



Important - BEFORE GETTING STARTED

Please download MRV Tool Version 4.1 from:

<http://www.mitigationpartnership.net/mrv-tool-how-set-national-mrv-systems>





Measurement, Reporting, Verification Tool

NAMA approach

Emily Castro Prieto
GIZ, México

Regional workshop on promoting international collaboration to facilitate preparation, submission and implementation of NAMAs - LAC

Mexico City, December 12th, 2013



What do you expect from this presentation and working group?

- Understand the drivers behind MRV and the importance of data;
- Understand key concepts and processes of MRV;
- Be able to follow a step-by-step process for developing and enhancing or implementing MRV-system for NAMAs by using MRV tool;
- Leave with a clear set of 'Actions' to contribute effectively to MRV-related activities;
- Know how to constructively address 'barriers' to effectively following the MRV process for NAMAs.





1

Introduction

MRV Background

2. MRV Tool Overview
3. MRV Tool for NAMAs



MRV - the Centrepiece of Mitigation Architecture

MRV shall comprise methodologies to measure:

- **emission** inventories and trends
- supported and unilateral, public and private **mitigation actions**,
- **support** provided and needed

in order to monitor if actions globally are on track to a 2°C target

➤ HOW?

- Building national capacity on MRV
- Institutionalising procedures





Purpose for developing MRV systems – National level

- Compiling and providing the **information basis** for planning and implementation and domestic verification of impacts of mitigation actions.
- MRV systems underpin national GHG **data quality**
- MRV helps **identify national priorities** (including NAMAs), as well as challenges and opportunities.
- **Policy planning and prioritisation** and improving policy coherence – important to keep track of lessons learnt from NAMA implementation to develop better policies in the future.



Purpose for developing MRV systems – International level

- **Tracking progress** towards achieving national goals and account emission reductions for aggregation to the global 2°C objective
- **Keeping a record** of NAMAs in place
- **International recognition** for national performance
- **Data quality assurance:** important to access climate finance and participate in market mechanism
- **Demonstrate to donors** the emission reduction and impacts of NAMAs
- **Improve trust** amongst Parties
- **Provide lessons learned**
- **Countries should harness MRV for their national development goals and in their own interest**



Group exercise 1 M, R & V stands for...

Divide the room in three groups:

1. Measurement
2. Reporting
3. Verification

Discuss and write (no more than three lines) on the ballots provided:

- What they are,
- Why they're important,
- What are key related issues,
- What elements or similar approaches already exist in their country – related to mitigation actions (**write which country!**)

15 min





2010 - 2013: MRV In the negotiations



- **2010, Cancun/Mexico, COP 16:** Decision on what should be included in MRV framework (additionally to already existing MRV rules) and that all countries should submit **National Communications** every four years and **Biennial (Update) Reports** every two years.
- **2011, Durban/South Africa, COP 17: Guidelines for Reporting** (“Biennial Update Reports“), **Guidelines for Verification** (“International Consultation and Analysis“), and Guidelines for Measuring (already existed: IPCC 1996 Guidelines and IPCC 2006 Guidelines).
- **2013, Warsaw/Poland, COP 19:** Decision on composition of Teams of Technical Experts to carry out the **technical analysis under ICA**, and **Guidelines for domestic MRV of NAMAs** in order to develop consistent national MRV systems.



Domestic MRV – General Guidelines for NAMAs (1/2)

The General Guidelines for domestic MRV of NAMAs refer to measuring impacts of policies and measures.

Principles

- General, voluntary, pragmatic, non-prescriptive, non-intrusive and country driven, take into account national circumstances and national priorities, respect the diversity of NAMAs, build on existing domestic systems and capacities, recognize existing domestic measurement, reporting and verification systems and promote a cost-effective approach.



Domestic MRV – General Guidelines for NAMAs (2/2)

Elements:

- Developing country Parties are encouraged to utilize existing domestic **processes, arrangements or systems**, including domestically available information, **methodologies, entities, experts** and other aspects, for domestic measurement, reporting and verification.
- The challenge of installing a robust national MRV system for measuring the impacts of actions will mainly lie in designing these elements properly and according to national circumstances.



