



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!

Nationally Appropriate Mitigation Actions (NAMAs)

Steps for Moving a
NAMA from Idea towards Implementation

Version 9.0

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.



Imprint

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Please be aware that this version of the NAMA-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.

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On behalf of

Federal Ministry
for Economic Cooperation
and Development



Federal Ministry for the
Environment, Nature Conservation
and Nuclear Safety



International Partnership
on Mitigation and MRV

Launched by South Africa, South 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

In this context the Partnership is supporting the design, pilot testing, and training of a series of tools, including this NAMA tool.

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

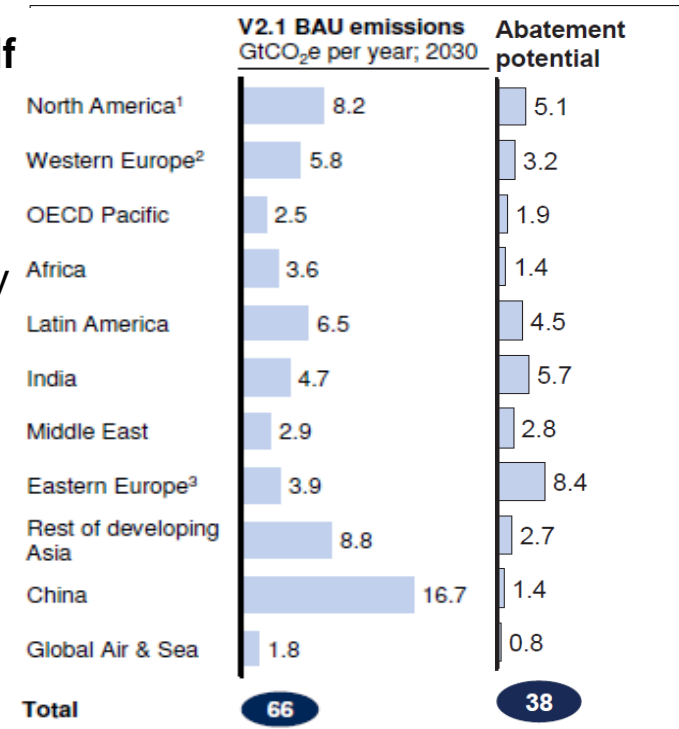


Ministry of Environment
Republic of Korea



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 target 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, which both account for **around half of global emissions** today
- 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

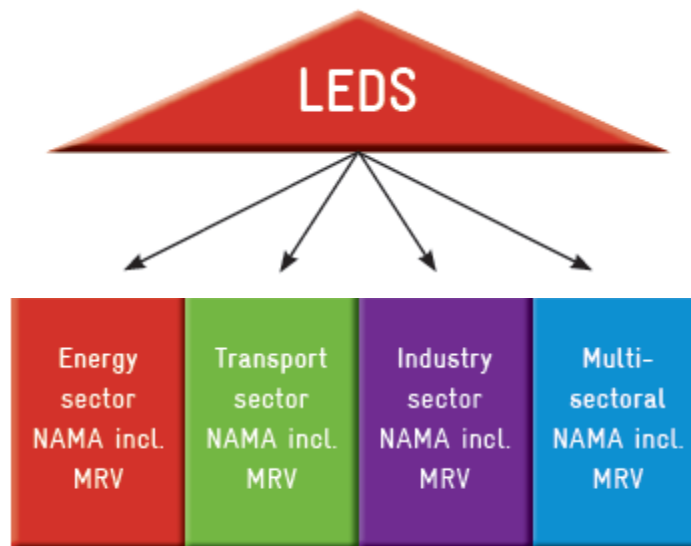
- While the UN negotiations proceed to establishing a **global mitigation architecture**, the national level – with international support according to needs and ambition - must already act on **developing and implementing the building blocks of this mitigation architecture**.
- The challenge is to consider the **global requirements** for achieving the 2°C objective while at the same time addressing **national appropriateness** of actions. This translates into the implementation of national policies and strategies for sustainable development, while reducing GHG emissions and seizing opportunities for green growth.
- 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 provide an overall framework for the development of Nationally Appropriate Mitigation Actions (NAMAs).

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 NAMA-Tool history

On June 11th, 2011, on the margins of the UN climate negotiations in Bonn, the ICI brought together about 50 practitioners and experts for the workshop: “Developing Knowledge on the Building Blocks of a Global Mitigation Architecture.” Workshop participants looked at and analyzed 13 ICI-projects that were in the process of developing and implementing LEDS, NAMAs and MRV systems.

The discussion during the workshop generated ideas about certain generic *success factors* for the development and potentially for the future implementation of LEDS, NAMAs and MRV systems. Furthermore, the approaches being used in the 13 projects helped participants identify *steps* for the development of LEDS, NAMAs, and MRV systems.

The outcomes of the workshop were subsequently taken up by two GIZ-implemented programs that are supporting the Federal Ministry for Economic Cooperation (BMZ) in the global climate negotiations and the BMU’s secretariat of the International Partnership on Mitigation and MRV, respectively. The two programs have collaborated to develop three tools that will guide practitioners through the process of developing and implementing NAMAs, LEDS and MRV. The tools form the basis for a NAMA Training, an MRV Training and a LEDS Workshop, which GIZ is now offering to interested partners.

These tools are continuously being improved upon. 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 contact: **climate@giz.de**



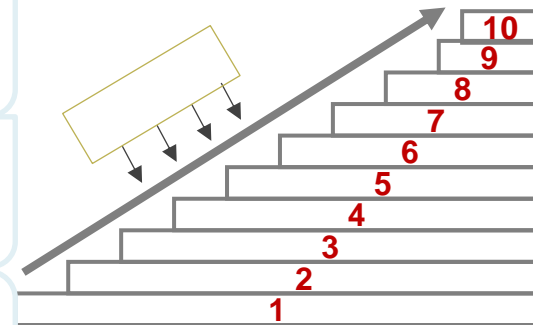
Intro V: NAMA-Tool Objectives and Contents

The NAMA-Tool provides developers and implementers of NAMAs with brief step-by-step instructions on how to develop a NAMA. The tool navigates users to the relevant information, knowledge, instruments, and publications available.

The process is structured into **ten steps**. The 10-step approach is designed to supply users with more data and accessible instruments for certain aspects of the NAMA development.

Even though this tool helps prepare for the implementation of NAMA, it is first and foremost a navigation tool, guiding practitioners through the process of developing a NAMA. It is not an instrument for the implementation of NAMAs itself.

This tool also does not give sector-specific instructions, but includes links to sector-specific expertise and handbooks. The tool is publicly available at www.mitigationpartnership.net



What is a NAMA?



Related tools

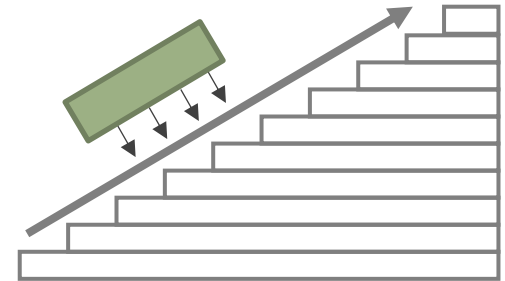


Note!

- When developing an individual NAMA, the sequence of 10 steps does not require to be followed strictly chronologically nor completely!
- However, an ambitious NAMA must most likely have completed every step somewhere along the process!



Success Factors *(early lessons)*



Individual NAMAs should be embedded in **long-term visions** and **clear objectives**. The LEDS helps to ensure that NAMAs create synergies, and support one another.

The **availability of resources** can be ensured by developing a robust financing plan, involving potential investors early, and having the NAMA acknowledged as high quality by potential supporters. (Pre-) feasibility studies can also be useful for attracting finance.

High-level political commitment and **inter-ministerial collaboration and coordination** – particularly involving the Finance Ministry – are necessary and support the whole process in prioritizing action, aligning low carbon with wider sustainable development goals, and identifying public and private potential financing sources.

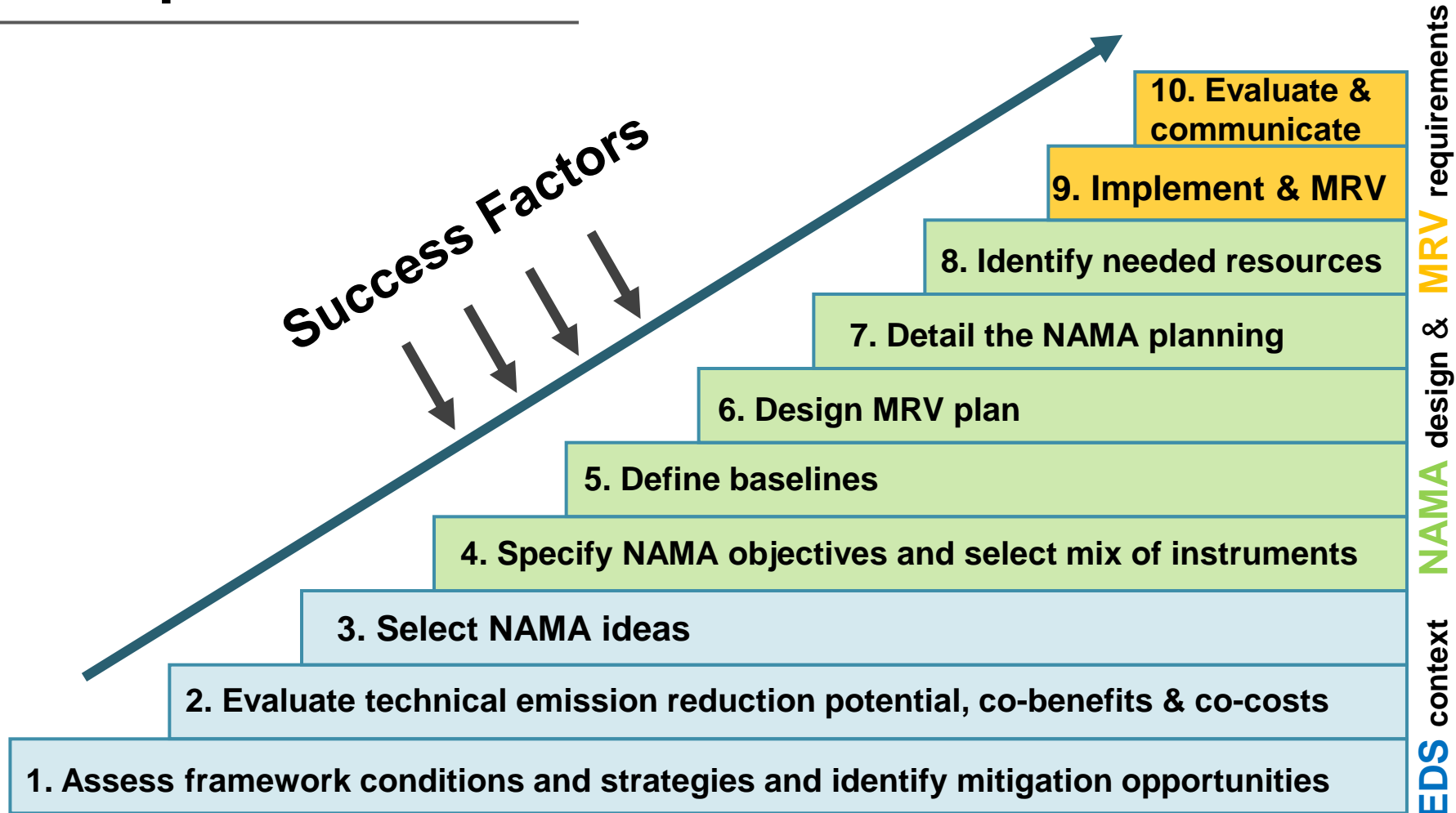
The designation of a **responsible institution** to coordinate NAMAs, a robust **MRV** system and **scientific and technological basis** for individual NAMAs, the **bundling of policies and measures**, along with the consideration of sustainable development **co-benefits** make it more likely that NAMAs will be successfully and effectively implemented.

