Climate MRV for Africa – Phase 2
MRV of Mitigation Actions
Quantifying Co-benefits

Lead partner

Project of the European Commission DG Clima Action

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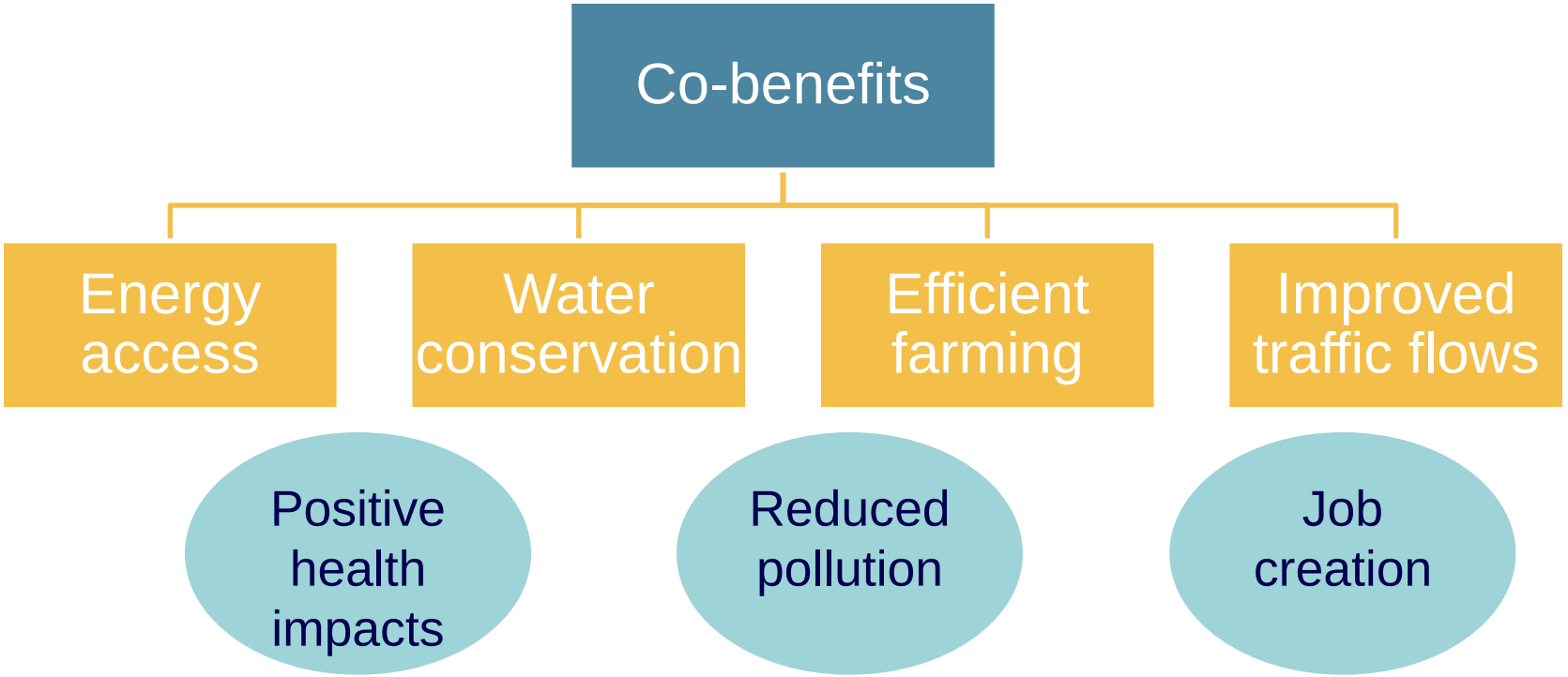
Agenda

- Background
- NAMA Co-benefits
- Assessment of Co-benefits

Background

Background

- Mitigation measures have a range of positive human health, ecosystem functioning, macroeconomic, social, and/or equity side effects. In some cases these **co-benefits** outweigh the importance of climate change mitigation benefits.