National Communications (NCs) for NAI countries

Guidelines for the preparation of NCs (2002)

- Scope:
 - National GHG inventory, Steps taken, National circumstances
- Tiered approaches
- Principles:
 - Transparency, Accuracy, Completeness, Consistency, Comparability
- Coverage of gases & Global Warming Potential
- Reporting should describe sources/sinks, methodologies, emission factors, activity data

- *Since 1997, more than 130 developing countries have submitted one or two National Communications. Only Mexico (5), Republic of Korea, United Arab Emirates, and Uruguay (3) have submitted more.*
- *The Consultative Group of Experts (CGE) supports countries with capacity building for the improvement of NCs.*
- *How to harness the information provided is still under negotiation.*



Biennial Update Reports (BURs) for NAI countries

Every two years NAI countries are supposed to provide an **update to the National Communications** on developments with regard to emissions, emission reductions, and support for mitigation actions.

Guidelines for Biennial Update Reporting (2011)

- Scope:
 - National circumstances and institutional arrangements
 - National GHG inventory
 - Mitigation actions and their effects (incl. methodologies&assumptions, objectives, progress)
 - Constraints and gaps, financial, technical and capacity needs
 - Support received
 - Domestic MRV

➤ First BUR due 12/2014



Consultative Group of Experts (CGE)

Provides **flexible and long term** technical assistance according to developing countries' problems and constraints

For improvement of reporting capacities, appropriate **institutional arrangements** and national technical teams for the continuous preparation of reports, including GHG inventories

Technical advice

- on accessing sources of financial and technical support for the preparation of reports,
- on how to integrate climate change considerations into relevant policies and actions, and
- on lessons learnt and best practices in reporting
- develops training materials and organizes training programmes

CGE is composed of 24 experts nominated by regional groups:

- 5 from Africa
- 5 from Asia and the Pacific
- 5 from Latin America and the Caribbean
- 6 from Annex I Parties
- 3 from intergovernmental organizations



International Consultation and Analysis (ICA)

Guidelines for verification (2011)

- Technical analysis of BUR
- Team of Technical Experts (TTE)
- Summary report
 - Scope: national GHG inventory report, mitigation actions, analysis of impacts, methodologies & assumptions, progress, domestic MRV
- Facilitative sharing of views. non-intrusive, non-punitive and respectful of national sovereignty,
- Increase transparency of mitigation actions and their effects
- Identify capacity-building needs



MRV Requirements

Annex I countries

Reporting:

- National Communication every four years
- Biennial Report (BR) every two years
- Emission inventories (yearly)

Verification:

- International Assessment and Review (of BR)
- Review process

Non-Annex I countries

Reporting:

- National Communication every four years
- Biennial Update report (BUR) every two years

Verification:

- International Consultation and Analysis of BUR



Aspired MRV in the 2015 agreement (1/2)

- Consolidate into a **common, robust, transparent and legally binding MRV and accounting** system based on strong rules and framework for all Parties as a **backbone** of the international mitigation architecture to:
- enable **tracking progress** towards our below 2°C objective,
 - ensure **environmental integrity and sustainability**
 - promoting mutual confidence that all Parties are contributing their fair share
 - and avoid double counting.

MRV can help to guide national actions towards the global objective and enhance effective coordination of action and support



Aspired MRV in the 2015 agreement (2/2)

MRV requirements will **build on** the MRV framework in the existing regime

Will take into account **lessons learned** and **experiences** from the implementation of the current MRV framework until 2020

MRV provision for all Parties

- **M**: all Parties to establish domestic measuring systems
- **R**: all Parties to report on emissions and other information
- **V**: all information provided subject to independent technical analysis and review.

*Agreeing such rules **up-front** will provide greater clarity to countries on how ambitious their contributions can be and if pledged mitigation actions are effective and sufficient thereby **promote transparency and trust** in the international framework, and is a prerequisite **to enable** the use of **market mechanisms** to meet commitments.*



Challenges for MRV today...

- A transformation of the needed dimension has never been implemented so far, let alone in the required time frame
- Nobody knows how to do that
 - Training courses for National Authorities, NAMA coordinating entities, NAMA developers
 - New methodologies for measurement and management must be developed → MRV Tool



Exercise 2 – Importance of seeing the bigger picture

Bicycle Shower

Watch video clip – http://www.youtube.com/watch?v=C93cL_zDVIM

- What do you think about the clip and what it might mean in the context of MRV?

15 min





1. Introduction MRV Background

2

MRV Tool Overview

3. MRV Tool for NAMAs



The MRV Tool – Introduction

- **Initiative** : International Partnership on Mitigation and MRV
- **Developer**: GIZ on behalf of BMZ & BMU
- **Launched**: November 2013
- **Format**: PPT Format with macros
- **Access**: free
- **Objective**: Guide countries through the process of setting-up a national MRV system.
- **Use**: The MRV-Tool is not designed to be read from start to finish. Instead, follow the path you want to take by clicking on the links, forward arrows and back arrows.
- **Download**: <http://www.mitigationpartnership.net/mrv-tool-how-set-national-mrv-systems>





MRV Tool – NAMA Content

Intro I: The Need for GHG Mitigation ▶

Intro II: The Political Design of GHG Mitigation ▶

Intro III: LEDS, NAMA, MRV Architecture ▶

What is a LEDS?

