Please open this tool in full screen mode in order to be able to click on the internal hyperlinks to additional information or accessible instruments.

Low Emission Development Strategies

Step-by-step guidance to a long-term framework for continuous sustainable development cooperation

Version 5.2

Imprint

As a federally owned enterprise, GIZ supports the German Government in achieving its objectives in the field of international cooperation for sustainable development.

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Please be aware that this version of the LEDS Tool is still under development and that some steps can only be finalized after the negotiations have made substantial progress. Hence, there might be issues in the tool which different governments have different views on.

The concepts expressed in this tool are those of the authors and do not necessarily represent the views of the German government, or the endorsement of any approach described herein.

On behalf of
Federal Ministry
for Economic Cooperation
and Development

Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety

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International Partnership
on Mitigation and MRV

This tool as well as the workshop based on it is made accessible through the International Partnership on Mitigation and MRV which supports through a variety of measures the capacity building on MRV, NAMAs, and LEDS, including the design, pilot testing, and training of a series of tools as this LEDS-Tool.

Launched by South Africa, Republic of Korea and Germany at the Petersberg Climate Dialogue in 2010, the Partnership encourages countries to step-up mitigation ambition and undertake transformational change.

More specifically the Partnership supports the design, set-up and effective implementation of:

- Low-Emission Development Strategies (LEDS)
- Nationally Appropriate Mitigation Actions (NAMAs)
- Measuring, Reporting and Verification (MRV) systems

The Partnership facilitates the exchange of best practice between climate negotiators, policymakers and practitioners from more than 40 developing, emerging and developed countries. This helps to share learning, build trust and inform the UNFCCC negotiations.
Visit us at: www.mitigationpartnership.net

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

environmental affairs
Department: Environmental Affairs
REPUBLIC OF SOUTH AFRICA

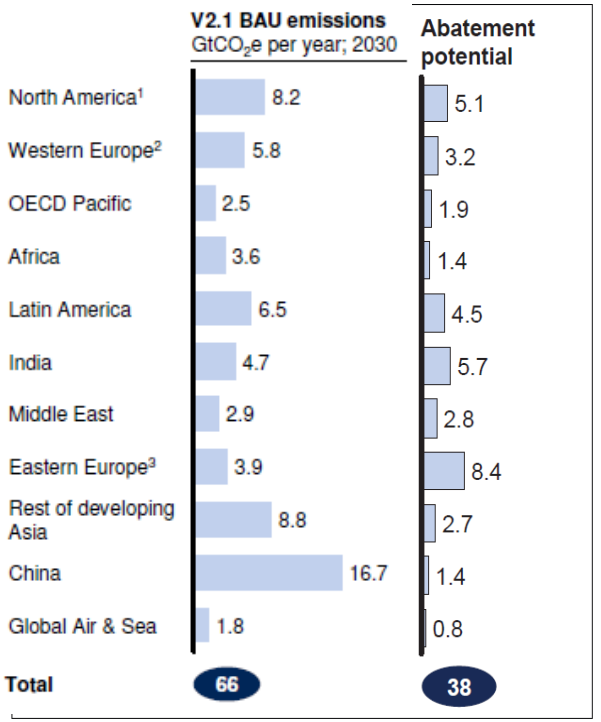
MINISTRY OF ENVIRONMENT

Intro I: The need for GHG mitigation

The major challenge of international climate policy is to reduce GHG emissions to a level consistent with the **2°C objective**

Having a "likely" chance of meeting this objective requires global emissions to peak before 2020 and have emission levels in 2020 around 44 GtCO2e, steeply declining thereafter

- This requires bold mitigation action by developed and developing countries
- McKinsey estimated global GHG emissions of 66 Gigatonnes CO2e per year in 2030,
  - of which 38 Gt. CO2 could be abated cost-efficiently
    - **72% of this GHG abatement potential is located in developing countries**
- Many developing countries have begun tackling the challenge of rising emissions by developing and implementing Nationally Appropriate Mitigation Actions (NAMAs), and informing UNFCCC about their mitigation actions through pledges.



Intro II: The Political Design of GHG Mitigation

- While the UN negotiations proceed to establishing a **global mitigation architecture**, the national level – with international support according to needs and ambition - must already act on **developing and implementing the building blocks of this mitigation architecture**.

- The challenge is to consider the **global requirements** for achieving the 2°C objective while at the same time continuing **national development priorities**. This translates into the implementation of national long-term policies and strategies for sustainable development, while reducing GHG emissions and seizing opportunities for green growth.

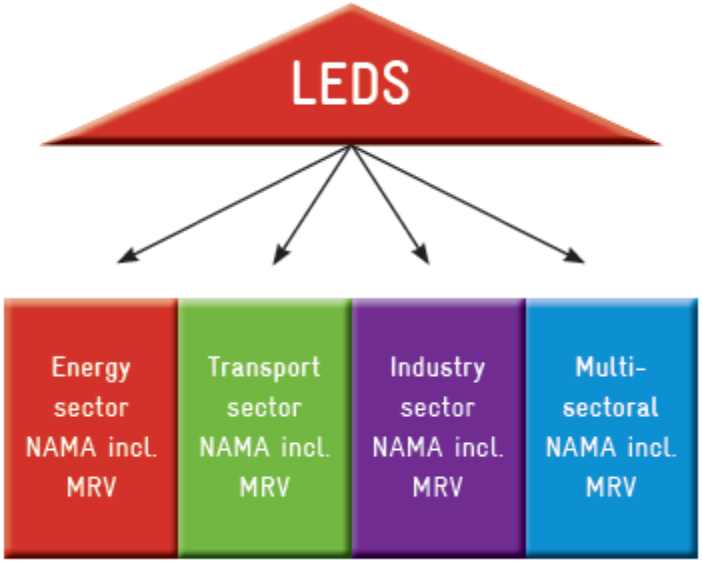
- In many cases comprehensive national and regional models for such low carbon and sustainable development are yet to be developed.

Intro III: LEDS, NAMA, MRV Architecture

Low-Emission Development Strategies (LEDS) are national long-term strategies for reducing emissions while promoting sustainable development. They can provide an overall framework for the development of Nationally Appropriate Mitigation Actions (NAMAs).

Note: A LEDS and NAMAs can be developed at the same time.

The **Measurement, Reporting and Verification (MRV)** of these actions is important to generate transparency on their effectiveness and facilitate decision-making.



→ *What is a LEDS?*

→ *What is a NAMA?*

→ *What is MRV?*

Intro IV: The LEDS-Tool history

On 11 June 2011, on the margins of the UN climate negotiations in Bonn, the International Climate Initiative (IKI) brought together about 50 practitioners and experts. The workshop “Developing Knowledge on the Building Blocks of a Global Mitigation Architecture” discussed, showcased and compared a selection of 13 ICI-projects, developing and implementing LEDS, NAMAs and MRV systems.

