

INFORMATION NOTE

CONCEPTUAL FRAMEWORKS FOR IMPLEMENTING LEDS & NAMAS: A Comparative Analysis

A number of institutions, including the United Nations Development Programme (UNDP), have described conceptual frameworks for developing Low-Emission Development Strategies (LEDS) and Nationally Appropriate Mitigation Actions (NAMAs). This paper briefly summarises these frameworks and attempts to map the approaches and activities across a common set of outputs (Table 1), noting that different frameworks go into more depth in different areas. In doing so, it is hoped that this analysis will support LECB practitioners to identify and define a nationally appropriate approach to NAMA development. Therefore, you may wish to select elements from different approaches to tailor to national circumstances as you elaborate a workplan for these project outcomes. Annex A describes each framework in more detail and provides a reference to the original document.

What's in a name?

Just as NAMAs and LEDS remain broadly defined in the negotiations, the conceptual frameworks for elaborating NAMAs and LEDS share both commonalities in language and differences. Nonetheless, the mapping in Table 1 reveals a relatively similar process of elaboration for all the frameworks reviewed. Therefore, for developing countries, the more important decision may be understanding how best to apply one (or more) of the frameworks to particular national circumstances. Although Table 1 describes a somewhat linear process, countries may find that they are at different steps for different sectors. Governments might choose to begin work on one or two promising NAMA concepts in order to “learn by doing” and build a stronger evidence base for the underlying scenario work. Some governments will take a top-down approach to NAMA development and first elaborate a LEDS; others may choose a bottom-up approach of elaborating NAMAs that support a broad vision of low-emission, climate-resilient development. There is no right or wrong way – just the most nationally appropriate way¹.

Lessons learned

Several organizations have also analysed climate change strategies, LEDS and NAMAs prepared to date to extract lessons and best practices. None of the lessons are particularly surprising; but continue to reflect the need for high quality data, capacity building, political buy-in, broad stakeholder engagement, and well-defined institutional coordination. You may wish to consider how you will address these issues as you elaborate a workplan for these project outcomes – for example, by building in regular consultations between technical working groups, and with decision-makers, the private sector and other key stakeholders.

¹ For a brief discussion on top-down and bottom-up approaches, see UNDP 2010: *How-to Guidebook: Low-emission development strategies and mitigation actions: Europe and CIS*

On NAMA development, Ecofys, ECN and the Center for Clean Air Policy² note:

1. *High-level political ownership and leadership are essential to drive the NAMA development process* – both for setting national priorities and to improve the chances of the NAMA being implemented.
2. *Co-ordinated inter-governmental processes help in reducing barriers to implementation of NAMAs* – upfront attention to setting up an institutional structure involving different areas of government is recommended. Clarity on mandates reduces tension between parts of the government and delays in NAMA development.
3. *Stakeholder participation builds support and ensures the NAMA development is a locally driven process* – affected stakeholders also have the best knowledge of barriers to implementation and potential negative development impacts. Engaging a broad group of actors also helps to raise awareness about the NAMA process.
4. *Aligning technical and political process when developing NAMAs requires flexibility in the process and time allocated for regular reviews and feedback from stakeholders* – a national NAMA development process will draw heavily on technical inputs, but many choices and trade-offs between mitigation options are largely political and will require insights from informed decision makers regarding feasibility and financing potential.
5. *NAMA development may require data and time for capacity building to ensure informed decision making*, but need not hold up NAMA development. Building on existing initiatives is helpful in this respect to gain experience in “learning by doing”.

