United Nations
Framework Convention on
Climate Change

International Partnership
on Mitigation and MRV

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Energy Break-out Group

NAMA development phases - Main steps and key considerations for the NAMA concept development

Anglophone African Regional Workshop on
"Converting INDCs into action: the role of NAMAs
in INDC implementation"

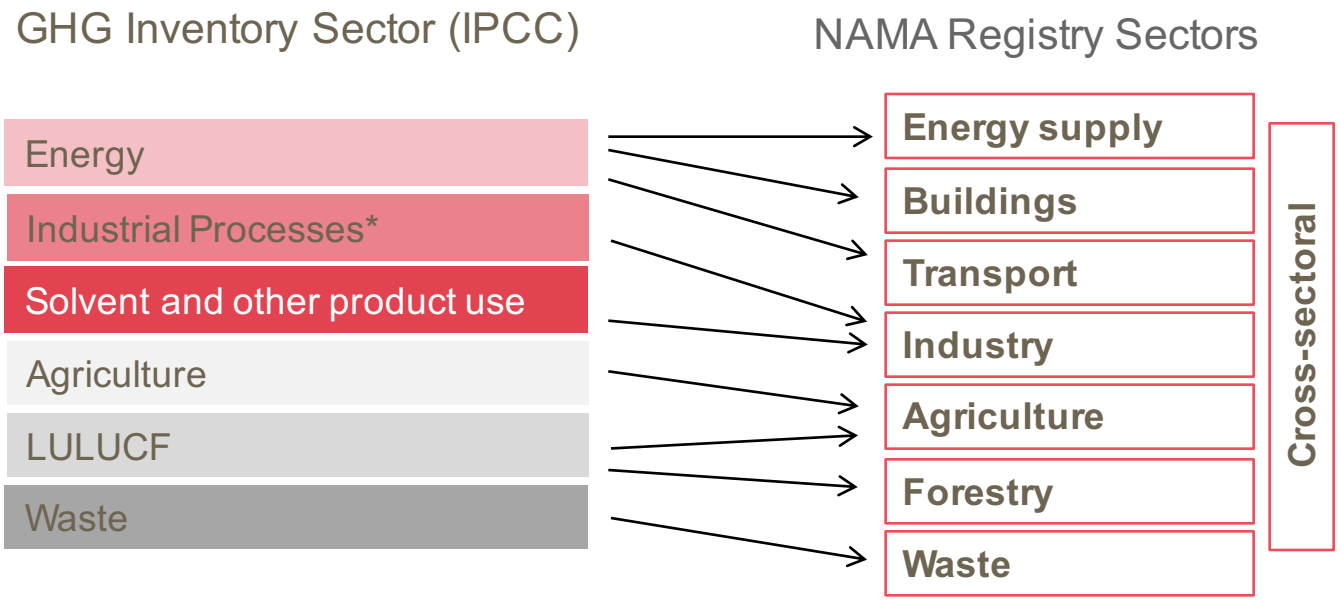
Addis-Ababa, 2nd to 4th May, 2016

Stefan Wehner

Agenda

1. NAMAs in the energy sector
2. Re-Cap: NAMA Development Phases: 10 Steps to a NAMA
3. Key Considerations throughout the development steps

