



**International Partnership
on Mitigation and MRV**

Knowledge Product

Institutional Arrangements for MRV





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Institutional Arrangements for MRV

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See more information at: www.mitigationpartnership.net

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Introduction

Many countries are currently grappling with the challenge of developing and implementing an appropriate national system that meets their specific needs for measurement, reporting and verification (MRV). While some institutional mechanisms for measurement and evaluation may often exist in countries (in the form of policy tracking, national GHG inventories and air quality measurement systems) these systems are not sufficient for responding to newly emerging MRV responsibilities. As such, countries are faced with whether to adapt and expand existing institutional systems and mandates to also reflect MRV needs or to create a new set of arrangements exclusively for MRV.

Developing a robust institutional framework that encompasses the relevant institutional entities as well as the necessary staff, systems and processes, is essential for an effective MRV system. However, the approaches that countries have taken vary widely, ranging from top-down integrated MRV systems that cover multiple reporting needs to bottom up systems that focus on a specific policy, action, or region. This paper explores some of the differing approaches countries have taken in designing their institutional arrangements for MRV.



1 Institutional Arrangements for MRV: Drivers and Types of MRV

A country's institutional arrangements for MRV are reflective of the specific drivers and types of MRV that have been prioritized based on their national context. Countries are embarking on MRV activities due to a range of drivers, including the design and evaluation of policies and actions, to ensure transparency in reporting of the GHG mitigation effects, to facilitate support and enable financing, and for the quantification of mitigation actions in terms of emissions reductions and other non-GHG impacts.

Domestically, countries may want to track a number of activities including national targets, policies or projects as highlighted in Table 1.

Table 1: What may countries want to track domestically?

Target	e.g. a national goal such as reduction of GHG emissions by 30% compared to BAU
Policy	e.g. a cap-and-trade program
Project	e.g. project to deploy 500MW of wind capacity in a country
Sub-national inventory	e.g. municipal inventory, state inventory
Corporate Level	All emissions within boundary of a company
Facility Level	Similar to corporate level but just at one, usually high-emitting, operating unit
Product Level	Carbon footprint of one product, cradle to grave

In addition to these domestic drivers, MRV systems may also be adapted to meet international reporting requirements such as national GHG inventories, biennial update reports (BURs) and the MRV of nationally appropriate mitigation actions (NAMAs) as outlined in Table 2.



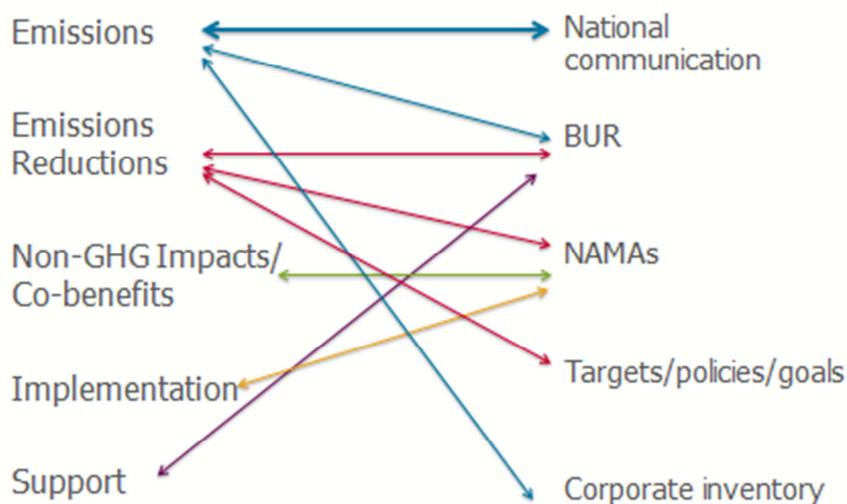
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Table 2: International Reporting Requirements

National Communications	<ul style="list-style-type: none"> • Every four years • Includes a national inventory component • UNFCCC and IPCC guidelines
Biennial Update Reports	<ul style="list-style-type: none"> • First round by Dec. 2014 • National GHG inventory: <ul style="list-style-type: none"> • UNFCCC and IPCC guidelines • Within 4 years of calendar year • Mitigation actions in tabular format <ul style="list-style-type: none"> • Goals and progress indicators • Assumptions and methodologies • Results achieved, estimated reductions • Finance, technology and capacity building <ul style="list-style-type: none"> • Constraints and gaps • Support received
MRV of NAMAs	<ul style="list-style-type: none"> • Some requirements specified under BUR • No guidelines or methodologies developed by UNFCCC- however some developed by organizations including WRI's Mitigation Accounting Guidance

Within these various drivers, the actual type of data and information being monitored can vary widely. Countries may be looking to track anything from GHG emissions, emission reductions, non-GHG impacts and co-benefits, the implementation of policies and activities and the support received as evident in Figure 1.

Figure 1: What is being tracked?





2 Commonalities and Differences in Institutional Arrangements

While there is no single set of institutional arrangements that can be considered “best practice” as of now, there are a number of commonalities as well as differences in how countries have chosen to approach institutional arrangements as highlighted in the comparison of institutional arrangements for three African countries in Table 3. Broadly speaking, some of these elements include:

Commonalities:

1. Coordinating body/ Lead institution

- In most cases countries have designated a lead institution, often the Ministry of Environment or equivalent to coordinate the MRV system and direct the activities of other actors in this area.