On LEDS, the OECD drew technical, institutional and policy lessons from an analysis of seven countries³:

1. *Data on emission projections, mitigation potential and costs are not always readily available and can be a particular challenge for developing countries.*
2. *To maximize an efficient use of resources, producing a LEDS should build on existing related strategies and reports, including the experience gained during development of those reports.*
3. *The national GHG inventory is a fundamental step in understanding a national GHG emission portfolio and the underlying trends.*
4. *Inter-ministerial participation is required, with clear leadership. Actors should have clear roles and responsibilities. Stakeholder consultation supports widespread engagement.*
5. *In anticipation of funding for LEDS, it may be useful to set up a coordinated funding mechanism.*
6. *An important part of developing a LEDS is to identify policy options to support the LEDS, which involves examining an array of policy options and analyzing any barriers to implementation.*

² 2011 Annual State Report on Nationally Appropriate Mitigation Actions (NAMAs), Ecofys, ECN, and the Center for Clean Air Policy. www.ecn.nl/publications/PdfFetch.aspx?nr=ECN-O--11-078

³ Low-Emission Development Strategies (LEDS): Technical, Institutional and Policy Lessons. Christa Clapp, Gregory Briner, and Katia Karousakis. OECD, November 2010. www.oecd.org/dataoecd/32/58/46553489.pdf

7. *It is essential to align policies with national economic and development goals.* Policies can have overlapping effects and it is also important to ensure policy coherence across sectors and ministries.

Further reading

The resource base of the LECB Programme website (www.lowemissiondevelopment.org) features a range of selected readings on LEDS, NAMAs and MRV.

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Table 1: Mapping of conceptual frameworks

Green LECRDS (UNDP)	LEDS (NREL & US DoE)	LEDS (ECN)	LEDS/NAMAs (UNDP)	NAMAs (ECN)	NAMAs (Wuppertal)	NAMAs (IISD) "Deep screen"	NAMAs (GIZ)
1. Develop multi-stakeholder planning process	1. Organise LEDS process		1. Scoping and planning LEDS	0. Identify groups of stakeholders	National consultations are recommended throughout the development process.	0. Set context (quick screen)	
2. Prepare CC profiles and vulnerability scenarios	2. Assess current situation	1. Assessment of current situation	2. Develop baseline and LED emission scenarios	1 Identify and score mitigation actions <i>Output: long-list of NAMAs and their attributes.</i>	1. Identify Policy Objectives 2. Identify set of measures to achieve policy objectives	1. Deep screen selection: Identify potential actions for further analysis 2. Reference case	1. Assess framework conditions, analyze policy gaps and identify needed measures
3. Identify strategic options leading to LECRD trajectories (steering committee, supported by tech WGs)	3. Analyse options	2. Analysis of low-carbon development alternatives	3. Determine mitigation options	2. Prioritise and select NAMAs <i>Output: short-list of NAMAs</i> 3 Prepare concept notes <i>Output: NAMA concept notes</i>	3. Analyse activities & emissions to identify mitigation potential 4. Identify potential NAMAs <i>Output: NAMA fact sheets</i> 5. Select and refine set of NAMAs <i>Output: NAMA fact sheets</i>	3. Additional quantitative analysis: to identify measures and technology options to abate emissions, calculate emission reduction potential and abatement costs. 4. Assess associated impacts (co-benefits and potential negative impacts)	2. Evaluate technical emission reduction potential & co-benefits 3. Identify potential actions & NAMA implementers
4. Identify policies and financing options to implement priority actions	4. Prioritise actions	3a. Identification of policy aims, actions, and interventions	4. Assess financing of mitigation options	4. Prepare detailed NAMA proposal <i>Output: NAMA proposals</i>	6. Determine data required to develop, implement and MRV NAMAs 7. Prepare detailed NAMA proposal (with stakeholder consultations)	5. Financing NAMAs: prepare overview of potential support 6. Prepare Deep Screen report 7. Validate and finalise report	4. Define baselines 5. Design MRV plan 6. Detail the NAMA planning 7. Identify needed resources
5. Prepare LECRD roadmap	5. Implement and monitor	3b. International reporting	5. Implement, monitor & MRV	5. Readiness activities 6. Negotiate financing 7 Implement 8 MRV	8. UNFCCC registration 9. Funding negotiation 10 Implement 11 MRV		8. Submit to NAMA registry 9. Implement & MRV 10. Best practice

