value for money in line with FCDO procurement principles.