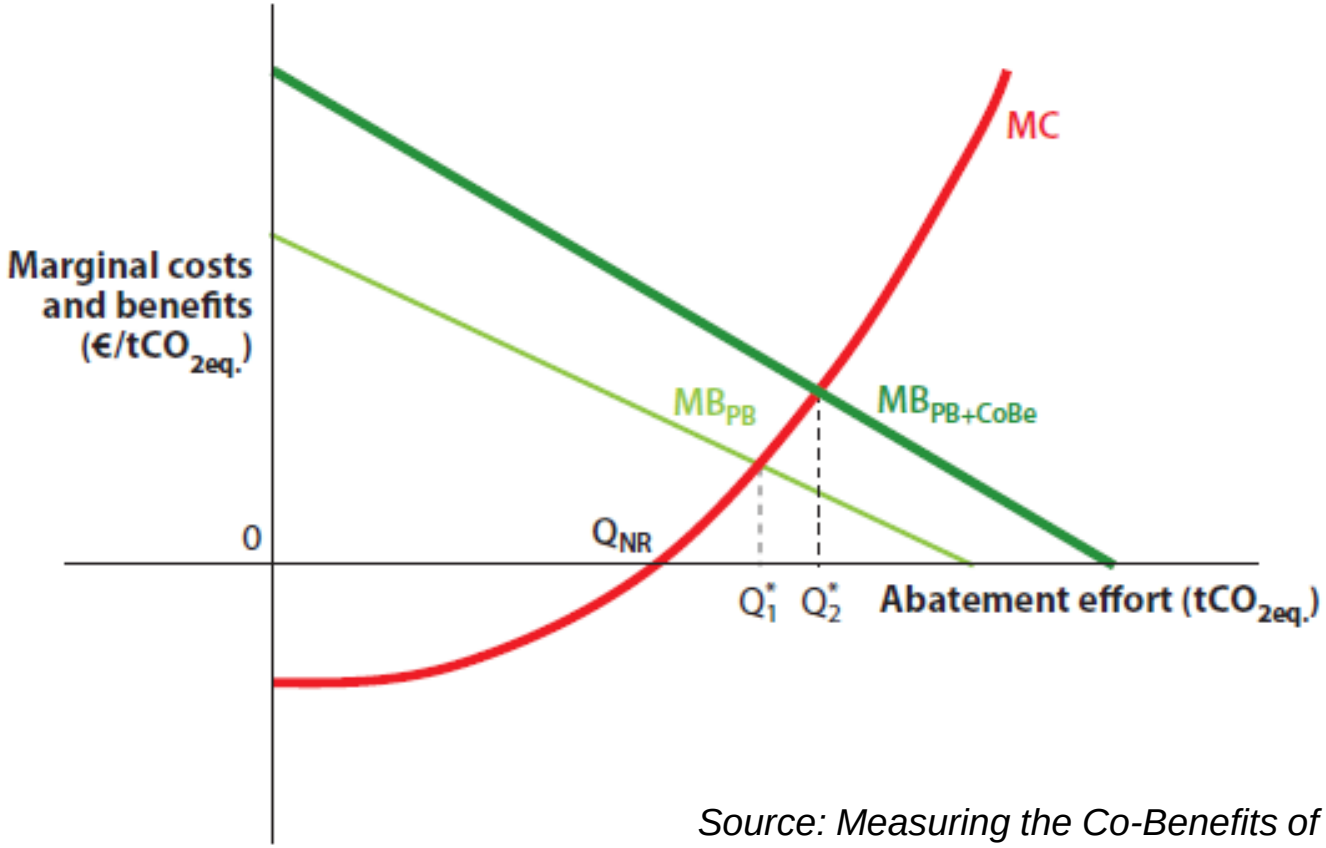


Background

- Similarly, climate-related policies/measures can have adverse or negative co-impacts.
- Co-benefits can significantly change the outcomes of direct cost-benefit evaluations.
- Ideally, for any decision, a full stream of costs and benefits of all impacts should be considered.

Optimal Pollution Level Hypothesis in Case of Co-benefits

Co-benefits are especially important in countries where basic development objectives
often strongly outweigh the importance of climate objectives!



Source: Measuring the Co-Benefits of Climate Change Mitigation by Diana Ürge-Vorsatz et all, 2014

NAMA Co-benefits

NAMA Co-benefits

- The **Concept phase** brings the initial NAMA idea through to its first presentation as a comprehensive concept paper.
- In this phase, NAMA developers must carry out different actions among which is **describing the NAMA's** prime benefits and **co-benefits** and outlining MRV system.
- Documentation strategy for NAMA proposals, for the initial proposal there must be document descriptions of the sustainable co-benefits.