What is a LEDS? – Related policies and plans

What is a NAMA?

Intro IV: Background on MRV ▶

MRV of emissions

MRV of actions

MRV of support

Intro IV: Background on MRV – In the Negotiations ▶

Intro IV: Background on MRV – National GHG Inventories ▶

Good practice checklist for generating a GHG inventory

Emission estimation – National GHG Inventory

Typical Inventory Development Cycle

Example of Institutional arrangements: GHG Inventory in the UK

Intro IV: Background on MRV – National Communications ▶

Intro IV: Background on MRV – Biennial Update Reports ▶

Scope and Content of Biennial Update Reports

Reporting Guidelines for BURs on National Greenhouse Gas Inventory

Consultative Group of Experts (CGE)

Intro V: Why do we need to M,R & V? ▶

International requirements

International Consultation and Analysis (ICA)

Intro VI: Key Features of MRV ▶

Intro VII: MRV-Tool Objectives and Content ▶

Intro VIII: Concept to practice ▶

The National MRV System ▶

Menu: The 3 „Types“ of MRV ▶

Different Forms of intended contributions

Glossary ▶



MRV Tool – Objective

The MRV-Tool is intended to help implementers set up and harness national MRV systems:

- To **improve the basis of information of countries and to monitor** their mitigation actions for national planning, implementation and coordination of individual mitigation activities of bottom-up actions.
- To **comply** with common international UNFCCC reporting requirements to be able to track emissions and ER towards mitigation goals and coordinate individual activities internationally.
- To **be guided step-by-step through the process of developing a national MRV system**, and to **carry out** MRV in three principle areas of scope as required in the BUR guidelines:
 - Emissions/ National greenhouse gas inventories
 - NAMAs/ Mitigation actions
 - Support/ Finance, technology and capacity building needs and support received

The three principle areas in the MRV-Tool shall also reflect the different groups of people usually in charge of MRV in these three areas and the different responsible ministries in international cooperation



MRV Tool – General Content

Intro I: The Need for GHG Mitigation ▶

Intro II: The Political Design of GHG Mitigation ▶

Intro III: LEDS, NAMA, MRV Architecture ▶

What is a LEDS?

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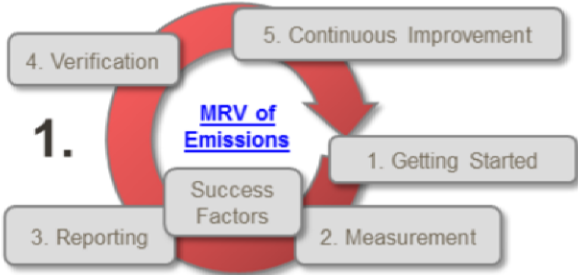


MRV Tool – Main Menu

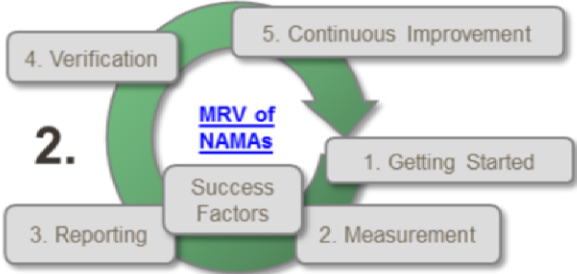


Menu: The 3 „Types“ of MRV*

1. MRV of Emissions

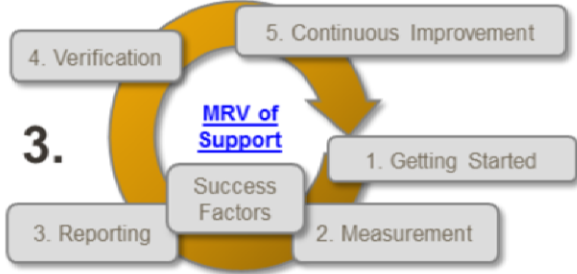


2. MRV of NAMAs



MRV serves the purpose to continuously improve the intended contribution and the actions.

3. MRV of Support



Ideally, an intended contribution and defined actions to achieve it exist. The impacts of these actions and the progress towards the target are the object of MRV.

* The MRV-Tool is not designed to be read from start to finish. Instead, follow the path you want to take by clicking on the links, forward arrows and back arrows.