A **participatory, bottom-up, stakeholder process** and the inclusion of **local expertise** and work from within the target countries should be emphasized to create **ownership**.

Upscaling existing programmes, rather than creating completely new projects.



10 Steps to a NAMA

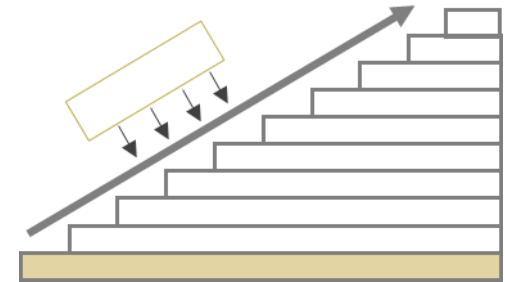


Navigate by clicking on a particular step or start the full tour





1. Assess framework conditions and strategies and identify mitigation opportunities



Assess **national framework conditions** for mitigation, including the political and governance framework and general barriers for climate policy implementation. Consider **relevant national strategies or plans** as well as **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).

Assess bottom-up where **gaps** remain in existing **policies** in order to address national development needs and priorities and **identify needed measures** to be implemented applying emission reduction targets to them.

A **LEDS** – given one exists already –can provide the framework for the development and implementation of NAMAs, as well as help to identify synergies and align with national development planning processes. If there is already a LEDS in place, the process of NAMA development can proceed directly from **Step 3** onwards.



Whereas countries are encouraged by the UNFCCC to develop LEDS, there are currently no specific UNFCCC requirements such as guidelines for their development.

What is a LEDS?

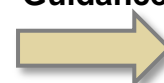
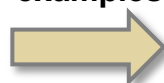
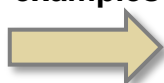
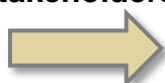
Checklist – relevant stakeholders

List of NAMA examples by sectors

List of NAMA examples by type

Gap Analysis Guidance

Checklist: Anticorruption



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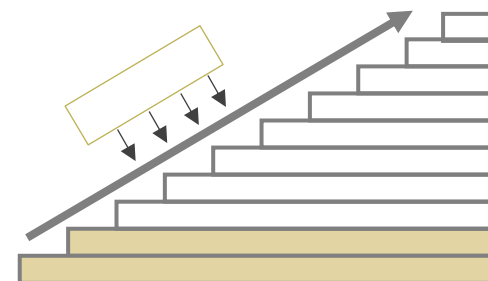
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2. Evaluate technical emission reduction potential, co-benefits & co-costs



Assess the emissions structure of different sectors and evaluate the **technical GHG emission reduction potential** at national and sectoral level. Apply ex-ante estimates, which should be based on the application of internationally recognized methodologies that quantify emission reductions and costs and avoid double counting.

Important impacts to be assessed besides the GHG emission reduction potential:

- **Co-benefits for sustainable development**
- **Associated economic incremental costs**
- **Co-costs** (make sure you apply a do-no-harm approach and check for co-costs and negative effects of the envisioned NAMA)

Checklist – Marginal Abatement Cost Curve and further tools to estimate NAMA impacts

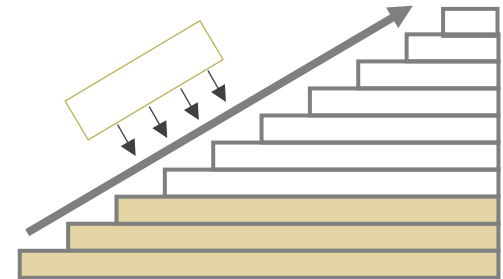


Types of barriers, co-costs and negative effects





3. Select NAMA ideas



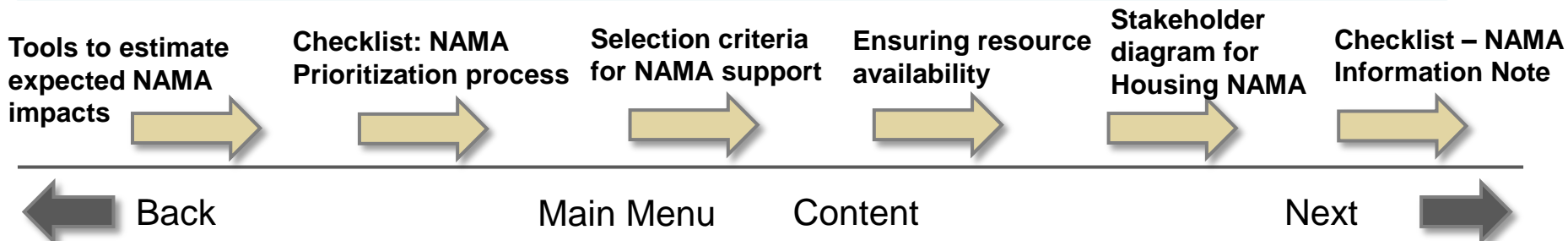
Identify potential actions, possibly with the help of a Marginal Abatement Cost curve, and select an action which is cost-efficient and contributes to long-term sustainable emission reductions.

Conduct sector-by-sector **participatory assessment, planning and consultation processes**, e.g. workshops, 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.

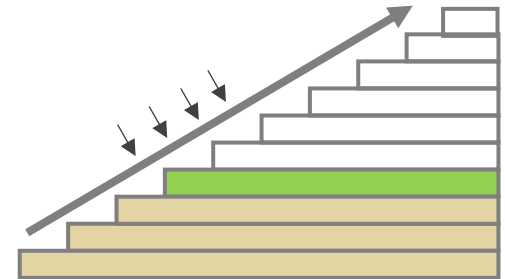
Evaluate financial, political and socio-cultural **feasibility**.

Identify and involve potential financiers, discuss planned NAMA and potential NAMA implementers with them .





4. Specify NAMA objectives and select mix of instruments



Formulate **concrete NAMA objectives** with regard to the expected GHG emission reduction and co-benefits

Determine sectoral, temporal and geographical **scope** of the NAMA

Select mix of measures and instruments to be included

List of NAMA examples by sectors



List of NAMA examples by type



Checklist – Economic incentives



Checklist – Technology promotion



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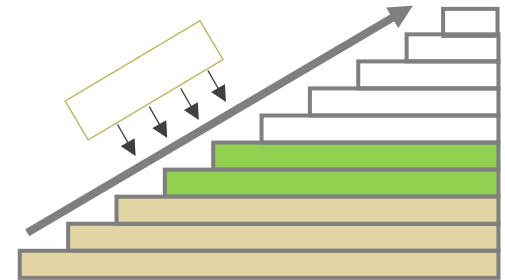
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5. Define baselines



A baseline is a level of emissions that provides a **reference level** to establish a **goal** or **target** and/or to **measure progress**.

Determine the **purpose** of the baseline: what does the NAMA seek to achieve (e.g. is it setting a target?), or what would happen in the absence of the NAMA? (e.g. will the baseline measure performance?)

Collect data to set up a **GHG baseline**. Define **boundaries**, consider **leakages** as well as **uncertainty**, pay attention to **net emission reductions**.

Include additionally non-GHG **co-benefits** in the baseline.

Checklist for defining the baseline



Types of baselines



Possible baseline data sources



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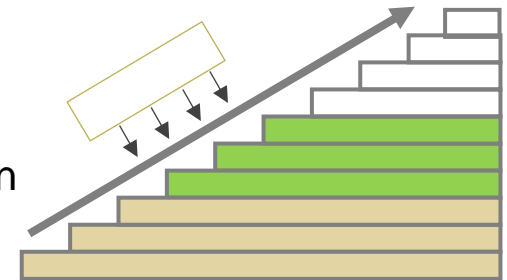
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6. Design a MRV plan

The UNFCCC negotiations reached international agreement on guidelines for reporting ([Biennial Update Reports - BUR](#)) and verification ([International Consultation and Analysis](#)) of national-level mitigation information, the [composition of the Teams of Technical Experts](#) to undertake the technical analysis of BURs, and on [general guidelines for MRV of NAMAs](#) to set up national MRV systems.

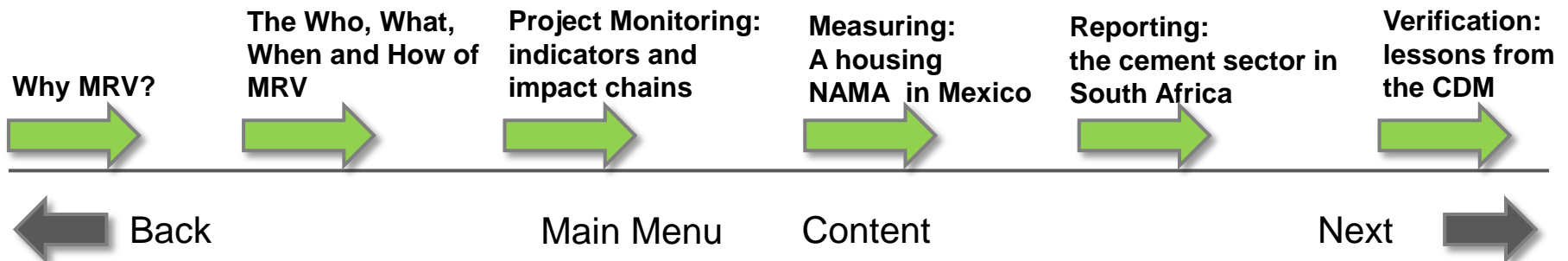


Countries shall submit BURs and subject them to ICA

Voluntary general guidelines for domestic MRV of domestically supported NAMAs were negotiated at COP 19 in Warsaw

Taking this guidance into account, the NAMA developer and those supporting the NAMA – whether it be national or international supporters – may design MRV plans for NAMAs, including processes, arrangements, methodologies and expertise needed, that suit the parties involved and facilitate reporting on their impacts in BURs.

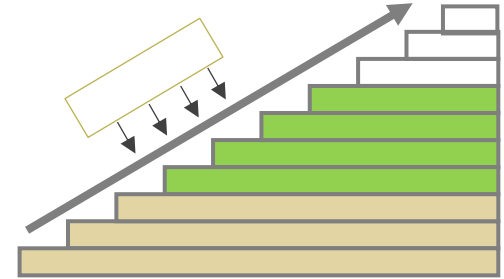
Development cooperation experience with project monitoring, sectoral experience with measuring and reporting, and CDM experience with verification offer valuable lessons for NAMA developers.





7. Detail the NAMA planning

Plan detailed activities and determine **roles of different stakeholders** to make the NAMA process time-efficient and transparent.



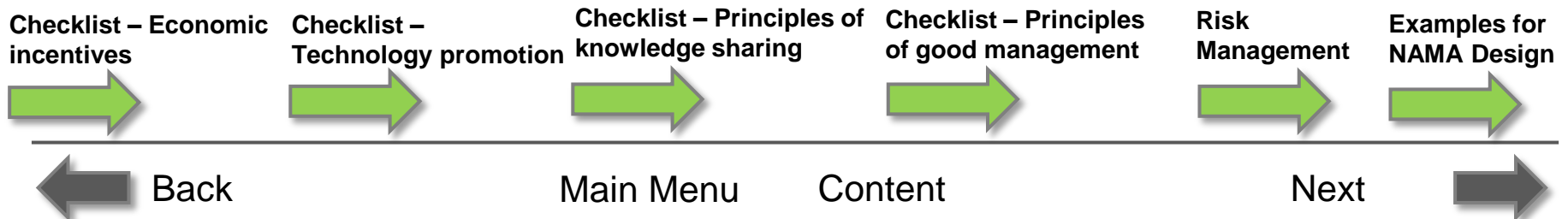
Define a timeline for a set of activities and responsibilities of the NAMA implementer(s).

