

Capacity Building Project for Measurement, Reporting and Verification (MRV) of Greenhouse Gas (GHG) Emission Reductions in Africa

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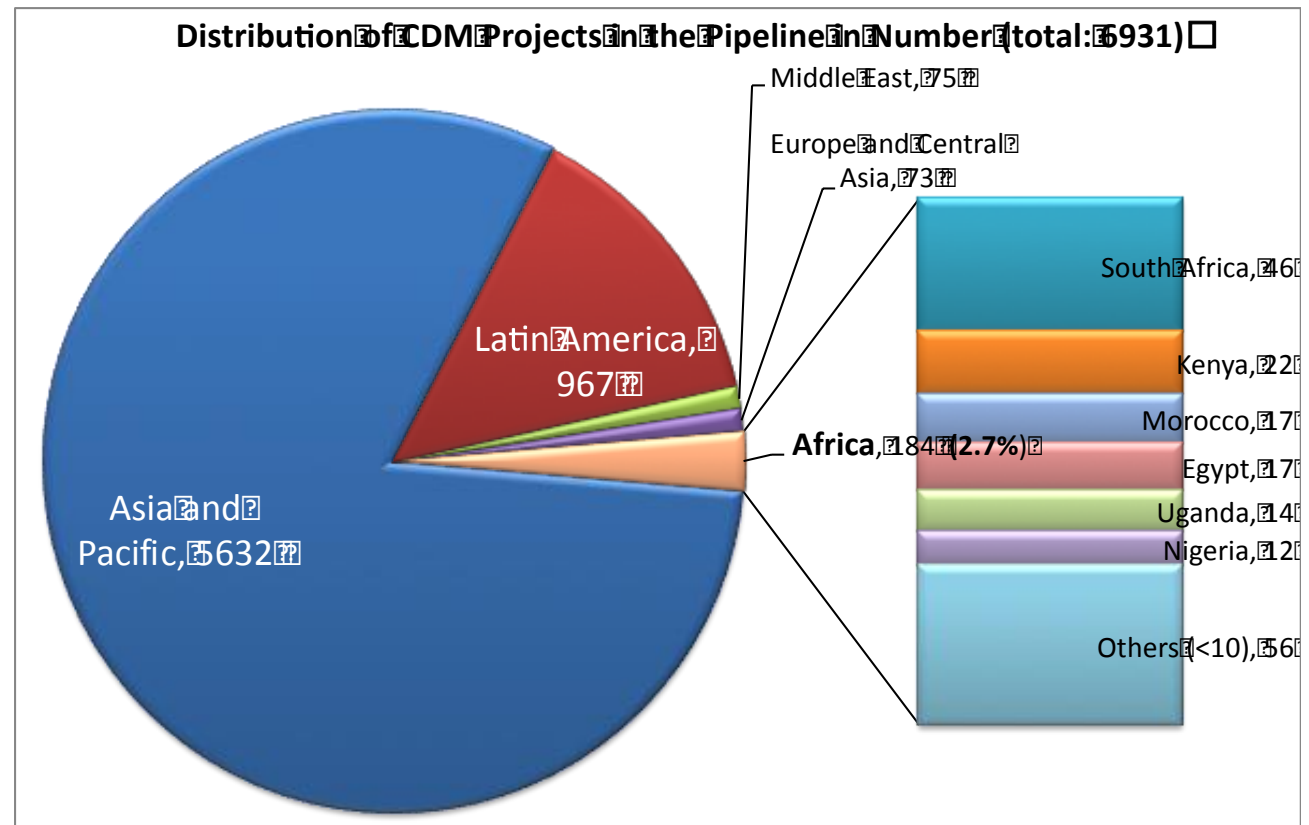
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Project Background

Limited benefits from the existing market mechanisms in spite of strong need for sustainable development of African countries.