Navigate by clicking on a particular Type or click [here](#) to start a full tour





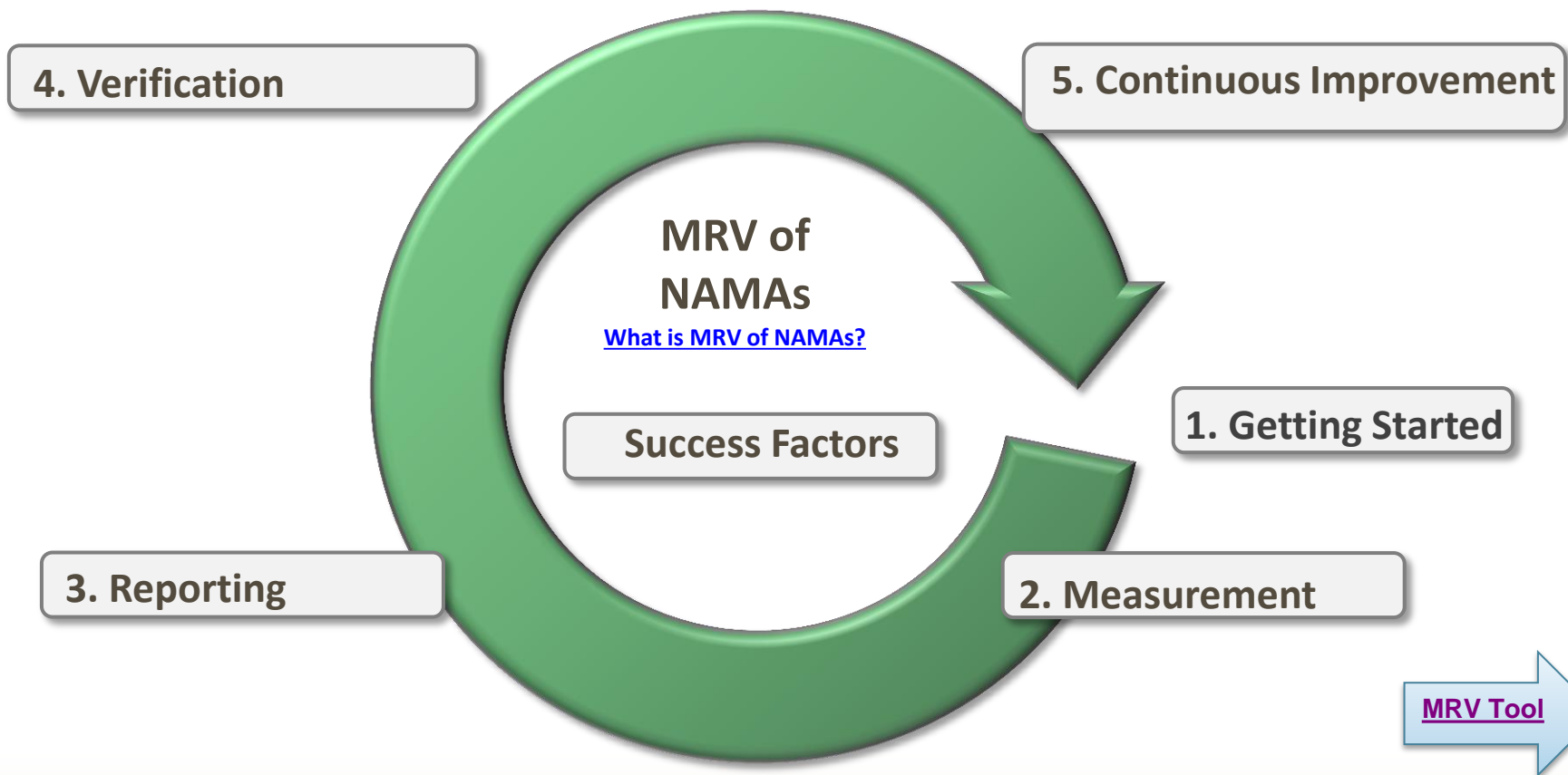
1. Introduction MRV Background
2. MRV Tool Overview

3

MRV Tool for NAMAs



MRV Tool – MRV of NAMAs





What is MRV of Actions?

Measure, report and verify the impacts of mitigation policies and actions through **indicators**, whether they seek to measure GHG reductions or other benefits.