Conceptualize and design NAMA with the help of a [NAMA template](#).

Develop and apply tools for different interventions:

- for planning the policy framework and creating an enabling environment;
- for regulation and setting up effective institutions;
- for economic incentives to form appropriate structures;
- for generating and disseminating relevant information;
- for promoting investments in technologies for implementation;
- for avoiding any potential negative impacts of the NAMA

In the detailed development of NAMAs, existing [sector-specific](#) NAMA handbooks can be helpful references for the application of appropriate instruments.





1. Under negotiation in UNFCCC
2. A consistent approach for the interlinkage of technical assistance and financial assistance for NAMAs is currently under development



8. Identify needed resources

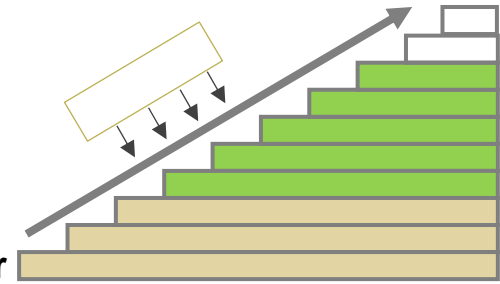
Develop a professional **business plan** jointly with implementers to present NAMAs to potential public/private financiers.

The design process of NAMAs should pro-actively engage the **private sector** and remove barriers to its involvement. Public-private roundtables, for example, can establish a continuous communication process.

Depending on cost structure and revenue streams, the major portion of NAMA financing will have to come from **domestic sources** through the creation of economic incentives, e.g. putting a price on carbon or regulatory interventions to cap (and trade) emissions. Therefore, NAMAs must form part of national plans and strategies.

If private and domestic resources are not sufficient, identify needs for **technological, capacity building and financial support** and potential sources for this support.

International climate finance can play a complementary and catalytic role if support is necessary. In addition private sector engagement will be necessary to meet the financing needs. At a later stage, carbon markets may also be a mechanism in the long run to attract resources for NAMAs.



Instruments to mobilise the private sector



Note! Individual NAMAs may differ in their support needs and, hence, international support may differ in what is adequate in terms of technical or financial assistance.

Checklist – Economic incentives

Climate Finance Options

Checklist – Types of barriers

How to develop a financing plan

How to justify the need for international support

Selection criteria of donors for NAMA support



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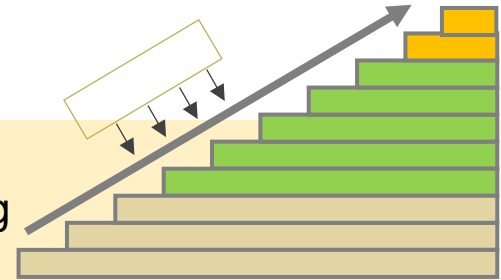
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10. Evaluate & Communicate

Instigate a learning process by **starting early action** and getting **experience on the ground** in developing and implementing NAMAs. Identify best practice and share it with peers and in the international climate negotiations. Identify lessons learnt along the process (from own and other experiences) and improve processes continuously.



Lessons can be drawn from:

- Annex I country implementation of policies and measures
- Annex I Reporting Requirements, e.g. MRV of Policies and Measures
- Implementation of the CDM and Programmes of Activity under the CDM (while NAMAs go clearly beyond individual projects and are not necessarily linked to the international carbon market)

The [UNFCCC NAMA Registry](#) has the function of enhancing transparency by tracking mitigation actions and is supposed to facilitate the matching of needs of NAMA host countries with support from developed countries.

Since submission to the Registry is **voluntary**, a country may decide to use the Registry as a means of **attracting international support** or for **recognition** as a means of showcasing internationally already ongoing NAMAs.



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The Registry and Gaining Support
for NAMA implementation



Examples for
NAMA Design

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Organisational structure for NAMA development

In addition to the 10 step process of NAMA development, governments should assess the **existing institutional structures** if the country needs a **designated organisational set-up** to facilitate NAMA development and implementation.

Guiding questions for institutional assessment

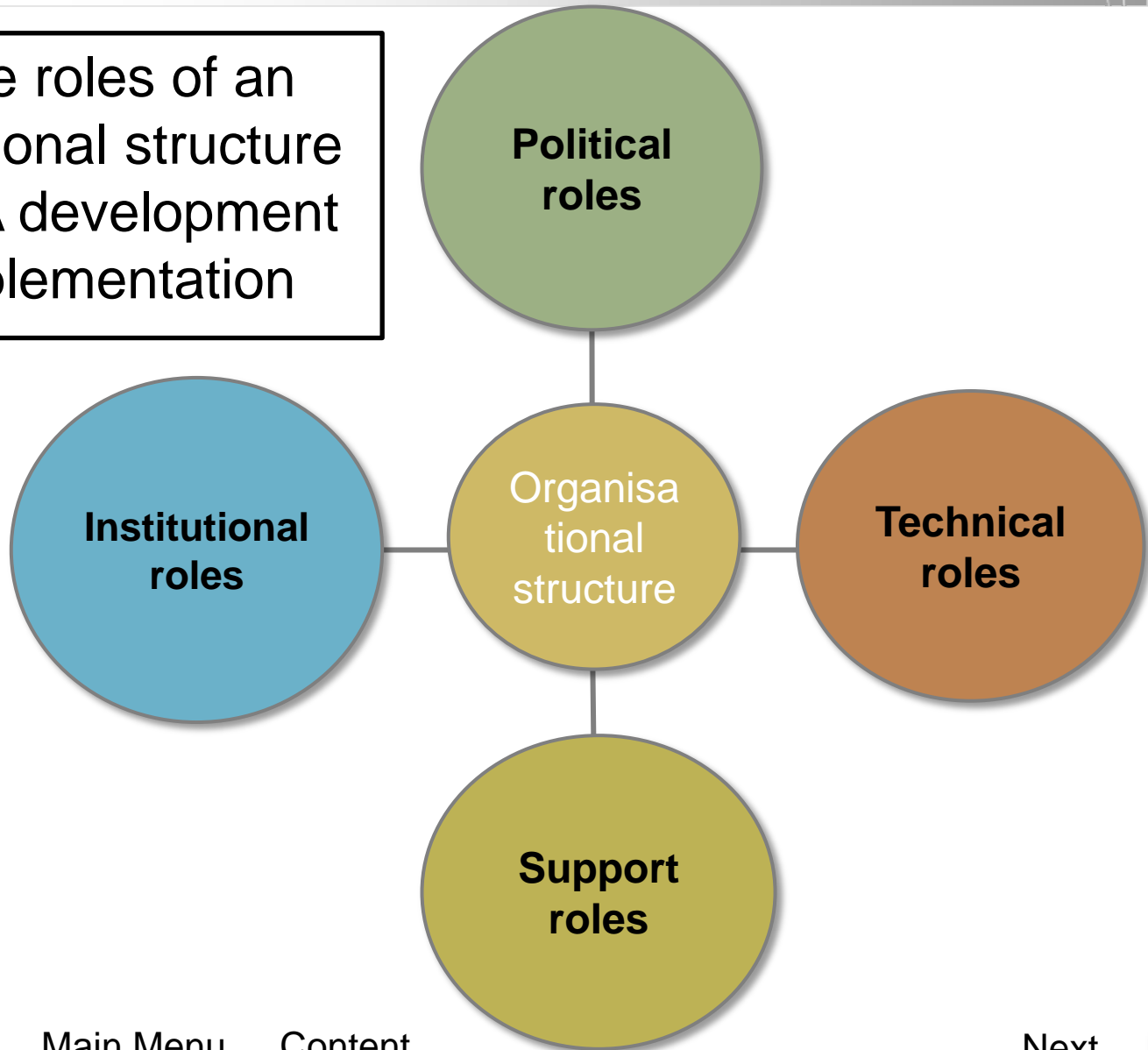
There is **no official requirement** for such an institutional structure. To **harness existing capacities** can strengthen **ownership**.

- Options for such organizational structures could be a new mandate for an existing institution, or an inter-institutional committee. In general, organizational structures should be based on existing structures and not establish new institutions.
- The organizational structure should ideally have a facilitating role, rather than steering NAMA development top-down, which might be inefficient. The NAMA development process should involve a variety of in-country stakeholders and activities. The organizational structure should network the different line ministries involved.
- If a dedicated organizational structure is installed, this needs to have an overarching institutional position but not be included in one line ministry.

For an example of inter-ministerial cooperation of different line ministries in the MRV of NAMAs in Indonesia, please consult the [NAMA Sourcebook](#), (2012), p. 35.



Possible roles of an organisational structure for NAMA development and implementation





Nationally Appropriate Mitigation Actions (NAMAs)

Instruments
in particular steps

➔ **End presentation** ←

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Political roles

- Check national appropriateness of planned actions
- Stocktaking of relevant policies and measures
- Creating incentives for investment
- Setting priorities for NAMA development
- Create visibility of mitigation actions...
- ...



Institutional roles

- Liaising with UNFCCC
- Liaising with Public and Private Sectors
- Sharing knowledge / managing information
- Coordinating amongst line ministries / sub-national entities
- ...



Support roles

- Identifying support options, including financing, technology and capacity building
- Establishing public-private dialogues and promoting public-private partnerships
- Outreach activities and liaising with potential domestic and international providers of support / investors to facilitate matching of support with NAMAs
- Identify and promote relevant public finance mechanisms which could catalyze private investment flows (e.g. Investment guarantee agreements)
- ...



Technical roles

- Helping to establish baselines
- Conducting Cost-Benefit Analyses
- Setting national standards for MRV of NAMAs
- Overseeing MRV requirements
- Managing technical challenges
- Connecting NAMAs to national development goals
- ...





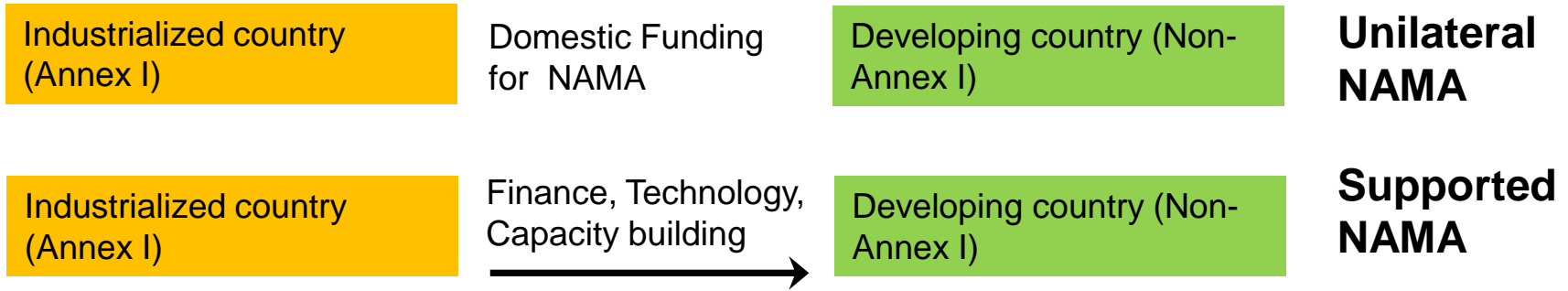
Guiding questions for institutional assessment

- What technical capacities are needed in the country for NAMAs?
- What financial management capacities are needed in the government for NAMAs?
- What M&E capacities are needed in the government to steer the NAMA process?
- What procedures must be set up to manage and monitor the NAMA process?
- What external relations must be set up to other institutions to govern the NAMA process?
- Which institutions can provide sufficient leadership to start the NAMA process?
- Which resource endowments are needed in institutions in the NAMA process?
- How can the (long-term) costs of NAMAs be financed with minimal public intervention?