The discussion brought to the surface certain generic *success factors* for the development and potentially the future implementation of LEDS, NAMAs and MRV systems. Furthermore, the approaches applied in these projects facilitated the identification of certain common effective *steps* in the individual development of LEDS, NAMAs, and MRV systems.

To build on these insights two BMU and BMZ funded projects combined the experiences from the IKI projects with knowledge from the international debate and available instruments of other actors, and developed three tools to guide practitioners through the process of developing and implementing NAMAs, LEDS and MRV. These tools formed the groundwork for a NAMA Training, an MRV Training and a LEDS Workshop GIZ is now offering to interested partners.

These tools are continuously under development. If you use them please inform us about your experiences and give us feedback. If you seek support in conducting a training or workshop, please also contact: **climate@giz.de**

Related Tools

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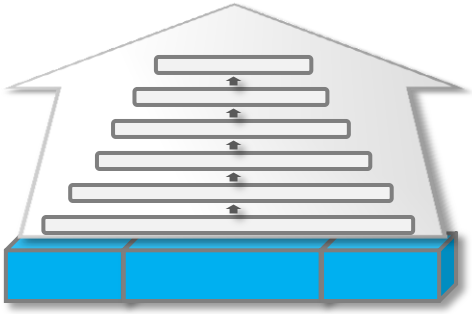
Intro V: LEDS-Tool Objectives and Contents

The LEDS-Tool guides practitioners step-by-step through the process of developing and implementing a LEDS.

The process is structured into six **steps**.

The 6-step approach is designed to lead users to more information about and accessible instruments for certain aspects of LEDS development.

The tool will be made publicy available at www.mitigationpartnership.net



Note:

When developing an individual LEDS, the sequence of 6 steps does not require to be followed strictly chronologically nor completely.

However, an ambitious LEDS has most likely completed every step somewhere in the process.

What is a LEDS?

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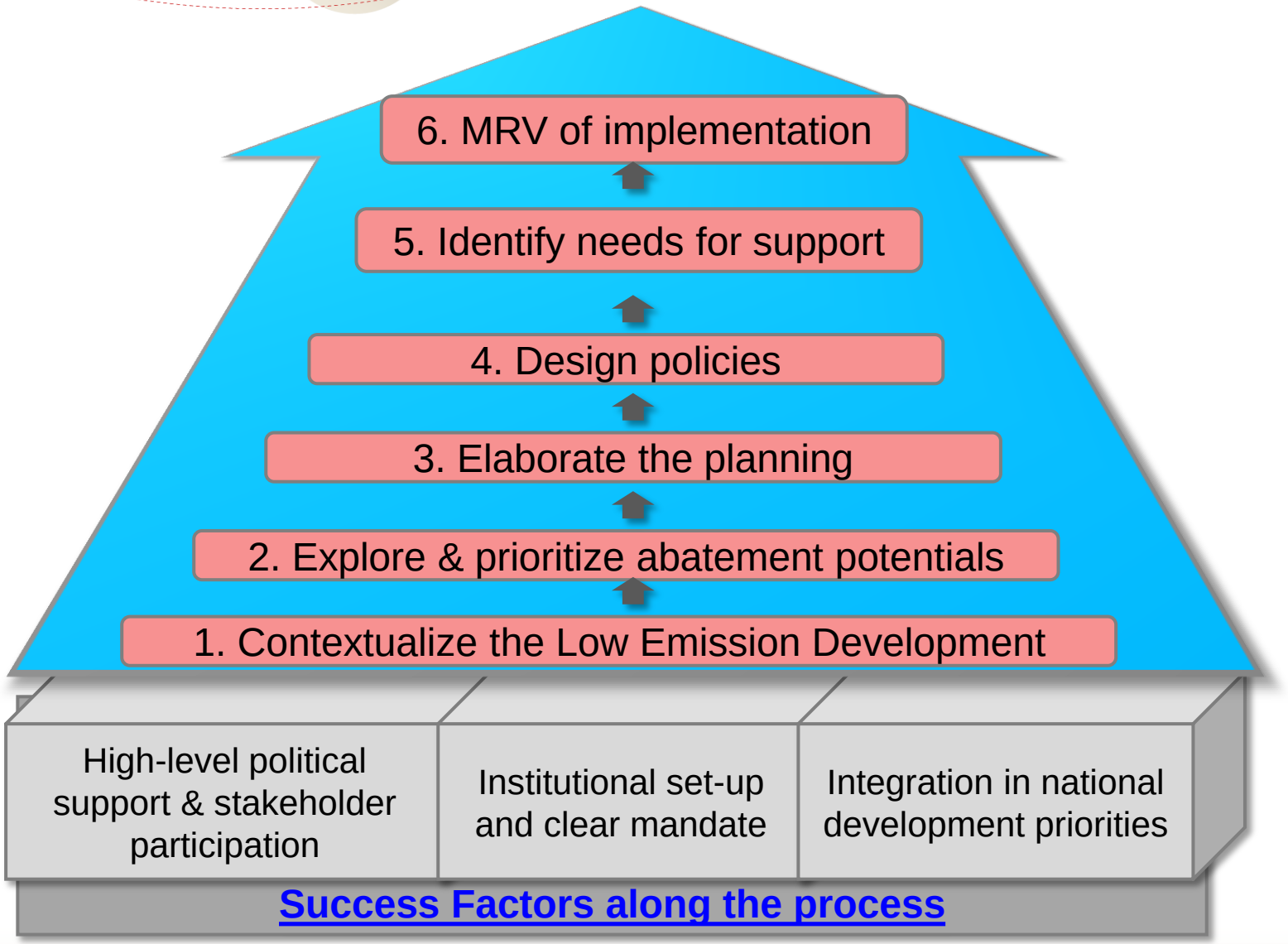
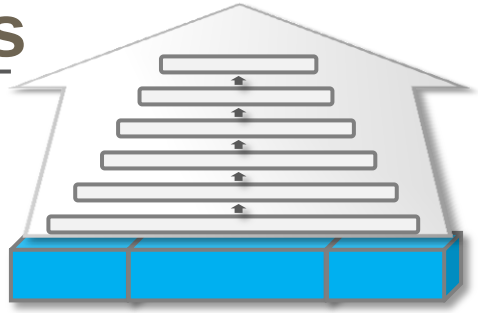
LEDS



Navigate by clicking on an individual step or start the full tour

Success Factors along the process



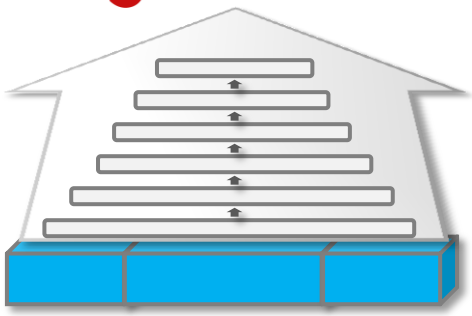
The facilitating process to develop and implement the LEDS spans several phases in which different success factors are necessary:

Leadership by some actor – in many countries this is an inter-institutional committee – is necessary to start the process.