What gets Measured:

- Emission reductions according to emission baseline scenario
- Progress of achievement of sustainable development goals/co-benefits

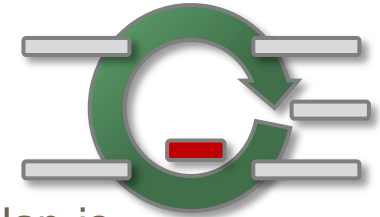
What gets Reported:

- Data on emission savings and methodologies/sustainability objectives, coverage, institutional arrangements and activities, based on the qualitative and quantitative guidelines for submission of Biennial Update Reports (BURs)

What gets Verified:

- All quantitative and qualitative information reported for the mitigation action
- *Guidelines for verification are still under negotiation in the UNFCCC;* Data may be verified through national procedures, International consultation and Analysis and should apply TCCCA criteria.

MRV of Actions helps to identify challenges and opportunities, as well as the overall effectiveness of Mitigation Actions

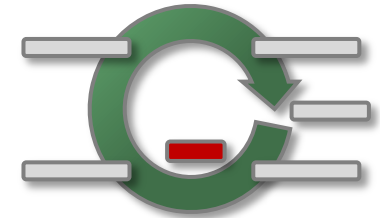


MRV of NAMAs: Success Factors (1/2)

Understanding the rationale behind developing a successful MRV plan is the key to understand the MRV of NAMA success factors.

- Consider the development of the MRV system at an **early stage** of the NAMA planning
- Consider the practicability and **cost-effectiveness** of a NAMA MRV system – MRV requirements for NAMAs do not need to be as rigid as the methodologies used under the CDM.
- Good information, communication and **coordination** between all entities involved in the monitoring process.
- Define **clear roles and responsibilities** and give transparent guidance to each organisation involved in developing and implementing the NAMA MRV-plan.

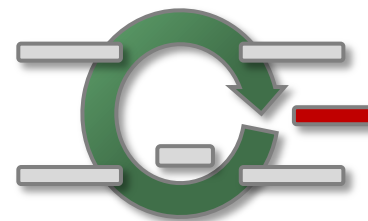




MRV of NAMAs: Success Factors (2/2)

- Calculate emission mitigation and mitigation costs based on **proven or credible methods** and using the best available data.
- Monitoring **quality and reliability of data** and an open and transparent access to information increases the efficiency of the MRV process.
- **Examine** existing MRV **best practice** to ensure the MRV plan is designed according to national requirements.
- Perform **continuous review and improvement** of the MRV plan. Organisations with different expertise should be involved, in order to maximise technical capabilities.





MRV of NAMAs: Getting Started

Making use of what do he currently have:

- **National level**

- Build upon existing experience
- development cooperation experience with project monitoring, sectoral experience with measuring and reporting
- CDM experience with verification

- **International level**

- Guidelines for domestic MRV of NAMAs (COP 19)
- Guidelines for reporting (*Biennial Update Reports*)
- Guidelines for verification (*International Consultation and Analysis*)



Note!: WRI/WBCSD GHG Protocol has developed a [Policies and Actions Accounting Standard](#) (2013) which includes all individual steps like defining causal chains, baseline, boundaries, quantification methodologies, reporting and verification.

- Answer four major questions during the NAMA implementation: *what* to MRV, *when* to MRV, *who* should MRV, *when* to MRV.



The Who, What, When and How: MRV of NAMAs

1. What to MRV?

- Individual 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?

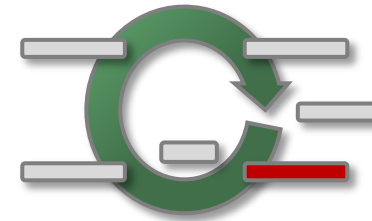
- How will benefits be measured (methodologies used)? How accurate must measurement be? Can measurement be conducted “on-site” or will official data sources be used to measure results? How will results be compiled and stored, and through which channels will they be reported? Is on-site verification required?

3. When to MRV?

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

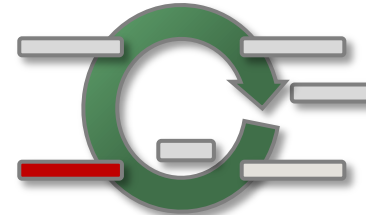
4. Who should MRV?