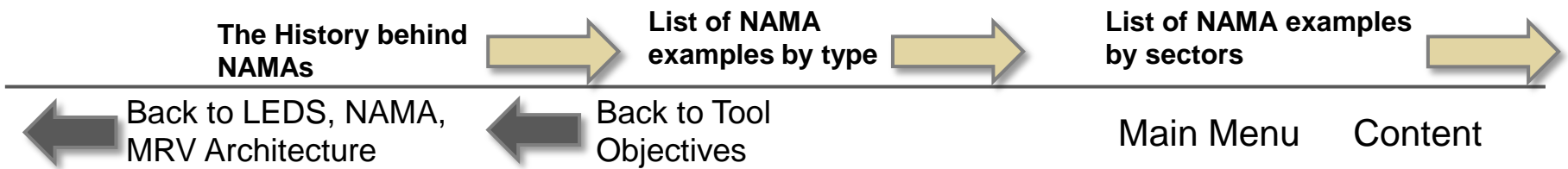


What is a NAMA?

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



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.





The history behind NAMAs

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.“*

The **rationale** why Parties introduced the concept of NAMAs:

To achieve the global 2°C target **both developed and developing countries must mitigate** their GHG emissions.

Developing countries acknowledged this fact in 2007 **without accepting binding caps** on their GHG emissions or economic growth which is still needed in developing countries to „*meet the needs of the present without compromising the ability of future generations to meet their own needs*“.

Therefore Parties agreed that developing countries will implement nationally appropriate mitigation actions (NAMAs) which must be measurable, reportable and verifiable (MRV) – as necessary and fair contribution to the global 2°C target and in the best own interest of sustainable development of developing countries.



Related Tools

The NAMA 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 NAMA tool may find it useful to consult the other three tools in the package, namely:

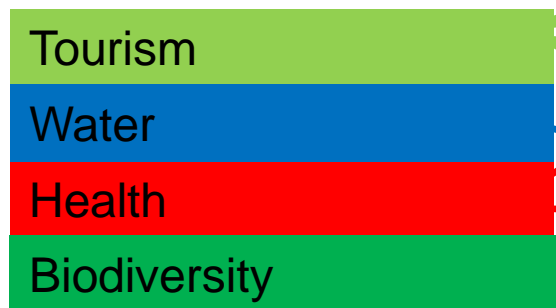
- **The Low Emissions Development Strategy (LEDS) Tool**
 - Walks users through a Six-Step Process beginning with the conceptualization of Low-Emission Development through to the implementation of the strategy.
- **The Measurement, Reporting and Verification (MRV) Tool**
 - Presents three “types” of 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.



List of NAMA examples by sectors

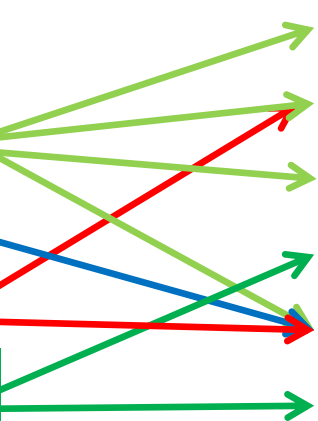
IPCC suggests to categorize GHG emissions along 7 emitting sectors (in the following “IPCC sectors”). To help you find your way through the IPCC logic, this slide attaches every IPCC sector to one or more socio-economic sectors that might be responsible for GHG emissions.

Sectors with indirect climate impact



IPCC sectors

- Energy
- Buildings
- Transport
- Forestry
- Waste
- Agriculture
- Industry





List of NAMA examples by types: Project, Enabling/Policy, and Target-based NAMAs

Enabling/Policy-Based :

- Public Procurement Guidelines
- Feed-In Tariffs
- Tax-Reductions/Exemptions
- Building Standards
- Labeling Schemes
- Removing Subsidies to non-Renewable Energies

Project-based:

- Point-Source Emission Reductions
- Energy Efficiency Measures
- Direct interventions to avoid emissions

Target-Based:

- Energy-efficiency target
- GHG emission target
- Renewable energy target
- GHG emission below BAU
- Mitigation target

A necessary pre-condition of NAMAs is **government involvement**. NAMAs should always include a policy component in order to shape climate-friendly framework conditions and facilitate transformational change

For more information on the conceptual steps towards NAMA Development in the case of Indonesia, please consult the [NAMA Sourcebook](#), (2012), p.50



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List of potential NAMA examples by sectors:

Energy

- Feed-in tariff for renewable energies
- Energy efficiency top runner programmes
- Renewable energy targets
- Support schemes for individual RE technologies
- (i.e. biomass cogeneration)



List of potential NAMA examples by sectors:

Buildings

- Building codes
- Credit lines for use of sustainable, energy efficient technologies
- Replacement programmes for conventional boilers with solar water heaters
- Labelling programmes and minimum energy performance standards for household appliances
- Additional energy efficiency requirements for existing loan/ mortgage programs for residential housing (ex. Mexico)



List of potential NAMA examples by sectors:

Transport

Avoid

- Urban land use planning
- Economic development around railway corridors
- Green logistics avoid empty haulage
- Reduction of subsidies / (Fuel Tax)

Shift

- High quality public transport
- Non-motorised transport infrastructure
- Road Pricing
- Parking Management

Improve

- Fuel Economy Standards
- Regulation on Truck design
- Eco-Driving Campaign

For potential co-benefits of the NAMAs in the transport sector see [NAMA Sourcebook](#), (2012), p.28
For a detailed planning of individual Transport-NAMA activities, see the [“Navigating Transport NAMAs” Handbook](#).



List of NAMA examples by sectors:

Forestry

- Reducing Emissions from Deforestation and Degradation
- Afforestation / reforestation (please refer to the UNFCCC definitions: http://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf)
- Degraded land management / landscape restoration
- Improved / sustainable forest management
- Forest conservation



List of NAMA examples by sectors:

Waste

- Improve the legislative framework and law enforcement
- Improve Public Awareness for households, SME, Industry
- Increase recycling and composting rate
- Increase methane capture and energy generation from waste
- Reduce illegal waste disposal, increase disposal in sanitary landfills
- Wastewater management

For more information on the bottom-up evaluation of tech. options for solid waste management NAMAs in the case of the Philippines, please consult the [NAMA Sourcebook](#), (2012), p. 53.



List of NAMA examples by sectors:

Agriculture

- **Reducing on-farm emissions**
 - Improve cropland management (e.g. reduced burning),
 - CH₄ reduction
 - Improve livestock management
 - Manure management
- **Enhancing removals/ carbon sequestration**
 - increase soil organic matter content
 - increase plant organic matter
 - rehabilitation of agriculturally used peatlands and wetlands
- **Avoiding emissions**
 - increase efficiency of agricultural equipment and operations, reduction of fuel consumption,
 - use of alternative energies
 - use of biomass waste for agricultural processing energy or electricity production

For the steps to calculating emissions for the land-based sector in Indonesia, please consult the [NAMA Sourcebook](#), (2012), p. 53.



List of NAMA examples by sectors:

Industry

- Top runner programmes
- Improved cement processing
- Improved charcoal production
- Promotion of sector-wide technology upgrades
- Accelerated retirement of older and inefficient plants or technologies
- HFC gas phase-out in the refrigeration, air-conditioning & foam sector (cooling and insulation) and introduction of climate friendly alternatives to HFC gases.



Checklist:

Tools to estimate expected NAMA impacts

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](#).

The IFC of the Worldbank provides the Carbon Emissions Estimation Tool ([CEET](#)) for the ex-ante estimation of direct emission reductions from planned projects which can be particularly helpful in the communication with potential financiers.

In order to enable policy-makers and multiple stakeholders to weigh 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 TN Assess tool. A description of the MCDA approach may be found [here](#).

A supplementary tool for rating the co-benefits of mitigation measures in a MAC is the **Development Impact Assessment (DIA) tool**, developed within the LEDS Global Partnership.



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 with 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, which can be found [here](#).

For more information on the development of Mitigation Action Plans (MAPS) in the case of Brazil, please consult the [NAMA Sourecbook](#), p. 48



Checklist:

Anticorruption

Corruption risks

- Bid-rigging and bribery in public procurement
- Nepotism in appointments or awarding of contracts
- Collusion and extortion in regulatory or auditing processes
- More examples of corruption risks can be found in the [U4 anti-corruption glossary](#)

Counter measures

- Conclude [integrity pacts](#) in public procurement
- Adopt [codes of conduct for public officials](#), including conflict of interest policies, and transparent criteria for their appointment
- Ensure NAMA-related regulation/ licensing is vested in an independent institution with a strong [integrity management system](#)
- More tools can be found in the [UN Anti-Corruption Toolkit](#) and at the [Global Infrastructure Anti Corruption Centre](#)

Further Info: anticorruption-program@giz.de





Governance Indices

They are useful to get a broad impression of the governance environment at a country level.

Broader Governance Indices:

Bertelsmann Transformations Index (BTI):

- analyzes the quality of democracy, market economy and political management
- In-depth country reports can be used to assess countries' transformation status and challenges

Actionable Governance Indicators (AGI) by World Bank:

- collection of different un-aggregated indicators of various specific aspects of governance
- “governance at a glance” provide a useful overview of the governance situation within a country

World Governance Indicators (WGI) by World Bank:

- highly aggregate data of 218 countries for six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption

Corruption and Integrity Indices:

Corruption Perception Index (CPI) by Transparency International:

- prevalent measure of corruption in the public sector to get a broad idea about the corruption level

Global Corruption Barometer (GCB) by Transparency International:

- enables comparison in between countries and regions and over time
- allows detailed analysis according to specific institutions or demographic criteria (age, gender, income)

Global Integrity Report by Global Integrity:

- anti-corruption legal frameworks and practical implementation and enforcement of frameworks
- takes a close look at whether citizens can effectively access and use anti-corruption safeguards



Tools to assess governance and corruption risks at sector level

Governance assessments

- [Political economy analysis](#)
 - power relations, actors, interests, decision-making structures, etc.
- GIZ Governance compass for sectors:
 - Core governance issues
 - Good governance principles applied
 - Relevant governance topics

