MRV of NAMAs

The question of Measuring, Reporting and Verification

UNFCCC Regional Workshop on NAMAs for Africa

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MRV of NAMAs

- Background of MRV
- Why MRV?
- Elements of MRV of NAMAs
- Monitoring NAMAs
- Reporting about NAMAs: making use of existing reporting systems
- Verifying NAMAs
- Succes Factors
- Case study: Mexican Housing NAMA

MRV Background

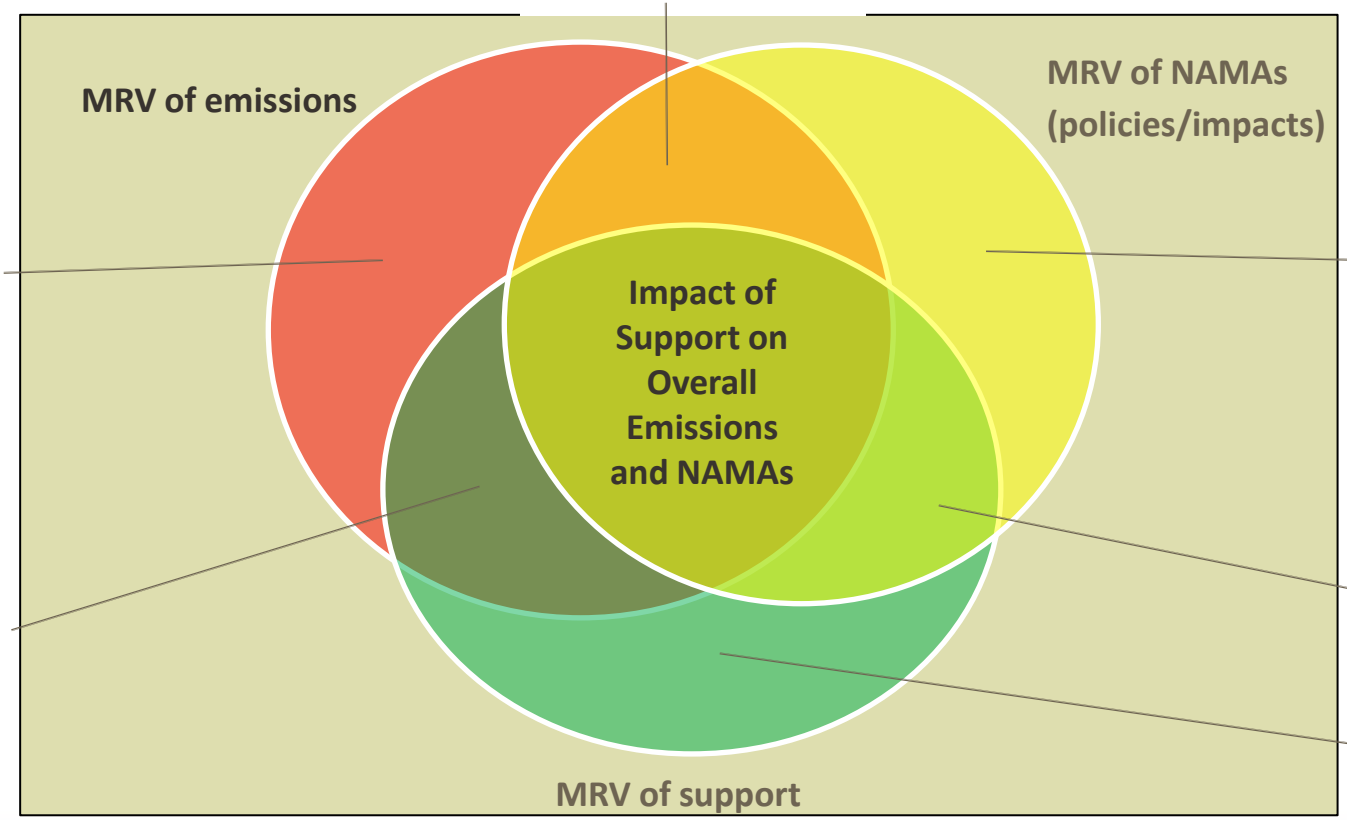
MRV originates from the international climate negotiations:

COP13, Bali 2007: decision to enhance mitigation actions

> "…NAMAs 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."

Clarifying decisions at COP 16 Cancún, COP 17 Durban and COP 19 Warsaw.