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



MRV of NAMAs: Measurement

- Define a baseline
 - Develop Marginal abatement costs curve (MAC)
 - Evaluate co-benefits
 - Consider economic incremental costs
 - Develop data management systems
 - Designate a central organization
 - Define responsibilities
 - Conduct measurement on a regular basis
- *Emissions projections scenario with and without the NAMA*
 - *Calculate and compare mitigation costs.*
 - *Indicators to track progress on: the achievement of NAMA's and sustainable development goals*
 - *Transparente, use harmonized methodologies and deliver data in a timely manner.*
 - *Responsible for compiling and evaluating information*
 - *Sectoral organizations, municipalities, companies and other stakeholders.*
 - *National inventory system, every two years for BURs, and upon agreement in the case of bilateral arrangements.*



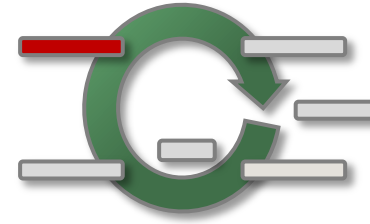
MRV of NAMAs: Reporting

- Follow **Guidelines for submission of BURs**, as adopted in Durban.
 - *Quantitative information* – data on emission savings and methodologies
 - *Qualitative information* – data on sustainability objectives, coverage, institutional arrangements and activities within the NAMA.
- **Designate organisations** responsible for reporting to the UNFCCC (BURs), to NAMAs' financiers and to the national government.
- Use **submission templates** for the reporting to the UNFCCC registry and through NCs and BURs.
- Define **clear responsibilities** for the NAMA implementers.



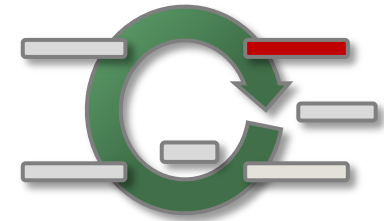
MRV of NAMAs: Verification

- Verification ensures credibility and accountability of a project's estimated GHG emission reductions
- Subject the qualitative and quantitative information reported on the NAMA to national verification procedures, such as QA. The requirements for NAMA verification remain the domain of NAMA implementers and those supporting the NAMA to determine.
- At international level, BURs will be subject to the process of International Consultation and Analysis ([ICA](#)) which will support countries in improving their M&R systems and mitigation actions but it is *not intended to scrutinize individual NAMAs in detail*.
- It is performed by different organisations at domestic and international levels - recommended by a third party



Transparency
Completeness
Consistency
Comparability
Accuracy

Assign different organisations to verify information at different stages of the MRV framework for NAMAs



MRV of NAMAs: Continuous Improvement

Measurement

- Increase efficiency of data collection;
- Increase capacity for quantifying emission saving estimates;
- Measure new data previously not available; and
- Improve the quality of data through improved methodologies for measuring
- Revise baseline assumptions

Reporting

- Ensure that the submission meets all requirements in guidelines;
- Improving efficiency through developing tools useful for reporting NAMAs;

Verification

- Implement feedback and issues found by independent reviewers;
- In-house post submission review to develop an improvement plan; and
- Build in-house QA/QC procedure to improve efficiency of verification in terms of cost and time.



Co-Benefits and Mitigative Capacities achieved by 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:

- Job creation
- Access to energy of transport
- Improved Water or Air quality
- Protection of Biodiversity