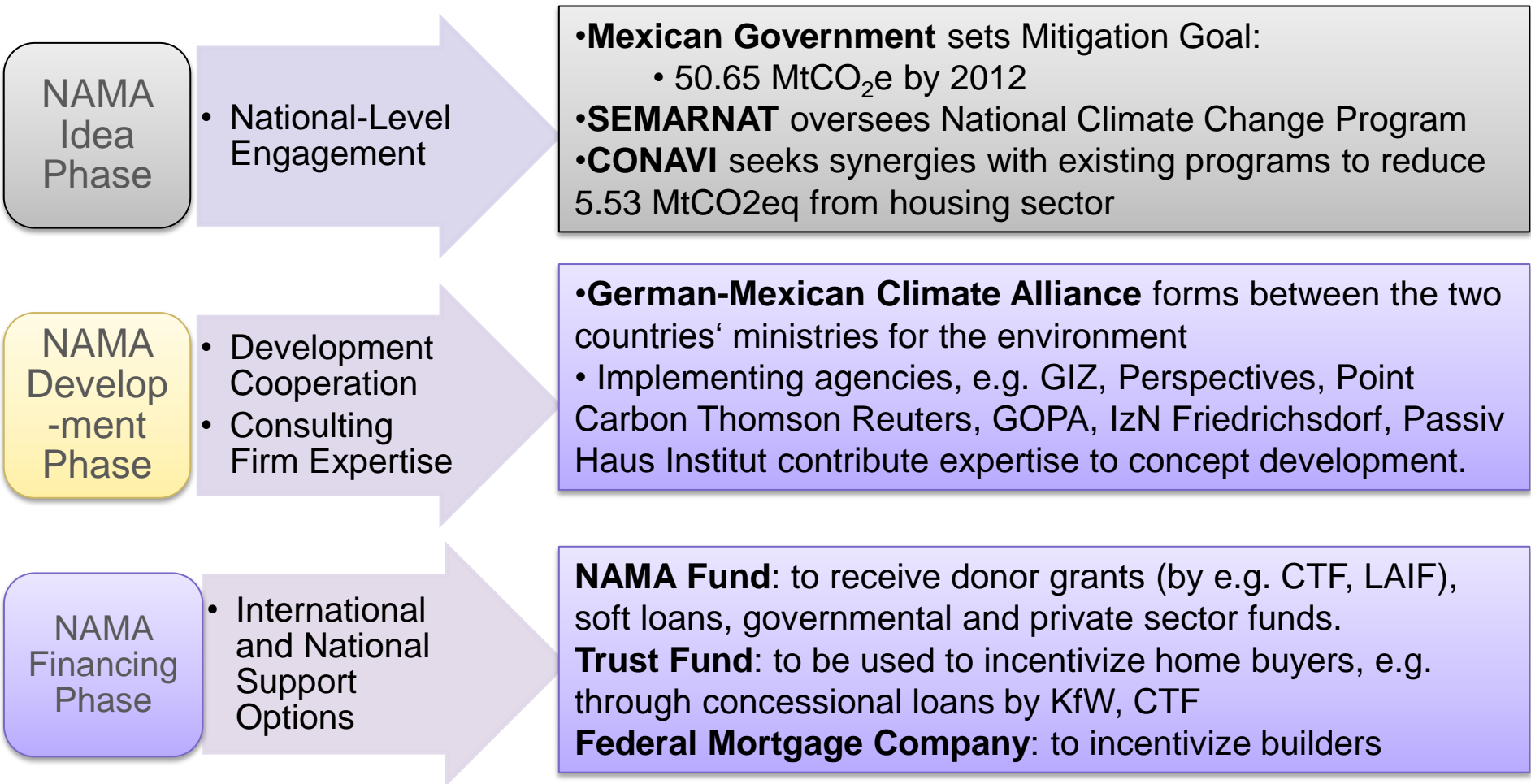
Corruption risk analyses

- Actor-based risk analysis
 - Which interests, hidden agenda, formal/informal relations, etc. do core actors have?
 - Which types of corruption may occur between these actors?
- [Process-based risk analysis](#)
 - Which are the core processes in a sector (e.g. funding, regulation, service provision)?
 - Which types of corruption may occur at which process steps?
- Institutional Assessment
 - Focus on [risks](#) or [integrity](#) within an institution
- [Anticorruption WORKS](#)
 - Participatory workshop format for
 - programme-specific corruption risk analysis and anticorruption activity planning

Further Info: anticorruption-program@giz.de



Stakeholder Diagram for a Housing NAMA in Mexico



More information on the NAMA available [here](#).



Checklist: NAMA prioritization process

In order to facilitate an informed decision-taking process on NAMA development in a country, a participatory prioritization of different NAMA options following previously discussed selection criteria is strongly recommendable. Such a process could be carried out along the following steps:

- **Step 1:** Convene stakeholders around the NAMA table
- **Step 2:** Put all NAMA ideas on the table
- **Step 3:** Define your set of NAMA objectives
- **Step 4:** Define your set of NAMA co-benefits
 - **Step 5:** Weigh objectives and co-benefits
 - **Step 6:** Score objectives and co-benefits
 - **Step 7:** Review the results of the prioritization exercise

A more detailed description of the steps to take and aspects to consider within the process of NAMA prioritization can be found [here](#).





Checklist:

Defining the Baseline

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

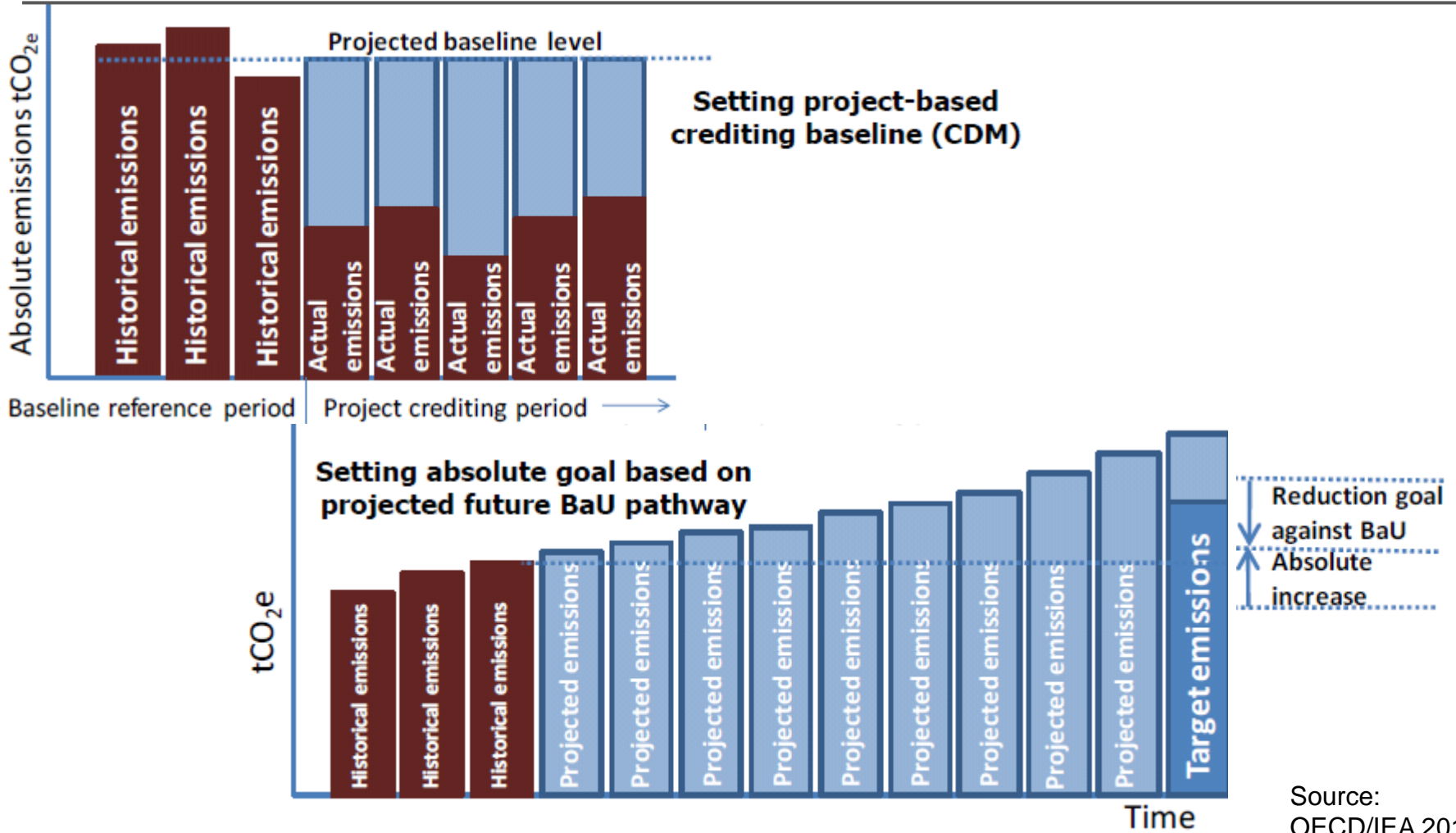
- **Scope:** Project, Programme, Sub-Sector, Sector, Country, Technology
The baseline should take into account all UNFCCC gases (CO₂, CH₄, N₂O, SF₆, PFCs, HFCs, NF₃) and use the GWP established by the IPCC.
- **Metrics or Indicators:** Absolute GHG or CO₂ emissions; Relative GHG Emissions (e.g. emissions intensity); indirect metrics (e.g. MW of renewable energy capacity installed, m³ of forest stock, or qualitative aspects such as mitigative capacity, co-benefits)
→ *When choosing indirect metrics, consider whether it will be important to „convert“ the outcomes into GHG reductions with emission factors!*
- **Historical Data:** single time period (e.g. one year); multiple time periods (e.g. average over several years)
- **Future Assumptions:** assumed continuation of historical emissions (project); continued rate of growth of emissions / emissions intensity (sector); modelling, based on policies included in baseline
- **Co-benefits:** indicators for sustainable development (e.g. resource efficiency, social inclusion, economic viability)

Policy and technical considerations may influence the overall ambition of a baseline, e.g., data availability, expertise, legislation etc. It is also important to carry out uncertainty assessments and sensitivity analyses on existing data, key parameters and assumptions in order to properly interpret GHG assessment results.

For an example on the development of a baseline for the power sector in Indonesia, please consult the [NAMA Sourcebook](#) (2012), p. 43. For more guidance on baseline-setting see the [WRI GHG Protocol Standard for Policies and Actions](#) (2013), p. 56.



Types of Baselines





Checklist:

Data sources for baseline setting

Consider which **sources** may be available to provide data for baseline setting and subsequent monitoring:

- GHG Inventory (National Communications)
- Sector-Specific Data
- Consumption Data
- Emissions factors
- Economic Growth Projections
- Population Growth Projections





Designing a monitoring system for a Housing NAMA in Mexico

National Circumstances:

- 50 Million Mexicans live in poverty, 80% of which have no access to funding for appropriate housing.
- Mexico committed to ambitious GHG emissions reductions until 2020, dependent on support

Proposed NAMA:

- Sustainable Housing Program to target mortgage market to provide low-income families with low GHG-emitting homes

Monitoring to focus on GHG and non-GHG metrics:

- GHG Reductions - GHG Metrics needed
- Increased access to energy-efficient housing - non-GHG metrics needed

GHG Metrics for the Mexican Housing NAMA



Non- GHG Metrics for the Mexican Housing NAMA





Measuring: GHG Metrics

Data needs and sources for a Housing NAMA in Mexico

| Data to measure | Type of measuring |
|---|---|
| Electricity consumption | Direct and continuous metering of electricity consumption (including generation from PV). If available, utility billing records can be used. |
| Emission factor of the grid electricity | As per CDM Tool to calculate emission factor for an electricity system, or use published data. |
| Transmission & distribution loss | Data from utility or an official government body. (Note that electricity theft and meter-manipulation are to be considered under this category of monitoring) |
| Fuel consumption | Direct and continuous metering of fuel consumption (meters to be installed as part of NAMA). Alternative: ask families how many gas canisters used/year. |
| Net calorific value of the fuel | Values provided by the fuel supplier in invoices, own measurement, or regional or national default value. |
| CO ₂ emission factor of the fuel | Values provided by the fuel supplier in invoices, own measurement, or regional or national default value. |
| Heating Degree Days | Use data on outside air temperature in a given region to calculate HDD |
| Gross floor area of a building unit | Building plan, or onsite measurement. |

Source: Perspectives, Thomson Reuters



Measuring: non-GHG Metrics

Non-GHG Metrics for a Housing NAMA in Mexico

- Number of Houses constructed / year
- Demographic data
- Inhabitants/house (to compare baseline and NAMA houses)
- Energy costs for poor families
- Peak-load of the electricity grid*
- Air quality
- Water use (NAMA in water sector under consideration)

**Low-energy houses will need no/smaller air-conditioners and therefore consume less electricity at peak hours*



Measuring: non-GHG metrics

Co-Benefits and mitigative capacities achieved through NAMAs

Depending on the scope of MRV for the NAMA, the NAMA may also seek to monitor and report **non-GHG reduction outcomes**, such as the NAMAs' contribution to development goals and/or the improvement of mitigative capacities amongst NAMA stakeholders.