2. Inter-ministerial body/ Steering Committee

- This body promotes coordination across key stakeholders and also ensures input into other national processes and plans.

3. Technical Coordinator(s)

- The technical coordinator, which may take the form of a team or individual, often sits within the lead institution and is responsible for the technical outputs of the MRV system. Technical coordinators may also be designated for each of the sectoral working groups

4. Sectoral Working Groups

- Countries also often designate separate working groups to conduct MRV activities within a specific sector. These teams comprise a combination of governmental institutes, research organizations and other public and private sector bodies.

Differences:

1. Scope of the System

- The actual scope of the MRV system varies widely from country to country. While some countries have opted to develop integrated national systems that cover both domestic and international reporting requirements, other countries have taken a more bottom-up approach to MRV with the national GHG inventory remaining the only top-down, national level component to the system.



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2. Institution for Verification

- Countries have also taken very different approaches to verification, varying from a government body to independent third party verifiers.

3. Institutional Arrangements for Data Management

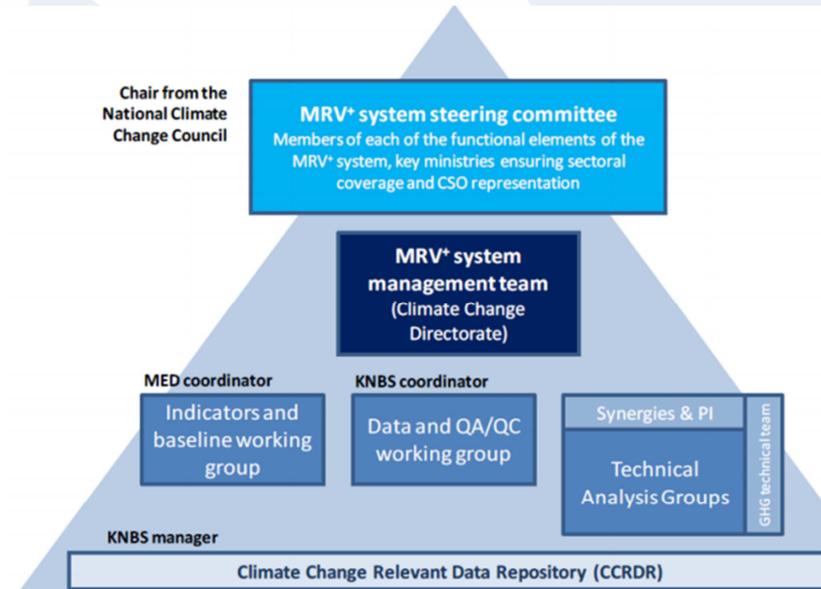
- Some countries have developed a centralized system for data management with all information centralized within the lead institution for compilation and analysis. Where MRV systems are bottom-up, much of the data management, collection and storage takes place in a more decentralized way.

4. Compliance Body

- As with the institution for verification, compliance bodies can also range from a government entity to third party enforcement mechanisms.

Kenya's proposed MRV+ governance structure, as illustrated in the figure below, includes many of the elements highlighted above.

Figure 2: Kenya's MRV+ Governance Structure¹



¹ Source: National Climate Change Action Plan [www.kccap.info]



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Table 3: Comparison of Institutional Arrangements in Three African Countries ²

	Kenya	Mali	Ghana
Is there a national climate policy/ LED?	Yes: National Climate change Strategy and Action Plan	Yes: National Climate Change Policy and Strategy and Action Plan	Yes: Draft National Climate Change Policy
GHG Inventories Submitted	Preparing 2nd national communication.	Have submitted two national communications.	Preparing 3rd national communication.
What is the Scope of the MRV system?	Integrated MRV system that covers all areas including national policy, NAMAs, national communication, BURS. System also reports on progress towards meeting national goals and socio-economic benefits.	In the process of designing a system. The existing one covers CDM and national inventory.	In the process of designing a system that covers inventory, BURs, NAMAs and policy tracking. Has a design for NAMA but not yet implemented. BUR will use the same system as broader NC system
Objective	To track actions proposed in action plan with added benefit of contributing to UNFCCC reporting.	To track national climate policy.	To track national policy and meet UNFCCC reporting requirements.
Status	Proposed- to be implemented piecemeal. Will pilot different levels for	Proposed- technical approval, awaiting political approval.	Proposed. NC system has been accepted and being implemented with

² Based on interviews with government MRV leads from Kenya, Mali and Ghana



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What is being measured?:	different sectors.		the NC3 preparation.	
	GHG	Yes	Yes	Yes
	Reductions	Yes	Yes	Yes
	Co-benefits	Yes	No	Yes
Support	Yes- MRV of finance	Yes	Yes	
Implementation	Yes-tracking tool to track stages of implementation of actions in action plan.	No	Yes	
Structure: Interministerial Committee	Yes- National Climate Change Council. Representatives from all ministries and chaired by cabinet office in the office of president.	Yes- National Council on Environment which covers climate change.	Yes- National Climate Change Committee.	
Coordinating body/ lead institution	Cabinet office provides secretariat support. Climate Change Council has been given a convening mandate at top policy level.	Environment and Sustainable Development Agency	Environmental Protection Agency (but some approval has to go through ministry).	
Technical coordinator	Ministry of Environment- convenes the sectoral working groups.	Environment and Sustainable Development Agency	Environmental Protection Agency (Energy resources and climate change unit). For The ministry handles CDM technical aspects whilst the Agency feeds into it	



