Initiative for Climate Action Transparency - ICAT -

NEEDS AND GAP ASSESSMENT REPORT

Measuring, Reporting and Verification (MRV) of the NDC Implementation for fhe Energy and Transport Sectors in Kenya

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Deliverable #1

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ACRONYMS & ABBREVIATIONS

BUR	Biennial Update Report
CCD	Climate Change Directorate
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
COP	Conference of the Parties
GHG	Greenhouse Gas
GoK	Government of Kenya
INC	Initial National Communication
ICAT	Initiative for Climate Action Transparency
NPBMF	National Performance Benefit Measurement Framework
NSAs	Non-state actors
MDAs	Ministries, Departments and Agencies
IPCC	Intergovernmental Panel on Climate Change
ITMOs	Internationally Transferred Mitigation Outcomes
KPIs	Key Performance Indicators
LULUCF	Land Use, Land Use Change and Forestry
M & E	Monitoring and Evaluation
MEF	Ministry of Environment and Forestry
MoU	Memorandum of Understanding
MRV	Measurement, Reporting and Verification
MTP	Medium-Term Plan
NC	National Communication
NCCAP	National Climate Change Action Plan
NCCRS	National Climate Change Response Strategy
NDC	Nationally Determined Contribution
QA/QC	Quality Assurance/Quality Control
R-PP	REDD+ Readiness Plan
SNC	Second National Communication
StARCK+	Strengthening Adaptation and Resilience to Climate Change in Kenya Plus
TNT	The National Treasury
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

CHAPTER 1: INTRODUCTION

BACKGROUND AND CONTEXT

Since July 2008 when Kenya launched its Vision 20301, there has been an increasing acknowledgement that the impacts of climate change offer one of the greatest threats to achieve the country's development goals. As a result, Kenya has made major steps in policy, planning and development to address climate change. These steps include:

1. The formulation of Kenya's National Climate Change Response Strategy (NCCRS) in 2010, which recognised the impact of climate change on Kenya's development.
2. The preparation of the National Climate Change Action Plan (NCCAP) 2013-2017 that was launched in 2013 and updated for the period 2018-2022 in 2018.
3. The preparation of Kenya's National Adaptation Plan (NAP) 2015-2030 where the key adaptation actions are identified and prioritised for implementation.
4. The passing of the Climate Change Act of 2016 (the Act)
5. Establishment of the Climate Change Directorate within the Ministry of Environment and Forestry (MEF) in 2016 and a Climate Finance Unit in the National Treasury in 2013
6. Preparation and communication of Kenya's Nationally Determined Contribution (NDC) in 2016 and its subsequent sectoral analysis in 2017.
7. The preparation of Kenya's Second National Climate Change Action Plan (NCCAP) 2018-2022.

On 12th December 2015, Parties to the UNFCCC reached a landmark agreement (the Paris Agreement) in Paris with the central aim of strengthening the global response to the threat of climate change by keeping a global temperature rise to well below 2^0C above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5^0C. The Paris Agreement charted a new course in the global climate effort by bringing all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects. With enhanced support to assist developing countries, such as Kenya, the Agreement aims to make finance flows consistent with a low carbon development and climate-resilient pathway. To reach these ambitious goals, appropriate mobilization and provision of financial resources, a new technology framework and enhanced capacity-building is to be put in place, thus supporting action by developing countries in line with their own national objectives. To build mutual trust and confidence and promote effective implementation, the Agreement also sets out an enhanced transparency framework for action (both mitigation and adaptation) and support (in form of finance, technology and capacity building) through a more robust transparency framework. Transparent and effective climate action needs robust means to assess the impacts of policies and actions in order to prioritize them. Under the framework, Kenya will be expected to provide information on mitigation, adaptation and support received, including:

1. National GHG inventory to enable tracking of progress on implementing and achieving the mitigation component of the NDC.
2. Information related to climate change impacts, vulnerabilities and adaptation.
3. Information on financial, technology development and transfer, and capacity building needs and support received from developed countries.

[1] The national long-term development blueprint that aims to transform Kenya into a newly industrialising, middle-income country providing a high quality of life to all its citizens by 2030

Broadly, Kenya's response to climate change at both national and global levels and its contribution to the global mitigation goal of limiting global warming was communicated to the UNFCCC in Kenya's Nationally Determined Contribution (NDC) when Kenya ratified the Paris Agreement in December 2016. The NDC puts forward Kenya's best efforts in combatting climate change, setting out the country's approach to mitigating and adapting to climate change. Kenya's NDC has emphasised enhanced resilience to climate change towards the attainment of Vision 2030, identifying priority actions drawn from the National Adaptation Plan (NAP) 215-2030.

The NDC has the following components:

4. Mitigation - 30% emissions reductions by 2030 relative to the BAU scenario of 143 MtCO2eq per annum in 2030.
1. Adaptation - enhanced resilience to climate change towards the attainment of Vision 2030.
2. Enablers-subject to international support in the form of finance, investment, technology development and transfer, and capacity building. However, Kenya did not specify which components of the NDC are conditional to international support.

Kenya's Climate Change Act, 2016 (the Act) aims to strengthen climate change governance, institutional arrangements, and mainstreaming of climate change into sectoral planning, budgeting and implementation at all levels of government. It defines roles of key players in climate actions, including those for collecting and reporting climate related data. The Act therefore provides a strong basis for addressing the requirements of the enhanced transparency framework.

The implementation of climate change action plans, strategies and policies is a requirement of the Act. The Act establishes a legal framework, which functions as the operational mechanism for NDC implementation in line with the Vision 2030.

Institutional reforms established in the Act are of special importance to enhance the coordination of climate change actions for NDC implementation. The Act mandates the Ministry of Environment and Forestry (MEF), through the Climate Change Directorate (CCD), to coordinate all climate change actions including the establishment and management of a national registry for appropriate mitigation actions by public and private entities as well as the identification of low carbon development strategies and the coordination of related measurement, reporting and verification (MRV). The Act further establishes a National Climate Change Council chaired by the President and a Kenya Climate Change Fund as enablers to climate change actions.

