



Low-Emission Development Strategy (LEDS)

A “low-emission development strategy is indispensable to sustainable development”.

Copenhagen Accord 2009

The Conference of the Parties “encourages developing countries to develop low-carbon development strategies ...”

Cancun Agreement 2011

Aim of a LEDS

A **Low-Emission Development Strategy (LEDS)** is a national, high-level, comprehensive, long-term strategy, developed by domestic stakeholders, which aims at decoupling economic growth and social development from greenhouse-gas (GHG) emissions growth. In other words, the goal of a LEDS is to make development climate-compatible.

There are a number of other denominations for similar policy instruments, such as Low Carbon Development Strategy, Climate-Compatible Development Plan, or National Climate Change Plan. But the aims, purposes and basic elements are not very different.

A LEDS should build upon and influence existing national strategies and processes. Points of synergy for low-emissions development planning are illustrated below:



LEDS essentials:

- A LEDS is a policy instrument that identifies the sources of a country’s GHG emissions and prioritizes options for their mitigation.
- A LEDS focuses on achieving development through mitigation actions.
- A LEDS helps to improve framework conditions for private sector investment in mitigation actions.

LEDS purposes:

On the **domestic level**, the LEDS is a country-driven policy instrument for national decision making. The LEDS merges climate change action with national development and helps to identify and prioritize nationally appropriate mitigation actions (NAMAs) by providing a comprehensive analysis of mitigation potentials, costs and co-benefits. The LEDS supports sector transformation through a national, economy-wide approach.

On the **international level**, LEDS support the global goal of GHG emission reduction. LEDS may help to attract international support (finance, capacity building, technology transfer) and recognition of NAMAs that are being planned and implemented by developing countries.

Key elements of a LEDS

The approach for developing a LEDS depends on the national framework conditions. For example, some rainforest countries may focus primarily on the forestry

Adaptation - an element of a LEDS?

Some countries have included a full vulnerability analysis and a description of necessary adaptation measures in their LEDS. Others focused only on the mitigation aspect of climate change.

An analysis of potential climate change on the implementation of mitigation options (e.g. impact of changing rainfall patterns on hydro power generation) is recommendable for a LEDS.

and agriculture sectors and include adaptation aspects, as these sectors are very vulnerable to climate change. Some newly industrializing countries may have the resources and data available to perform a comprehensive analysis of all sectors. The following list includes some essential elements for LEDS preparation, regardless of country circumstances:

- A **long-term strategic vision** based on and integrating national development priorities, global agreements and scientific projections.
- **Baseline GHG emissions analysis and projections** under a business as usual (BAU) scenario.
- **Mitigation opportunities and costs**
- **Prioritization of key mitigation sectors and measures** according to:
 - abatement potential and costs (marginal abatement cost curve),
 - co-benefits (jobs, poverty reduction, income distribution, growth, government revenues, technological capacity, etc.),
 - ease and timeframe of implementation,
 - socio-economic and environmental impacts,
 - vulnerability of mitigation actions,
 - public-private partnership potential,
 - synergies and trade-offs with existing national strategies and policies.
- **Identification of policies and measures and definition of targets** presented in a short- to medium-term implementation roadmap with:
 - timeframe,
 - intermediate emission targets,
 - a barrier analysis and a description of the necessary policy mix,
 - the supporting institutional and legal framework and
 - an assessment of capacity building needs.