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<p>Working groups</p>	<p>5 sectoral working groups for each sector.</p>	<p>Thematic groups covering adaptation, mitigation, technology transfer, finance. Sub-groups within mitigation.</p>	<p>6 thematic teams each led by different bodies.</p>
<p>Other key structures/bodies</p>	<p>National task force created to help coordinate the implementation of the action plan at a lower level than the Secretariat.</p>	<p>Meteorological service (Mali meteo) and National Direction of Energy are also key stakeholders.</p>	<p>Ministry of Environment, science and Innovation, Ghana Meteorological Agency</p>
<p>Key Successes</p>	<ol style="list-style-type: none"> 1. Bringing in other ministries like finance and planning 2. Having action plan endorsed by the cabinet. 3. Putting together multistakeholder taskforce to promote ownership across different stakeholders. 	<ol style="list-style-type: none"> 1. Creating a multistakeholder group. 2. Setting up climate fund. 3. Strategy on green economy. 	<ol style="list-style-type: none"> 1. For 3rd national communication have created a new institutional arrangement that is more coordinated at all levels. 2. Formed teams to work on sectors-with clear mandates and timelines. 3. Developed a NAMA investment guide that spells out different NAMAs and benefits, for both public and private use as well as the process that a NAMA has to go through to be approved.



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<p>Key Challenges</p>	<ol style="list-style-type: none"> 1. Funding. 2. Convening different stakeholders and getting them to agree to a national agenda. 3. In need of standardized information going to stakeholders from both international and national sources. 	<ol style="list-style-type: none"> 1. Getting high level endorsement from authorities. 	<ol style="list-style-type: none"> 1. Need a way for core finance rather than activity specific since there is so much overlap between activities such as national communications, BURS, MRV etc. 2. Getting MOUs with public institutions- and enforcement of agreements. 3. Inventory QA/QC system that can be adhered to.
<p>Lessons learned</p>	<ol style="list-style-type: none"> 1. It is possible to move processes ahead- e.g. getting buy in. Don't give up! 2. It is possible to get funding but you need to have a good foundation to demonstrate. 3. To address climate change you need every stakeholder to play their role. 4. Institutionalization of the process is important to ensure sustainability. These are not traditional government ministries but multistakeholder. 	<p>Still in the early stages- no concrete lessons to report.</p>	<ol style="list-style-type: none"> 1. Need to clearly define institutional structure and make it workable. Whatever is proposed should involve all stakeholders. Should not rely on individuals but institutionalize process through teams. 2. Important to set up a registry in order to store and archive all information.



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5. Should not always look internationally for financial support- there are often domestic options that are not utilized.



3 Examples of Institutional Approaches

Countries have taken various approaches to designing institutional arrangements for MRV. For example some countries such as Kenya and Ethiopia have opted for a top-down approach, designing an integrated MRV system that covers multiple reporting needs including NAMAs, national inventories and policy tracking. Other countries have also prioritized the strengthening of the national inventory system in order to lay the foundation for any nationwide MRV. Alternatively, some countries have taken a more bottom up approach to MRV with targeted systems for either a specific region or action.

Table 4: Top-down and Bottom-up Approaches

	Approach	Examples
Top Down	Integrated national MRV system	Kenya, Ethiopia, South Africa
	National GHG Inventory System	Most
Bottom Up	MRV system developed to track specific policies/NAMAs	Chile, Tunisia, Egypt
	Separate market based/corporate MRV system to track emissions from companies.	Thailand, Brazil, South Africa, India
	Municipal MRV system	Brazil (Rio de Janeiro), China (multiple municipalities)