Energy touches many sectors



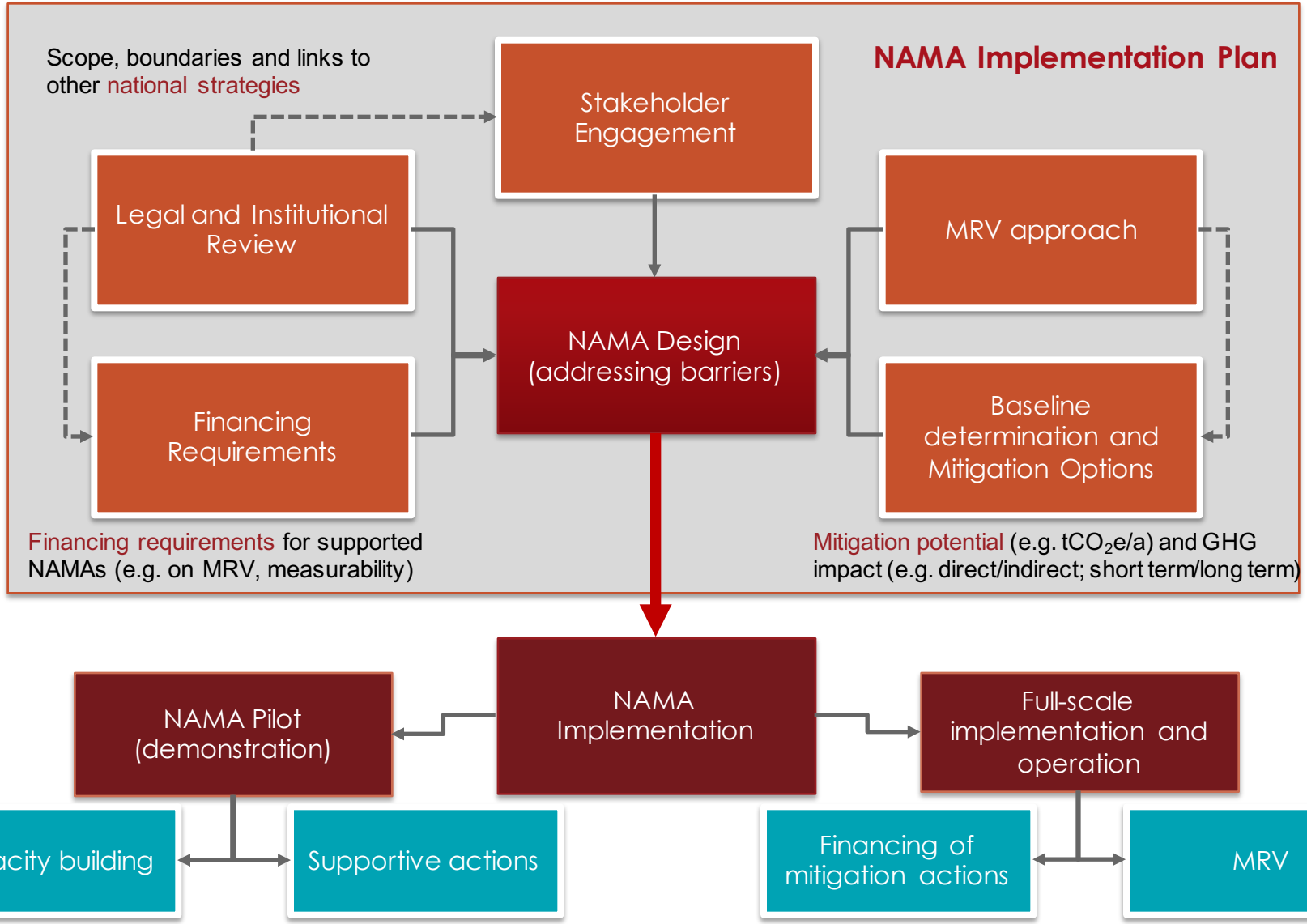
Source: GIZ NAMA-Tool, version 10.0

Types of barriers for low carbon investments and SD

Financial barriers	• High upfront costs; • Small project sizes • Split incentives (e.g. of owners and users) • Misallocation of 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

Source: Based on GIZ NAMA-Tool, version 10.0

NAMA elements to be defined...



Develop a mix of instruments to overcome barriers through a NAMAs I

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Carbon and energy taxes aim at creating a uniform carbon price – are typically applied to fuels and electricity, seeking to raise their prices in a manner consistent with their inherent emission factors.
Emissions trading schemes aim at creating a uniform carbon price – are used to create a price for carbon indirectly, by requiring emitters to submit a tradable certificate (or allowance) for each ton of their CO2 emissions, while limiting the quantity of available certificates via a quota or cap.
Fossil fuel subsidy reform is a pre-condition to creating a uniform carbon price. In some countries, fossil fuels are subsidized. These subsidies need to be phased out before carbon taxation or trading schemes are being installed.
Other market instruments and reforms are used to add flexibility of implementation (and reduce costs) in meeting other climate-related regulations and targets. The certificates are denominated not in tones of direct emissions but rather in amounts of: electricity production from renewable energy sources (RES) (green certificates); electricity production from combined heat and power (blue certificates); energy savings (white certificates); and landfill waste reduction (landfill allowance certificates).
Other fiscal and economic incentives are used to promote or discourage certain purchases, investments or behaviour through financial means – can take many forms, including: subsidies for energy-efficient product purchases or home renovations; project financing assistance; guaranteed minimum feed-in tariffs for electricity production from RES; differentiated purchase fees and rebates on automobiles based on fuel economy; road or landfill usage charges; and grants, loans and guarantees for emission mitigation projects.
Research and development intended to provide a long-term signal to the industry to enhance its ability to deliver necessary emission reductions in the energy supply, energy end-use and non-energy fields, while improving Parties' competitive position in the potential markets for the new technologies – include direct funding and contributions to joint international research efforts