However, like many developing countries, Kenya does not have the tools to measure, report and verify progress on her climate commitments and actions as per the transparency clause of the Paris Agreement. Through a 1-year project entitled 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy Sector in Kenya', ICAT[2] seeks to support Kenya's efforts to establish a domestic Measuring, Reporting and Verification (MRV) system for tracking of progress with NDC implementation in the energy and transport sectors in line with the requirements of the enhanced transparency framework of the Paris Agreement. Specifically, the project aims to deliver the following results to the GoK and ICAT:

1. The assessment of needs and gap for MRV of the energy and transport sectors in Kenya.
2. Strengthening of the institutional arrangements for MRV in the energy and transport sectors.
3. Development of capacity for data management to track NDC implementation in the energy and transport sectors supported by use of the ICAT Series of Guidance, where relevant.
4. Development of a road map to ensure the sustainability of ICAT outcomes.

[2] See details on ICAT below.

UNEP DTU Partnership (UDP), one of the three implementing partners of ICAT, in collaboration with the GoK, has therefore contracted ClimateCare to support the implementation of this project in Kenya. The project will support the GoK's efforts to establish a domestic MRV/transparency system for tracking of progress with NDC implementation, focusing on the energy and transport sectors and using the experience in these sectors to share lessons learned of relevance to other sectors. To date, there has been no formal definition of a Measuring, Reporting and Verification (MRV) system3, but in 2013 during the preparation of Kenya's first Climate Change Action Plan (NCCAP 2013-2017), a national MRV+ system was proposed as part of a broader National Performance Benefit Measurement Framework (NPBMF). The conceptual MRV model proposed for Kenya had three core elements:

1. Institutional arrangements
2. Legal arrangements
3. Procedural arrangements.

Since 2013, Kenya has already put in place some of these elements that are building blocks for the proposed MRV+ system. There are significant challenges to successfully implementing the full MRV+ system, with particular efforts needed to clearly define and assign roles and responsibilities in the central and devolved government in an environment, where climate change issues have not yet been fully mainstreamed in line ministries and the governance landscape is changing. The MRV+ system is discussed in detail in Chapter 4.

Through a Needs and Gap Assessment process, and with reference to the prior climate change related work, the ICAT project has identified and prioritised actions needed in both the energy and transport sectors to develop the MRV/transparency system for NDC implementation. The assessment has applied the requirements of the Act, the enhanced transparency framework of the Paris Agreement, the draft National Climate Change Action Plan (NCCAP) 2018-2022, Kenya's Nationally Determined Contribution (NDC) and the MRV+ system to define the required future MRV/transparency system for the energy and transport sectors in Kenya. The existing situation has been established through interviews, desk studies and engagement with Kenya stakeholders in two workshops for feedback. The needs and gaps have then been established as the variance between the desired and the existing situations.

In identifying the required actions to address the identified needs and gaps as planned for the next phase of the 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy Sector in Kenya' Project, the ongoing MRV/transparency-related projects, programmes and activities have been considered with a view to avoiding duplication, enhancing complementarities and building synergies with them.

To carry out the assessment, it was also necessary to understand the climate policy context at both the global and national level, the evolution of the concept of MRV/transparency from the perspectives of both the Paris Agreement and GoK, specifically the NDC and the Climate Change Act, 2016. These relevant documents have therefore been reviewed and summarised in this Needs and Gap Analysis Report.

This Needs and Gap Assessment Report presents the findings of the results of the Needs and Gap Assessment on the MRV/transparency systems for NDC Implementation in the energy and transport sectors. The report is the first output under the first activity of the 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy Sector in Kenya' Project, and covers the following:

1. Chapter 1 Introduction: This chapter provides the background and context under which the project is being implemented, it describes the project and the ICAT Programme and introduces the ICAT Series of Guidance, together with its applicability.

[3] The MRV+ System was chosen because it is the only available national system and CCD advised that it provides a good basis for a national MRV system given the level of consultations that was involved in establishing it. The NCCAP, where it resides, is to be the framework for all future climate action according to the Climate Change Act, 2016.

1. Chapter 2 Methodology: This chapter presents the approach and steps applied to carry out the needs and gap analysis and the next activities of the project.
2. Chapter 3 The Climate Policy Context: This chapter reviews both the global and national context of climate change with a focus on the transparency requirements of the Paris Agreement. It covers Article 13 of the Paris Agreement on transparency, the NDC and Kenya's policy context with regard to climate change. The chapter concludes with a review of the implementation of Kenya's NDC and the MRV/transparency system.
3. Chapter 4 Measuring, Reporting and Verification (MRV) Systems: This chapter provides an overview of the MRV/transparency systems and their evolution to the enhanced transparency framework of the Paris Agreement. It then reviews Kenya's proposed MRV+ system, highlighting, both its implementation challenges and successes.
4. Chapter 5: Results of the Needs and Gap Analysis, Recommendations and Conclusion: This chapter presents the results of the analysis, including the state of Kenya's MRV system, the recommendations from the needs and gap analysis and the conclusion.

PROJECT DESCRIPTION

The project 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy Sector in Kenya' is a 1½-year support project to the Government of Kenya (GoK) that commenced in December 2017. The overall objective of the project is to support Kenya's efforts to establish a domestic Measuring, Reporting and Verification (MRV)/transparency system for tracking progress of the NDC implementation in the energy and transport sectors in line with the requirements of the enhanced transparency framework of the Paris Agreement. The specific project objectives have been discussed in the preceding section of this report. These objectives will be achieved through Kenya-specific capacity building programs with national stakeholders, training on MRV/transparency concepts, methods and tools, including iterative testing and application of the ICAT Series of Guidance, continued observation of future UNFCCC transparency requirements and development of a road map to sustain ICAT outcomes.

UNEP DTU Partnership (UDP), one of the three implementing partners of ICAT, in collaboration with the GoK, has therefore contracted ClimateCare to support the implementation of this project in Kenya.

Under the project, Kenyan policymakers will be provided with the tools and support to measure and assess the impacts of the country's climate actions in line with the Paris Agreement. The MRV/transparency systems, once established, will also support the tracking of progress of the NDC implementation in the energy and transport sectors.