A successful NAMA is driven by the value it generates onwards domestic policy priorities!

NAMA Co-benefits

- The development and promotion of a NAMA requires systematic representation of information and robust documentation.
- A NAMA Design Template provides a concise description of the essential components of a NAMA proposal.
- NAMA Design Template must:
  - provide a well-structured vision of all the key aspects of the proposed NAMA
  - inform NAMA financiers to understand the relevance of their role and responsibilities, and enable them to assess benefits and risk

UNFCCC NAMA Registry

CCAP: Supported NAMA Template

UNEP Risø Centre – NINO template

Ecofys NAMA concept note and proposal templates

The NAMA Facility

NAMA Co-benefits

- Quantifying the benefits of a NAMA, both in terms of GHG emissions reduction and the co-benefits, is use to determine whether or not a NAMA is successful.
- Quantifying begins with measuring and stating the baseline.
- The baseline is the zero-point against which the benefits (and costs) of a NAMA are measured.
- Once baselines has been established, the NAMA's MRV system is used to measure its benefits, both in terms of GHG emissions reduction and sustainable development.

NAMA Co-benefits

Elements of NAMA Documentation

- Overall Benefits (direct and indirect)
- Primary benefits expected from the NAMA (environmental, economic and/or social).
- Indirect benefits such as **technology improvement**, **capacity and skills enhancement**, **increased overseas investment** can be added as relevant

Assessment of Co-benefits

Assessment of Co--benefits

- Categorisation / check-list – most common, but difficult due to different impacts of each action/ measure;

- Quantification/ monetisation:
  - avoided costs e.g. avoided hospital admissions in case of improved air quality or degreased energy demand in case of energy efficiency;
  - replacement costs e.g. of child's caregiving in case of energy poverty–related health effects;
  - preference evaluation/ hedonic pricing e.g. real estate market transaction prices due to improved traffic situation or improved air quality re. odor;
  - willingness to pay e.g. for an additional unit of quality energy/ electricity.

Sustainability Assessment

Assessment of SD Impacts

- Typically negative impacts are assessed with negative scores, and positive impacts are assessed with positive scores;
- Safeguard requirements of the Gold Standard and the CCB Standards, also provide for detailed negative impact assessments, and include safeguard principles in order to ensure that projects do no harm.

Monitoring and Reporting

- Significant credibility is added
- If negative impacts are identified, monitoring is needed to ensure that these impacts are alleviated.
- Gold Standard and CCB Standard have strong obligatory provisions, including dedicated monitoring plans and reports that are independently verified.

Sustainability Assessment

Independent third party validation and verification

- Use of external auditors to give credibility to review and evaluate efforts.

Certification

- Add significant value to carbon credits generated by a project with high SD co-benefits;
- higher prices on the carbon market, in return for the assurance that the project fulfills high standards.

Guidelines for Stakeholder consultation

- All approaches include structured processes, stakeholder meetings and project reference material in local languages to identify stakeholders

Tools for Assessment of Co-benefits

- The CDM sustainable development tool .34. (A version for NAMAs is under development by the UNEP Risø Centre.)
- Gold Standard Sustainability Assessment
- UNEP Sustainable Development Evaluation Tool for NAMAs
- UNEP Multi Criteria Analysis for Climate Policy
- Sustainable development criteria and indicators can also be found in :
  - National development priorities that have been established in development plans and sector strategies,
  - National responses to international Millennium Development Goals (MDGs) and Sustainable Development Goal (SDG).
  - CDM Designated National Authorities

Guidance for NAMA Design
Criteria and Measurable Indicators for Co-benefits

Criteria	Indicator
Economic	
Job Creation	• Created employment • Availability of qualified, highly efficient, productive national manpower
Energy Security	• Diversification and conservation of energy sources • More efficient use of fossil fuels • Rural electrification
Social	
Improvement of quality of life	• Health improvements • Contribution to gender equality
Environment	
Conservation of natural resources and land use	• Water supply and demand • Net impact on biosphere/biodiversity
Reduction of local/ regional environmental impacts	• Air quality: local air pollution, particulates • Waste: solid waste generation and disposal