Distribution of CDM Projects
in the Pipeline in Number; 6,931 total
(Source: UNEP Risø Centre, 2011.10)

Project period

June 2011 – March 2012

Target Countries

- Group 1 Ghana, Morocco, Senegal
- Group 2 Kenya, Tanzania, Uganda
- Group 3 Mozambique, South Africa, Zambia
- Group 4 Democratic Republic of the Congo (DRC),
Egypt, Ethiopia, Nigeria

Project Implementing Entities

INGÉROSEC Corporation



Climate Experts, Ltd.



UNICO International Corporation



OSUMI Co., Ltd.



Project Objectives

- ❖ Conduct capacity development program on MRV of potential projects for future crediting under new market mechanisms such as the BOCM (Bilateral Offset Credit Mechanism).
- ❖ Find out potential GHG emission reduction projects / programmes for future crediting under market mechanisms including the BOCM.
- ❖ Find out potential verification entities to implement MRV for GHG emission reductions.

Relevant Events (co-hosted by project team)

- ❖ COP17 Side Event
- ❖ International Workshop in Tokyo (February, 2012)



Project Activities



❖ Preliminary Survey

- Find out a counterpart (C/P) in each target country. (mostly CDM DNA: Designated National Authority)
- Interview with relevant governmental agencies and private companies (for data collection and analysis)

❖ 1st Local Coordination

- Reach agreement with C/P in terms of cooperation for this project.
- Hold a workshop with C/P.
- Consultation with relevant governmental agencies and private companies.
- Find out the potential GHG emission reduction projects.

❖ 2nd and 3rd Local Coordination

- Hold a workshop with C/P.
- Discussions with relevant governmental agencies and private companies.
- Find out potential verification entities and support them to conduct Model MRV Exercise.

Project Status and Schedule – Group 1 (Ghana, Morocco, Senegal)

	7	8	9	10	11	12	1	2
Ghana			●		●		③	
Morocco	★		●		●		③	
Senegal			●		●		③	
	Preliminary Survey		1 st Local Coordination		2 nd Local Coordination		3 rd Local Coordination	International Workshop

★ Africa Carbon Forum (7/4-6) ● 1st & 2nd Workshop (2-days) ③ 3rd Workshop (tentative; 2-days)



Palais des Congres, Morocco (7/4-6)