INITIATIVE FOR CLIMATE ACTION TRANSPARENCY (ICAT)

Since the adoption of the Paris Agreement in December 2015, many countries have begun to implement their climate commitments or "Nationally Determined Contribution" (NDC). In order to coordinate and ensure best efforts in the implementation of the various NDC policies and actions, transparency will be essential and governments and civil-society practitioners will need new tools and additional resources to make such a transparent impact assessment a reality. However, many developing countries, including Kenya, lack the tools to measure, report and verify progress on their climate commitments and actions.

The Initiative for Climate Action Transparency (ICAT) was launched on 14th April 2016 in response to calls for support from countries for improved transparency and capacity building related to the Paris Agreement. It is a multi-donor initiative aimed at strengthening national institutions of developing countries to meet the enhanced transparency requirements. The mission of ICAT is to help build the capacity of developing countries to measure the impacts of their climate actions while fostering greater transparency, effectiveness, trust and ambition in climate policies worldwide. ICAT is working to build capacity within 20 to 30 developing countries across Asia, Africa and Latin America and the Caribbean, with Kenya as one of them.

ICAT provides policymakers with tools and support to measure and assess the impacts of their climate actions, with the overall objective of improving the availability and quality of data, and enabling countries to promote efficient, cost-effective policies that reduce greenhouse gas emissions, respond to sustainable development needs, and drive systemic, transformational change for the global climate and development goals. In Kenya, the focus of ICAT will be the energy and transport sectors.

ICAT will also provide a platform for countries to share lessons learned and build mutual confidence in their climate actions. ICAT was founded by:

1. The Children's Investment Fund Foundation (CIFF)
2. German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB)

Besides the founding organisations, it is also supported and funded by:

1. The Italian Ministry for the Environment, Land and Sea (IMELS)
2. Climate Works Foundation

The implementing partners are UNEP DTU Partnership (UDP), Verified Carbon Standard (VCS) and World Resources Institute (WRI). The United Nations Office for Project Services (UNOPS) manages the trust fund through which the work is funded (fund manager).

UNEP DTU Partnership (UDP), one of the three implementing partners, in collaboration with the GoK, has therefore contracted ClimateCare to support the implementation of this project in Kenya.

THE 'ICAT SERIES OF GUIDANCE' AND ITS APPLICABILITY

During the next phase of the project (up to mid-2019); 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy an Transport Sectors in Kenya', the ICAT Series of Guidance will be applied for the energy and transport sectors to support the development of the MRV/transparency system for climate action and to assess the GHG, sustainable development and transformational impacts of the prioritised NDC actions in the energy and transport sectors..

The ICAT Series of Guidance provide methods focused on helping users to assess the impacts[4] resulting of policies and actions that:

1. Reduce Greenhouse gas (GHG), which are changes in GHG emissions by sources and removals by sinks.
2. Achieve Sustainable development, which are changes in environmental, social or economic conditions, such as changes in economic activity, employment, public health, air quality, and energy security.
3. Drive Transformational impacts, which relate to a system change, leading to processes of change and outcomes of change at scale and sustained over time.

The ICAT Series of Guidance was developed with the objective of supporting the following processes:

1. Assessment process: help users assess the greenhouse gas (GHG), sustainable development and transformational impacts of policies and actions in an integrated way. In the energy sector, the focus will be those prioritised actions

[4] "Impacts" refers to changes that result from a policy or action.

in the sector as specified in the NCCAP 2018-2022. The guidance documents can be used in combination with guidance on stakeholder participation, technical review, and non-state and sub-national action such as those by county governments in Kenya.

2. Decision-making: help policymakers and other decision-makers develop effective and transformational strategies for achieving GHG mitigation and broader sustainable development objectives through a better understanding of the various impacts of policies and actions. For Kenya's energy sector, this will be particularly applicable to decisions related to the development of least cost power development plans and cooking energy policy decisions, among others. The guidance can help to identify and promote cost-effective policies and actions that maximise positive impacts, avoid or mitigate negative impacts, and contribute to multiple goals such as Nationally Determined Contributions (NDCs) and Sustainable Development Goals (SDGs)

3. Reporting: support consistent and transparent reporting of GHG, sustainable development and transformational impacts, and policy effectiveness. This reporting may be done before, during or after policy or action implementation. The guidance can support both domestic and international (such as UNFCCC) reporting. It is through reporting that users can demonstrate the results of their policies and actions to donor agencies, financial institutions and other stakeholders, thereby building and broadening support for policies and actions. For the energy sector, the guidance will be applied in development of consistent and transparent reporting of GHG, sustainable development and transformational impacts, and policy effectiveness.

Under the ICAT project, the ICAT Series of Guidance will be used as needed to assess the impacts of the prioritised NDC actions in the energy and transport sectors. The guidance is flexible in a manner that can be applied in the context of the users' own objectives and circumstances. The following are the core guidance documents:

1. Impact assessment documents, which provide sector guidance for GHG impacts (for policies and actions within sub-sectors of renewable energy, buildings, transport, agriculture and forestry).

2. Sustainable development and transformational impacts.

In the guidance documents, methods are provided identifying the scope of the assessment, defining baseline and policy scenarios, and monitoring indicators and parameters for estimating policy impacts. These core documents are supported by further guidance on:

1. Stakeholder participation

2. Technical review

3. Non-state and sub-national action

The GHG guidance does not cover all sectors, but rather focuses on gaps in existing guidance. Further, it focuses on specific types of policies and actions. The other ICAT guidance documents are more broadly applicable across the various types of policies and actions. While the guidance can be applied to any policy type, data collection and estimation challenges may hinder a complete and credible assessment.

The ICAT Series of Guidance is applicable to policies and actions:

1. At any level of government. This means that, for Kenya, it can be applied at national, county or sector level. However, for this ICAT project, the focus will be the energy sector at the national level. Later, the application could gradually move to county level as capacities are built.

2. In any sector, such as energy and transport, including on cross-sector policy instruments.

3. That are planned, adopted or implemented. For this project, the focus will be on the priority actions in the energy sector in the NCCAP 2018-2022.
4. That are new policies or actions, or extensions, modifications or eliminations of existing policies or actions

The purpose of the guidance is to assess policies and actions that have an impact on climate change. This includes policies and actions implemented primarily to achieve climate goals, as well as policies and actions primarily implemented to achieve other environmental, social or economic objectives, but that have an impact, either positive or negative, on greenhouse gas emissions.