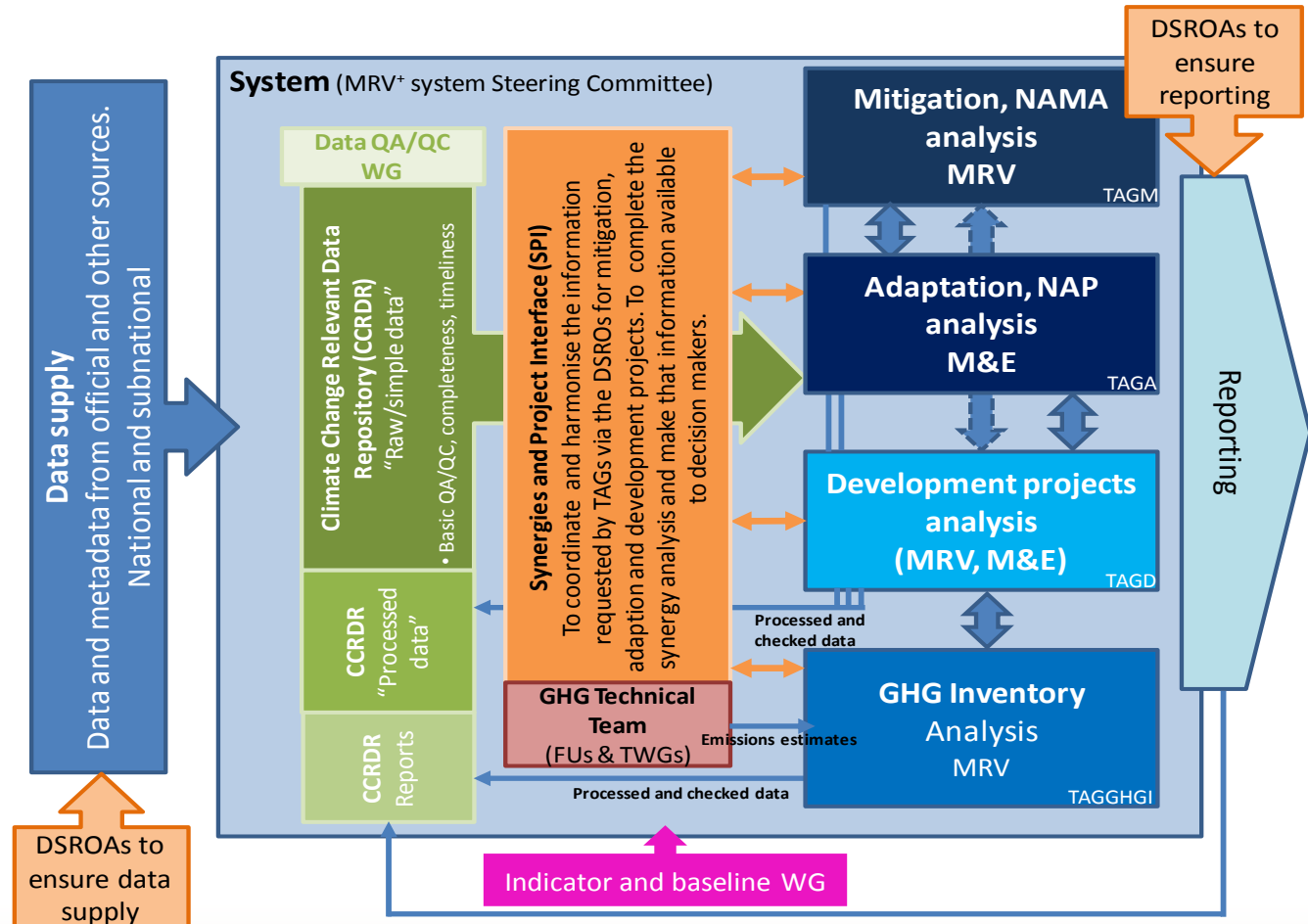
Improved Mitigative Capacity may include:

- 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



Kenya MRV+ case study

- MRV+ system designed to cover mitigation actions, adaptation actions and development actions
- Central to system is a climate change relevant data repository, where all data is stored (raw data, processed data and final reports)
- Data requirements decided through Data Supply Reporting Obligation Agreements
- Raw data processed by the respective Technical Analysis Group (e.g. for mitigation, adaptation, development and GHG inventory)





Training on MRV Tool

- Capacity building for Government officials / NAMA developers / national donors
- **Focus:** On-going projects
- **Length:** 2 days training
- **Contact:**

- International Partnership on Mitigation and MRV

<http://www.mitigationpartnership.net/>



International Partnership
on Mitigation and MRV

- Country based GIZ offices

<http://www.giz.de/en/html/worldwide.html>

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

GIZ, Sebastian Wienges E-mail: sebastian.wienges@giz.de



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GIZ in Mexico



GIZ in Mexico - Portfolio

Gestión Ambiental Urbano e Industrial ▶ 10.6 M€

BMZ-SEMARNAT ▶ 7.1 M€

BMZ-AMEXCID/CCE ▶ 3.5 M€
(regional)

BMU-SEMARNAT ▶ 3.5 M€

BMU-INFONAVIT ▶ 3.1 M€

BMU-SEMARNAT/SENER/SCT ▶ 7 M€

BMU-CONANP ▶ 4 M€

BMZ/RU -SEMARNAT ▶ 0.3 M€

Programa de Gestión Ambiental
Urbano e Industrial

Plataforma de Cooperación
Regional sobre Tecnologías
Ambientales

Alianza Mexicana Alemana de
Cambio Climático

25.000 Techos solares

Desarrollo de NAMA

Cambio Climático y Gestión de
ANP (en la Sierra Madre Oriental)

Escuelas Bajas en Emisiones

Cambio Climático ▶ 17.9 M€

BMZ-AMEXCID ▶ 2 M€

BMZ ▶

Proyecto para el fortalecimiento
institucional de AMEXCID

Fondo para estudios

Energía Sustentable ▶ 10.85 M€

Programa Energía
Sustentable

BMZ-SENER ▶ 6.65 M€

Uso eficiente de
recursos y energía
para la mitigación del
CC en PyMEs

BMZ-COMPITE ▶ 4.2 M€

Conservación de la
Biodiversidad en el Golfo
de California

BMU-CONANP ▶ 9.5 M€

Conservación de la
Biodiversidad en la Sierra
Madre Oriental

BMZ-CONANP ▶ 7 M€

Reparto Justo de Beneficios del
Uso Sustentable de la
Biodiversidad (ABS)