Source: GIZ NAMA-Tool, version 10.0

Develop a mix of instruments to overcome barriers through a NAMAs II

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Regulations (rules, standards and permitting requirements) are used to directly shape the market by reducing the role played by less-efficient, more carbon-intensive products (e.g. making it illegal to sell poorly performing equipment) or by increasing the role of climate-friendly operating practices (e.g. requiring industrial plants to undergo energy audits or use best available technologies). Regulations take many forms, including: appliance and equipment efficiency standards; building codes; landfill operating standards; manufacturing and power plant permitting criteria; and power plant fuel share obligations (e.g. a minimum share of RES).

Voluntary/negotiated agreements encompass a variety of industry sector–government arrangements that range from covenants with binding targets and severe repercussions for non-compliance to agreements with aspirational targets and mild consequences for failure to attain them. Voluntary enterprise partnerships are a diverse group of programmes aimed at individual companies, with various mixes of information, education, promotion, advice, decision aids, inventories, assessments, audits, strategies, action plans, aspirational challenges and targets, monitoring systems, benchmarks, performance indicators, public reporting, public recognition, public–private cooperative action and sometimes financing

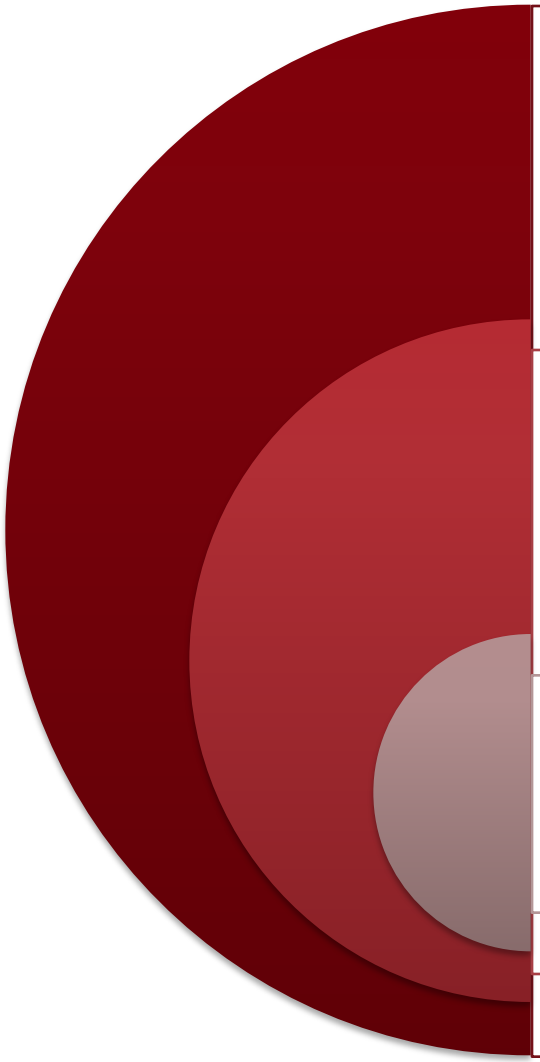
Framework targets with measurement, reporting and verification (MRV) of emissions establish legally binding (i.e. mandatory) or indicative (i.e. voluntary) goals for emission levels (carbon budgets), technology shares, fuel shares and efficiency, followed up by MRV procedures to ensure compliance.

Information, education and awareness (labels, auditing, metering, advice and demonstration) programmes intended to improve the availability and accuracy of information about the emission and energy characteristics of appliances and equipment – include labels for household appliances and entertainment devices, office equipment and buildings, and audits for buildings (in the residential, commercial and public sectors), best practice manuals, motor ratings and plant audits (in the industrial sector) and labels for automobiles and tires (in the transport sector).