CDM Sustainable Development Tool Sustainability Assessment

Air	Reducing Sox
	Reducing Nox
	Reducing Fly ash
	Reducing suspended particulate matter (SPM)
	Reducing Non Methane Volatile Organic Compounds (NMVOCs)
	Reducing Noise Pollution
	Reducing Odors
	Reducing Dust
	Other air quality improvements
Land	Preventing end of life products/equipment (solid waste)
	Producing/using compost
	Producing/using manure, mineral fertilizer or other soil nutrients
	Irrigation
	Preventing soil erosion
	Minimum tillage
	Other means to improve land quality
Water	Improving management/control of wastewater
	Saving/conserving of water
	Improving reliability/accessibility of water supply
	Purification/cleaner water supply
	Improving ecological state of water bodies
	Other means to improve water

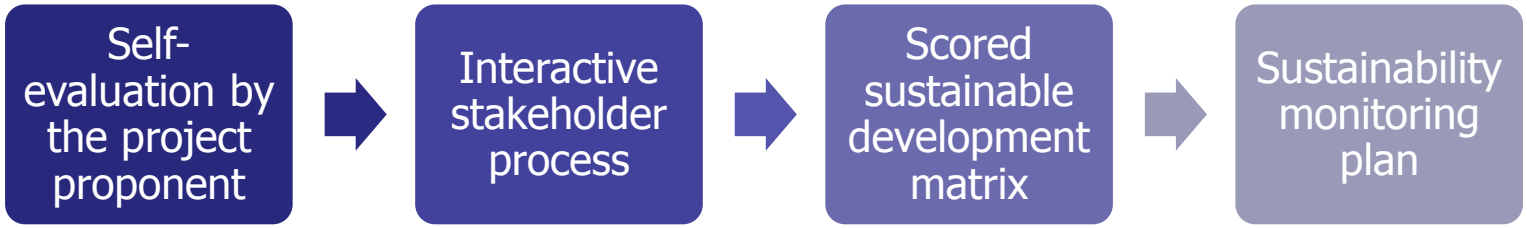
- Assesses environmental, social and economic co-benefits.

- See: cdmcobenefits.unfccc.int

Gold Standard Sustainability Assessment

- The Gold Standard employs an integrated approach to sustainability assessment that makes use of the following tools:

1. "Do No Harm" assessment
2. Sustainable development matrix
3. Two-stakeholder consultation
4. Sustainability monitoring plan



- Allows project proponents to:
  - Include co-benefits and possible negative impacts into a project's documentation;
  - Commit to monitor, report and verify such impacts for the duration of the project's crediting period.

Gold Standard Sustainability Assessment

"Do No Harm" Assessment

- Conducted by project proponents of the risk that the proposed project activity might result in negative environmental, social and/or economic impacts.
- It is comprised of:
  - 11 safeguarding principles on human rights, labor standards, environmental protection and anticorruption derived from the UNDP Millennium Development Goals (MDG12);
  - 8 goals from the United Nations member states have pledged to achieve by 2015.
- Applicable for any location.

Safeguarding Principles	
Human Rights	
1	The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Rights abuses.
2	The project does not involve and is not complicit in involuntary resettlement.
3	The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage.
Labour Standards	
4	The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights
5	The project does not involve and is not complicit in any form of forced or compulsory labour.
6	The project does not employ and is not complicit in any form of child labour.
7	The project does not involve and is not complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis.
8	The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments
Environmental Protection	
9	The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle. This principle can be defined23 as: "When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically."
10	The project does not involve and is not complicit in significant conversion or degradation of critical natural habitats, including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value or (d) recognised as protected by traditional local communities
Anti-corruption	
11	The project respects the employees' freedom of association and their right to collective bargaining and is not complicit in restrictions of these freedoms and rights The project does not involve and is not complicit in corruption.