ANNEX A: Summary of conceptual frameworks

GREEN LOW-EMISSION, CLIMATE RESILIENT DEVELOPMENT STRATEGIES (UNDP)

Source: [Preparing Low-emission and Climate-Resilient Development Strategies \(LECRDS\) - Executive Summary](#) (UNDP, April 2011). Available in English, French and Spanish.
http://www.undp.org/content/undp/en/home/ourwork/environmentandenergy/focus_areas/climate_strategies/green_lecrds_guidancemanualsandtoolkits/

- **Develop multi-stakeholder planning process**
 - a. Establish team
 - b. Review and compile existing information & stakeholders
 - c. Est. steering committee
 - d. Identify and create policy and technical working groups
 - e. Identify technical capacity needs and implement training
 - f. Put in place comms/awareness strategy
- **Prepare climate change profiles and vulnerability scenarios**
 - a. Develop climate scenarios
 - b. Est. BAU scenarios for GHG emissions
 - c. Project scenarios for future emissions
 - d. Assess current and future vulnerabilities
 - e. Produce current and future vulnerability maps
- **Identify strategic options leading to LECRD trajectories (steering committee, supported by tech WGs)**
 - a. Review climate profiles and vulnerability scenarios
 - b. Determine mitigation targets and identify opportunities for mitigation
 - c. Develop different LECRD scenarios for key sectors
 - d. Assess impact of scenarios on predicted vulnerability
 - e. Define comprehensive LECRD objectives and priority adaptation & mitigation options
- **Identify policies and financing options to implement priority actions**
 - a. Perform technical and social feasibility and cost-benefit analysis of priority options
 - b. Analyse barriers to implementation & identify which can be addressed
 - c. Evaluate existing policies and local/national financing opportunities for priority options
 - d. Identify required investment & financial flows, and make recommendations by sector for short, med, and long-term scenarios
 - e. Identify public policy and innovative financing instruments to secure \$
- **Prepare LECRD roadmap**
 - a. Prepare roadmap with short, med, and long-term priorities
 - b. Validate
 - c. Disseminate to stakeholders and key public and private financial actors

LEDS: NREL and US Department of State

Source: http://en.openei.org/wiki/Gateway:Low_Emission_Development_Strategies

1. Organize LEDS process

- Design and put in place institutional structures and processes
- Create a workplan for how to complete the LEDS
- Identify roles and responsibilities for LEDS process
- Establish a plan to engage and sustain national leadership for LEDS
- Establish partnerships with private sector, donors, and other technical and implementation organizations
- Review of institutional process and work plan
- Create more permanent institutional structures and processes

Key Products

- LEDS team in place with clearly defined roles and responsibilities
- Guiding principles and objectives (reviewed by government advisory body and stakeholder group)
- Plan and budget for ensuring engaged and sustained national leadership
- Clarified role of stakeholders (public and private) and international partners

1. Assess current situation

- Assess current country plans, policies, practices, and capacities
- Compile lessons learned and good practices from ongoing and previous sustainable development efforts
- Assess and improve the national GHG inventory and other economic and resource data as needed for LEDS

3. Analyze options

- **Analytical Decision Making - Developing BAU Scenario**
 - Develop common vision of "no action" scenario through 2050
 - Assess business as usual (BAU) scenarios
- **Analytical Decision Making - Assessing Opportunities**
 - Conduct a key emission source category analysis
 - Assess public and private sector capacity to support initiatives
 - Assess technical potential for energy technologies
 - Assess economic and market potential of technologies and initiatives
 - Identify types of development and climate impacts that are country priorities
 - Analyze qualitatively development and climate impacts of LEDS technologies and measures
 - Establish preliminary near- and long-term emissions and development goals
- **Analytical Decision Making - Developing and Assessing LEDS**
 - Develop low emissions growth scenarios
 - Review barriers to achieving deployment scenarios
 - Identify comprehensive portfolio of possible actions for addressing barriers
 - Assess institutional frameworks for LEDS for land-use sector
 - Review international policy best practices and lessons learned
 - Select actions for analysis and tailor to country contexts
 - Assess in-depth contributions of selected scenarios to goals across sectors
 - Combine scenarios by sector to conduct integrated, economy-wide analysis
 - Perform multi-criteria impact analysis
 - Stakeholder and decision-maker review of the scenarios and impacts
 - Stakeholder and decision-maker review of the scenarios and co-benefits
 - Prepare final recommended economy-wide scenario