Resources are necessary to make the process operational and start any action.

In the long term, it is necessary to minimize the costs of the process to keep it alive.

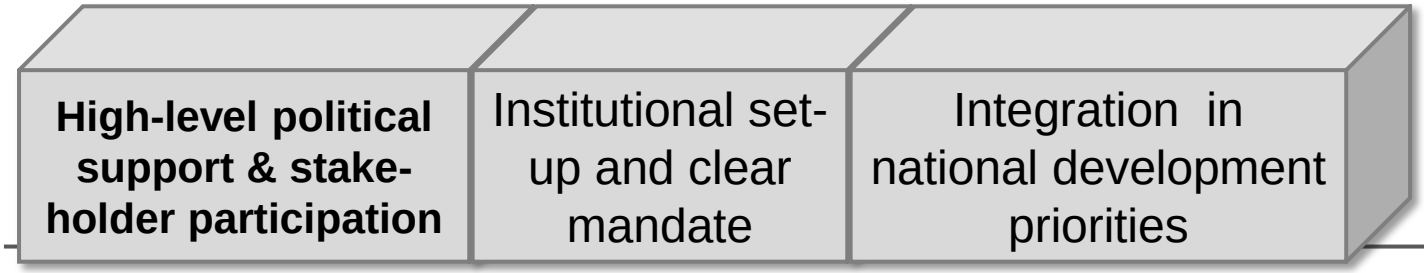
Success Factors I (early lessons)



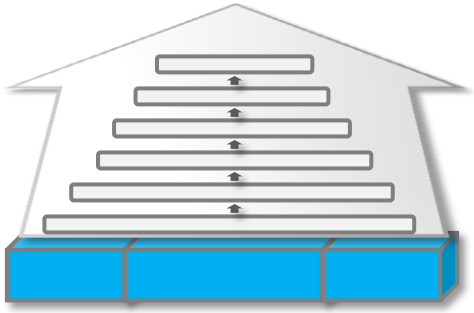
Although LEDS are a rather top-down applied tool, in order to ensure ownership, the process of developing a LEDS should account for the following generic framework conditions:

OWNERSHIP	
Particpatory engagement	High level political support
Bottom-up process	Clearly defined responsibilities
Multistakeholder Involvement	Institutional leadership

*To this end, the development of LEDS should follow a **process orientation** and be **demand driven**. A **learning process, identifying best practices** underway, is beneficial.*



Success Factors II (early lessons)



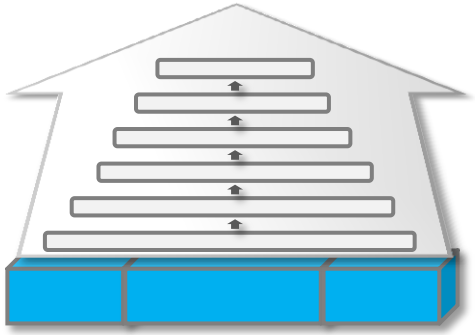
The following institutional set-up supports the successful implementation process of a LEDS :

- **Effective** and **sufficiently staffed institutions**,
- **Provision of sufficient financial resources.**

High-level political support & stake-holder participation	**Institutional set-up and clear mandate**	Integration in national development priorities

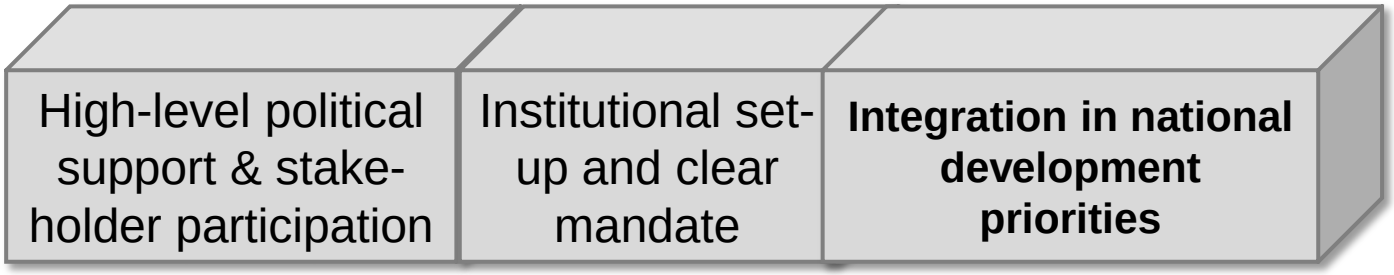
Ensuring resource availability

Success Factors III (early lessons)



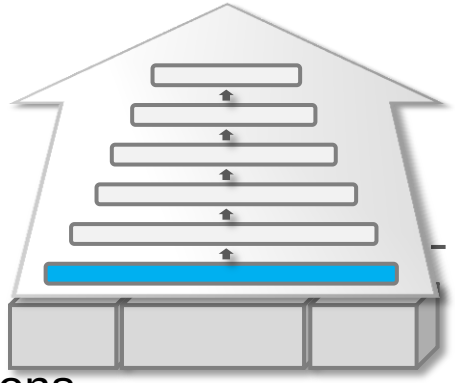
The following generic framework conditions should be ensured during the process of developing a LEDS:

- A **long-term perspective** and a **holistic approach**, based e.g. on the **National Communications**
- **An Inter-ministerial collaboration and coordination**, particularly involving the Finance Ministry, which ensures:
  - **prioritization of action**
  - **aligning low carbon with wider sustainable development goals**
  - considering **adaptation** needs
  - identifying **potential public and private financing sources.**



Checklist - National Communications

1. Contextualize the Low Emission Development



A strategy for low emission development needs to consider **sustainable development goals** and **contextualize** plans for reducing and avoiding emissions.

Take into consideration different documents of **development planning**

Identify and analyse existing **data and statistics on GHG-emissions**

Identify **relevant stakeholders** at local as well as national level and involve them in a participatory bottom-up LEDS planning process. Engage the private sector and potential financiers as early as possible in the process.

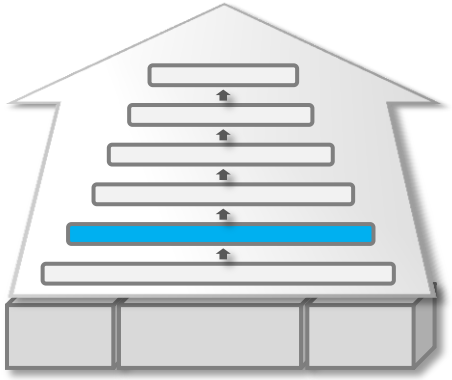
Checklist – sources of information

Checklist – categories of relevant stakeholders

What is a LEDS?

Gap Analysis Guidance

2. Explore & Prioritize Abatement Potential



Apply tools to explore **abatement potentials**. Among these tools, Marginal Abatement Cost curves can possibly be an option, as well as the rather bottom-up in-country evaluation of potentials for a low emission development.