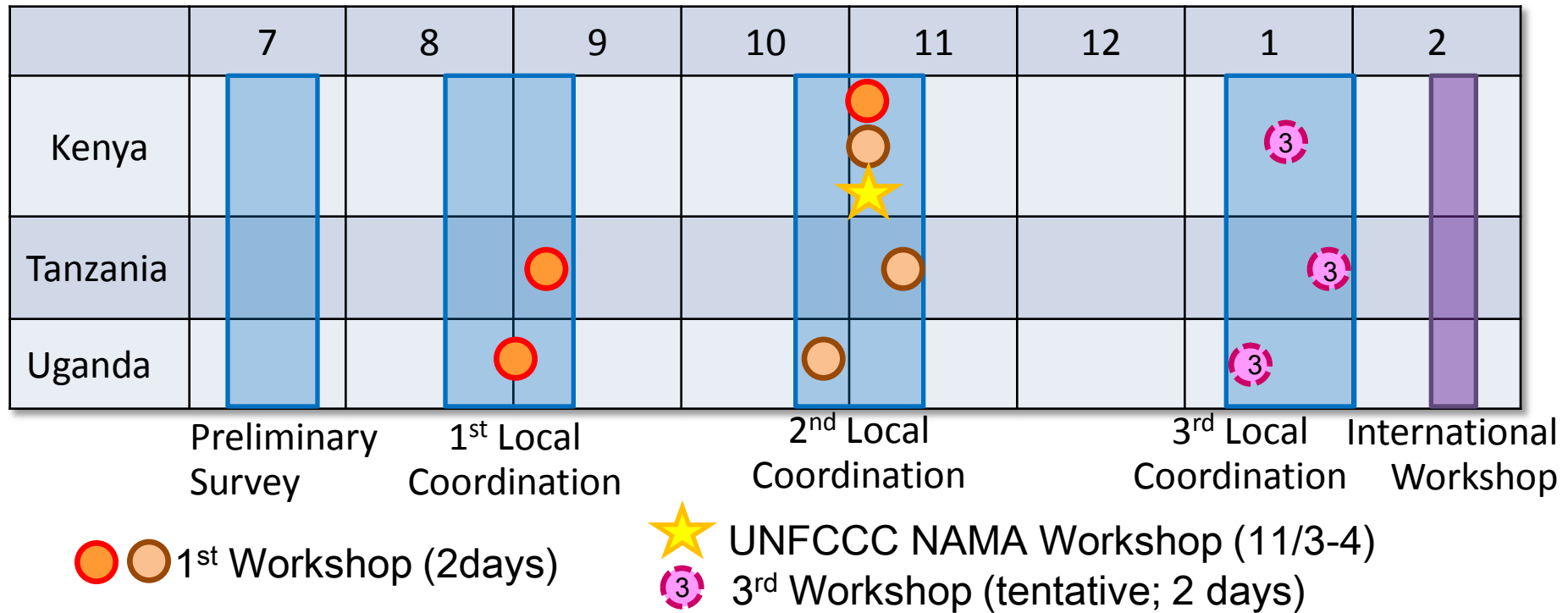


Novotel Accra City Center, Ghana (9/14-15)



Direction de l'environnement et des établissements Classés (DEEC), Senegal (9/21-22)

Project Status and Schedule – Group 2 (Kenya, Tanzania, Uganda)



UNFCCC NAMA Workshop, UNEPHQ, Kenya (11/3)

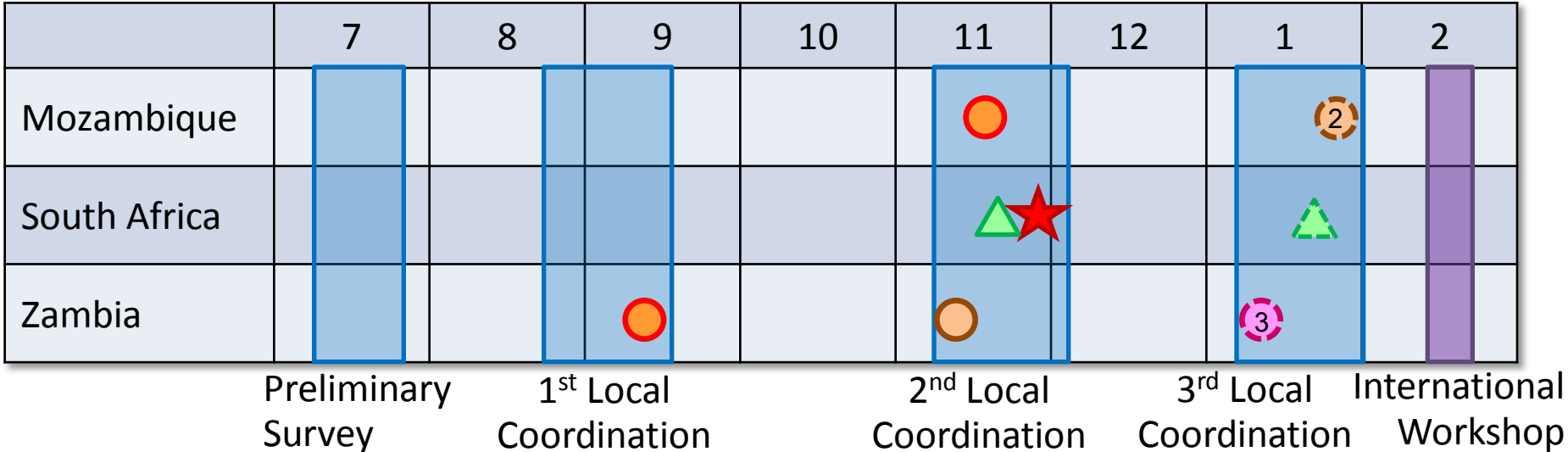




Hotel Silver Springs, Uganda (9/7)






Protea Hotel, Tanzania (9/1)



Project Status and Schedule – Group 3 (Mozambique, South Africa, Zambia)





1st & 2nd Workshop (1–2 days)