Policies and actions can refer to interventions at various stages along a policy-making continuum, including:

1. Broad strategic plans or goals that define high-level objectives or desired outcomes.
2. Specific policy instruments to carry out a broad strategy, plan or goal.
3. The implementation of technologies, processes or practices (sometimes called “measures”) that result from policy instruments.

The guidance is primarily designed to assess specific policy instruments and the implementation of technologies, processes and practices. For the assessment of the impacts of broad strategies, plans or goals, the individual policy instruments or technologies, processes or practices that will be implemented to achieve the strategy or plan have to be defined first. Broad strategies or plans can be difficult to assess since the level of detail needed to assess impacts may not be available without further specificity, and different policies or actions used to achieve the same goal could have different impacts.

CHAPTER 2: METHODOLOGY

SCOPING

The project, 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy and Transport Sectors in Kenya' was initiated following an ICAT scoping mission in Kenya during which a number of consultations with key stakeholders were conducted and energy and transport sectors were identified as the priority sectors of the GoK for piloting an MRV/transparency system.

The outputs of the first activity are the Needs and Gap Analysis Report and the ToR for the Transport Sector Consultant.

The subsequent 3 activities will be guided by the results of the Needs and Gap Analysis as outlined in this report and the ICAT Series of Guidance, as applicable to the energy and transport sectors. These activities will be action-oriented with a view to setting up and establishing the sectoral MRV/transparency systems.

During scoping, it was recognised that there are several planned and on-going initiatives with similar objectives as the ICAT project and that these initiatives would be recognised by the ICAT project with complementarities being sort at all stages of implementation.

The process required continuous dialogue, ownership and clarity of mandates among all stakeholders. The approach applied was both consultative and inclusive in order to enable participation and engagement with a wide range of stakeholders and the Ministry of Environment and Forestry to ensure ownership.

THE NEEDS AND GAP ANALYSIS

The Needs and Gap Analysis, which is a strategic planning tool to help in understanding the current situation, the future situation and the means to get there, has involved the following five broad steps:

1. Step 1: The definition of the MRV/transparency scope for the Needs and Gap Analysis. This step entailed the identification of the objectives to be achieved by the MRV/transparency system and the required future state of the system. This was determined as the MRV/transparency system that meets the requirements of the national MRV+ System as proposed in the NCCAP 2013-2017, the known requirements of the enhanced transparency framework of the Paris Agreement, the NDC, the NAP 2015-2030, the Climate Change Act of 2016 and the draft NCCAP 2018-2022. Consideration was given to the fact that some of the proposed elements of the MRV+ System have either not been prioritised by the CCD or have been overtaken by events while others have already been implemented.
2. Step 2: Identification and analysis of the current state of Kenya's MRV/transparency system and the planned activities. This was done through literature review, interviews and stakeholder consultations to determine what was in place, which components of the MRV+ system had been implemented or planned, what was still relevant but had not been implemented and what was no longer relevant.
3. Step 3: Identification of the needs and gap between the current status and the desired future status was then carried out.
4. Step 4: Determination of how the needs and gap should be filled has been carried out in consultation with Kenya stakeholders through two workshops held 3rd October and 30th October 2018.
5. Step 5: Gaining consensus and prioritising activities. This was carried out through further consultations and interviews with stakeholders including during the two stakeholder engagement workshops.

At the start of the Needs and Gap Analysis, the consultants had initial discussions with UNEP DTU, TraCS and GoK representatives at CCD, the Ministry of Energy, and the State Department for Transport in the Ministry of Transport, Infrastructure, Housing and Urban Development to ensure there was alignment between the GoK's expectations and the objectives of the work as defined in the Terms of Reference (ToR).

The Needs and Gap Analysis aims to identify needs and gaps in the existing MRV/transparency system relative to a future desired MRV/transparency system (as described in the introduction), and to identify and prioritise specific activities that are needed to address the identified needs and gaps, which can then be implemented under the subsequent activities.

Kenya's future-state MRV/transparency system is described in the NCCAP 2013-17. The intention is to establish an effective transparency mechanism for accurate and precise MRV/transparency of greenhouse gas emissions, climate actions (mitigation and adaptation) and their results, together with the support received. This future MRV/transparency system, once established, will help in tracking of progress with NDC implementation in the energy and transport sectors.

A comparison and analysis of the required future state and the current state was then used to determine the needs and gaps between the current and desired states of the MRV/transparency system.

The project will build synergies with on-going efforts towards the enhancement of the transparency of climate action, including the following ongoing projects:

1. The Capacity Building Initiative for Transparency (CBIT) project supporting the strengthening of national institutional and technical capacities in Kenya to meet the transparency requirements of the Paris Agreement, including the coordination between national, regional and global transparency related activities in Kenya. This project is supported by the GEF and implemented by Conservation International in collaboration with the Ministry of Environment and Forestry in Kenya.
2. The Ambition to Action (A2A) project in the energy sector. In Kenya, the project provides analytical support to the energy sector to accelerate the continued development and implementation of the NDC, with a focus on energy sector level actions. The support includes developing a methodology for assessing sector benefits of mitigation actions and international analysis and reporting through production of reports and research papers to provide a platform for discussion, analysis, and sharing of lessons learned about NDC implementation in developing countries and emerging economies. The project is supported by the International Climate Initiative (IKI). The project works in collaboration with the Ministry of Environment and Forestry and the Ministry of Energy in Kenya.
3. The Advancing Transport Climate Strategies project (TraCS) initiative in the transport sector, which is supported by GIZ. The project aims to ensure that emissions in the transport sector are systematically recorded and reduced in order to support the implementation of Kenya's NDC. It also estimates reduction potentials in the transport sector by developing scenarios and identifying the most promising strategies and policies. It is supported and implemented by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) in collaboration with Ministry of Environment and Forestry and the State Department for Transport in the Ministry of Transport, Infrastructure, Housing and Urban Development in Kenya.
4. The Low Emissions Climate Resilient Development (LECRD) project, which is funded by USAID through UNDP and implemented by the Ministry of Environment and Forestry, aims to contribute to Kenya's overall goal in achieving transformative development, accelerating sustainable climate resilient economic growth while slowing down Green House Gas emissions. Specifically, the project supports the establishment of the GHG inventory system and global reporting in Kenya.
5. Global NDC Implementation Partners (GNIplus) in Kenya is a 3-year program funded by the German International Climate Initiative (IKI). Under the project, GNIplus will work in partnership with the Ministry of Environment and Forestry, through the Climate Change Directorate (CCD), and in collaboration with the National Treasury and relevant sectoral ministries and other public and private stakeholders to help the GoK achieve its NDC goals. GNIplus will support the GoK to plan and mobilize finance for projects that build resilience, contribute to mitigation

goals and create a foundation for sustainable and inclusive development. GNIplus will provide expert legal, technical, and financial advice to:

a) Support the creation of enabling environments to scale up public and private investment.