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

▪ Social Benefit

- 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

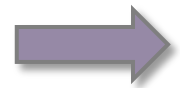
▪ Economic benefits

- Job creation
- New economic opportunities (green growth)

▪ Institutional benefits (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

Barriers-to-objective
weighting method (BOW)





Measuring methods:

Barriers-to-objective weighting method (BOW)

Figure 10: Procedure for the barriers-to-objective weighting method (BOW)



- The **barriers-to-objective weighting method (BOW)** estimates emission reduction (in tonnes of CO₂ eq.) achieved by projects, which aim at the increase of the **mitigative capacity** of a country as an intended outcome.
- The contribution by the project to GHG reduction is estimated by **weighting** the importance of all barriers (**transaction costs**) that obstruct the implementation of the climate protection measure or the scaling up of investments in ER.
- A target of emissions to be reduced by the project needs to be quantified.
- Once the obstructive barriers no longer exist (or are lowered), the investment is possible i.e. climate protection measures can be implemented.
- If the quantified target is multiplied by the weighting of the overcome barrier, the ER effect can be quantified.

For more information on the BOW method, please consult GIZ Sourcebook on Climate Results, available [here](#) (p.58).



Reporting:

Reporting emissions and mitigation information in the cement sector of South Africa

| Reporting Level | Reporting to Whom: |
|--------------------------------------|---|
| International-level reporting | Carbon Disclosure Project |
| National-level reporting | Department of Environmental Affairs (DEA) => compiled for national communications to the UNFCCC |
| Sectoral-level reporting | The Association of Cementitious Materials Producers (ACMP) |
| Individual cement producer reporting | To international holding companies and shareholders |

- WBCSD used as reporting tool to avoid duplicate reporting

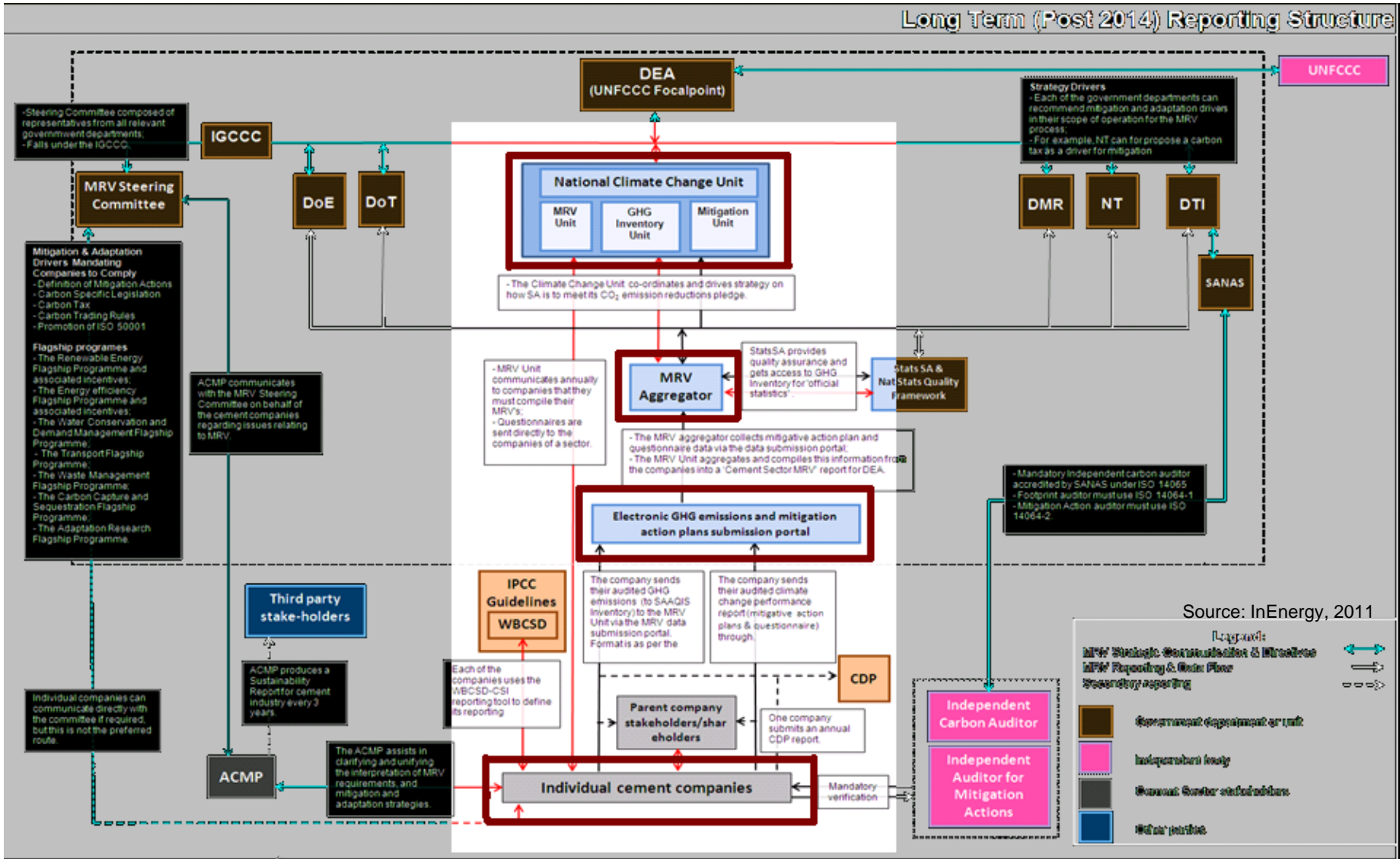
Depiction of the reporting system for the cement sector in South Africa





Proposed reporting structure for the cement sector in South Africa

Long Term (Post 2014) Reporting Structure



Source: InEnergy, 2011





Verification:

Lessons from the CDM for NAMA Verification

- Verification ensures credibility and accountability of a project's estimated GHG emission reductions
- Independence of verifiers (i.e. third party) is needed to ensure confidentiality of industry data and credibility
- Domestic capacity for verification services are often weak, need to draw on int'l auditors or build capacity
- *What to verify* must be made clear: Verifiers should only be responsible for data that is easily verifiable (e.g. data on fuel use, compliance with procedures) and not for assessing politically-influenced elements, such as baselines.

Although reporting systems can be very complex, the actual core process of reporting is fairly simple and comprises:

- ✓ the emitter,
- ✓ the submission of data on emissions and mitigation actions in a defined format,
- ✓ the aggregation of the reported data
- ✓ a national unit to handle the reported data

Depiction of the reporting system for
the cement sector in South Africa





International Guidelines for Reporting under the Climate Convention: Biennial Update Reports (BURs)

- **Biennial Update Reports** should cover the following information related to **NAMAs** and their effects:
 - Name and description of the mitigation action
 - Information on methodologies and assumptions
 - Objectives of the action and steps taken or envisaged to achieve that action
 - 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 committed to submit BURs and subject them to ICA



International Guidelines for Verification under the Climate Convention: International Consultation and Analysis (ICA)

ICA and NAMAs:

- Progress on NAMAs 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 committed to submit BURs and subject them to ICA



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](#)“.

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Checklist:

Instruments to mobilise the private sector

- Low Carbon Bonds
- Concessional Loans
- Public equity
- Guarantees
- Public-Private Partnerships
- Special Purpose Investment Vehicle (for certain technologies)

A clear carbon price signal would be the best and most effective measure to mobilise private investments and incentivize the private sector to invest in mitigation actions.

All these instruments can be supported through public grant components.

And all these instruments can be combined in asset packages mobilising different dimensions of investments from different classes of investors and cascading those investments down to the level of technical implementation.

Workshop Summary
“Leveraging Private Capital for Climate Investments in Developing Countries”



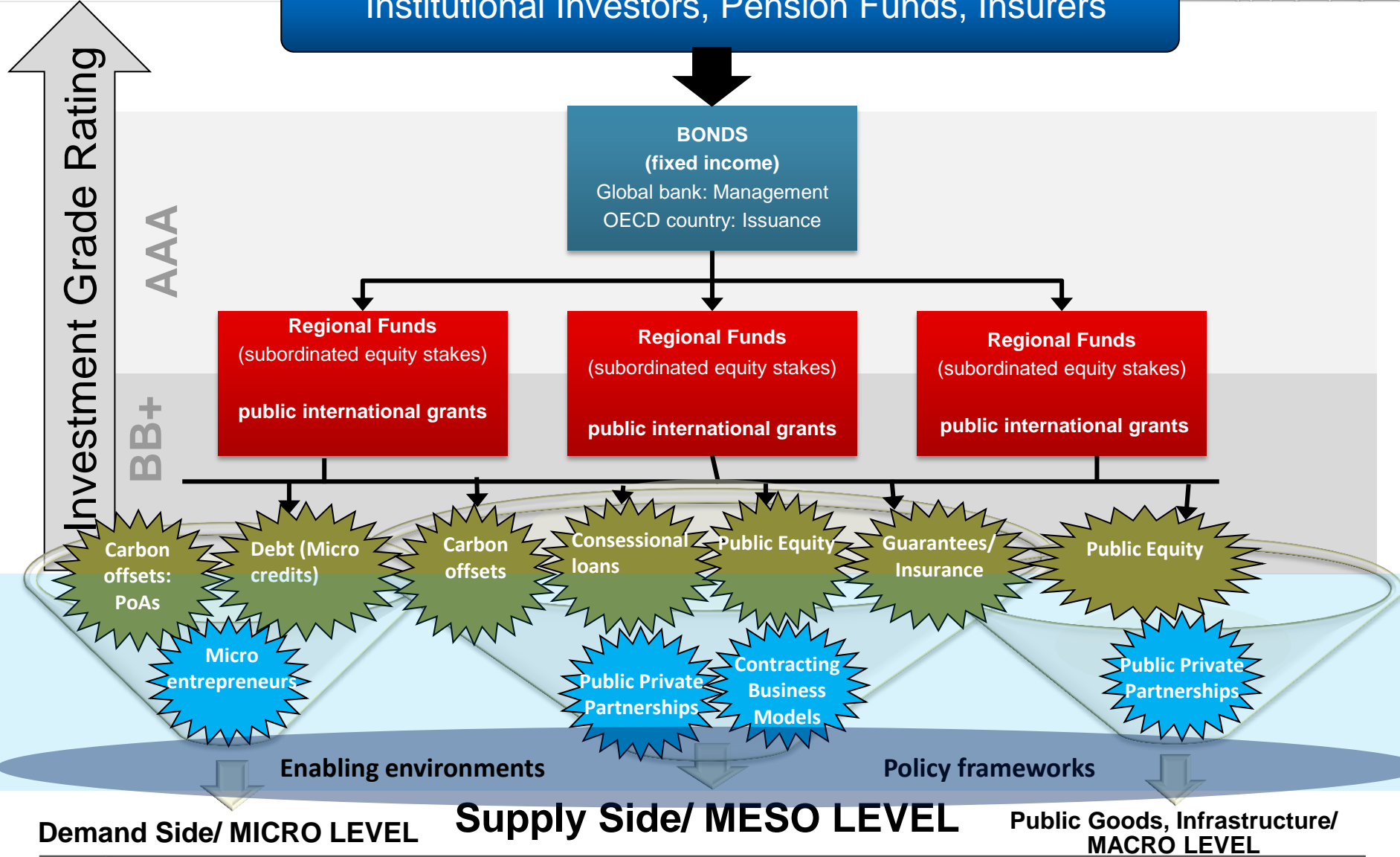
(Possible) Climate Finance Cascade



Climate Financing Cascade



Institutional Investors, Pension Funds, Insurers



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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 interconnected 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 NAMAs is the website of the [International Partnership on Mitigation and MRV](#).



Checklist:

Principles of good management

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

Democratic
Process Design



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Checklist:

To promote technologies, consider

- Enhancing the investment environment
- Removing market entry barriers, such as:
 - Monopolistic market structures and high levels of corruption
 - 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



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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.)



Climate Finance Options

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](#).

GIZ's [Climate Finance Cascade](#) offers an overview of sources for NAMA finance, including information on funding volumes (p. 21-42).

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](#).



See example: International NAMA Facility



Checklist:

For producing a NAMA Information Note

In order to communicate a NAMA idea with potential providers of support, investors, stakeholders, and policy makers, essential information on that NAMA must be compiled.