4. Prioritize actions

- Preparations for Implementation
- Review and refine proposed actions through stakeholder consultations

- Refine action design as necessary
- Finalize action recommendations
- Review and refine goals
- Gain country leadership endorsement of the goals and commitment to implement actions towards those goals
- Identify responsible agencies
- Work with lead agencies to develop detailed implementation plans for each measure
- Modify targets identified in the pathways analysis to be specific and measurable
- Establish process for an annual stakeholder review of progress and for refining the plan
- Select initial priority actions for near-term implementation
- Prepare comprehensive implementation plan
- Plan review with stakeholders and refinement
- Ensure senior leader endorsement
- Secure resources and partnerships for initial priority actions
- Launch implementation
- Put in place a system to monitor and evaluate LEDS implementation

5. Implement and monitor

- Begin execution of implementation plans
- Monitor progress in achieving actions using objective measurable timelines and critical path miles

LEDS: ECN

Source: **Paving the Way for Low-Carbon Development Strategies** (ECN, September 2011).
www.ecn.nl/docs/library/report/2011/e11059.pdf

1. Assessment of the current situation

- **Data collection:** What do the available data show on socio-economic indicators, greenhouse gas emissions, and existing policies and regulation?
- **Capacity assessment:** Is there capacity available domestically to analyse the climate and development data?
- **Stakeholder mapping:** Who has an interest in low-carbon development, and what are their roles and responsibilities?
- **Institutional setup:** Which government ministries, departments and agencies are involved and what are their roles and mandates?

2. Analysis of low-carbon development alternatives

- **Identify actions:** What are costs, mitigation potential, and development benefits?
- **Identify gaps and barriers:** What are the reasons that actions are not implemented currently?
- **Scenarios and modelling:** What would be alternative development pathways and with what emissions impact?
- **Baseline and targets:** What would be the business as usual situation (base-line) and what targets correspond to the alternative low-carbon development pathways?
- **Policy and impact assessment:** Which policies and regulations can be used and what are the expected impacts on development and climate?
- **Priorities:** What are the priority sectors and actions, and what are the trade-offs when choosing one over the other?
- **Needs assessment:** What are the domestic needs in terms of finance, capacity building, technology and institutional setup?

3. Identification of policy aims, actions, and interventions

- **Long term vision:** What is the preferred low-carbon development path-way (policy aim)?
- **Targets and actions:** What are the targets that the government sets itself, quantitative or qualitative, and which actions do these require?
- **Finance:** What budget is required and where does that come from (national budget, private investment, donor support)?
- **Government intervention:** Which policies and regulations will the government establish to support low-carbon development? How are these integrated?
- **Private sector investments:** What level of investments in low-carbon technologies is expected from private sector investors and entrepreneurs?
- **International support:** How are the required actions linked to the international climate support framework (such as NAMAs and MRV)?
- **Plan for implementation:** What are the roles and responsibilities of all stakeholders?
- **International reporting:** Depending on the outcome of the negotiations, an LCDS may have to meet reporting requirements (future, if at all).