Prioritize **sectors** for development of NAMAs while considering socio-economic development impacts, co-benefits as well as political and cultural aspects.

Support action with **capacity building** for low emission development planning.

Checklist - MAC → **Co-benefits** → **Checklist – technology promotion** →

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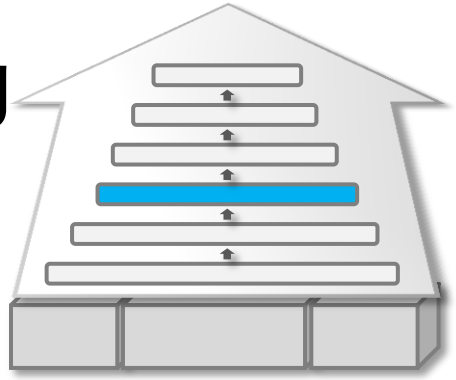
3. Elaborate the LEDS Planning



Specify planning and draft action plans,

Define baselines,

Develop MRV systems,

Define targets,

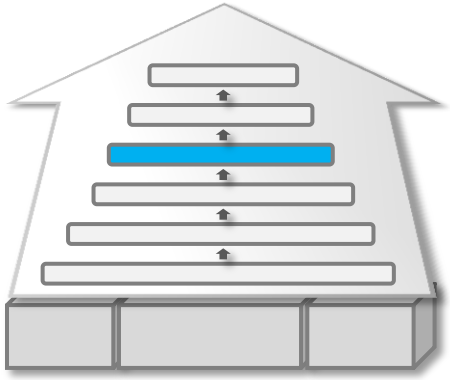
Facilitate partnerships of public and private actors,

Aim for concrete results and effectiveness.

LEDS should always contribute to a **long-term** sustainable low emission development, consider a **holistic, cross-sectoral** perspective and **avoid gaps or conflicting impacts** of different sectoral mitigation actions (like for instance NAMAs) but **increase synergies** among them.

Checklist - baseline → **MRV system** → **Why MRV?** → **Levels of intervention** → **Principles of knowledge sharing**

4. Design Policies



Identify lead institution.

Ensure high-level political backing.

Create enabling environments for low emission systems.

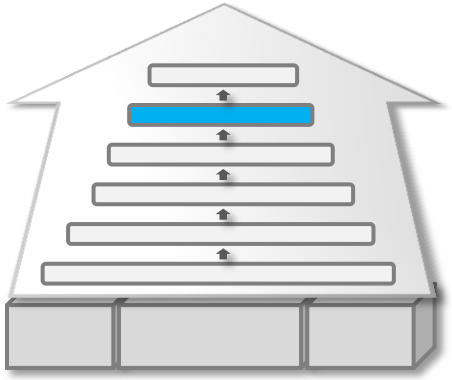
Overcome institutional and technical barriers.

Checklist – Principles of good management

Checklist – economic incentives

Checklist – types of barriers

5. Identify Needs for Support



Identify needs for:

- capacity building
- technology
- financing.

Investigate potential financing options:

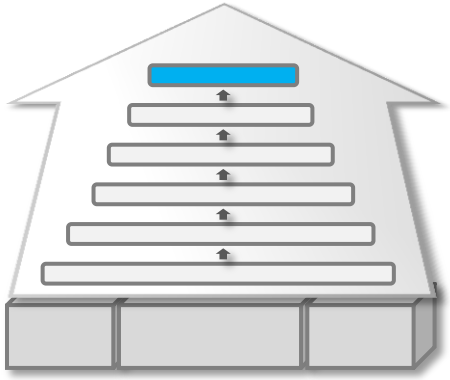
- public and private,
- domestic and international,
- bilateral and multilateral

International Climate Finance Options

How to develop a financing plan of a NAMA

How to justify the need for international support

6. MRV of Implementation



Monitor, report and verify results of implementation.

Continuously refine the LEDS in an iterative process.

Document & disseminate lessons learnt

Enhance communication, especially with the private sector,

Identify best practices

Create knowledge products for sharing

Enhance awareness raising and understanding.

Checklist – Principles of knowledge sharing

Low Emission Development Strategies

Specific Planning Instrument
in individual steps

End presentation

Content

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Checklist:

Potential Sources of Information

Collect objectives and priorities of **existing development planning** (5-year-plans, development or growth strategies, etc.)

- Green growth plans
- Development Plans & Strategies
- Five-year-plans
- Growth Strategies
- Climate Compatible/ Climate-Resilient Development Plans
- NAPAs

Identify and analyse existing and missing information sources and **statistics on GHG**

- GHG Inventories
- National Communications
- NAMAs

Checklist:

Categories of relevant stakeholders

Who should be involved in a LEDS planning process should be decided individually in each country, considering interests of, for instance, gender, ethnic, and indigenous groups if relevant. Stakeholders do not need to be mandated, but need to be knowledgeable of their respective sectors.

In general, leaders and laggards, early movers and foot draggers should all be included. For only after having considered all different rationales resistance to changes can be overcome.

In general, stakeholders should comprise representatives from the following categories:

- all ministries involved in low emission development
- subnational authorities
- big emitters
- private sector
- committed local, national, and international NGOs
- potential financiers and international providers of support
- organizations providing technical assistance
- academia
- labour

- *Process is important. The involvement of different stakeholders is key to a good result.*
- *Evidence is pivotal for convincing and mobilizing actors.*
- *Champions are necessary*

SouthSouthNorth's MAPS initiative developed a role model for deep stakeholder involvement: http://www.mapsprogramme.org/country-projects/

Checklist:

Defining the Baseline

Know the **variables** for producing a baseline:

- ***Scope:*** Project, Programme, Sub-Sector, Sector, Country, Technology
- ***Metrics or Indicators***:
  - Absolute GHG or CO_2 emissions vs. Relative GHG Emissions (e.g. emissions intensity)
  - Indirect metrics, e.g. MW of renewable energy capacity installed, m^3 of forest stock
  - Qualitative aspects such as mitigative capacity, co-benefits
- ***Historical Data*:**
  - single time period (e.g. one year)
  - multiple time periods (e.g. an average over several years)
- ***Future Assumptions*:**
  - assumed continuation of historical emissions (project)
  - continued rate of growth of emissions/emissions instensity (sector)
  - modelling, based on policies included in baseline
- ***Co-benefits*:** indicators for sustainable development (e.g. resource efficiency, social inclusion, economic viability)

When choosing indirect metrics, consider whether it will be important to „convert" the outcomes into GHG reductions with emission factors.

* Policy and Technical Considerations (e.g., data availability, expertise, climate legislation) may influence the overall ambition of a baseline.

Checklist – impact chain **Checklist - indicators**

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Checklist:

Indicators

Indicators make it possible to measure the attainment of goals more precisely.
They may measure quantitative or qualitative results of a project.