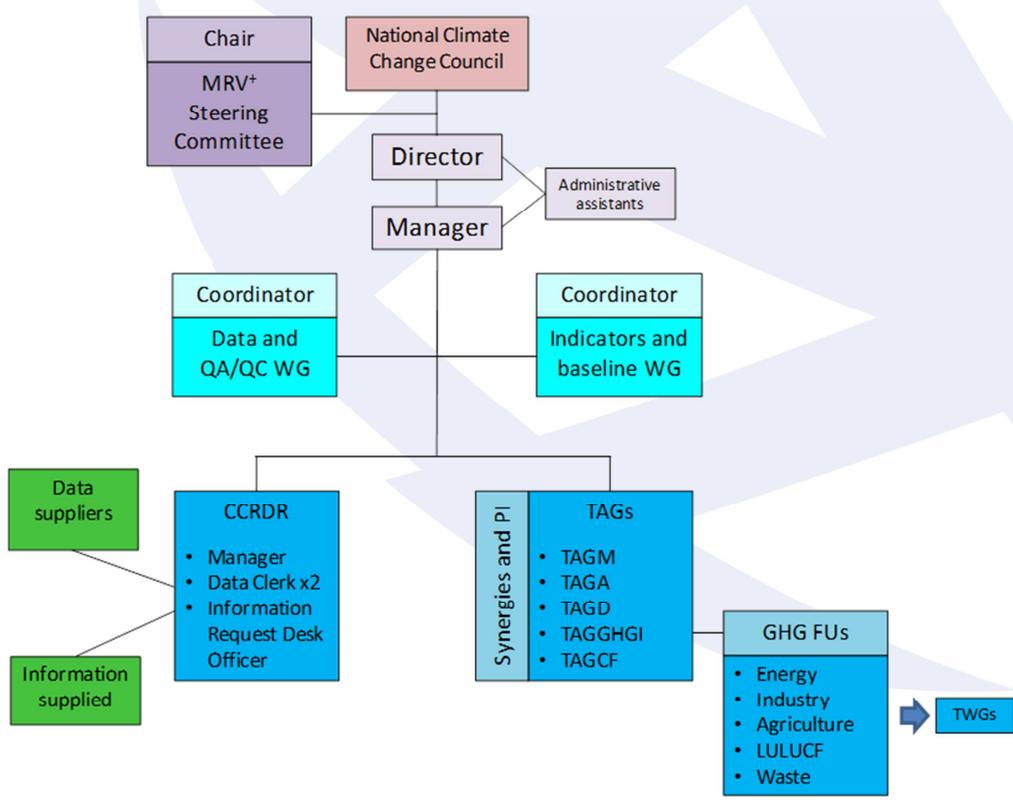
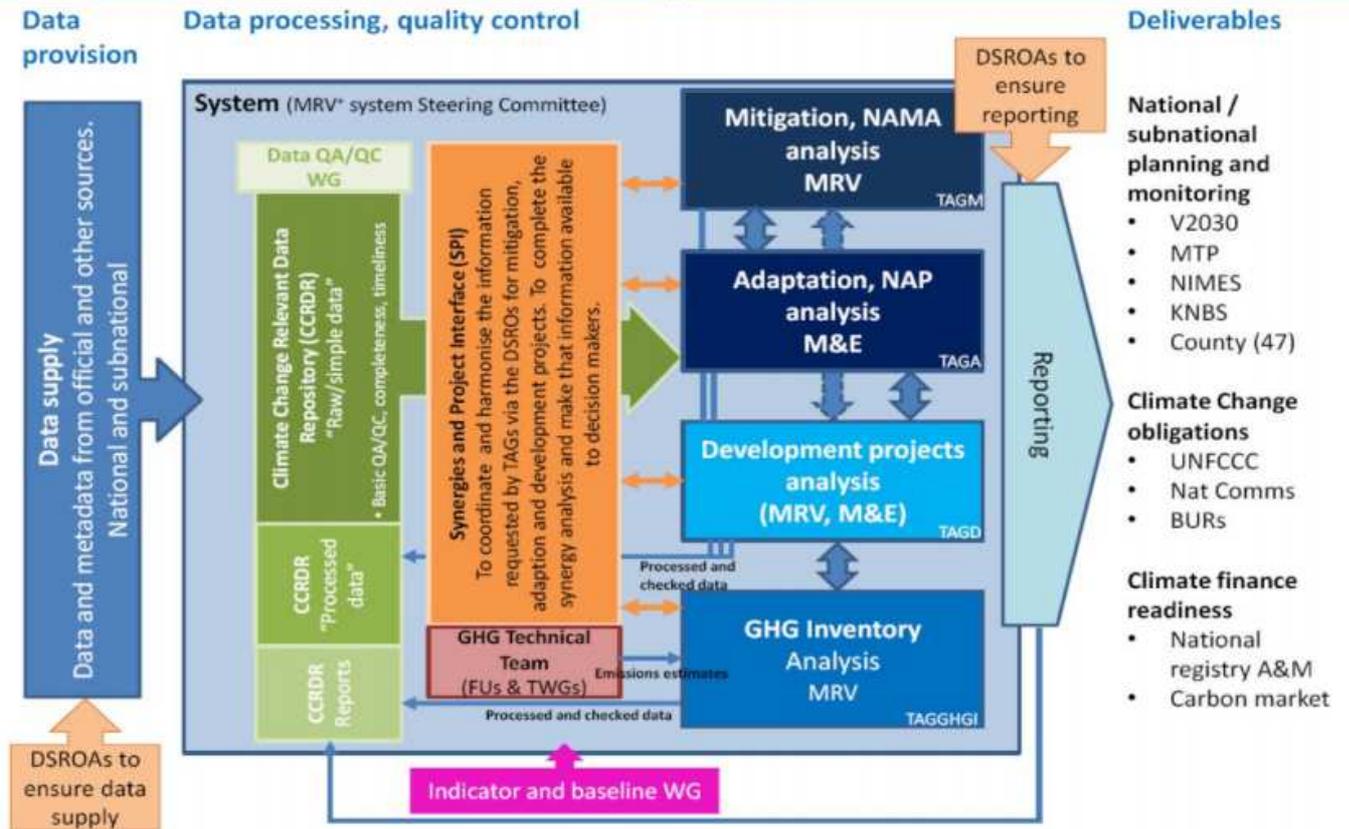
Example 1: Institutional Arrangements for Integrated National MRV System (Kenya)³

Kenya's system covers areas including national/subnational planning and monitoring, international reporting obligations and climate finance readiness.