LEDS & NAMAs: UNDP

Source: **How-to Guidebook: Low-emission development strategies and mitigation actions: Europe and CIS** (UNDP, November 2010). Available in English and Russian.

http://issuu.com/undp_in_europe_cis/docs/development_strategies_and_mitigation_actions/1?e=0

1. Scoping and planning LEDS

- Define scope of study
- Analyse national development priorities
- Analyse existing programmes & strategies
- Assess available information and methods
- Determine objectives
- Select key sectors
- Identify main stakeholders
- Identify leading institution
- Determine relevant organizations in key sectors
- Establish teams
- Assess capacities and needs & train
- Develop work programme
- Set up inter-WG coordination functions
- Set up mechanisms for stakeholder involvement

2. Develop baseline and LED emission scenarios

- Review existing data, projections & models
- Choose analytical tool for analysis
- Determine base year and timeframe
- Develop BAU scenario
- Develop LED scenario
- Set emission goals

3. Determine mitigation options

- Identify potential abatement options in key sectors, using criteria
- Analyse policy instruments
- Prioritise and choose mitigation options and policy instruments
- Quantify GHG reductions for selected measures and policies and formulate NAMAs

4. Assess financing of mitigation options

- Determine financing needs for NAMAs
- Identify domestic opportunities for financing
- Determine need for external support
- Identify external support sources
- Submit support request

5. Implement, monitor & MRV

- Develop/update implementation plan
- Make arrangements for MRV (incl. indicators)
- Implement, monitor, MRV

NAMAs: Energy research Centre of the Netherlands (ECN)

Source: **On Developing A NAMA Proposal** (ECN, September 2011)

<http://www.ecn.nl/docs/library/report/2011/o11053.pdf>

0. Identify groups of stakeholders,

- e.g. government technical team, government decision makers, private sector, support providers, civil society

1 Identify and score mitigation actions

- Done by technical WG using criteria

Output: long-list of NAMAs and their attributes.

Audience: government decision makers

2. Prioritise and select NAMAs

- Done by decisions makers using criteria

Output: short-list of NAMAs

3 Prepare concept notes

- Done by decision makers with technical support
- Includes: sectoral background, NAMA description and rationale, implementation barriers, needs assessment and proposed interventions, benefits (emissions and co-benefits), costs and financing options, MRV plan, actors, actions and timing

Output: NAMA concept notes

Audience: funders and high-level decision makers

4. Prepare detailed NAMA proposal

- Financing details
- Detailed baseline and interaction with other instruments
- Stakeholder analysis
- Shortlist of potential donors and partners
- MRV
- Action plan

Output: NAMA proposals

Audience: funders and high-level decision makers

5. Readiness activities

6. Negotiate financing

7 Implement

8 MRV

NAMAs: Wuppertal Institute

Source: **Presentation**, Wolfgang Sterk, Berlin presentation (November, 2011)

Although not described as a first step, it is assumed that there are ongoing national consultations throughout the development process.

1. Identify Policy Objectives

- Develop comprehensive development strategy; at minimum policy objectives
- Develop criteria for actions

2. Identify set of measures to achieve policy objectives

- Initial consultations

3. Analyse activities & emissions to identify emission reduction potential**4. Identify potential NAMAs**

- Output: NAMA fact sheets
- Stakeholder consultations

5. Select and refine set of NAMAs

- Test political support by engaging decision makers & other key stakeholders
- Collect additional data to refine planning
- Set up inter-Ministerial WG
- Incl. approach, GHG reduction potential, cost estimate, assessment of barriers & preconditions for implementation
- Output: NAMA fact sheets

6. Determine data required to develop, implement and MRV NAMAs

- Screening of data availability, collection of new data, data quality control
- Incl. quantitative data on sustainable dev. benefits

7. Prepare detailed NAMA proposal (with stakeholder consultations)

- General description of (sub-) sector
- Describe specific activities, activity levels, emission factors, emissions reduction potential
- Detailed implementation plan, incl. timeline & responsibilities
- Detailed mitigation analysis
- Financial plan
- MRV methodology
- Sustainable development benefits

8. UNFCCC registration**9. Funding negotiation****10 Implement****11 MRV**

NAMAs: International Institute for Sustainable Development (IISD)

Source: **Developing Financeable NAMAs: A Practitioner's Guide** (IISD, March 2013)

<http://www.iisd.org/publications/pub.aspx?id=2784>

The document describes two approaches:

- *NAMA Concept Quick Screen* – identifies promising NAMA options to be put forward for local validation, and produces information for the UNFCCC registry template for NAMAs seeking support for preparation (NAMA concept).
- *NAMA Proposal Deep Screen* – analyzes priority NAMA opportunities using a variety of techniques and tools, and produces information on viable NAMAs that could be used for submissions to the UNFCCC NAMA registry, either as a NAMA seeking support for preparation (NAMA concept) or a NAMA seeking support for implementation (NAMA proposal).