- Indicators should reflect variables to be addressed by the LEDS:
  - Emissions to be reduced directly (incl. methodology for calculation, assumptions, sensitivity)
  - Emissions to be reduced indirectly
  - Mitigative capacities to be developed
  - Sustainable development co-benefits
- Indicators may be applied at different levels:
  - For direct outputs of an activity
  - For direct impacts of an activity
  - For indirect impacts of an activity
- Indicators should define a mean of verification
- For monitoring implementation, it needs to be defined:
  - Who monitors the indicators
  - Timing and frequency of monitoring of indicators
  - Procedures for reporting and verification.

Indicators should be SMART:

S: Specific

M: Measurable

A: Achievable

R: Relevant

T: Time-Bound

Checklist:

National Communication

The collection of data can serve as a basis for planning and implementing action.

- → General position of the countries in the climate process
- → Potential for and willingness to reducing emissions
- → MAC
- → GHG inventory
- → LEDS
  - Long-term vision
  - Sustainable development co-benefits of low carbon development
- → NAMAs
  - National institutional arrangements and governance structures
- → MRV systems
  - GHG monitoring methodologies
- → Partners for development and implementation of LEDS, NAMAs, MRV systems
- → Investments made

under development in negotiations,

no mandatory content

Checklist:

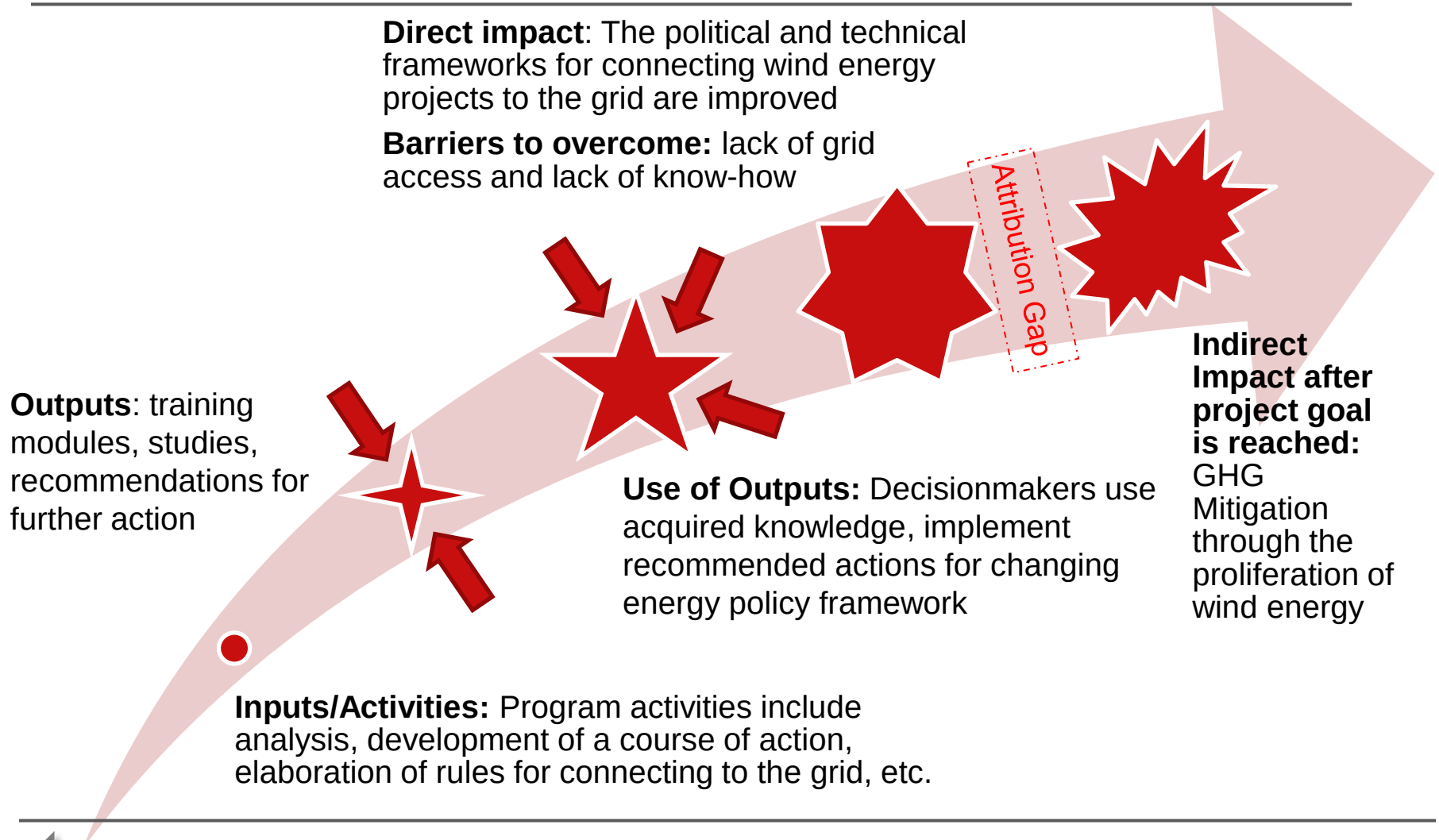
Standard Impact Chain

Impact chains are useful tools for fine-tuning activity-planning, as well as for monitoring. A standard impact chain includes:

- **Inputs**: (material and immaterial) contributions of donors, national partners, international partners, businesses and civil society to produce outputs
- **Activities**: immediate interventions
- **Outputs**: short-term results of activities
- **Use of outputs**: to make the intervention effective the target group must make use of the outputs, depends on complex circumstances and (enabling) environment
- **Direct Impact**: direct result of activities
- **Indirect Impact**: indirect result after achieving the project goal. The indirect impact is the actual benefit that is sought thru the activity.

Visualization of the standard impact chain

An Impact Chain for a GIZ Project promoting Wind Energy in Vietnam



Checklist:

Marginal abatement cost (MAC) curve

MAC curves rank technological options by costs and mitigation potentials. They can thus be useful in choosing and prioritising mitigation options.
When interpreting MAC curves, it is important to be aware of their **caveats**, such as:

- no consideration of co-benefits
- little or no reflection of institutional, transaction and implementation costs or market barriers.
- inability to capture impacts of climate policies on agents, sectors or income groups

The World Bank offers a MAC Tool available here.

In order to enable policy makers and multiple stakeholders to weight the sustainable development co-benefits of various technologies additional to emission reductions the UNEP Risoe Centre developed a **Multi Criteria Decision Analysis (MCDA)** as part of the TNAssess tool. A description of the MCDA approach may be found here.