³ Source: National Climate Change Action Plan [www.kccap.info]



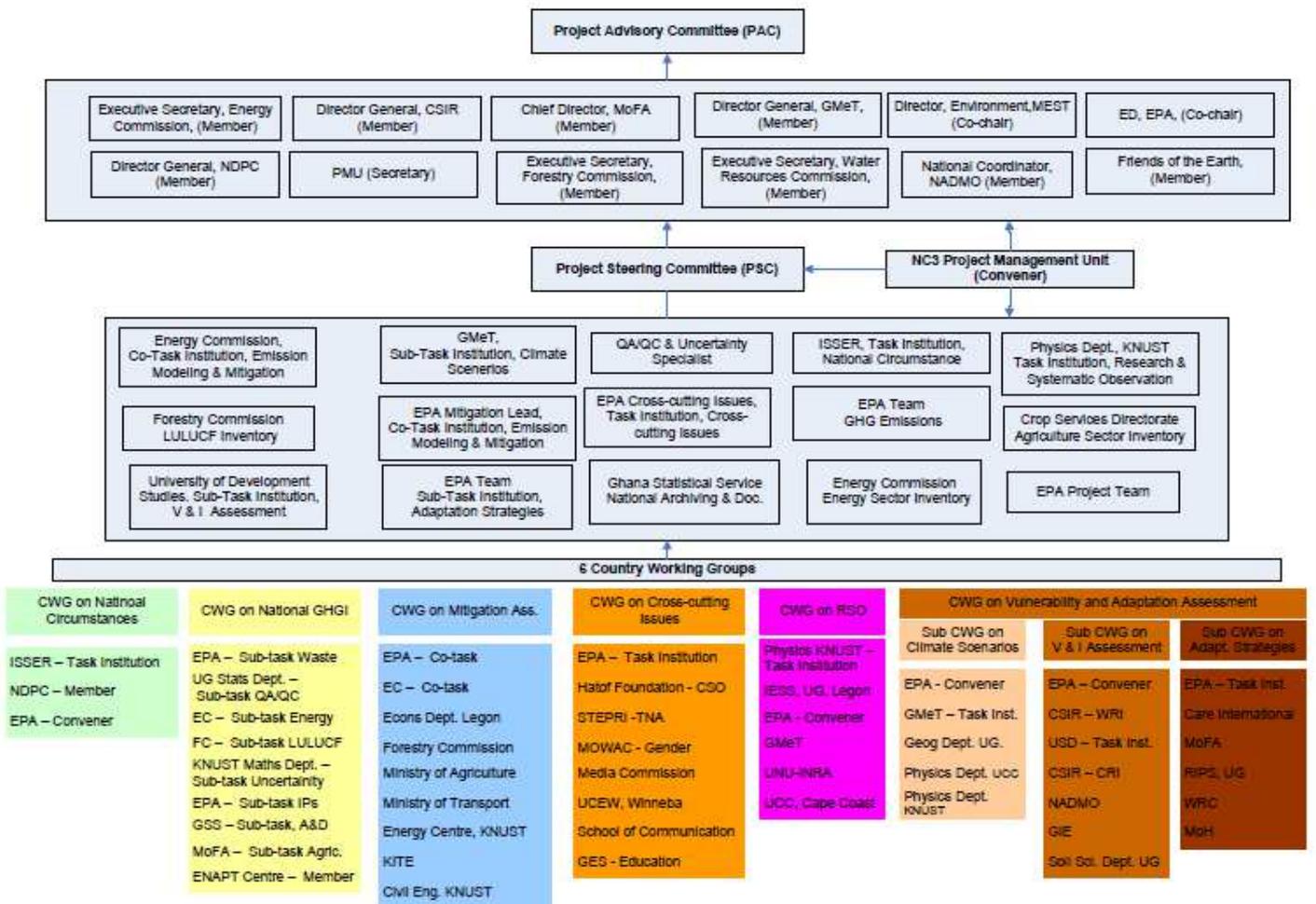
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Example 2: Institutional Arrangements for National Communication (Ghana)⁴