For examples for a combination of policies with financial, technical and economic instruments consult the Global Good Practice Analysis.

Source: GIZ NAMA-Tool, version 10.0

NAMA examples by types



Enabling/Policy-based	• Public procurement guidelines • Feed-in tariffs • Tax reductions/exemptions • Building standards • Labeling schemes • Removing subsidies to non-renewable energies
Target-based	• GHG emission target • GHG emission below BAU • Mitigation target • Intensity target • Energy efficiency target • Renewable energy target
Project-based	• Point-source emission reductions • Energy efficiency measures • Direct interventions to avoid emissions

Source: Based on GIZ NAMA-Tool, version 10.0

Energy NAMA examples

- Promoting renewables energies (RE): Guaranteed feed-in tariffs for electricity from RE
- Power supply: Promotion of combined heat and power (CHP), Shift from coal to low-carbon fuels in power production
- Energy efficiency (EE) improvement programmes, e.g. households – lightning, cooking
- Building codes for improved insulation, use of RE
- Support schemes for individual RE/EE technologies, e.g.:
  - Replacement programmes for conventional boilers with solar water heaters
  - Labelling programmes and minimum energy performance standards for household appliances

Source: Based on GIZ NAMA-Tool, version 10.0

Cross-sectoral examples

- Removal of fossil fuel subsidies
- Taxation of fossil fuels (according to carbon content)
- Emissions trading schemes for GHG across all relevant sectors
- Multi-sector framework and targets
- Project funding, research and development
- Urban and regional development and land-use mitigation action

Source: GIZ NAMA-Tool, version 10.0

Instruments to mobilise the private sector

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Non-financial

- Enforcement by governments to implement legal framework
- Technical assistance / expertise
- Information "green growth" market opportunities
- Best-practice information campaigns tailored to the private sector

Financial (selection)

- Direct financial incentives e.g. grants & soft loans
- Financial guarantees
- Co-investment with the private sector / Public-Private Partnerships
- Seed capital
- Public equity

For more information see for instant:
"The Green Climate Fund: Options for Mobilizing the Private Sector"
"Designing public sector interventions to mobilize private participation in low carbon development"
"Driving Transformative Change: The Role of the Private Sector in Advancing Short-term and Long-term Signals in the Paris Climate Agreement"

- 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.

Source: Based GIZ NAMA-Tool, version 10.0

NAMAs listed in the NAMA database – learn from your peers

NAMA title	Country	Stage	Sector
Ethiopia Addis Ababa Light Rail Transit Transit Oriented Development NAMA	Ethiopia	Under development	Transport
Ethiopia Railways Establishment of Climate Vulnerability Infrastructure Investment Framework NAMA	Ethiopia	Under development	Transport
Ethiopian Green Energy NAMA	Ethiopia	Under development	Energy
Ethiopian Railways Railway Academy NAMA	Ethiopia	Under development	Transport
National plan for freight transport: NAMA pilot study	Ethiopia	Under development	Transport
Accelerated geothermal electricity development	Kenya	Under development	Energy
Emission Reduction through Sustainable Solid Waste Management in Kenya	Kenya	Under development	Waste
Rural household energy	Kenya	Under development	Energy
Transport NAMA on BRT	Kenya	Implementation	Transport
Promote the cultivation of Upland High-yielding Rice varieties	Gambia	Under development	Agriculture
Reduce encroachment into forests and virgin lands through improvement of food storage facilities and promotion of the use of post-harvest technologies	Gambia	Under development	Forestry
Renewable energy NAMA	Gambia	Under development	Energy

Source: Ecofys (2016) NAMA Database Pipeline: April 2016. Available at http://www.nama-database.org/nama-db-pipeline.xls
Note: The NAMA Database pipeline is a public information and analysis document from www.nama-database.org. The NAMA Database is an open wiki platform for public information on supported NAMAs. It is not an official registry, it does not represent official submissions and may not reflect the priorities of the country government. Data is extracted from public sources; it is not verified and may be inaccurate.