b) Build bankable low-carbon and climate-resilient project pipelines.

c) Improve governance and transparency through the creation of robust and enforceable regulations.

d) Support clear decision-making procedures that provide investor confidence.

e) Build national capacity.

Through the review of the relevant policies and plans for the various ministries and other government agencies involved in policy and project implementation, clarity on how the government intends to achieve the 30% GHG emissions abatement has been gained. Specifically, the consultants have analysed the existing or proposed MRV/transparency activities in the energy and transport sectors to identify needs and gaps for ICAT support to strengthen institutional coordination and build capacity for MRV of NDC implementation in the sectors.

In order to create a conceptual link between the Needs and Gap Analysis and the application of the ICAT Series of Guidance in the next steps, basic understanding of the ICAT Series of Guidance was also found necessary. This was accomplished through a UNEP DTU introduction to the ICAT Guidance during a stakeholder engagement workshop on 3rd October 2018. The introduction included the results of a first pilot study using the ICAT Sustainable Development Guidance applied to a solar PV policy in Kenya and was followed up by a more in-depth review of the guidance at the beginning of the assignment. In addition, the team will be able to call upon UNEP DTU in form of technical support during the subsequent activities of the assignment.

To put the results of all the considerations into context, interviews and consultations have been conducted with the key stakeholders and representatives of various relevant projects.

As part of the Needs and Gap Analysis, the consultants have gained a clear understanding of the project, updated the project approach where necessary, determined how various stakeholders will be engaged and confirmed the outputs and deliverables with specific timeframes.

In dialogue with the Climate Change Directorate (CCD) and UNEP DTU Partnership (UDP) and through the interviews, the consultants have identified areas of overlap and synergies with the other related on-going projects. The ICAT implementation team in Kenya including CCD and UDP working closely with the consultants have proposed work co-ordination arrangements with the on-going related projects and a harmonised workplan has been developed. The results of the consultations and the agreed working arrangements have been included in the final Needs and Gap Analysis Report and the Terms of Reference for the Transport Consultant.

This first activity was concluded with the preparation of the draft Needs and Gap Analysis Report. The draft report was then presented and discussed for validation at two stakeholder workshops on 3rd October and 30th October 2018. Feedback from the stakeholders was incorporated subsequent to the two workshops and CCD and UNEP DTU reviewed the report prior to finalisation. The final Needs and Gap Analysis Report will serve as the basis for the next activities of the ICAT Kenya project, focussing on implementation.

This Needs and Gap Analysis Report covers the identified needs and gaps, together with the recommendations on how best to remove the most significant visible barriers. In addition, the results of the Needs and Gap Analysis were used to draft the Terms of Reference (ToR) for the domestic experts to pilot ICAT Guidance in the transport sectors.

The results of the Needs and Gap Analysis are presented in Chapter 5 of this report.

CHAPTER 3: THE CLIMATE POLICY CONTEXT

THE UNFCCC AND GLOBAL CONTEXT OF CLIMATE CHANGE POLICY

Climate change is the most serious global challenge of our time and it is important that countries do not only act to mitigate further global temperature rise, but also implement actions that enhance adaptation to the already changing climate. The Paris Agreement, adopted at the 21st Conference of the Parties (COP21)[5] of the of the UN Framework Convention on Climate Change (UNFCCC) in Paris, charts a new course in the global climate effort by building upon the UNFCCC and, for the first time, bringing nearly all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so.

The Paris Agreement aims to:

1. Strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 ^{0}C above pre-industrial levels, while pursuing efforts to limit it to 1.5 ^{0}C. The mitigation aim of the Agreement is for Parties to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter so as to achieve a balance between anthropogenic emissions by sources and removals by sinks in the second half of this century.[6] Although this aim is to be achieved "on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty", it is not clear how this provision will be implemented in practice given the very different national circumstances of various countries. In response to the global mitigation goal, Kenya has made a commitment to reduce its GHG emissions by 30% by 2030 relative to the business as usual scenario. For this reason, an MRV system for the mitigation actions and their results will be required for the NDC. Kenya has prepared NCCAP 2018-2022 which prioritises Kenya's mitigation actions for the next 5 years towards the NDC goal.
2. Strengthen the ability of countries to deal with the impacts of climate change. The Agreement establishes a notional and aspirational "global goal on adaptation" to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change.[7] Kenya in her NDC has undertaken to enhance resilience to climate change towards the attainment of Vision 2030. Adaptation is part of the global stocktake,[8] which will recognize adaptation efforts of developing countries, enhance the implementation of adaptation action, review the adequacy and effectiveness of adaptation and support provided, and review overall progress in achieving the global adaptation goal.[9] Kenya has prioritised climate change adaptation and resilience building in its strategy for addressing climate change towards the attainment of Vision 2030. Kenya has developed a NAP 2015-2030 which prioritises Kenya's adaptation actions towards the 'global goal on adaptation. Therefore, the MRV/transparency system for NDC implementation will have to track the adaptation actions and their results. Adaption actions for NDC implementation have been prioritised in the NCCAP 2018-2022 and the NAP 2015-203.
3. Make finance flows towards low emissions pathways and climate-resilient development. The agreement mandates developed country Parties to provide financial resources, technology support and capacity building to assist developing country Parties with respect to both mitigation and adaptation in continuation of their existing obligations under the Convention.[10] The provision of scaled-up financial resources should aim to achieve a balance between adaptation and mitigation, taking into account country-driven strategies, and the priorities and needs of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change and have significant capacity constraints, considering the need for public and grant-based resources for adaptation.[11] In Kenya's NDC, it is stated that the realisation of both the mitigation and the adaptation targets of the NDC is subject to international support in the form of finance, investment, technology development and transfer, and capacity

[5] CO21 was the 2015 United Nations Climate Change Conference held in Paris
[6] Article 4.1 of the Paris Agreement
[7] Article 7.1 of the Paris Agreement
[8] Article 14 of the Paris Agreement
[9] Article 7.14 of the Paris Agreement
[10] Article 9.1 of the Paris Agreement
[11] Article 9.4 of the Paris Agreement

building. Therefore, for tracking the NDC implementation, Kenya's MRV/transparency system will have to include both required and received international support, besides Kenya's own contributions toward climate action.