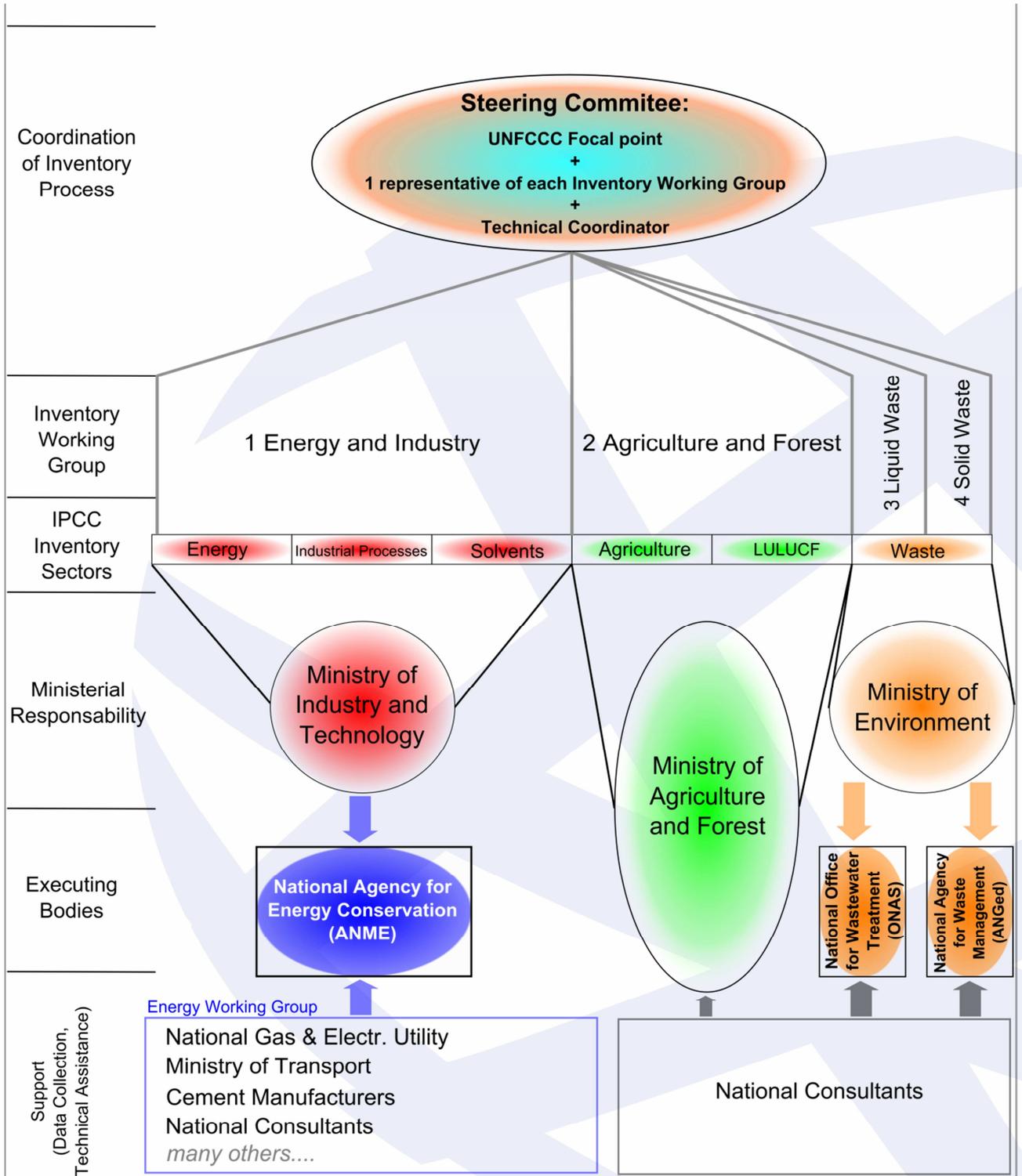
Example 3: Institutional Arrangements for National Inventory System (Tunisia)⁵

⁴ Source: Ghana Environmental Protection Agency

⁵ Source: Tunisia Ministry of Environment and Sustainable Development



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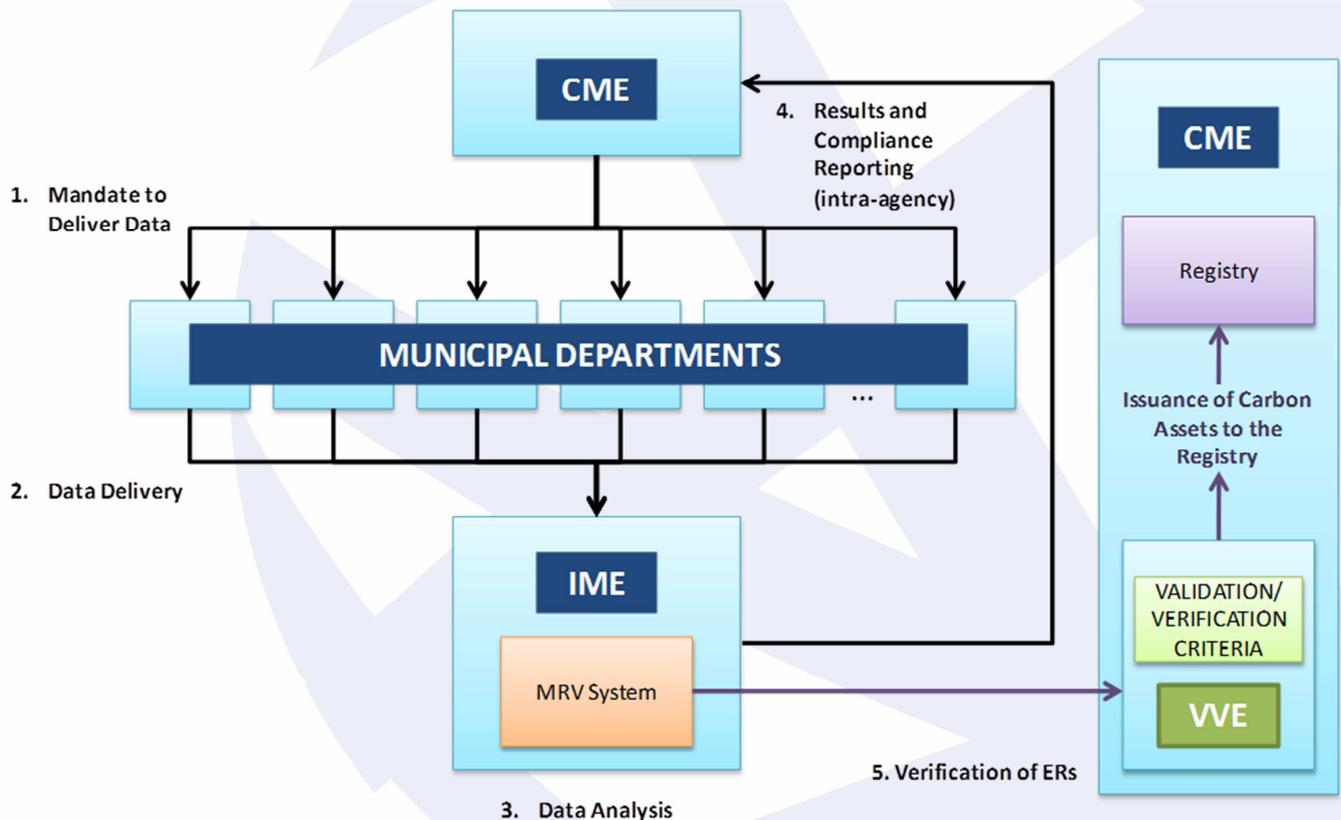