NAMAs listed in the NAMA database – learn from your peers (II)

NAMA title	Country	Stage	Sector
Rural Development in Namibia through Electrification with Renewable Energies	Namibia	Under development	Energy
Passenger Modal Shift from Road to Rail The Gautrain Case	South Africa	Under development	Transport
South African Renewables Initiative (SARI)	South Africa	Under development	Energy
Sustainable Settlement Facility	South Africa	Under development	Buildings
V-NAMA for energy efficiency in public buildings	South Africa	Under development	Buildings
Feed-in tariff NAMA for renewable energy	Sudan	Under development	Energy

Source: Ecofys (2016) NAMA Database Pipeline: April 2016. Available at http://www.nama-database.org/nama-db-pipeline.xls
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Key question for designing a Energy NAMA

What are the main objectives of the activities?

- E.g. promoting low-emission development? Changing the prevailing practice in the energy sector?
- Energy access, climate resilience?

What is the planned scope of the NAMA and underlying mitigation action?

- Set of interventions: policies, programs?
- Technologies: Renewable and clean energies?
- Can activities be built upon existing initiatives, experiences?
- Cost and business case?

How are the activities aligned to policies/country objectives?

- NAMA coordinator, stakeholders, line ministries, project implementer, service provider, funding institution

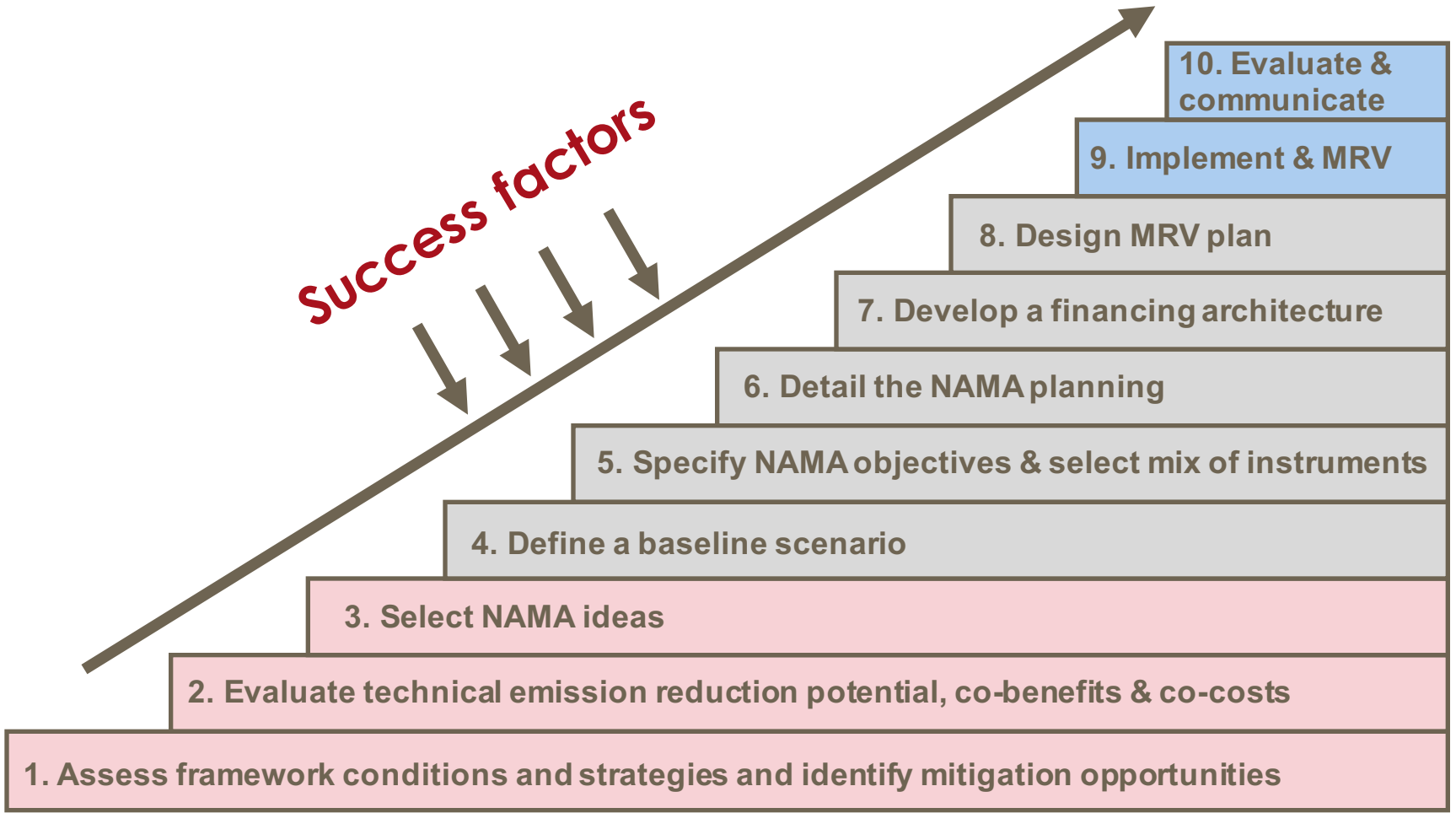
What is the target group of the NAMA?