2nd & 3rd Workshop (tentative; 1–2 days)


COP 17 Side Event (11/29)


Presentation (1 day, tentative; 1 day )



Department of Energy, Zambia (9/15)



Hotel Girassol, Mozambique (11/15)



World Bank, Zambia (9/13)

Project Status and Schedule – Group 4 (DRC, Egypt, Ethiopia, Nigeria)

	8	9	10	11	12	1	2
DRC							
Egypt							
Ethiopia							
Nigeria							

Preliminary Survey

1st Local
Coordination

2nd Local
Coordination International
Workshop

 1st Workshop (2 days)

  1st & 2nd Workshop (tentative; 2 days)



Ministry of State for
Environmental Affairs, Egypt (9/7)



Sultani Hotel, DRC (11/10)



EPA (Environmental Protection Authority),
Ethiopia (11/3)

Steps to Model MRV Exercise

Step 1

1. Importance of MRV

- Issues of MRV for CDM
- MRV for Crediting
- MRV for continuous process improvement (KAIZEN)

Step 2

2. Opportunities for GHG emission reductions

- Potential Programmes / Projects List

Step 3

3. Model MRV Exercise

- MRV for on-going Programmes / Project
- Identification of potential verification agency

Step 1: Importance of MRV

A. Issues of MRV for CDM

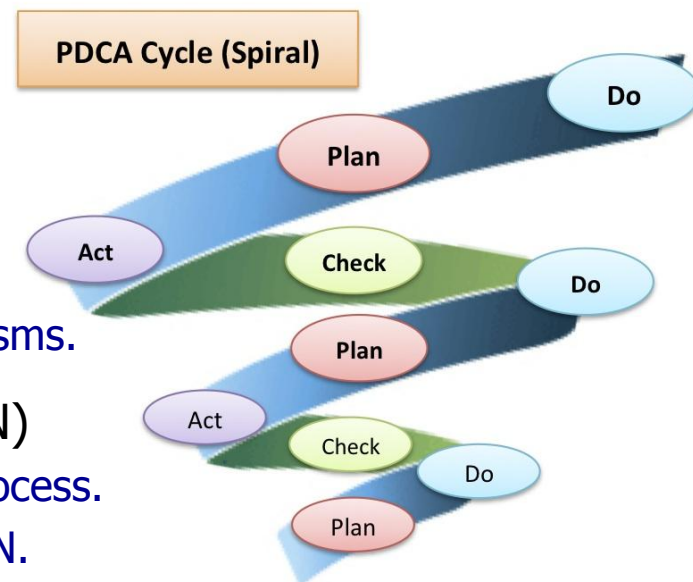
- ❖ Compliance with stringent rules / guidelines
- ❖ Time-consuming and cost prohibitive process etc.

B. MRV for Carbon Crediting

- ❖ MRV is an essential element for any crediting mechanisms.

C. MRV for continuous process improvement (KAIZEN)

- ❖ MRV can be utilized to improve the implementation process.
- ❖ PDCA (Plan-Do-Check-Act) cycle is essential for KAIZEN.



Step 2: Opportunities for GHG emission reductions

[1] Potential NAMA project/programme list (NAMA: Nationally Appropriate Mitigation Action)

What is NAMA?

- ❖ Domestic and voluntary mitigation actions for SD (Sustainable Development) by developing countries
- ❖ Government-initiated policies/measures/programmes/projects for SD
- ❖ MRV system is required

Why NAMA project / programme?