UNEP Risoe Centre has developed a **NAMA Idea Note template**, called NINO, for the purpose of organizing the most basic information on a NAMA seeking support. NINO includes information on:

- objective, set of measures, status of the activity
- background, barriers, description of activity, relation to other NAMAs, boundaries
- co-benefits, estimated GHG emission reduction, estimation methodology
- type of financing, technologies, capacity building needs
- monitoring indicators, national data management system, verification procedure

[NINO](#) can be found in the document „Low Carbon Development Strategies“



UNFCCC NAMA Registry Prototype:

Includes information on the NAMA seeking support: (Durban Outcome, § 46)

- Description of the NAMA and the National Implementing Entity (contact)
- Timeframe
- Full costs (estimated) for
 - preparation and
 - implementation
- Amount and type (financial, technological, capacity building) of support needed
- Emission reductions (estimated)
- Indicators
- Co-benefits and other relevant information

Includes information on support available by the providers of support: (Durban Outcome, § 48)

- Whether support available is for preparation or for implementation
- Source of support and executing entity (contact) channelling the support
- Amount and type (financial (type), technological, capacity building) of support available
- Status of delivery
- Types of action eligible for support
- Process of provision of support

The NAMA registry is only facilitating the matching of providers and recipients of support. It is **not** an automatic outlet for gaining international support, for example via the Green Climate Fund, and it gives no guarantee for funding. Click here to view the [NAMA registry prototype](#) or the [UNFCCC NAMA registry website](#).



Checklist:

A template compiles information from previous steps

- **Description of the NAMA:**
 - Title, Country, Timeframe, Sectors/Sub-Sectors, Brief description, partners and contact information
- **Strategic Assessment:**
 - Policy and Governance Analysis, Sector Analysis (including a baseline describing past and present situation, emissions and development priorities), Drivers and Trends, Barriers to emissions reductions and how the NAMA can contribute to overcoming barriers.
- **NAMA Proposal:**
 - Objective, Scope, Activities (with timelines), Outputs and Outcomes, Expected Impact, Benefits (including: emissions reductions, mitigative capacities, social, economic and environmental), costs (financing options for estimated costs and how financing might come from public, private and multilateral sources)
- **Implementation Plan:**
 - Description of individual activities and details on implementation (what will happen where and when, and who is responsible?), details about monitoring (including key indicators and interim results), reporting (including how results will be communicated), and verification (how will verification be performed), risks (including proposed ways of mitigating risk e.g. of corruption)

NAMA templates for the preparation of NAMA concept notes or NAMA proposals are already available. Click [here](#) for an example.

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The Registry and: Gaining support for NAMA implementation

- The NAMA Registry is **not** an automatic outlet for gaining international support, for example via the Green Climate Fund
- The approval of international support for developing and implementing NAMAs will continue to take place through bilateral, governmental negotiations
- Multilateral institutions also offer their own support-providing instruments that may be accessed for developing and implementing NAMAs.



Why MRV?

MRV tells us if we are on track to meeting mitigation goals.

It also:

- Facilitates decision-making and national planning
- Supports the implementation of NAMAs and generates feedback on NAMA effectiveness
- Promotes coordination and communication amongst emitting sectors
- Generates comparable, transparent information
- Highlights lessons and good practices
- Increases the likelihood of gaining international support

Transparency starts with access to information!



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





Design a MRV Plan:

The Who, What, When and How of MRV

1. What to MRV?

- Individual objectives and activities of the NAMA should have their own indicators, whether they seek to measure GHG reductions or other benefits. 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 cross-checking or on-site verification required?

3. When to MRV?

- How often will particular activities of the NAMA be “MRV’d”? E.g. Performance monitoring annually? Reporting Biennially in BURs? Verification of reported information?

4. Who should MRV?

- The person /institution responsible for the M, R and V of the NAMA need to be identified during the design phase and their independence and accountability must be secured.

You will find more information on MRV methodologies and procedures in the GHG Protocol [Mitigation Accounting Standards](#) of the World Resources Institute (WRI)

Why MRV? 



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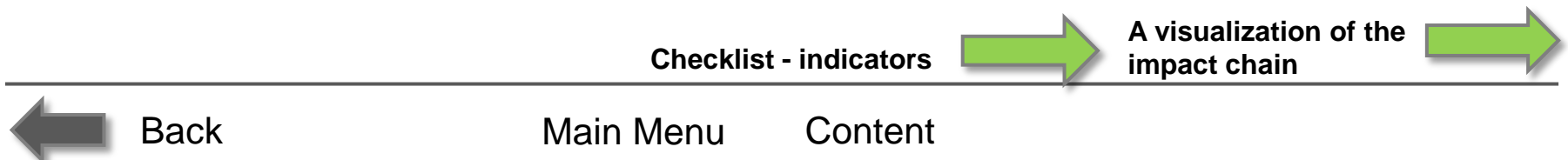
Project monitoring, indicators and impact chains: Standard impact chain checklist

When assessing the impact of a NAMA we can differentiate between intended and unintended, in-boundary or out-of-boundary (spillover), short-term or long-term effects.

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 providers of support, 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 through the activity.

More information on options for monitoring and reporting can be found in the [NAMA Sourcebook](#), (2012), p. 62





Checklist:

Monitoring indicators for NAMAs

Indicators make it possible to more precisely measure the attainment of goals. They may measure quantitative or qualitative results of a project. Individual NAMA implementation activities should have separate indicators.

- Indicators should reflect what the NAMA seeks to achieve, e.g.:
 - Direct emissions reductions: absolute or intensity-based, (e.g., gCO₂e/km), gas targeted, geographic coverage of mitigation etc. (see [CEET](#) for ex-ante reduction estimation)
 - Indirect emissions reductions, i.e. those difficult to attribute to the NAMA
 - Mitigative capacities to be developed (See non-GHG Metric Link below)
 - Sustainable development co-benefits (See non-GHG Metric Link below)
- Indicators may be applied at different levels: (See [Impact Chain Visualization](#))
 - For direct outputs of an activity
 - For direct impacts of an activity
 - For indirect impacts of an activity
- For monitoring implementation, it needs to be defined:
 - The specific interventions included in the NAMA (taxes, grants, etc.)
 - 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

For a user-oriented guide how to design a climate impact monitoring system see the GIZ Monitoring Sourcebook [here](#).

Non-GHG Metrics for
measuring NAMA results



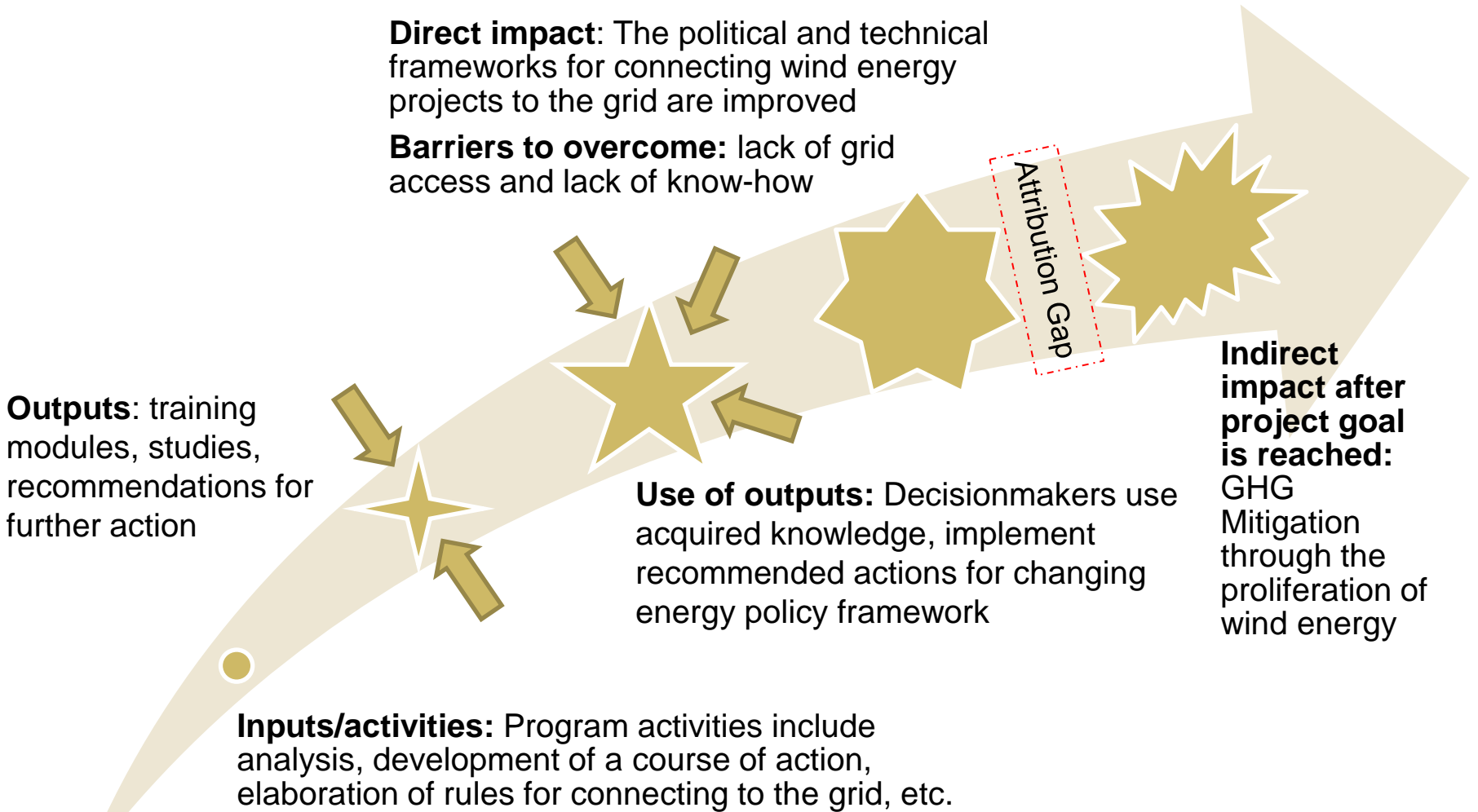
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Content



An impact chain for a GIZ project promoting wind energy in Vietnam





Implementing the MRV Plan for a Housing NAMA in Mexico

| | Measure | Report | Verify |
|---------------|--|--|--|
| What to... | <ul style="list-style-type: none"> • Electricity and fuel consumption; emission factors (grid electricity and fuel); transmission and distribution loss, including electricity theft; net calorific value of fuel; floor area of building unit, heating degree days | <ul style="list-style-type: none"> • Description of NAMA activities • Assumptions and methodologies • Objectives of the actions and information on progress | <ul style="list-style-type: none"> • Emissions reductions (level of stringency tbd) • Increased access to affordable and efficient housing |
| How to... | <ul style="list-style-type: none"> • Electricity / fuel meters and/or utility bills • CDM Tool for emissions factors • Data from utility providers on losses • Default values • Data on air temperature for HDD | <ul style="list-style-type: none"> • National-level reporting procedures (i.e. biennial update reports to UNFCCC) • NAMA-level reporting procedures, tbd | <ul style="list-style-type: none"> • Biennial Update Reports to be verified by international experts (ICA) • NAMA-level verification, tbd |
| Who should... | <ul style="list-style-type: none"> • NAMA implementer | <ul style="list-style-type: none"> • NAMA implementer | <ul style="list-style-type: none"> • NAMA supporter (national and/or int'l) |
| When to... | <ul style="list-style-type: none"> • Continuous metering • Performance monitoring annually • Baseline updates every 3-4 years | <ul style="list-style-type: none"> • National-level, biennially • NAMA-level, TBD | <ul style="list-style-type: none"> • National level every 2 years (ICA) • NAMA-level, TBD |



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, e.g. through social exclusion

Economic barriers

- Externalities: costs that are not included in market prices, like negative environmental effects.