To reach these ambitious goals, and besides provision of a universal platform for all countries to act towards the commonly agreed goal for responding to climate change, the international agreement provides the mechanisms to pursue these goals and binding obligations for all Parties, including commitments by developing countries, such as Kenya, to:

1. Prepare, communicate and maintain successive Nationally Determined Contributions (NDCs),[12] with the expectation that each party's successive NDC will represent a progression beyond its previous one and reflect its highest possible ambition. This obligation for Parties under the Agreement is procedural in nature and Kenya has already established the framework for compliance through the Climate Change Act of 2016. Kenya has prepared and communicated her first NDC. The Climate Change Act, together with the NCCAP process establishes the framework for achieving the NDC. The NDC will be implemented through the five-yearly NCCAPs, starting with NCCAP 2018-2022, as required by the Climate Change Act. Kenya, like all other countries, will submit a new NDC by 2020 and every five years thereafter.
2. Pursue domestic mitigation measures aimed at achieving their NDCs. In Kenya's NCCAP 2018-2022, various sectoral mitigation actions have been identified and prioritised for the next 5 years. The actions are also aligned to the Medium-Term Plan for the same period.
3. Report regularly on their emissions inventories, progress in implementing and achieving their NDCs, the support required, and any support received.

For enhanced transparency of action and support, and to facilitate implementation and promote compliance, the agreement establishes a new mechanism with a more robust enhanced transparency framework. A facilitative dialogue[13] among countries in 2018 was also included in the adopting decision, to take stock of collective progress. However, the existing diversity of NDCs make it very difficult to take stock of progress.

All countries are encouraged to formulate and communicate Low Emission Development Strategies by 2020, and to strengthen these plans over time, based on their national abilities. Through the Climate Change Act, 2016, Kenya has already set up the legal basis and framework to formulate and communicate the low emission development pathway via the National Climate Change Action Plan process, every five years.

Under the Cooperative Approaches (Market-based and Non-market based mechanisms), Parties may voluntarily cooperate in implementing their NDCs (both mitigation and adaptation). Globally and specifically for Kenya, both market and non-market-based mechanisms are yet to be established. The MRV system for NDC implementation will have to eventually include a system for keeping track of 'units' transferred internationally as mitigation outcomes (Article 6.2) and 'units' originated under the sustainable development mechanism (SDM) (Article 6.4). The units originated and/or transferred under the future market mechanisms will have to be accounted against the NDC of Kenya through 'corresponding adjustments' to ensure accounting integrity under the Cooperative Approaches. However, implementing this in practice and ensuring that a reduction unit is not "double counted" in both the country of origin and the recipient country will be a major issue for both Internationally Transferred Mitigation Outcomes (ITMOs) and the SDM.

A global goal on adaptation is established, to ensure an adequate adaptation response in the context of the 20C temperature goal. All countries should submit adaptation communications, detailing adaptation priorities, support needs, plans and actions, which should be updated periodically. Collective adaptation efforts will also be subject to review under the global stocktaking process. For Kenya, the NDC has emphasised enhanced resilience to climate change

[12] See below for details
[13] Kenya did not participate in the dialogue as it has not prepared a BUR.

towards the attainment of Vision 2030, identifying priority adaptation actions drawn from the National Adaptation Plan (NAP) 2105-2030. The MRV/ transparency system for NDC Implementation will have to cover the actions and their results together with the resources applied.

The Agreement recognises the need to address loss and damage from climate change impacts – it incorporates the Warsaw International Mechanism for Loss and Damage and calls for its strengthening. At the moment, this is not considered as a priority for inclusion in the MRV system for NDC Implementation but could be considered at a later time.

Developed countries will provide finance to developing countries to assist them with their mitigation and adaptation efforts and will report their public financial contributions to developing countries in a detailed manner every two year. Developing countries may also voluntarily provide support. The collective mobilization goal of US$100 billion annually by 2020, made in Copenhagen, has been extended – a higher goal will be set by the Conference of the Parties serving as Meeting of the Parties to the Paris Agreement (CMA) sometime before 2025. The adopting decision states that clear methods for the accounting of climate finance will be developed by 2018. Finance will be part of the global stocktaking. Despite the establishment of the Climate Finance Unit at the National Treasury and the Climate Change Fund, Kenya still faces major challenges in the establishment and effective implementation of climate finance reporting at the national level, including identification and tracking of climate finance nationally.

The Agreement incorporates the existing Technology Mechanism and strengthens it by creating a technology framework to provide strategic guidance. It stipulates that financial support will be provided to developing countries to address technology development and transfer. The global stocktaking process will assess the provision of this support. For Kenya, this process is still at the early stages of development and inclusion of technology transfer in the internal support will constitute a major challenge. For the ICAT project, the MRV/transparency of technology transfer is not likely to be included as this requires more time.

The Agreement emphasises the capacity building needs of countries with the least capacity, such as least developed countries (LDCs), and those that are particularly vulnerable to the adverse effects of climate change, such as small island developing States (SIDS), to help them take effective climate change action including on mitigation, adaptation, technology development and transfer and to access climate finance. Countries will report capacity building assistance by developed countries, as well as capacity building activities undertaken. The adopting decision establishes a Paris Committee on Capacity-building. Kenya has already benefited from various capacity building initiatives, including the Capacity Building Initiative for Transparency (CBIT) and the Initiative for Climate Action Transparency (ICAT), both of which focus on addressing the transparency clause of the Paris Agreement.