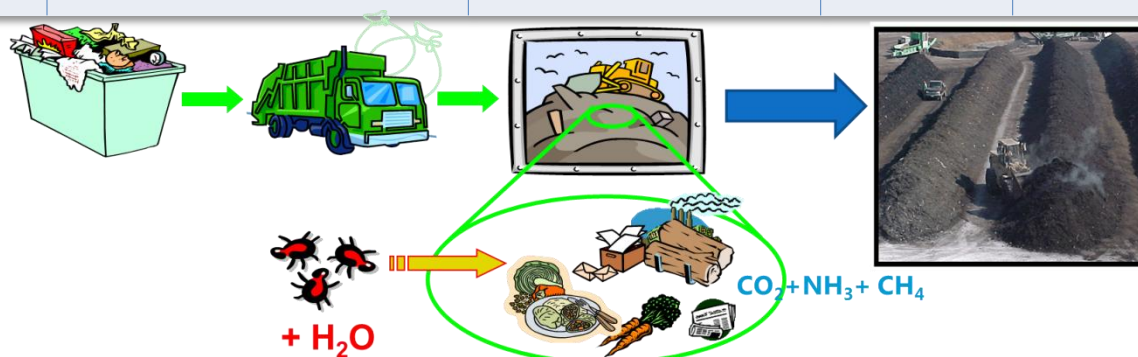
- ❖ Documents and process for NAMA MRV can be simpler than conventional CDM.
 - Good exercise to practice entire MRV process for the people who have never experienced.
- ❖ Since NAMA can be a project as well as policy measures and programme, there are many opportunities for a model project or program.
- ❖ This exercise will be a good opportunity to revise existing
 1. Policy measures and programs
 2. Management system of each measure
 3. Reporting/auditing scheme or procedure
- ❖ NAMA can be easier to register than CDM.

Step 2: Opportunities for GHG emission reductions (cont'd)

[1] Potential NAMA project/programme list (cont'd)

Examples of Workshop Results – Zambia & Egypt

SECTOR	OBJECTIVES	TARGET ENTITY	APPROPRIATE NAMAs	DESCRIPTION	CATEGORI-ZATION	HOW TO CALCULATE EMISSION REDUCTION	MONITORING INDICATORS
Waste	3R promotion	Local govt.	Policies formulation on waste managemnet	Segregation, information dissemination, efficient collection systems, 3Rs including subsidies.	existing	$(RE_{meth} - PE_{meth}) * (Quantity\ of\ waste) - LE$	Quantities of waste, quantities of materials recycled, No. of jobs created
		ZEMA	Regulate waste management collect, transport and recycle		existing		
		PPIs	segregation, campaign, efficient collection systems, subsidies.		existing		
	Solid Waste Treatment	local authority	biogas digesters, composting facilities	Segregation, information dissemination, efficient collection systems, 3Rs including subsidies/incentives, regulation.	new	$(RE_{meth} - PE_{meth}) * (Quantity\ of\ waste) - LE$	Quantities of waste, quantities of materials recycled, No. of jobs created
		ZEMA	Regulate waste treatment		planned		
		PPIs	biogas digesters, composting facilities		existing		
					planned		



Step 2: Opportunities for GHG emission reductions (cont'd)

