Climate MRV for Africa – Phase 2
MRV of Mitigation Actions
Current MRV Frameworks and Lessons Learnt: CDM and NAMAs

Project of the European Commission
DG Clima Action
EuropeAid/136245/DH/SER/MULTI

Amr Osama Abdel-Aziz, Assen Gasharov, Mike Bess and Laura Lahti
Team Leader and Key Experts
August 2017
Agenda

- Overview of CDM
- Overview of NAMAs
- CDM vs. NAMA
- CDM MRV Requirements
- NAMA MRV Requirements
- Lessons Learnt for MRV of NAMAs
Clean Development Mechanism (CDM)

Annex I Country (Developed country)

Developing country

Certified Emission Reductions (CERs)

Emission trading and carbon credits
Nationally Appropriate Mitigation Actions (NAMAs)

- Voluntary measures for mitigating GHGs
- Can be supported by implementing country or by developed countries
- Can include policies, strategies, sectoral programmes, and/or projects
- Address mitigation on a broader scale and goes beyond individual investment projects
Nationally Appropriate Mitigation Actions (NAMAs)

LEDS / NDCs

Transport NAMA  Buildings NAMA  RE NAMA  Waste NAMA

Sectoral Mitigation
CDM vs. NAMA

Market vs. Country Driven

Scope

Main Goal

Finance
CDM vs. NAMA

Market vs. Country Driven

- In CDM, developed countries invest in specific projects in developing countries, and in turn earn carbon credits which are traded in carbon markets.

- NAMAs are not driven by carbon credits. They are rather country driven processes reflecting long-term national strategies. Emission reductions achieved via NAMAs are accounted for by the host country.

- Mechanisms for credited NAMAs are still undefined.

Source: Carbon Market Watch, 2015
CDM vs. NAMA

Scope

- In CDM, GHG emissions reductions take place through single project activities
- In CDM, the broadest scope developed was PoAs
- In NAMAs, the scope is mainly sectoral
- NAMAs can be defined in the form of policies, programs, projects, standards, laws and regulations, financial incentives
- NAMAs can even cover projects not covered by CDM (e.g. those that required a higher carbon price to become viable)

Source: Carbon Market Watch, 2015
CDM vs. NAMA

Goal

- In CDM, the main goal is to help developed countries fulfil their commitments to reduce emissions.
- In CDM, the approach is ‘mitigation first’, while sustainable development is regarded as a co-benefit.
- In NAMAs, the main goal is to help national governments achieve national or subnational needs for development.
- In NAMAs, the approach is ‘development first’, while emissions reduction is regarded as a co-benefit.

Source: Carbon Market Watch, 2015
CDM vs. NAMA

Finance

- In CDM, the investment mainly comes from domestic sources in developing countries (sometimes from international sources), and carbon credits are earned after project execution.
- In NAMAs, finance needs to be leveraged ex-ante via domestic or international financial support either from public or private sources.

Source: Carbon Market Watch, 2015
CDM MRV Requirements

Source: UNFCCC
CDM MRV Requirements

- According to a monitoring plan in an approved methodology by the CDM-EB
  - Determined appropriate by the Designated National Authority during validation
  - Reflects good monitoring practice for the project type
- Monitoring plan contained in the registered Project Design Document (PDD) shall be implemented ➔ any change has to be approved by DOE
- Regular Monitoring reports have to be prepared
- Verification undertaken by Designated National Authorities

Source: UNFCCC
CDM MRV Requirements

Landfill Gas Flaring CDM Project

Monitoring Equipment Diagram

- **Landfill**
  - **FAU Ultramat 23** measures the gas composition of the biogas entering the system.

- **Blower**
  - **Thermocouples** measures the temperature of the flare.
  - **FEA** measures methane and oxygen composition in the exhaust gas of the flare.

- **Flare**
  - **Electricity Meter** measures electricity consumption of the electrical equipment of the system.
  - **Flow Meters** measures the gas flow entering the flare.
  - **LPG Meter** measures the LPG used when starting the flare after shutdowns.

Source: UNFCCC
NAMA MRV Requirements

- Depends on NAMA type

Source: Adapted from ‘Developing Financeable NAMAs: A Practitioner’s Guide, IISD
NAMA MRV Requirements

- Domestic NAMAs are subject to a domestic MRV system
- COP 19 announced general guidelines for domestic MRV of domestically supported NAMAs indicating the following:
  - To establish, and/or recognize, where relevant the institutions, and systems involved in the domestic MRV of NAMAs;
  - To measure domestically supported NAMAs, including the collection of relevant and available information;
  - To verify domestically supported NAMAs, including the use of domestic experts using domestically developed processes
  - Developing country Parties are encouraged to utilize existing domestic processes, arrangements or systems

Source: UNFCCC
NAMA MRV Requirements

- NAMAs will assist parties achieve their NDCs
- Detailed MRV for NDCs will still be negotiated under the operationalization of Paris Agreement
- For current internationally supported NAMAs, criteria for MRV is agreed between the developing country and the donor entity
- National circumstances and development priorities have to be taken into account
MRV Requirements - NAMAs vs. CDM

- Methodologies for CDM projects are generally considered to be complex, and may be a barrier if used for MRV of NAMAs.

- The role of MRV is not to impede the NAMA process but rather facilitate actions of reducing GHG emissions.

- MRV must be effective and avoid imposing high transaction costs or other heavy burdens.

- Standardization reduces transaction costs.

- MRV should always be tailored to be nationally appropriate.

Source: Carbon Market Watch, 2015
For NAMAs, MRV is not a “one size fits all” solution

In comparison to the CDM, NAMA MRV system can be simpler and more flexible

Source: Thai-German Programme on Energy Efficiency Development Plan
Example for NAMA MRV

Waste NAMA Possible Approach

- Develop estimations for the emission reduction potential of each mitigation technology
- Monitor the amount of waste processed in each waste processing facility

<table>
<thead>
<tr>
<th>Technology</th>
<th>Emission Reduction Potential (tCO₂e/ton waste)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incineration with energy recovery (IER)</td>
<td>0.23</td>
</tr>
<tr>
<td>Anaerobic Digestion (AD)</td>
<td>0.40</td>
</tr>
<tr>
<td>Composting</td>
<td>0.11</td>
</tr>
<tr>
<td>Co-firing in Cement Kilns (CFC)</td>
<td>0.40</td>
</tr>
<tr>
<td>Recycling</td>
<td></td>
</tr>
<tr>
<td>PET</td>
<td>1.76</td>
</tr>
<tr>
<td>Paper</td>
<td>0.72</td>
</tr>
<tr>
<td>Glass</td>
<td>0.25</td>
</tr>
<tr>
<td>Textiles</td>
<td>3.38</td>
</tr>
</tbody>
</table>
Lessons Learnt for NAMAs

- MRV of CDM is very complex
- Use of standardized approaches is helpful in keeping the MRV system simple and practical
- National customization for the MRV of NAMA is important
- A successful NAMA should build on existing national criteria, data and indicators
- A successful NAMA should include metrics for sustainable development benefits to gain recognition
- Initially, NAMA MRV will not be perfect, but will improve over time

Source: Exploring practical experience of NAMAs and MRV requirements, NEFCO
Thank you!

Amr Osama Abdel-Aziz, Assen Gasharov, Mike Bess and Laura Lahti