The Paris Agreement relies on a robust transparency and accounting system to provide clarity of action and support by Parties, with flexibility for the differing capabilities of Parties. Therefore, A transparency framework is established, to enhance the transparency of action and support, with built-in flexibility which takes into account Parties' different capacities and builds upon collective experience", and be implemented in a "facilitative, non-intrusive, non-punitive manner, respectful of national sovereignty, and avoid placing undue burden on Parties."[14] There will also be a global stocktake every five years from 2023 to assess the collective progress towards achieving the purpose of the agreement and to inform further individual actions by Parties.[15]

The enhanced transparency framework will build on the transparency arrangements under the UNFCCC, drawing on the experience of national MRV systems. The adopting decision established a Capacity-building Initiative for Transparency (CBIT) to meet the enhanced transparency requirements of the Agreement. Developing countries will receive support to implement transparency measures and as already mentioned above,

Kenya has already benefitted from CBIT and a CBIT-funded project is ongoing. At the end of the project, Kenya is expected to have significantly enhanced its capacity to address the requirements of the transparency clause of the Paris Agreement. The CBIT project will provide the framework against which all the MRV for NDC-related actions gravitate.

[14] Article 13.3 of the Paris Agreement
[15] Article 13 (Transparency) and Art. 15 (Implementation and Compliance)

ICAT and CBIT have developed a harmonized work plan to ensure, the ICAT focus on MRV/transparency in the energy and transport sectors is aligned with the CBIT approach to the national MRV/transparency system. This collaboration has been facilitated by the coordination and control of the Climate Change Directorate (CCD).

A compliance mechanism is established, consisting of a committee of experts, to facilitate implementation in a transparent and non-punitive manner, and promote compliance with the Paris Agreement. As details evolve on the compliance mechanism, Kenya will address this through the MRV system for NDC Implementation, but it is not a priority now.

KENYA'S CONTEXT OF CLIMATE CHANGE POLICY

Since July 2008, when Kenya launched its Vision 203016, which aims to transform Kenya into "a newly-industrializing, middle-income country providing a high quality of life by 2030 to its citizens", there has been increasing acknowledgement that the greatest challenge to its realisation is the impact of climate change. As a result, Kenya has made major strides in policy, legislation, planning and action to address climate change. The country has supported the UNFCCC processes starting with the ratification of the Kyoto Protocol in 2005 and continuing to contribute to global, continental and regional climate change initiatives.

At the policy level in 2010, Kenya developed the National Climate Change Response Strategy (NCCRS, 2010)17 which, for the first time, recognised the importance of climate change impacts for Kenya's development. Further, the Constitution of Kenya, 201018, set out a legal commitment to attain ecologically sustainable development, thereby providing a firm basis to address the challenge of climate change while striving to attain the development goals set out in Vision 2030.

As a logical next step in 2013, the GoK launched the first National Climate Change Action Plan for the period 2013 to 2017 (NCCAP 2013-2017), which was to facilitate the **operationalisation** of the NCCRS and the mainstreaming of climate change across all government line ministries in order to reduce vulnerability to climate change and improve the country's ability to take advantage of the opportunities offered by climate change. Figure 1 shows how the components of the first NCCAP (2013-2017) fitted together.

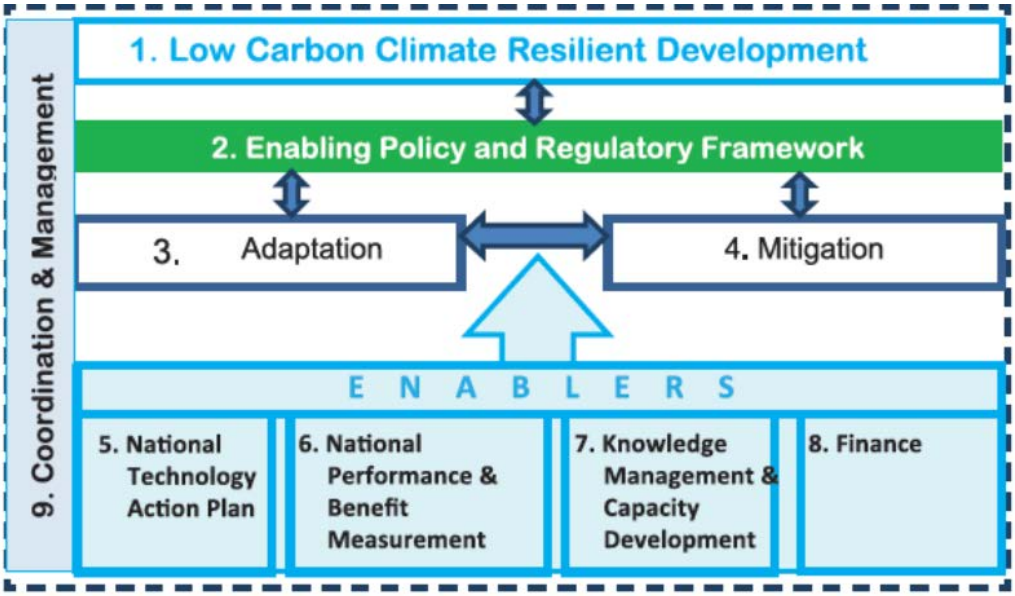
Significant work conducted for Kenya's NCCAP 2013-2017 examined the technical potential of emission reductions related to the six mitigation sectors (agriculture, energy, industrial processes, LULUCF, transport and waste). This technical potential provided a basis for determining the overall NDC target for Kenya, but each sector had widely differentiated potential as well as costs. With this in mind, the sector emission reduction targets had to be less than the technical potential of individual mitigation options identified, while also contributing to the overall emission reduction target.