[2] Potential Private Sector project list

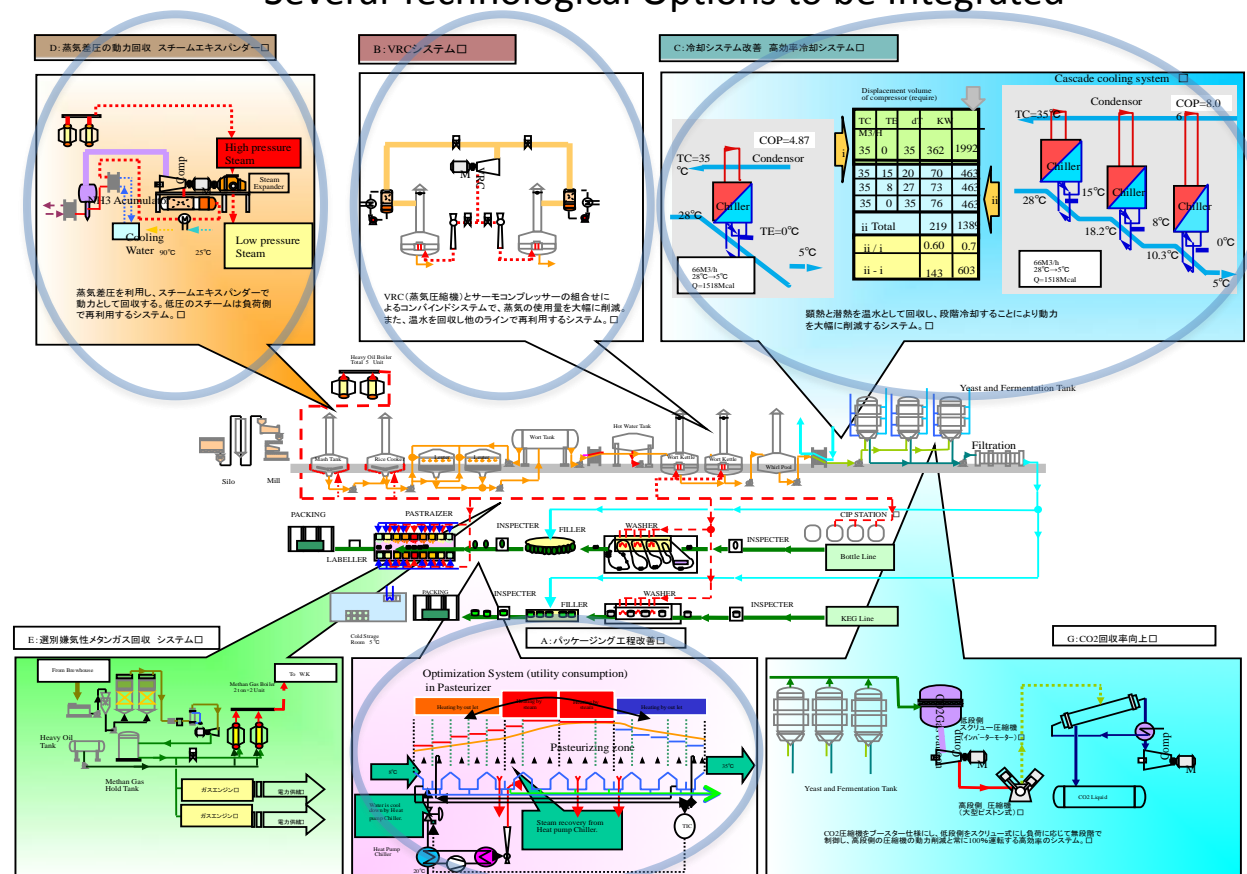
Currently under preparation based on literature search and interviews with local private companies and NGOs