0. Set context

Under the quick screen, the first step is to collect, review and categorize the information that underlies the identification of NAMA opportunities. This includes relevant documents and data that provide country context, information on GHG emissions, government priorities, and ongoing and planned actions in the six UNFCCC mitigation sectors.

1 Deep screen selection

To identify potential actions for further Deep Screen analysis from the short list developed under the NAMA Quick Screen or the government list of priority potential NAMAs.

Output: *A manageable list of low-carbon options for further analysis.*

2: Reference Case

To identify historical GHG emissions and removals, and project these out to a select date to form the reference case— or the baseline—against which to demonstrate the abatement potential of NAMAs.

- *Develop an inventory of historical GHG emissions, and project emissions out to a select date (2030)*

3: Additional Quantitative Analysis

To identify measures and technology options to abate emissions, and calculate emission reduction potential and abatement costs. Ideally, the prioritized mitigation actions are identified from the NAMA concept assessment (described above) and locally validated.

- *Calculate marginal abatement costs (MACs)*

4: Assessment of Associated Impacts

To assess the sustainable development and climate resilience co-benefits and potential negative impacts of the identified NAMAs.

5: Financing NAMAs

To present an initial overview of the possible channels or types of climate finance that might be needed to implement the NAMA. This includes the sources of funding, the instrument and the barriers to be addressed to ensure successful NAMA implementation. (NB: Not a detailed financing plan.)

- *Barriers assessment - identifies barriers to low-carbon technology deployment and behavioural change for the action*
- *Barriers linked to financing options - a summary overview that identifies priority financing channels that address barriers*

6: Draft Deep Screen Report

Presents the NAMAs' information in a comprehensive report with potential priority NAMA proposals identified.

7: Validation and Finalization

Validate assumptions and analysis with local experts, and revise analysis based on expert input.

Output: A final report.

NAMAs: GIZ

Source: **NAMA Tool v 8.6** (GIZ, June 2013). Available in English, Spanish and French.

<http://mitigationpartnership.net/nama-tool-steps-moving-nama-idea-towards-implementation>

LEDS context

1. Assess framework conditions, analyse policy gaps and identify needed measures

2. Evaluate technical emission reduction potential & co-benefits

- Also check for co-costs and negative effects

3. Identify potential actions & NAMA implementers

- Identify potential actions, possibly with use of MACCs
- Conduct sector-by-sector participatory assessment planning and consultation processes to identify reduction potential and development gains and to plan for concrete activities. Develop and discuss criteria for good and ambitious NAMA.
- Prioritize sectors and actions for potential NAMAs, considering the best available options and ones that are realistic for implementation
- Evaluate financial, political and socio-cultural feasibility
- Identify and involve potential financiers, discuss planned NAMA and potential NAMA implementers with them

NAMA design

4. Define baselines

- Determine the purpose of the baseline
- Collect data to set up a GHG baseline. Define boundaries, consider leakages as well as uncertainty, pay attention to net emission reductions
- Include non-GHG co-benefits in the baseline

5. Design MRV plan

6. Detail the NAMA planning

- Plan NAMA using template
- Define timeline for a set of activities and responsibilities of the NAMA implementer(s)

7. Identify needed resources

- Develop a professional business plan jointly with implementers to present NAMAs to potential public/private financiers
- If private and domestic resources are not sufficient, identify needs for technological, capacity building and financial support and potential sources for this support

MRV requirements

8. Submit to NAMA registry (voluntary)

9. Implement & MRV

10. Identify best practices

- Instigate a learning process by starting early action and getting experience on the ground in developing and implementing NAMAs and identify best practice