A supplementary tool for rating co-benefits of each mitigation measure in a MAC is currently under development by a working group of CLEAN: Development Impact Assessment tool (forthcoming)

Tools to identify technology needs

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Sustainable development co-benefits

Co-benefits may include a wide range of national development goals, such as:

➢**Social Benefits**
- Access to energy and transportation services
- Health benefits through improved air and water quality
- Lifestyle benefits through the use of environmental services

➢ **Environmental benefits**
- Protection of Biodiversity
- Improved Water or Air quality

➢**Economic benefits**
- Job creation
- New economic opportunities (green growth)

Tools to identify technology needs

➢**Improved Capacity for Mitigation**
- Institutional arrangements are in place to promote low-emissions development
- Technical and human resource capacities are strengthened
- The policy environment for low-emission development is improved

Tools to identify technology needs

A database and tools to identify which technologies are needed and most appropriate and who provides these technologies can be found at UNEP‘s and UNDP‘s ClimateTechWiki and REEEP‘s and REN21‘s REEGLE here

A technology needs assessment that considers co-benefits, may help to avoid conflicts.

The UNEP Risoe Centre developed the Financial and Cost Assessment Model (FICAM) as a tool to evaluate the mitigation capacity, as well as costs of technologies. Available here.

As FICAM merely takes mitigation benefits into account but no co-benefits, the TNAssess tool complements FICAM and helps policy makers and multiple stakeholders to weight the sustainable development co-benefits of various technologies through a Multi Criteria Decision Analysis (MCDA) included in the TNAssess tool. TNAssess helps technology recipients to define their own priorities in technology selection. A description of MCDA is found here. (see p. 48)

A barrier analysis should follow the identification of appropriate technologies. (A guideline is forthcoming at the ClimateTechWiki.)

Checklist – types of barriers

Back to MAC | Back to Co-Benefits | Back to Technology Promotion | Main Menu | Content

Design a MRV Plan:

The Who, What, When and How of MRV

While guidelines for international reporting ***(Biennial Update Reports)*** and verification ***(Interntational Consultation and Analysis)*** of national mitigation actions do exist, no international agreement on MRV guidelines at the level of individual activities has been reached.

1. **What to MRV?**
   - Individual activities should have their own indicators, whether they seek to measure GHG reductions or other benefits and secondary effects. The indicators will determine what gets reported and verified.
2. **How to MRV?**
   - How will benefits be measured (methodologies used)? How accurate must measurement be? Can measurement be conducted "on-site" or will official data sources be used to measure results? How will results be compiled and stored, and through which channels will they be reported? Is on-site verification required?
3. **When to MRV?**
   - How often will particular activities be "MRV'd"? E.g. Performance monitoring annually? Reporting Biennially? Verification of reported information?
4. **Who should MRV?**
   - The person/ institution responsible for the M, R and V of mitigation activities need to be identified during the design phase.

In order to foster the capacity building activities of the International Partnership on Mitigation and MRV a comprehensive MRV Tool has been developed, which MRV Trainings for partner countries are based on. More information on MRV Tools and Trainings can soon be found here.

Biennial Update Reports (BURs)

Biennial Update Reports should cover the following information related to **LEDS** and the mitigative effects of NAMAs:

- Name and description of the mitigation action
- Information on methodologies and assumptions
- Objectives of the actions and steps taken or envisioned to achieve the mitigation
- Information on the progress of implementation
- Information on international market mechanisms
- A description of domestic measurement, reporting and verification arrangements

The complete guidelines for BURs are available here beginning on page 41.

Countries have commited to submit BURs and subject them to ICA

International Consultation and Analysis (ICA)

ICA and LEDS:

Progress on LEDS will be aggregated into a biennial update report to be submitted to the UNFCCC

ICA is intended to broadly analyze a country‘s progress on GHG mitigation through an examination - by a team of international experts - of biennial update reports.

ICA is not intended to scrutinize individual NAMAs in detail.

The requirements for NAMA verification, therefore, remain the domain of NAMA implementers and those supporting the NAMA to determine.

Countries have commited to submit BURs and subject them to ICA

Checklist:

Principles of knowledge sharing include

- Knowledge is a resource that enables actors to plan and implement interventions as it conceptualizes causal impact chains and provides according models for interventions.
- Knowledge can be made available by virtual **Knowledge Maps** guiding users to the holders of the relevant knowledge. The knowledge map links areas of knowledge, which can provide insights on the effects and side-effects of inter-connected activities.
- Such Knowledge Maps are characterized by:
  - Openness
  - Transparency
  - Connection of knowledge holders
  - Distribution of relevant knowledge pro-actively
  - Installing knowledge managers

A useful source regarding knowledge management on LEDSs is the website of the International Partnership on Mitigation and MRV: http://www.mitigationpartnership.net/

Checklist:

Levels of Intervention

UNDP has developed a five step approach to develop a Low Emission Climate Resilient Development Strategy (LECRDS) with various instruments for interventions at five levels:

- Action level (comprising multi-stakeholder involvement)
- Information level (comprising inventories and scenarios)
- Framework level (comprising needs-oriented design of strategies)
- Structure level (comprising the financing)
- Institution level (comprising implementation and MRV)

The guidebook on how to develop an LECRDS with various instruments of UNDP can be found here.

Checklist:

Principles of good management

The development and implementation of a LEDS is a process which has to be managed carefully involving various stakeholders and considering various interests.

Leading principles for good management of LEDS are:

- Establish **leadership** and define **responsibility**
- Share **common goals**
- Define **clear objectives**
- Ensure **lean management**
- Coordinate **different ministries involved**

Position of the government in the climate process

Reporting should include a general overview of:

- Position of government on LEDS, NAMAs, MRV/ICA
- Affiliation with country groups
- National mitigation commitments
- Challenges and opportunities linked to low emission and sustainable development
- Ratification of international agreements and conventions
- Contact in government delegation for climate negotiations

Potential and willingness for emission reduction

Reporting should include information on:

- Reduction targets
  - Relative GHG Emission reduction (e.g. reduction of emissions intensity)
  - Absolute GHG emission reduction (i.e. quantified emission limitation)
- Baseline for reduction
  - Information on the baseline year
  - Information on the baseline senario (BAU)
- Timeframe of aspired reductions

MAC

Reporting should include information on, if available:

- Marginal Abatement Cost curve (graph and data)
- Author of MAC
- Emission trends
- Emission profiles
- Mitigation potentials of sectors
- Costs of mitigation potentials
- Co-benefits

GHG inventory

Reporting should include information on, if available:

- National/ sectoral inventory
- Responsible entity/ ministry
- Inter-ministerial working group
- Data collection systems
- Involved partners (NGOs, multilaterals, private finance institutions, etc.)
- Stakeholder engagement
- Financial support for development of GHG inventory
  - Amount
  - Donor
- Technical support for development of GHG inventory
- National Communications
  - Year
  - Documentation

LEDS

Reporting should include information on, if available:

- LEDS, climate change strategy, action plans (developed, implemented)
- Financial support for development of LEDS
  - Amount
  - Donor
- Technical support for development of LEDS
- National baseline, GHG inventory
- Mitigation potentials of sectors
- Methodologies for quantification of direct and indirect emission reductions
- Costs of mitigation potentials
- Incentives/ risks and barriers of mitigation potentials
- MRV system
- Low carbon emission scenarios, coherent with development goals
- Stakeholder engagement
- Policies and measures
- Long-term vision
- Timeframe
- Responsible entity/ ministry
- Inter-ministerial working group
- Involved partners (NGOs, multilaterals, private finance institutions, etc.)
- Development priorities, prioritized sectors
- Sustainable development co-benefits
- Legislation and activities to implement LEDS
- Technical needs
- Financial needs and financing options

NAMAs 1/2

Reporting should include information on, if available:

- NAMAs
  - Developed
  - Implemented
- Embedded in LEDS
- Financial support for development of NAMA
  - Amount
  - Donor
- Technical support for development of NAMA
- Stakeholder engagement
- Technical mitigation options in sectors, like:
  - Buildings,
  - Transport,
  - Energy,
  - Forestry,
  - Agriculture,
  - Industry,
  - Tourism,
  - Waste,
  - Water
- Sustainable development co-benefits
- Monitoring methodologies

NAMAs 2/2

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NAMAs 2/2

- National baseline, GHG inventory
- Costs of implementation of mitigation potentials
- Reduction impacts
- Cost efficiency
- Innovativity
- Development priorities, prioritized sectors
- Legislation and activities to implement NAMA
- Responsible entity/ ministry
- Inter-ministerial working group
- Involved partners (NGOs, multilaterals, private finance institutions, etc.)
- Economic incentives to implement NAMAs
- Knowledge management systems for development and implementation of NAMAs
- Instruments for technology cooperation
- Technical needs
- Financial needs and financing options
- Leverage of/potential for private financing of NAMAs
- Submission of NAMAs to NAMA Registry
- MRVable

MRV systems

Reporting should include information on, if available:

- MRV system, data collection system (developed, implemented)
- Financial support for development of MRV system
  - Amount
  - Donor
- Technical support for development of MRV system
- Responsible entity/ ministry
- Inter-ministerial working group
- Involved partners (NGOs, multilaterals, private finance institutions, etc.)
- Stakeholder engagement
- Methodologies for data collection, quantification of reduction impacts, and reporting of
  - Direct emission reductions
  - Indirect emission reductions
  - Enhancement of mitigative capacities
  - Sustainable development co-benefits
- Key indicators
- Guidelines and instruments for data collection and analysis
- Reporting templates and systems for data aggregation
- GHG inventories
- Quality of available information
- Capacities for data collection, calculation of reduction impacts, technical capacities
- Technical needs
- Financial needs and financing options

Partners for development and implementation of LEDS, NAMAs, MRV systems

Reporting should include information on:

- A list of partners, involved in the development of climate instruments (LEDS, NAMAs, MRV systems, GHG inventory), e.g.:
  - NGOs
  - Multilaterals
  - Private Finance Institutions
  - Civil Institutions

Investments made

Reporting should include information on:

- Financial support for climate policies
  - Amount
  - Donor
- Technical support for climate policies
- Public domestic ivestments made
- Private sector investments made
- Estimation of international financial support needed
- Sources of financial support

Types of barriers for low carbon investments and sustainable development

Financial barriers	• High upfront costs • Small project sizes • Split incentives (e.g. of owners and users) • Misallocation of resources for investments (subsidies for conventional technologies)
Institutional barriers	•High transaction costs •Limited access to capital •Monopolies/ Limited access to markets
Economic barriers	•Externalities: costs that are not included in market prices
Technical barriers	•High transaction costs
Information barriers	•Limited awareness of options •Lack of knowledge/ access to knowledge
Capacity barriers	•Lack of skilled labour •High transaction costs

Checklist:

To promote technologies, consider

- Enhancing the investment environment
- Removing market entry barriers, such as:
  - Monopolistic market structures
  - Subsidies for conventional technologies
  - Lack of capacity
  - Lack of knowledge
  - Lack of financing
  - Externalities
- Supporting innovation systems:
  - Setting up Technology Cooperation Advisory Facility and regional Technology Centres
  - Technology Needs Assessments
  - Fostering learning processes
  - Identifying partners for technology cooperation

Tools to identify technologies

Back Step 2

Back to: How to justify international support?

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Checklist:

Categories of Economic Incentives to consider

- Capacity and information-based
  - e.g. awareness campaigns, monitoring and reporting schemes, education policies
- Regulatory
  - e.g. mandatory insurances, standards, macroeconomic policy framework, legal institutions
- Fiscal mechanisms
  - e.g. tax credits, carbon tax, levies, fees, phasing-out subsidies
- Early market development mechanisms
  - e.g. grants, public procurement, feed-in tariffs, production subsidies
- Debt and equity finance mechanisms
  - e.g. incubators, mezzanine subordinated debt funds, green bonds, microfinance
- Environmental market mechanisms
  - e.g. cap and trade, carbon credits, carbon funds, quotas

For more details on policy and financial instruments, see the UNDP report „Catalysing Climate Finance“.

Climate Finance Options link

A wide range of options for accessing climate finance exists:

- Multilateral funds dedicated to climate finance
- Multilateral Development Banks
- Private Finance
- Bilateral funding mechanisms

The official website of the UNFCCC on climate finance provides information on the UN climate finance architecture as well as bilateral, regional and other multilateral channels.

The Climate Policy Initiative has collected data on global climate-related finance flows and has drawn a Landscape of Climate Finance.

An overview of existing climate funding sources and how to access them is here.

At a later stage, carbon markets may also be a mechanism in the long run to attract resources for NAMAs. The role of **carbon markets** for NAMAs is still under debate.

Suggestions on how to improve technical and financial cooperation are forthcoming

How to develop a financing plan

It is important to recognize that **NAMAs** generally **go beyond** individual **investment** projects. Instead, NAMAs push forward sector policies aimed at lowering barriers to investment and implementation. The implementation of certain elements of a NAMA may need financial and also technical support.

To develop a financing plan convincing for investors, the following four steps are proposed:

1. **Planning** of how to pay for the costs of implementation
2. **Contact financiers** to present them the planning of financing of the investment and to apply for support / direct finance
3. Complete a **term sheet** (i.e. a document outlining non-binding terms and conditions of an agreement), the financier should define criteria for the refusal of application for a credit
4. Finalize the term sheet with the **technical implementer** to test if financing via financial market is possible

What is a LEDS?

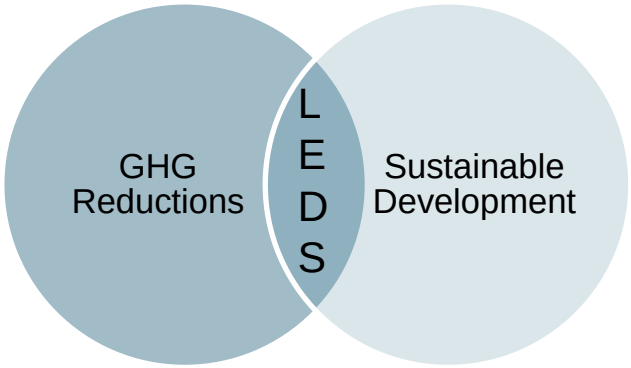
- A national, high-level, comprehensive, long-term, holistic strategy, developed by domestic stakeholders,
- which aims at decoupling economic growth and social development from greenhouse gas (GHG) emissions growth,
- can create a roadmap for continued international collaboration and a framework for sectoral activities (like NAMAs)
- and mainstreams activities.
- It takes into consideration time horizons in the global climate process until 2015 (when a global agreement shall be negotiated) and 2020 (when the global emission peak must be reached).