MRV Background – National MRV System



Estimation of national, regional, sectoral emissions etc

Non-emissions impact (Co-Benefits of NAMAs)

Impact of support on GHG Monitoring, Reporting and Verification

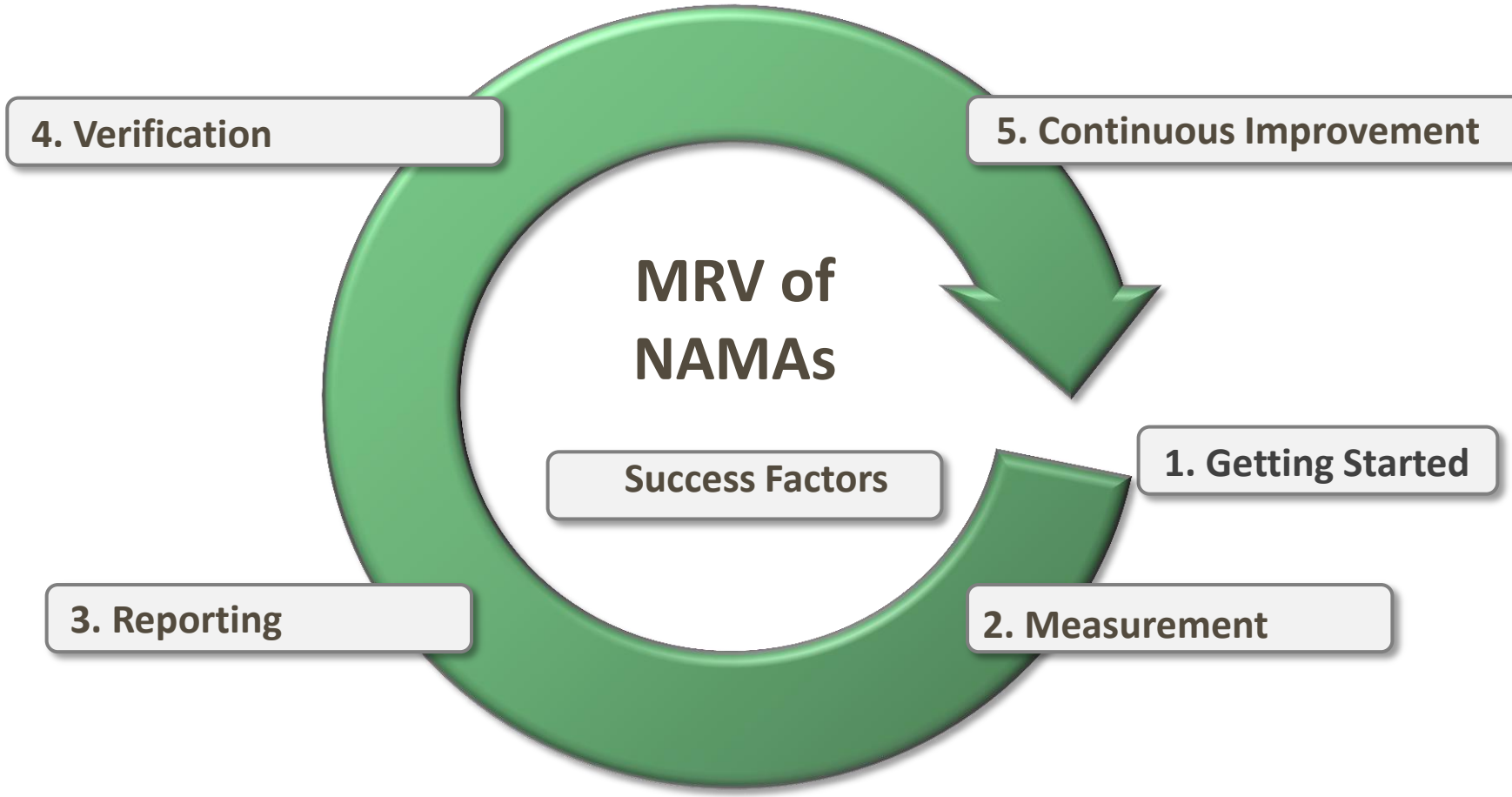
Non-emissions Impacts of support (Co-Benefits)

Mitigation-related support

Why to MRV?