Examples of Private Sector Project:

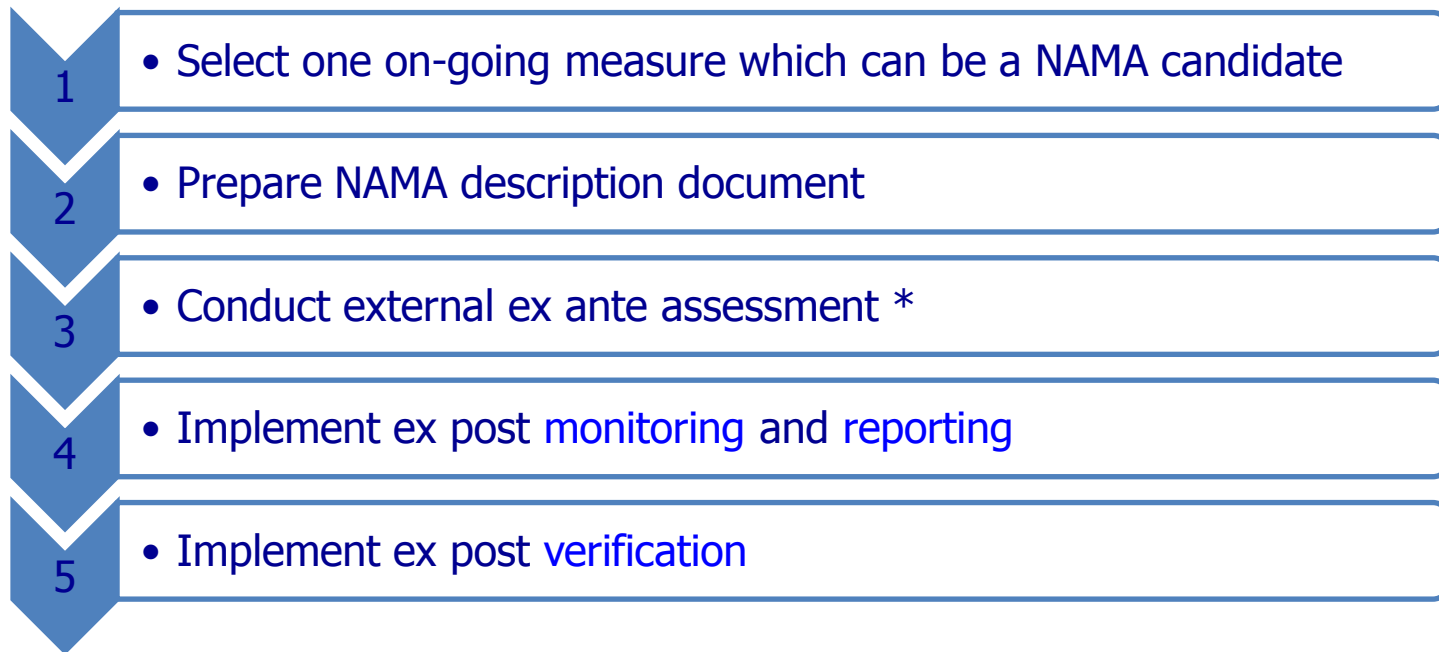
Feasibility study for a **Beer Factory of SAB Miller** in **Durban, South Africa** (Prospecton)