Gold Standard
Sustainable Development Matrix

- Any project seeking to obtain Gold Standard certification must demonstrate clear benefits in terms of sustainable development
- Gold Standard project applicants must assess their project activities against a series of twelve SD indicators in three categories: **Environment**, **Social development**, **Economic** and **Technological development.**
- GS project proponents shall score each of the SD indicators as –1, neutral, +1 in close collaboration with the local stakeholders and against baseline situation.
- Project activities must contribute positively to two of the three categories and be neutral to the third category

Gold Standard
Stakeholder Consultation

- The GS requires that project proponents discuss their project design and its potential environmental and social impacts with relevant (local) stakeholders and actively seek their comment
- The GS stakeholder consultation process has two main events:
  - 'live' stakeholder consultation meeting (during this meeting both 'Do No Harm' assessment and sustainable development matrix are assessed by stakeholders through the use of blind exercise
  - Stakeholder feedback round (lasts for 60 during which project documentation is publically available for comments for both local and global stakeholders)

The Gold Standard
Premium quality carbon credits

Gold Standard
Sustainability Monitoring Plan

- All non-neutral indicators shall be monitored
- Project proponents shall identify parameters that can be used to properly monitor each non-neutral SD indicator
- Sustainability monitoring plan describes how and with what frequency they monitor the monitored parameters and with what means
- All mitigation and compensation measures put in place to prevent violation or the risk of violating a safeguarding principle of the ‘Do No Harm’ assessment
- Based on the monitoring plan, data gathered and reported on the SD attributed to the project
- These reports are subject to verification by the DOE.

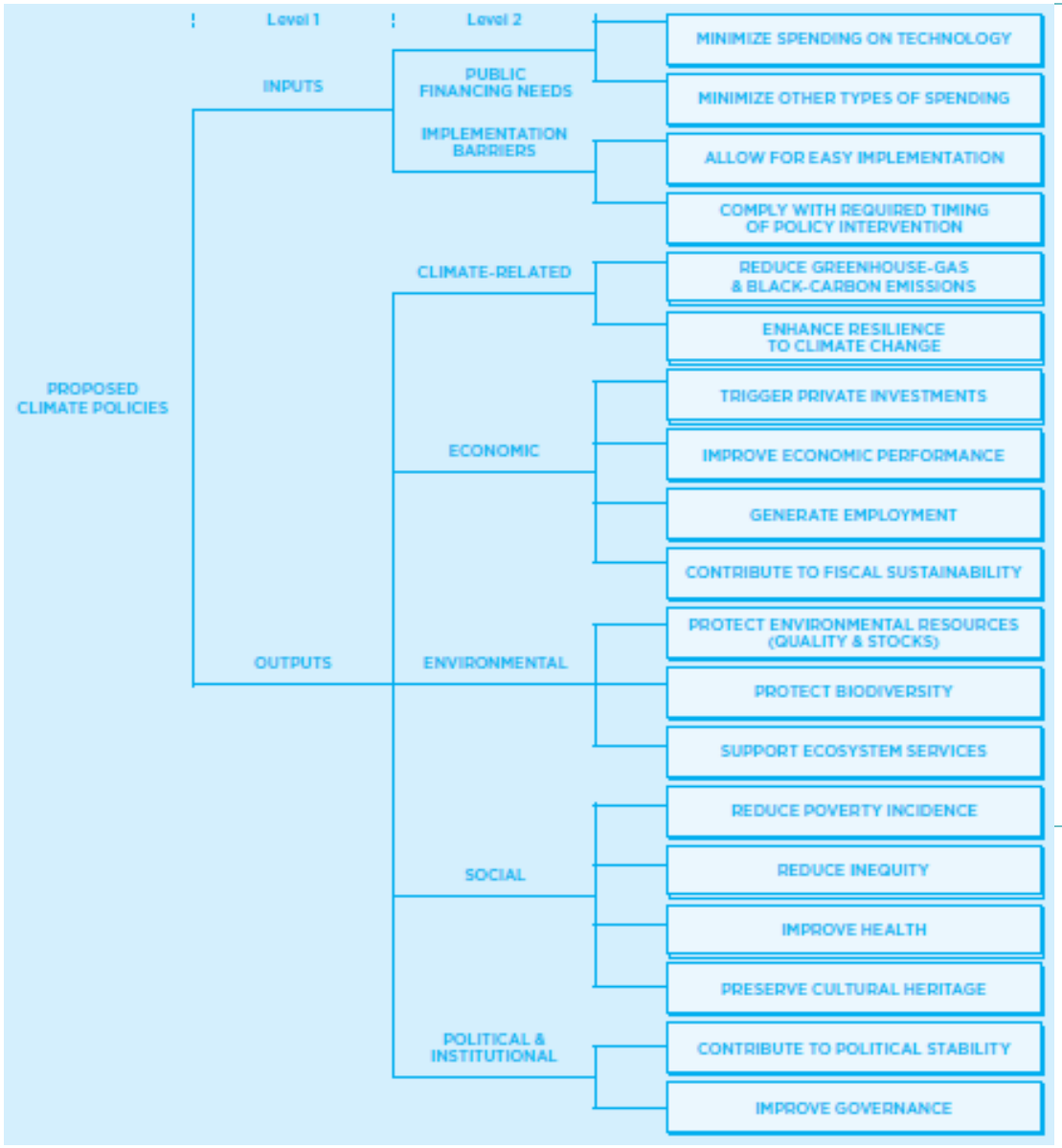
UNEP Sustainable Development Evaluation Tool for NAMAs