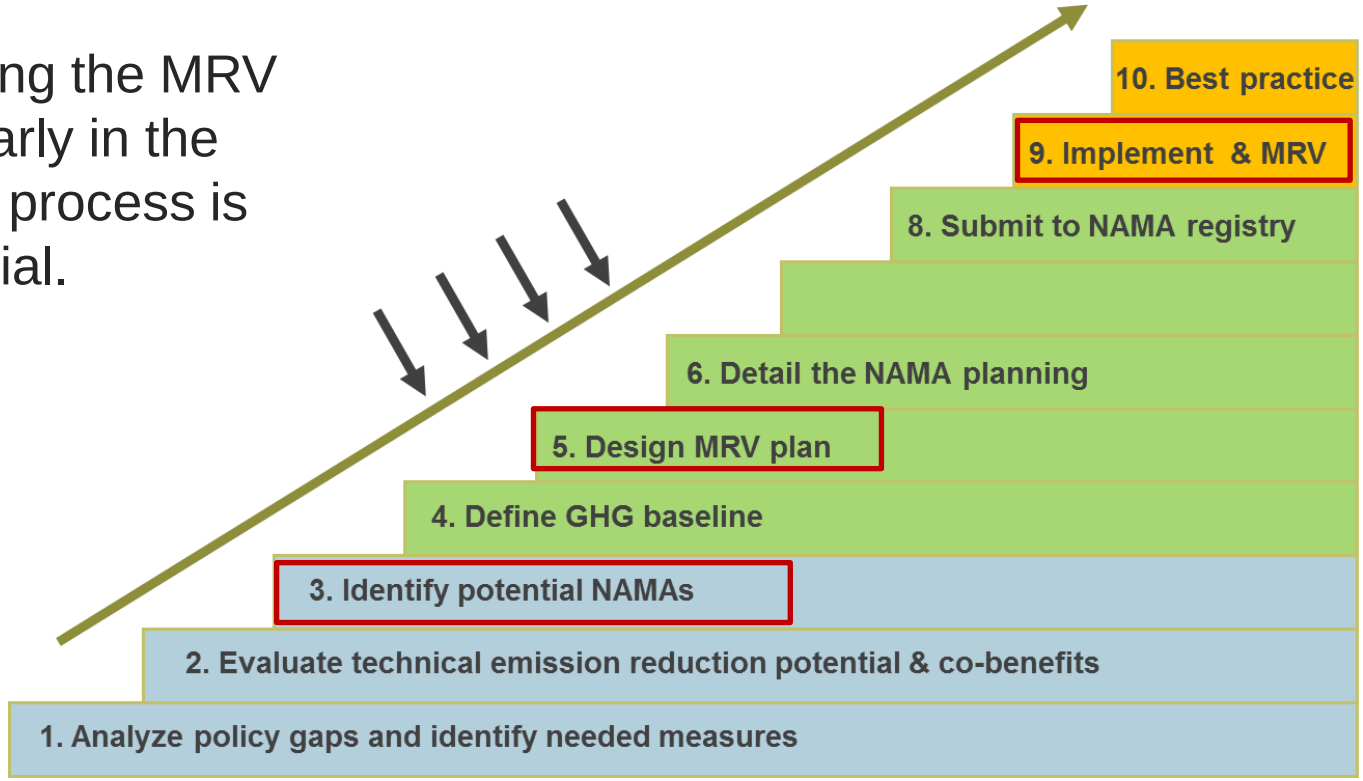
- facilitates decision-making and national planning
- supports the implementation of NAMAs and generates feedback on NAMA effectiveness
- highlights lessons and good practices
- increases the likelihood of gaining international support
- may promote coordination and communication amongst emitting sectors
- may tell us if we´re on track to meeting global mitigation goals

Transparency starts with access to information!


4. Verification
5. Continuous Improvement
MRV of NAMAs
Success Factors
1. Getting Started
3. Reporting
2. Measurement

1. Getting started

Including the MRV plan early in the NAMA process is essential.



2. Measuring

- Define a baseline
- Calculate mitigation costs – e.g. make use of marginal abatement cost curve
- Evaluate co-benefits and define suitable indicators
- Develop data management system (set of indicators, harmonized methodologies, timely delivery of data)
  - Analyse who needs what kind of information when (national, international, donor requirements)
- Assign responsibilities and conduct measuring on a regular basis

Note: WRI/WBCSD GHG Protocol has developed a Policies and Actions Accounting Standard (2013).