BMZ-CONABIO ▶ 6 M€

Valorización de Servicios
Ecosistemicos de ANPs

BMU-CONANP ▶ 4.5 M€

Uso sustentable de la
biodiversidad
en la Selva Maya

BMZ-CONANP ▶ 5 M€
(regional)

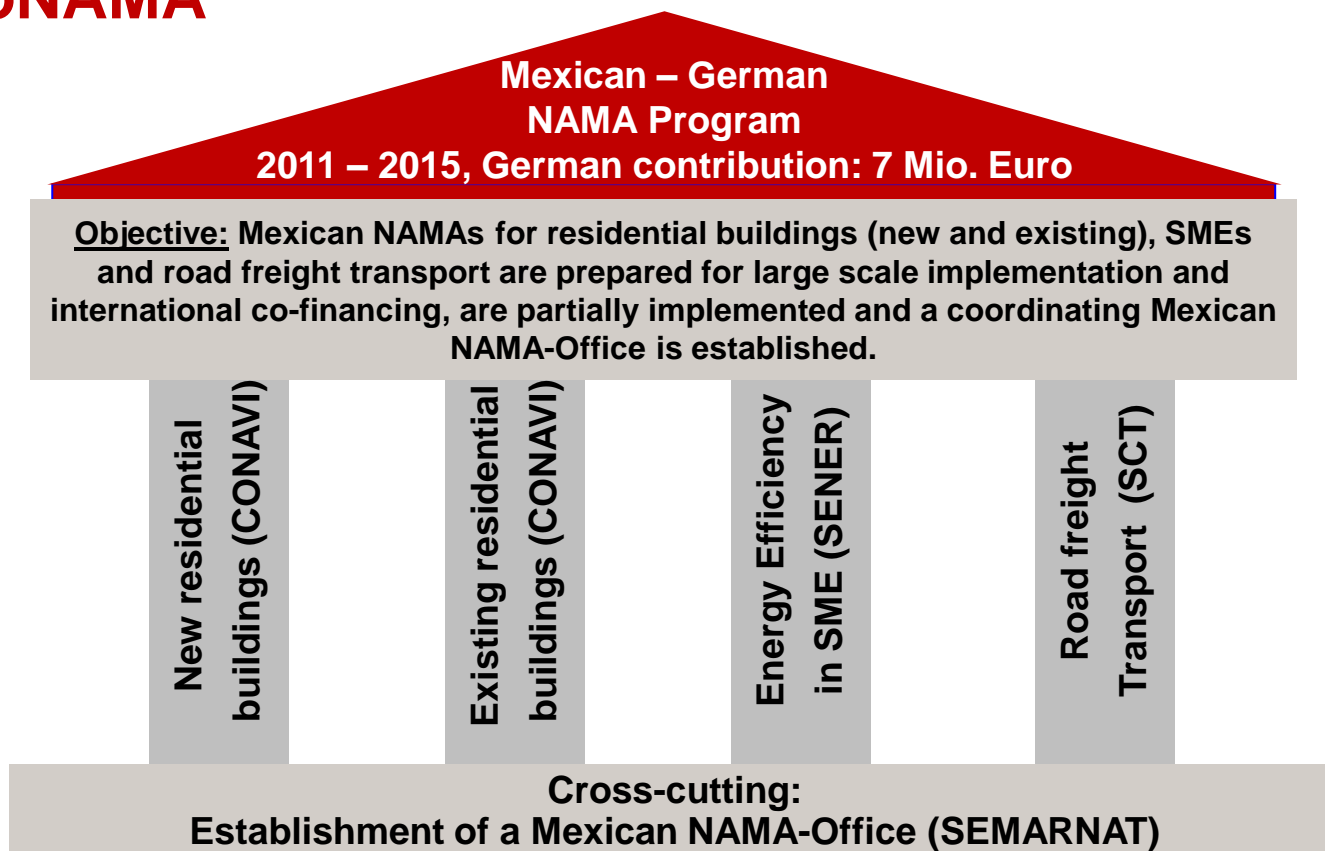
Biodiversidad ▶ 32 M€



Cooperación
Técnica entre
México y Alemania



The Mexican-German Programme for NAMAs - ProNAMA





Q&A TIME!



¡Muchas gracias por su atención!

Emily Castro Prieto
Asesora local ProNAMA
Componente Transversal MRV y Oficina NAMA

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