- Spreadsheet-based tool linked with SDG.
- High level assessment of SD impacts of a NAMA.
- Categories impacts on environmental, social, growth & development, economic and institutional domains, which are further divided in 26 indicators.
- Allows for ex-ante and ex-post assessment.

Domain	Indicator	Relevance to SDG and targets	Selected (Yes/No)	Identified impacts
Environment	Air pollution/quality	Goal 11, Target 11.6		
	Water pollution/quality	Goal 6, Target 6.6 Goal 11, Target 11.6 Goal 12, Target 12.4		
	Soil pollution/quality	Goal 2, Target 2.4 Goal 11, Target 11.6 Goal 12, Target 12.4		
	Others (Noise/visibility)	Goal 11, Target 11.6		
	Biodiversity and Ecosystem balance	Goal 14, all targets Goal 15, all targets		
	Climate change adaptation and mitigation	Goal 13, all targets		Resiliance/Vulnerability/Mitigation

[Extract from the spreadsheet]

UNEP Multi-Criteria Analysis for Climate Policy Evaluation Framework



Level 3 measure spesific:

Energy Efficiency and Conserving Energy

Low Carbon Energy Sources in the Fuel Mix

Improving Land Use Management

Carbon Capture and Storage

Source: http://www.mca4climate.info by UNEP

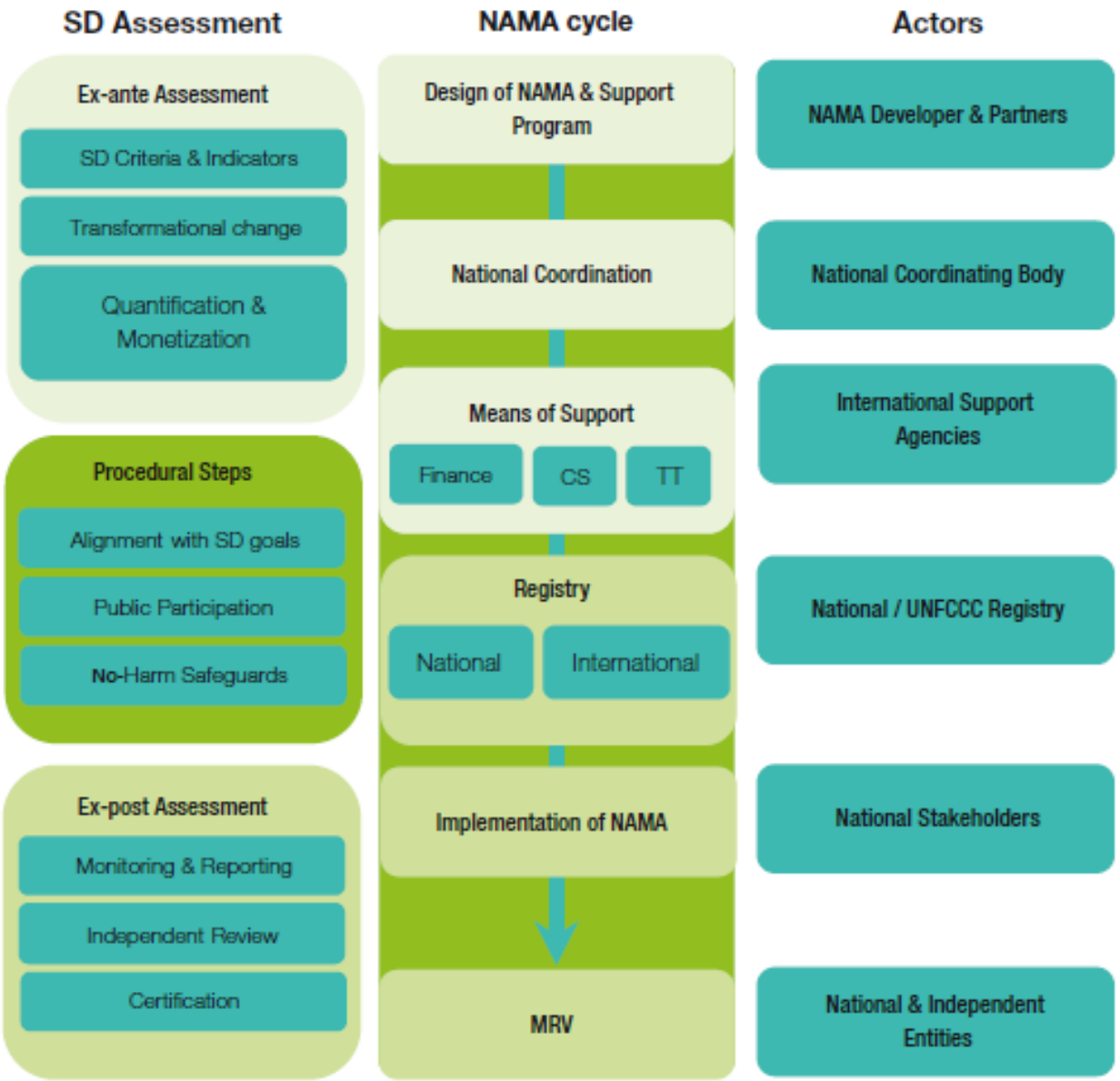
Multi-Criteria Analysis
Energy Efficiency and Conserving Energy