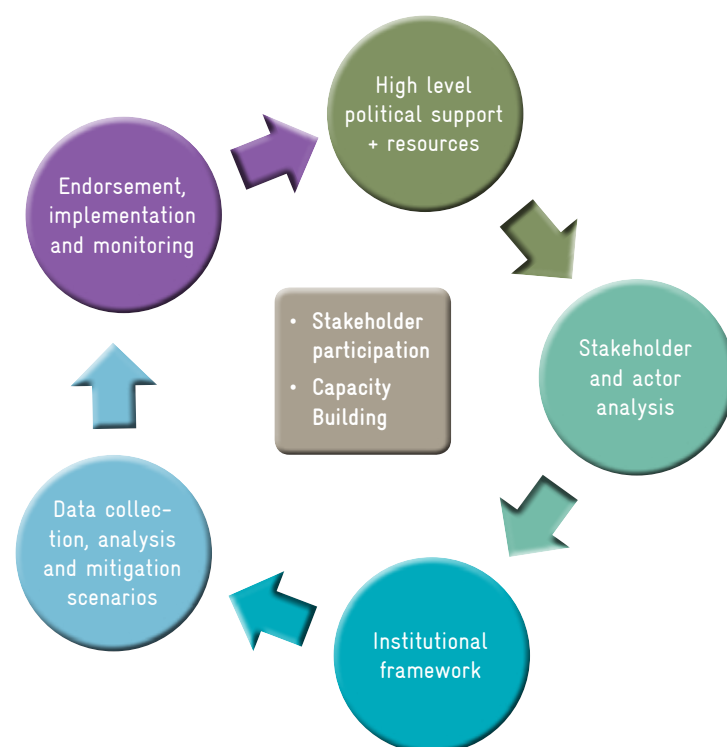
Some countries elaborate these elements for individual NAMAs, including monitoring approaches. Other countries prefer to develop general roadmaps for emitting sectors and develop NAMAs in a separate step.

- **Cost and financing of the LEDS:** the LEDS should include an assessment of needs for financial capacity building and technical support. It should also identify available domestic budget sources and potential sources of international financing.

Process of developing a LEDS

A LEDS is work in progress, as the underlying assumptions and projections need to be constantly reviewed and updated to reflect changing circumstances. Thus, the development of a LEDS is a long-term, dynamic, cyclical process that should continue for years or decades as emission pathways change. In a first step, **high level political support and the necessary financial and human resources** need to be assured.

In a second step, a **stakeholder and actor analysis** should identify relevant institutions and persons that need to be involved in the process. As there may also be losers in the process, it is vital to address potential negative outcomes during the planning process and include affected parties in the dialogue to negotiate the best possible outcomes.



The third step involves identifying an existing – or the setting-up a new – high-level **inter-ministerial coordination body** (“National Council on Climate Change”) and establishing technical working groups for different sectors.

In the fourth step, the **data collection and analysis, establishment of baseline and GHG-scenarios, identification of mitigation options and policies, the prioritization of options and the development of detailed implementation roadmaps/NAMAs** are undertaken.

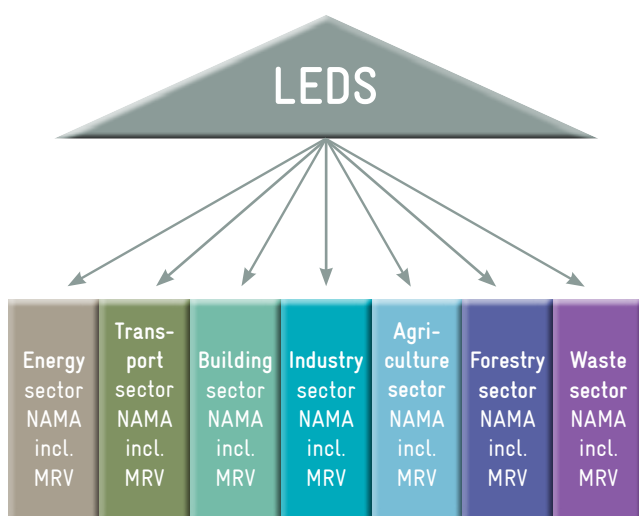
The final step concerns **political endorsement of the mitigation actions, implementation and monitoring**. The results of the monitoring would then be fed back into the next cycle by updating the LEDS with new assumptions, objectives and measures.

During the whole process, **stakeholder participation and capacity building** are crucial for the success of implementation and for triggering investment from the private sector.

Relation between LEDS and NAMAs

A **Low Emission Development Strategy** relates to NAMAs like an umbrella. A LEDS analyzes all mitigation options of a country and identifies priority sectors according to cost-benefits, as well as political and socio-economic criteria. In a **top-down approach**, NAMAs are then developed on the basis of this selection process.