- Plants / project developer (private or public entities, technology provider, households); End-user (households, farmers, utilities, etc.)

What are the required capabilities and capacities?

- To overcome barriers?
- Governance, management and monitoring

10 Steps to a NAMA



Source: Based GIZ NAMA-Tool, version 10.0

Key consideration throughout the steps

Steps	Key Considerations

Step 1: Assess framework conditions and strategies and identify mitigation opportunities	• Alignment of NAMAs with domestic plans and policies?
	  ○ Low-emission development strategy
	  ○ (Indented) Nationally Determined Contribution (INDC)
	  ○ Energy sector strategy
	  ○ (Energy) Development Plans
	  ○ Our energy programmes
	• Current energy situation in the country, sectors or sub-sectors: What is the prevailing practice?

Step 2: Evaluate technical emission reduction potential, co-benefits & co-costs	• What is the GHG emission reduction potential? • Which Sustainable Development (SD) Benefits / co-benefits are associated to the interventions? • Associated economic incremental costs, e.g. renewable energy cost compared to conventional energies
Step 3: Select NAMA ideas	• How to identify and to prioritise NAMA? ○ What are tools that can be used • Stakeholder engagement during selection process • Check of political feasibility • Identify and involve potential financiers and private sector?

Source: Based GIZ NAMA-Tool, version 10.0

Key consideration throughout the steps (2)

Steps	Key Considerations
Step 3: **Define a baseline scenario**	• How to establish the baseline and the NAMA scenario? • What are the challenges for establishing the baseline emission projections? • How to estimate the emission under NAMA scenario (NAMA impact)? • How can SD / co-benefits be evaluated?
Step 4: **Specify NAMA objectives and select mix of instruments**	• Which institutional arrangements for NAMA conceptualisation and development are necessary? • What measures and instruments should be included in the NAMA? • What is the sectoral, temporal and geographical scope of the NAMA?
Step 6: **Detail the NAMA planning**	• How does the timeline of the NAMA look like? • Which institutional arrangements for NAMA implementation are required? • What are the roles of the stakeholder for the implementation of the NAMA?

Source: Based GIZ NAMA-Tool, version 10.0

Key consideration throughout the steps (3)

Steps	Key Considerations
Step 7: Develop a financing architecture	• What are needed resources? • What are the costs, means and modalities of finance for the NAMA? • The financial point of departure: The current budget available? • Which types and sources of financing are required / available? • How to involve the private sector? How to design public-private-partnerships? • Key issues when approaching the first financier: The NAMA financing proposal

Step 8: Design MRV plan	• What is the purpose of MRV? What needs to be measured?
	• How to develop a NAMA measurement methodology and plan?
	  ○ What are national / international requirements for a NAMA MRV system and procedures?
	  ○ Which national / international guidance and best practices for measuring impacts on GHG emission exist?
	  ○ What are available tools and models?

Source: Based GIZ NAMA-Tool, version 10.0

Key consideration throughout the steps (4)

Steps	Key Considerations
Step 9: Implement & MRV	• Is the implementation plan timeline for planned interventions followed? • Are financial and organizational management carried out, and the progress monitored as envisaged? • How to operationalized the ex-post MRV of the emission reductions and other NAMA aspects?
Step 10: Evaluate & communicate	• 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

Source: Based GIZ NAMA-Tool, version 10.0

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Many thanks

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