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

Find a more detailed description of potential barriers in:
[IISD \(2013\): Developing Financeable NAMAS, p. 35-37](#)

Barriers-to-objective
weighting method (BOW)





How to develop a financing plan

In order to contribute to transformational change, NAMAs should **go beyond** individual investment projects and be embedded in a LEDS or a comparable national strategy. 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

How to justify the need for international support





How to justify the need for international support

1. Explain why the planned mitigation actions are needed, referring, for instance, to LEDS or co-benefits.
2. Document the barriers and challenges that are preventing the mitigation actions from being implemented.
3. Identify and document the baseline conditions in the absence of the action.
4. Describe the action that target the barriers and challenges.
5. Define why this action realistically may not or not sufficiently be undertaken 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 mitigation.
7. Document clearly all information and assumptions to develop and support the justification for funding the action.

What is
LEDS?



Checklist:
Technological
promotion



Non-GHG metrics:
Co-benefits



← Back to
Step 8



← Back to: How to develop
a financing plan

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



Quality criteria for NAMAs

The organizations, institutions and individuals considering the provision of NAMA support will ultimately determine for themselves the definition of „high-quality“ for NAMAs that should receive support. Some essential elements are the following:

| | Direct & indirect contribution to global climate change mitigation | Sustainability and efficiency of impact |
|--|---|---|
| Development impact | High GHG impact / Ambition level | Aligned with government priorities and national development goals |
| | Transformational potential | Embedded in a LEDS and/or other relevant national strategies |
| | Replicability | Economic, environmental and social co-benefits |
| | | Political ownership and support of relevant stakeholders |
| Technical and financial feasibility of action | Robust MRV system | Link to existing initiatives and institutional arrangements |
| | | Comprehensive financing plan |



Example: Selection criteria for projects supported by the International NAMA Facility

| Eligibility Criteria | Ambition Criteria |
|--|---|
| Submitting entity: national government or qualified delivery organisation (DO) | Potential for transformational change: <ul style="list-style-type: none"> • Element of broader programme or policy framework? • Changes structure of sector, overcomes barriers? • Builds capacities beyond project? • Replicable and innovative? • Participation of private sector? |
| Endorsement by national government / co-operation with qualified DO | |
| Degree of maturity (“Readiness”) | |
| Implementation time frame | |
| ODA eligibility | |
| Financing volume (5-15 m) | Co-benefits |
| Feasibility (implementation & MRV plan) | Substantial funding contribution from other sources |
| Concept for the phase-out of support | Mitigation potential |



What is the NAMA Facility?



Background information: NAMA Facility

- Launched at COP 18 in Doha by German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and UK Department of Energy and Climate Change (DECC)
- Designed to support developing countries that want to implement transformational country-led NAMAs in the short term
- Total budget of ca. €70 million for 2013
- Financial support & technical cooperation/capacity building
- Financial instruments: grants & concessional loans
- First NAMA initiatives pre-selected for support in 2013: Mexico (Housing NAMA); Chile (self-supply renewable energy NAMA); Costa Rica (Coffee NAMA); Indonesia (Transport NAMA); Colombia (Transport NAMA)
- See more information at www.nama-facility.org and the [website of the International Climate Initiative](#)



NAMA Facility Selection Criteria



Back to Climate Finance
Options

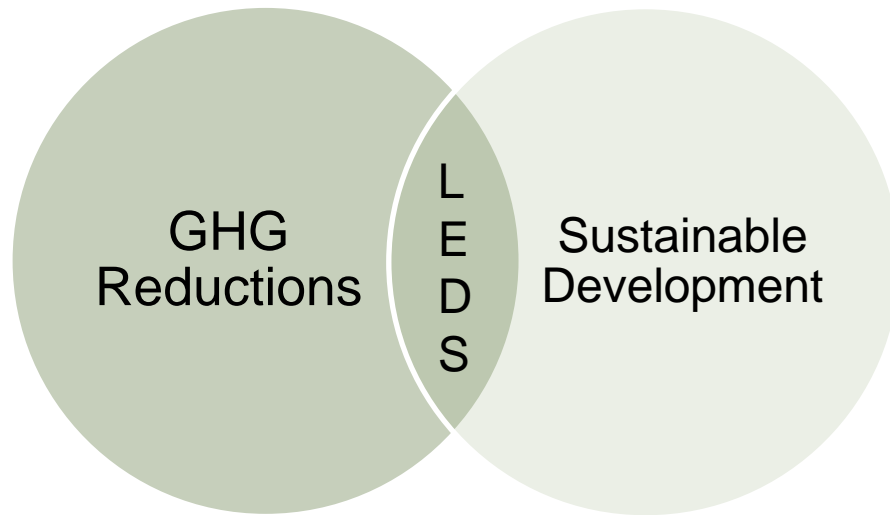
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What is a LEDS?

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.

The goal of a LEDS is to make development climate-compatible. NAMAs contribute to the implementation of LEDS.



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 LEDS, NAMA, MRV architecture

← Back to: How to justify international support

[Main Menu](#) [Content](#)



What is a LEDS? – Related policies and plans

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



- 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.



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:

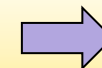
1. International Commitments and Positions
2. National Policies, Strategies and Targets
3. Emissions Profiles and Reductions potential
4. GHG inventories and National Reporting
5. Capacity, Technology and Finance

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.

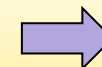
For more suggestions on carrying out a gap analysis, see the GIZ „Gap Analysis Tool for Mitigation Action“.



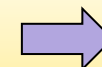
Intro I: The need for GHG Mitigation



Intro II: The Political design of GHG Mitigation

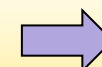


Intro III: LEDS, NAMA, MRV Architecture

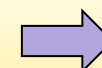


- What is LEDS [→](#)
- What is NAMA [→](#)
 - The History behind NAMAs [→](#)
- What is MRV [→](#)

Intro IV: The NAMA-Tool History

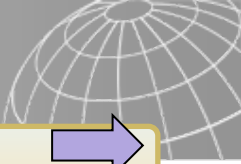


Intro V: NAMA-Tool Objectives and Contents



- What is NAMA [→](#)
- Related Tools [→](#)





Success Factors

- High Quality NAMA [→](#)

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

- What is a NAMA? [→](#)
- Checklist – relevant stakeholders [→](#)
- What is a LEDS? [→](#)
- LEDS – Related policies [→](#)
- List of NAMA examples by type [→](#)
- List of NAMA examples by sectors [→](#)
- Gap Analysis Guidance [→](#)
- Anticorruption [→](#)
 - Governance Indices [→](#)
 - Anticorruption tools [→](#)

2. Evaluate technical emission reduction potential & co-benefits

- Checklist – MAC [→](#)
- Types of barriers [→](#)

3. Identify potential NAMAs

- Checklist – MAC [→](#)
- Checklist – NAMA Information Note [→](#)
- Stakeholder diagram for Housing NAMA [→](#)
- Availability of resources [→](#)
- Selection criteria of donors [→](#)



4. Define the baselines

- Checklist for defining the baseline [→](#)
- Types of baselines [→](#)
- Possible baseline data sources [→](#)

5. Design MRV plan

- Why MRV [→](#)
- The Who, What, When and How of MRV [→](#)
- Project Monitoring: indicators and impact chain [→](#)
 - Checklist – indicators [→](#)
 - Non-GHG Metrics: Co-benefits [→](#)
 - Barriers-to-objective weighting method (BOW) [→](#)
 - A visualization of the impact chain [→](#)
- Measuring: a housing NAMA in Mexico [→](#)
 - GHG Metrics for the Mexican Housing NAMA [→](#)
 - Non-GHG metrics for the Mexican Housing NAMA [→](#)
- Reporting: the cement sector in South Africa [→](#)
 - Description of the reporting system for the cement sector in South Africa [→](#)
- Verification: lessons from the CDM [→](#)
 - Biennial Update Report (BUR) [→](#)
 - International Consultation and Analysis ICA [→](#)



6. Detail the NAMA planning

- Instruments to Mobilize the Private Sector [→](#)
 - (Possible) Climate Finance Cascade [→](#)
- Checklist – economic incentives [→](#)
- Checklist – technology promotion [→](#)
 - Tools to identify technologies [→](#)
- Checklist – Principles of knowledge sharing [→](#)
- Checklist – Principles of good management [→](#)
- Checklist - NAMA template [→](#)

7. Identify needed resources

- Checklist – economic incentives [→](#)
- Climate Finance Options link [→](#)
- Checklist – types of barriers [→](#)
- How to develop a financing plan [→](#)
- How to justify the need for international support [→](#)

8. Submit to NAMA registry

- Checklist - NAMA template [→](#)
- UNFCCC NAMA registry prototype [→](#)
- The Registry and gaining support for NAMA implementation [→](#)



9. Implement NAMA & MRV



- A proposed implementation plan for the housing NAMA in Mexico [→](#)

10. Identify best practice



Organizational Structures for NAMA Development



- Guiding Questions for institutional assessment [→](#)
- Possible roles of the organizational structure [→](#)
- Institutional roles [→](#)
- Support roles [→](#)
- Technical roles [→](#)
- Political roles [→](#)

Glossary



**Acronyms:**

| | |
|----------|---|
| CTF | Clean Technology Fund |
| SCCF | Special Climate Change Fund |
| SCF | Strategic Climate Fund |
| SREP | Scaling-up Renewable Energy Program in Low Income Countries |
| PPCR | Pilot Program on Climate Resilience |
| 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 |
| NINO | NAMA Idea Note template |
| PV | Photovoltaic |



Further literature on NAMAs

- [IRENA NAMA Handbuch](#)

IRENA Handbook on Renewable Energy Nationally Appropriate Mitigation Actions (NAMAs) for Policy Makers and Project Developers, November 2012

- [AFDB – NAMA Building Blocks](#)

- [IISD NAMA Guide](#)

Developing Financeable NAMAs - A Practitioner's Guide



Risk Management

| Risk | (Public) Risk Management Instrument |
|---|--|
| Country risk | <ul style="list-style-type: none"> Country risk guarantees |
| Policy risk: Low-carbon policy reversal | <ul style="list-style-type: none"> Low-carbon policy risk cover linked to NAMA process |
| Currency risk: Volatile returns due to exchange rate fluctuations | <ul style="list-style-type: none"> Currency funds offering foreign exchange hedging products |
| Deal flow problems: Insufficient number of commercially attractive deals | <ul style="list-style-type: none"> Low-carbon project development companies (publicly funded, privately run) for early stage project development, power purchase negotiations |
| Difficulty evaluating multiple, overlapping risks: Established mechanisms to fully evaluate risks may not be applicable due to interlinked risks | <ul style="list-style-type: none"> Structured funds with public first loss equity stakes |

Source: Catalysing low-carbon growth in developing economies: public finance mechanisms to scale up private sector investments in climate solutions' by UNEP and partners, 2009





Hints for a Democratic Process Design

- Make the process as transparent as possible (clearly defined roles and responsibilities, clear objectives and timeline)
 - Involve all relevant stakeholders from the beginning
 - Try to define a “neutral” process, agreeing on selection criteria and their weighting first, before talking about individual options. This makes the choice easier and easier to accept for everyone.
 - Develop several NAMAs if you can
-
- How can proactive lobby groups be handled?
 - How should corruption be addressed?

Checklist
Anticorruption



Principles of good
management





Further guidance and examples for NAMA design

An UNEP guidebook assists developing countries in formulating more effective NAMAs by building on specific country experience.



[UNEP Risoe Centre \(2013\):
Guidance for NAMA Design -
Building on Country Experiences](#)

See an updated list of NAMA examples at the [NAMA Database](#).

Ecofys provides an overview of detailed NAMA examples in the [Annual Status Report on NAMAs](#).