Several Technological Options to be Integrated

- ❖ Energy analysis simulator for analyzing/auditing current energy use and for optimal solution
- ❖ Integrated energy saving solution is provided
- ❖ > 30–40% fuel saving to be the most energy efficient factory in the world
- ❖ Proven technologies already applied to Japanese major beer factories
- ❖ Potential to expand to other SAB Miller factories all over the world



Step 3: Model NAMA MRV Exercise

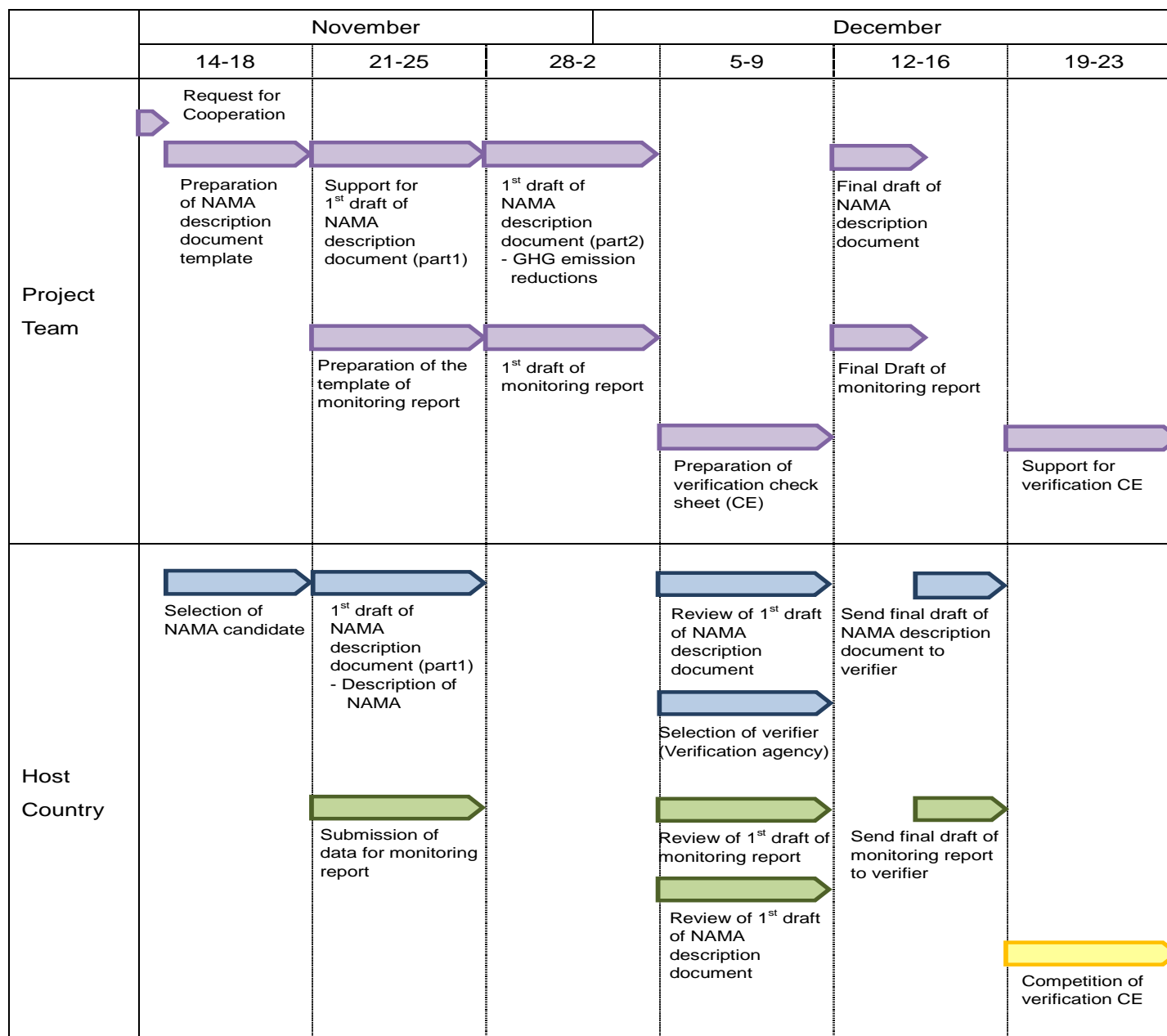


*[Note] This process may be needed for general NAMA MRV, but to be excluded in the model MRV exercise.

Stakeholders for the model NAMA exercise

- ❖ Project/program designer (line ministry responsible for policy design etc.)
- ❖ Project/program implementer (subordinate line ministry, public cooperation, etc.)
- ❖ NAMA description document writer (consultant, professor, etc.)
- ❖ Verifier (EIA execution agency, Auditor for environmental regulations, etc.)

Schedule of Model NAMA MRV Exercise



Findings

❖ Constraints to implement GHG emission reduction projects including MRV in Africa

- Limited financial support, knowledge, capacity in governmental agencies
- Limited participation of private companies
- Lack of coordination among various governmental agencies and donors
- Relatively small scale projects

❖ Opportunities for GHG emission reduction projects, MRV, and new mechanisms in Africa

- Strong interests for future carbon crediting mechanism
- Existence of various donors to support climate mitigation projects
- Potential for coordination with NAMAs
- Cooperation with research institute (e.g. university)

❖ Issues need to be considered to establish new mechanisms

- Co-existence with Kyoto Mechanisms
- Coordination with existing donors
- Sustainable technology transfer



Edurando Mondale University,
Mozambique (8/29)

Comments from Target Countries

- ❖ CDM methodologies do not reflect each country's characteristics. Hopefully new mechanism will provide an opportunity to apply methodologies based on the local realities.
- ❖ Even though potential flexibility and simplicity in new mechanism are attractive, environmental integrity also needs to be considered. Well-balanced mechanism is desirable.
- ❖ Since contribution to technology transfer by current CDM is limited, new mechanism needs to promote effective technology transfer which can root local industry.
- ❖ BOCM seems to have a potential to benefit for wide range of projects in terms of scale, type, etc.
- ❖ As monitoring costs in rural area can be very expensive if specialists need to be sent from the city all the time, capacity building for the local community to conduct monitoring is very important.
- ❖ Importance of monitoring and verification process is often ignored. Even though there are more than 20 CDM registered projects in South Africa, only 8 projects generate credits due to inappropriate monitoring. Capacity building for MRV is critical for any kinds of scheme.

Thank you !