Bottom-up approaches for NAMA development may also make sense if data are not available for a comprehensive analysis of mitigation potentials or if there is a lot of interest and motivation from key sector stakeholders to implement mitigation actions. In these cases the development of a LEDS should not be a prerequisite for the implementation of mitigation actions.



Necessary resources for establishing a LEDS:

- Timeframe: 0.5 – 3 years
- Costs: 0.5 – 1.5 million USD

Through the implementation of NAMAs, assumptions, objectives and projections of the LEDS are tested. Thus, monitoring, reporting and verification (MRV) of NAMA results helps improve the overall LEDS and may result in adjustments to supporting policies.

Credible and transparent MRV systems for NAMAs are also necessary to have the NAMA achievements recognized by the international community and to attract climate financing.

Lessons learned from ongoing projects

Nearly 50 countries, the majority of which are industrialized, have already produced a National Climate Change Strategy, a LEDS or a similar policy document. From this pool of experience, key success factors and key pitfalls can be identified:

Key LEDS success factors:

- Top-level commitment and leadership
- Integration into development planning, cross-cutting approach
- Strong data basis & scientific analysis (GHG inventory, BAU, scenarios, etc.)
- Transparency in approach and assumption
- Stakeholder participation and engagement
- Acceptance of technical assistance and use of peer-to-peer learning
- LEDS viewed as a living and dynamic document
- Interministerial coordination structure including key ministries (finance, economy, energy, etc.)

Key LEDS pitfalls:

- External imposition
- Poor integration in national development strategies
- Lack of information for prioritization



Selected examples of National Climate Strategies

Country	Date	Strategy Name
Bangladesh	2008	Bangladesh climate change strategy and action plan (draft)
Brazil	2007	National Plan on Climate Change (PNMC)
Chile	2008	Chile National Climate Change Plan
China	2007	National Climate Change Program
Colombia	2012	Low Carbon Development Strategy (CLCDS)
Costa Rica	2009	Estrategia Nacional de Cambio Climático
Dominican Republic	2010	Dominican Republic's Climate Compatible Development Plan
EU	2008	EU Energy and Climate Package
Germany	2007	Germany Integrated Energy and Climate Program
Guyana	2010	Transforming Guyana's Economy While Combating Climate Change
Iceland	2007	Iceland Climate Change Strategy (2007-2050)
India	2008	National Action Plan on Climate Change (NAPCC)
Indonesia	2010, 2011	Indonesia Climate Change Sectoral Roadmap (ICCSR); National Action Plan for Reducing GHG Emissions (RAN-GRK)
Israel	2010	Israel's Second Communication on Climate Change
Japan	2008	Action plan for achieving a low carbon society
Mexico	2013	National Strategy on Climate Change@ Special Program on Climate Change Policy Framework
Singapore	2009	Sustainable Singapore Blueprint
South Africa	2008	Long Term Mitigation Scenarios (LTMS)@ Climate Change Policy Framework
South Korea	2008	'Low Carbon, Green Growth' Vision and 1 st National Basic Energy Plan (2008-2030) and Comprehensive Plan on Combating Climate Change
Spain	2007	Spanish Climate Change and Clean Energy Strategy (2007-2020)
Thailand	2008	Thailand Strategic Plan on Climate Change
U.K.	2008	The UK Low Carbon Transition Plan
U.S.A	2009	U.S. Climate Bill

Source: Project Catalyst 2009: 7; Clapp et al 2010:53 ff.; own sources.

How can GIZ support LEDS?

GIZ supports on behalf of the federal ministries for Economic Cooperation and Development (BMZ) and Environment (BMU) a large number of partner countries with respect to climate change mitigation, including help with the development of low-emission development strategies, as well as with the design of NAMAs and MRV frameworks.

GIZ provides different forms of capacity development support, according to the partner country needs and on the basis of a gap-analysis that identifies existing elements of mitigation strategies, NAMAs or MRV frameworks, as well as missing elements, such as institutional or legal arrangements, stakeholder involvement, GHG data availability and accuracy, private sector participation, establishment of baselines and mitigation scenarios, etc.



Imprint

Published by:

Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

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October 2013

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