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Example 4: Institutional Arrangements for Municipal MRV System (Rio de Janeiro, Brazil)⁶

The city of Rio de Janeiro passed a municipal Climate Change Law in 2011 requiring a full greenhouse inventory to be conducted every four years as well as voluntary GHG reduction targets. In order to demonstrate progress towards meeting these targets bottom up mitigation accounting is carried out and five stage Intervention MRV Process is used covering 1) top-down regulatory mandate to deliver data; 2) data delivery; 3) data analysis; 4) reporting; and 5) verification of ERs. The Intervention MRV Process ends with the issuance of carbon assets to the Registry.



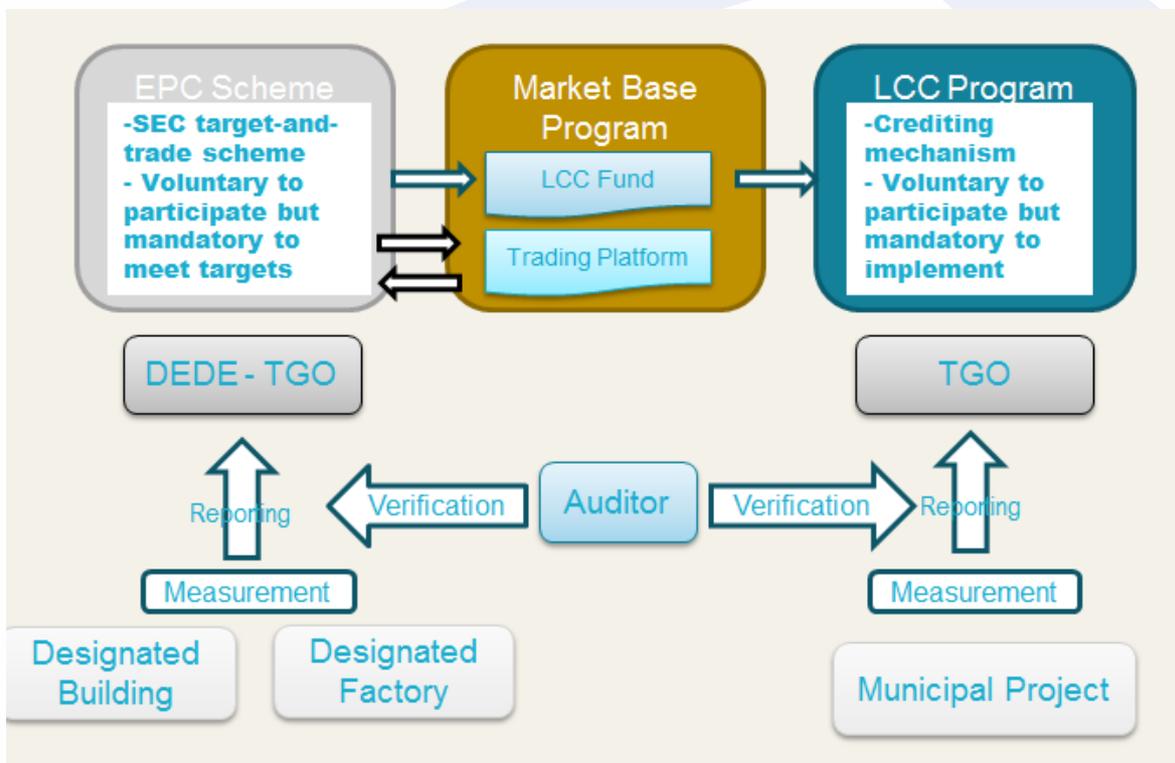
⁶Source: Taken from poster presented by Mayra Rocha (DNV) at Energy Research Centre/WRI Workshop: Sharing international experiences of domestic MRV (5-6th of September, 2013; Cape Town, South Africa)



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Example 5: Institutional Arrangements for Proposed Market Mechanisms (Thailand)⁷

Thailand is designing market mechanisms in order to reduce energy consumption and emissions, with the eventual objective of moving towards the establishment of a mandatory emission trading scheme in the future.