Non-GHG related benefits of NAMAs

- NAMAs are not limited to achieving only mitigation, but can help you achieve all kinds of non-GHG-related objectives such as:

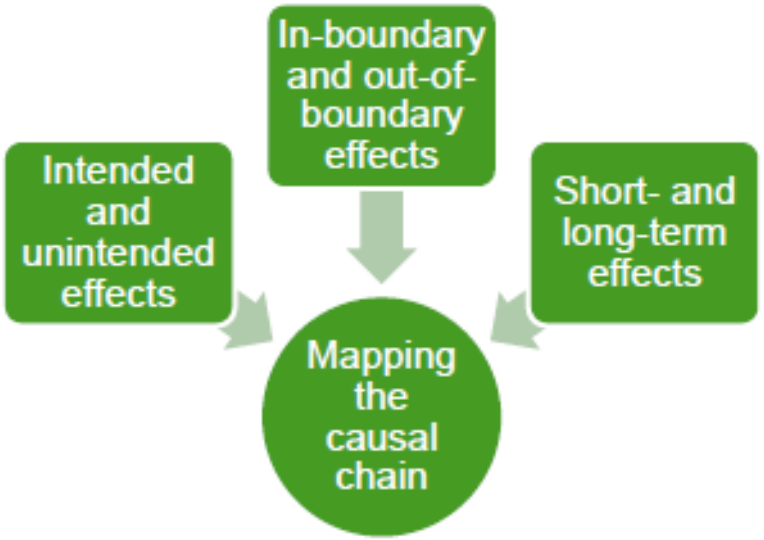
  Job creation Increased income
  Improved air quality health
  Increased crop production Safeguarding biodiversity
  Improving livelihoods Improving water availability
  .....you name it!

- It might bring stakeholders from different „universes“ together – e.g. Climate change and development
- MRV approaches for many of these objectives already exist and can be integrated

Causal chain and assessment boundary

Which indicators to choose for your NAMA MRV?

- Consider the impact chain to understand which **indicators** will show it is on track for its various objectives
- Do not forget about **potentially unwanted impacts**!



3. Reporting

- Follow guidelines for reporting of BURs
  - establish domestic institutions;
  - measure mitigation actions;
  - collect and manage information and document the methodology;
  - verify mitigation actions using domestic experts and domestically developed verification process.
- Clarify roles for BUR reporting within government.
- Define clear responsibilities for the NAMA implementers.
- Additional national reporting requirements?

4. Verification

National level

- Quality assessment procedures (within government/ external).
- Assign different organisations to verify information at different stages of the MRV framework for NAMAs.
- Apply Transparency, Completeness, Consistency, Comparability, Accuracy (TCCCA) criteria.

International level

- BURs will be subject to International Consultation and Analysis (ICA)
- This process will support countries in improving their M&R system and their mitigation actions.

5. Continuous improvement

Measurement

- Any news on: data collection, capacity, availability of data, improved methodologies, revised baseline assumptions.

Reporting

- Make sure to fulfil reporting requirements.

Verification

- Implementation of feed-back.
- Conduct in-house post submission review to develop an improvement plan.

It’s a learning system!

Success factors for MRV of NAMAs

- Good information, communication and coordination with all stakeholders
- Define clear roles and responsibilities and provide transparent guidance - increases reliability and consistency of data
- Calculate emission mitigation and mitigation costs based on proven or credible methods and using the best available data
- Allow for open and transparent access to information
- Examine existing MRV best practices
- Perform continuous review and improvement of the MRV plan

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

Data needs and sources for a Residential 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.
Fuel consumption	Direct and continuous metering of fuel consumption. If available, utility billing records or fuel purchase invoices can be used.
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.
Gross floor area of a building unit	Building plan, or onsite measurement.

Source: Perspectives, Thomson Reuters

Measuring: non-GHG Metrics Housing NAMA 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*

Implementing the MRV Plan for a Housing NAMA in Mexico

	Measure	Report	Verify
What to…	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	•Description of NAMA activities •Assumptions and methodologies •Objectives of the actions and information on progress	•Emissions reductions (level of stringency tbd) • Increased access to affordable and efficient housing
How to…	• 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	• National-level reporting procedures (i.e. biennial update reports to UNFCCC) •NAMA-level reporting procedures, tbd	• Biennial Update Reports to be verified by international experts (ICA) • NAMA-level verification, tbd
Who should…	• NAMA implementer	NAMA implementer	• NAMA supporter (national and/or int'l)
When to…	• Continuous metering • Perfomance monitoring annually • Baseline updates every 3-4 years	• National-level, biennially • NAMA-level, tbd	• National level every 2 years (ICA) • NAMA-level, tbd

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Thank you!

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