CRITERION	MAIN INDICATORS
Improve economic performance	Changes in the energy use in industry and households; Costs of measures (e.g. cost per tCO2 emissions avoided) and share of energy costs in overall costs of industry and household spending
Generate employment	Number of jobs created in energy efficiency services and number of technical staff trained; as well as number of jobs created in other sectors linked to those sectors for which energy efficiency improvements occurred
Protect environmental resources (quality and stocks)	Indoor air quality indicators such as the use of appropriate fuels, pollution control and exposure reduction

[Extract of Level 3 Evaluation]

1. Establish the context: clarify goals, identify main stakeholders, consider socioeconomic circumstances.
2. Identify the mitigation options to be evaluated.
3. Agree on criteria and indicators: at what level should the analysis occur.
4. Agree on scenarios, timeline of assessment method.
5. Score the different mitigation options against all of the criteria.
6. Weight the different criteria and calculate an overall input and output values for each mitigation option:
7. Examine the results, comparing the performance profiles of mitigation options at each level of the criteria tree to identify strengths and weaknesses.

Summary SD Assessment in the NAMA Cycle



Source: Framework for Measuring Sustainable Development in NAMAs, NAMA partnership 2015

Example
Co-Benefits from BRT Case Studies

- After the implementation of TransMilenio, Bogota reported a 43% decline in SO2 emissions, 18% decline in NOx, and a 12% decline in particulate matter;
- On average, BRTs in the Latin American context have contributed to a reduction in fatalities and injuries of over 40% on the streets where they were implemented.
- Johannesburg Rea Vaya users save on average 26 minutes per day and typical Metrobüs passenger in Istanbul saves 52 minutes per day on travel time.
- By reducing emissions of local air pollutants, especially of particulate matter, Metrobus Line in Mexico City eliminated more than 6,000 days of lost work, 12 new cases of chronic bronchitis, and three deaths per year saving an estimated USD $3 million per year.
- The employment impact of TransMilenio, , Bogota was positive, resulting in a net gain of 1,900 to 2,900 permanent jobs in operations, plus 1,400 to 1,800 temporary jobs per month during construction. This net gain occurred despite the requirement for elimination of traditional buses.
- Istanbul's Metrobüs benefits from reduced vehicle operating cost contribute to USD 2.2 billion.

Thank you!

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