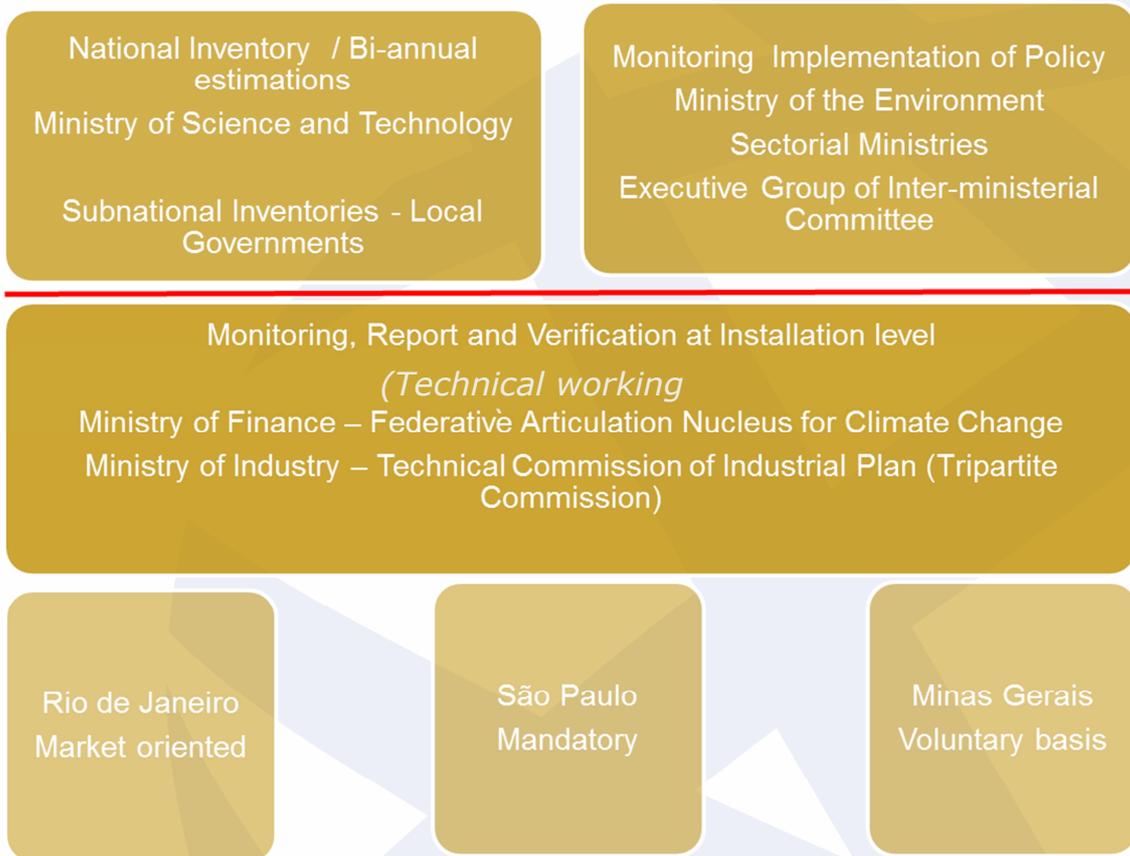
⁷ Source: Taken from poster presented by Chessada Sakulku (TGO) at Energy Research Centre/WRI Workshop: Sharing international experiences of domestic MRV (5-6th of September, 2013; Cape Town, South Africa)



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Example 6: Institutional Arrangements for multiple MRV needs (Brazil)⁸

In practice many countries actually have a composite of MRV systems resulting in a need for harmonization across governance levels as is the case in Brazil.



⁸ Source: Taken from poster presented by Daniel Couto Silva (Brazil Ministry of Environment) at Energy Research Centre/WRI Workshop: Sharing international experiences of domestic MRV (5-6th of September, 2013; Cape Town, South Africa)



4 Conclusion – Recommendations for Improving Institutional Capacity

As highlighted by the very different examples, there is no one-size fits all set of institutional arrangements. However there are some common principles for improving institutional capacity that have been emphasized by country experiences. This includes the need for institutional mandates and clear division of roles, improved institutional coordination mechanisms and sustainable human resource arrangements.

Institutional Mandates and Clarity of Roles

Countries can benefit from:

- Clearly designated roles and responsibilities for managing and monitoring GHG emissions both within lead institution and other entities.
- An institution explicitly charged with leading the process.
- Mandates to direct institutions and sectors to report on their emissions.
 - Without mandates the government will encounter difficulties in allocating resources to these bodies, including financial and personnel for the tracking of emissions.
- Legal frameworks as MRV system develops.

Institutional Coordination Mechanisms

Countries can benefit from:

- Central institution mandated with compiling data and information and ensuring coordination across relevant ministries.
- Clear and efficient process for sharing data and information across institutions and governance levels.
- Systematic procedure for integrating MRV into national policy tracking systems.
- Intergovernmental bodies can play an important role in improving efficiency and information sharing.



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- Integrated data management systems/registry.
- Steering group to coordinate donor activities.

Human Resource Capacity

Countries can benefit from:

- Adequate numbers of staff dedicated exclusively to MRV activities.
- Permanent staff which requires a move from project based model for MRV/inventories. Sustainable funding for MRV can help to minimize staff-turnover.
- Trained staff at national, sub-national and sectoral levels. Staff capacity building can include training on:
 - The design, implementation, and operation of MRV systems.
 - Data collection and management.
 - Accounting methodologies.
- Institutional mechanism for sustained training and support (as opposed to one-off activities).



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5 Additional Resources

Resource Websites with relevant material on a variety of subtopics, only a few of which are repeated here (*frequently updated*):

- Resources available from the International Partnership on Mitigation and MRV:
<http://www.mitigationpartnership.net/resources>
- Resources available from the NAMA Partnership:
[http://www.namapartnership.org/PUBLICATION%20DATABASE/Measuring,%20Reporting%20and%20Verifying%20\(MRV\).aspx](http://www.namapartnership.org/PUBLICATION%20DATABASE/Measuring,%20Reporting%20and%20Verifying%20(MRV).aspx)