A LEDS should comprise a voluntary national mitigation commitment, specifying how a country can contribute to the global 2°C objective.

The goal of a LEDS is to make development climate-compatible.

Different forms of targets

An ambitious climate policy generates and reinforces sustainable development co-benefits, and vice versa, and is, hence, ambitious development policy at the same time.



Developing Countries are encouraged *„to develop low-carbon development strategies or plans in the context of sustainable development“* – Cancun Agreements (2010)

Related policies and plans

Back to Step 1 | Back to mitigation architecture | Back to Tool Objectives | Main Menu | Content

What is a LEDS? – Related policies and plans

A LEDS should build upon existing national strategies and processes (see examples in the illustration).

LEDS do not need to be something new but rather integrate and mainstream mitigation into existing strategies, thereby reinforcing sustainable and low carbon development mutually.

- There are also 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.

Different Forms of Commitments

National emission reduction commitments in form of pledges or targets can have different forms:

Climate neutrality

Emissions below business as usual

Emissions below base year

Emissions per unit of GDP

- National pledges or targets can be quantified or qualitative.
- Quantified emission reduction targets can be in absolute terms or in relative terms, i.e. emission intensity per output.
- Quantified emission reduction targets can be defined nationally or internationally related to benchmarks.
- Quantified emission reduction targets can be economy-wide or sectoral.

What is a NAMA?

The concept of NAMAs was introduced in the **Bali Action Plan** 2007 as:

*„**nationally appropriate mitigation actions** by developing country Parties in the context of sustainable development, supported and enabled by **technology, financing and capacity-building**, in a **measurable, reportable and verifiable** manner.“*

No internationally agreed upon definition exists; however **2 categories** have emerged:

Industrialized country (Annex I)	Domestic Funding for NAMA	Developing country (Non-Annex I)	**Unilateral NAMA**
Industrialized country (Annex I)	Finance, Technology, Capacity building →	Developing country (Non-Annex I)	**Supported NAMA**

At a later stage, carbon markets may also be a mechanism in the long run to attract resources for NAMAs The role of carbon markets in financing NAMAs is under discussion among various stakeholders and includes the concept of **credited NAMAs**. However, this concept is neither used in any of the official documents nor has it yet been formally established

What is MRV?

Measurement, Reporting and Verification (MRV) are key elements for ensuring greater transparency, accuracy and comparability of information with regard to climate change.

MRV can be thought of as a knowledge-management system for tracking greenhouse gas (GHG) emissions, actions to reduce GHG emissions, and climate change mitigation support.

Recent decisions within the international climate negotiations demonstrate a growing global consensus that common forms of measuring, reporting and verifying information are needed to track such knowledge.

A tool and training on issues related to MRV is currently under development by GIZ and will be tested in early 2013

Related Tools

The LEDS Tool was developed as part of a package of tools designed to promote low-carbon development and the production and dissemination of transparent information. To that end, users of the LEDS tool may find it useful to consult the other three tools in the package, namely:

- **The Nationally Appropriate Mitigation Action (NAMA) Tool**
  - Walks users through a Ten-Step Process beginning with the conceptualization of NAMAs, through to their implementation and evaluation.
- **The Measurement, Reporting and Verification (MRV) Tool**
  - Presents three "types" of MRV that should be considered when developing monitoring systems to track progress towards mitigation goals:
    1. MRV of Emissions
    2. MRV of Mitigation Actions (NAMAs)
    3. MRV of Support Received
- **The Gap Analysis Tool**
  - Provides as a first step guiding questions for starting a process for low-emission development and/or NAMA development in a particular country. Questions are clustered by key categories. Further advice is provided for the second step, which is the data analysis, in order to arrive at recommendations for further work.

Another comprehensive LEDS Tool has been developed by the US Department of Energy and the National Renewable Energy Authority

Why MRV?

MRV tells us if we are on track to meeting low-emission development goals.

It also:

Facilitates Decision-making and national planning

Supports the implementation of NAMAs and generates feedback on NAMA/LEDS effectiveness

Promotes coordination and communication amongst emitting sectors

Generates comparable, transparent information

Highlights lessons and good practices

Increases the likelihood of gaining international support

Gap Analysis Guidance

A gap analysis can be divided into two phases:

1. Data Collection

2. Data Analysis

During the data collection phase, it may prove helpful to gather and organize information based on **key categories**, such as:

1. International Commitments and Positions
2. National Policies, Strategies and Targets
3. Emissions Profiles and Reductions potential
4. GHG inventories and National Reporting
5. Capacity, Technology and Finance

During the data analysis phase, the gaps with regard to data, policies, institutions, personnel, targets, etc. are identified and documented to formulate recommendations for interventions.

For more suggestions on carrying out a gap analysis, see the GIZ „Gap Analysis Tool for Mitigation Action“.

How to justify the need for international support

1. Explain why the planned low emission development strategy is needed, referring, for instance, to mitigation potential and co-benefits.
2. Document the barriers and challenges that are preventing the strategy from being implemented.
3. Identify and document the baseline conditions in the absence of a LEDS.
4. Describe particular actions that target the barriers and challenges.
5. Define why those action may not realistically be undertaken in an effective way, without the additional funding requested in the short, or in the long term.
6. Describe how the funding will leverage the co-financing and together achieve the results that will lead to the low-emission development.
7. Document clearly all information and assumptions to develop and support the justification for funding the strategy.

Checklist: Technological Promotion → **Non-GHG metrics: Co-benefits** →

How to ensure availability of resources

Discuss the level of contributions from national and sub-national budgets

The availability of resources can be ensured by developing a robust financing plan, including a pre- feasibility study to attract potential investors early, and having the high quality of the LEDS acknowledged as potential supporters. The pre-feasibility study should also give a first idea on possible MRV indicators that are relevant for private financing.

Identify reliable and financially strong potential LEDS financiers.

Inform potential financiers of planned NAMA and the NAMA implementer(s).

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Acronyms:

MRV	Measurement Reporting Verification
GHG	Greenhouse Gas
LEDS	Low Emission Development Strategy
CDM	Clean Development Mechanism
UNFCCC	United Nations Framework Convention on Climate Change
BAU	Business as Usual
MAC tool	Marginal Abatement Cost tool
BURs	Biennial update reports
ICA	International Consultation and Analysis
GEF	Global Environment Facility
PoA	Program of Action