[16] Vision 2030 is the national long-term development blueprint that aims to transform Kenya into a newly industrialising, middle-income country providing a high quality of life to all its citizens by 2030; http://www.vision2030.go.ke/

[17] Government of Kenya (2010), National Climate Change Response Strategy; Accessed at: https://cdkn.org/wp-content/uploads/2012/04/National-Climate-Change-Response-Strategy_April-2010.pdf

[18] Government of Kenya (2010). Constitution of Kenya. Accessed at: http://www.kenyalaw.org/lex/actview.xql?actid=Const2010

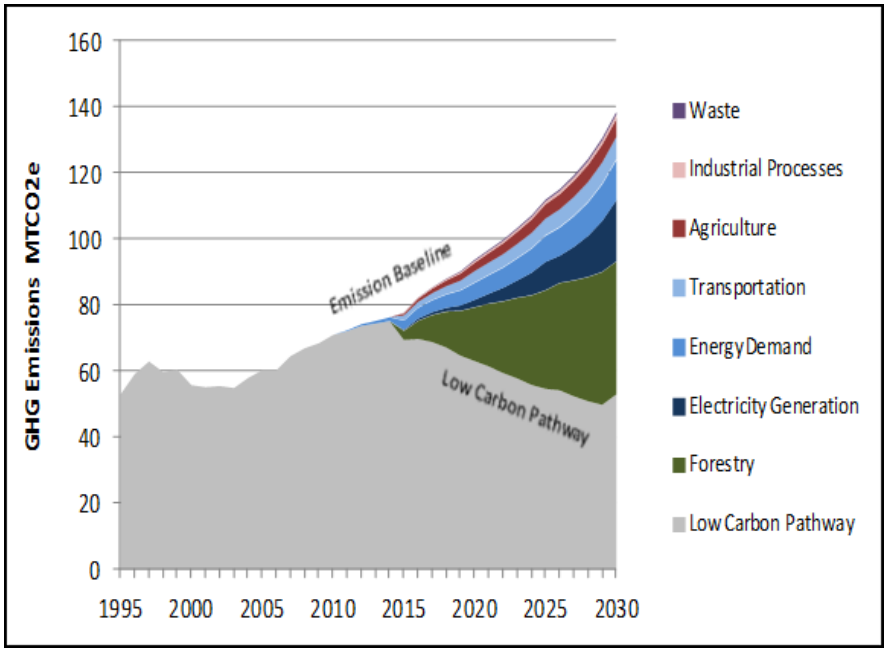
Figure 1: Components of Kenya's National Climate Change Action Plan



Source: GoK; NCCAP (2013-2017)

Kenya submitted its Nationally Determined Contribution (NDC) on 28th December 2016, when it deposited its instrument of ratification for the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC).[19] As set out in the NDC, Kenya will mainstream climate change mitigation and adaptation actions into development plans in all sectors and at all levels of government, including sub-national levels through Medium Term Plans (MTP) in line with the Vision 2030 and the Sustainable Development Agenda 2030. The mitigation contribution intends to abate greenhouse gas (GHG) emissions by 30% relative to the business as usual (BAU) scenario of 143 million tonnes of carbon dioxide equivalent (MtCO2e) by 2030 as shown in Figure 2. The mitigation target is ambitious and is equivalent to a half of the technical mitigation potential determined in the NCCAP 2013-2017.

Figure 2: Business as Usual Emission Projections



Source: GoK; NCCAP (2013-2017)

[19] The NDC had earlier been submitted to the UNFCCC as Kenya's Intended NDC on 25th July 2015; http://www4.unfccc.int/submissions/INDC/Published%20Documents/Kenya/1/Kenya_INDC_20150723.pdf

The NDC will be achieved through a low carbon, climate resilient pathway determined in the five-year national climate change action plans, the current one being the NCCAP 2018-2022. The NDC is subject to international support in the form of finance, investment, technology development and transfer, and capacity building.[20] The NCCAP 2018-2022 estimates a total contribution of 16.3 and 1.93 $MtCO_2e$ per annum from the energy and transport sectors, respectively by 2022.

For Kenya, NDC implementation can and will build on and strengthen wider development and social policy, with NDC commitments representing the opportunity to fundamentally shift the country's approach to economic development and wealth creation. Climate change actions to be targeted in the NDC will be integrated and embedded into development planning and therefore do not necessarily need to be a new and separate process.

In addition, implementing Kenya's NDC can support the achievement of the Sustainable Development Goals (SDGs) across all sectors and levels of government. The NDC also highlights the importance of public consultations and gender mainstreaming in its implementation. Kenya's NDC contains a timeframe up to 2030 but, as per the Paris Agreement, the country will have to communicate or update her contributions by 2020 and every five years, thereafter.

With Kenya having submitted its NDC, and the Paris Agreement having entered into force on 4th November 2016, attention is now shifting to turning the NDC commitments into actions. A key question that remains to be answered is how much clarity exists, not just for Kenya, but for most countries, on how to reach the NDC targets.

In 2016, Kenya enacted the Climate Change Act, 2016, whose key purpose was to provide a legal framework for the coordination of climate change actions in the country and to strengthen climate change governance, institutional arrangements and mainstream climate change into sectoral planning, budgeting and implementation at all levels of government. The Climate Change Act, 2016 provides for the preparation of NCCAPs every five years and for their biennial reviews. As per the Climate Change Act of 2016, the NCCAPs are to provide the basis of all climate actions nationally. The Climate Change Act, 2016 provides for a regulatory framework for:

1. Enhanced response to climate change
2. Mechanism and measures to achieve low carbon climate-resilient development
3. Connected purposes

In addition, the Climate Change Act, 2016 establishes the National Climate Change Council to provide the overarching climate change coordination mechanism, the Climate Change Directorate as the lead government agency on climate change actions and plans to deliver operational coordination and to serve as the Secretariat of the council. The Act also provides for the assignment of climate change roles and responsibilities to various public and private entities. Specifically, each state department and national government public entity has been assigned specific climate change duties, including the following MRV/transparency-related ones, among others:

1. Reporting on sectoral greenhouse gas emissions for the national inventory
2. Designation of a unit with adequate staff and financial resources and the appointment of a senior officer as head of the unit to coordinate the mainstreaming of the climate change action plan and other climate change statutory functions and mandates into sectoral strategies for implementation
3. Regular monitoring and review of the performance of the integrated climate change functions through sectoral mandates
4. Putting in place and implementing mechanisms for sustainability in performance of sectoral mandates

[20] The full implementation cost of the NDC was estimated at over US$40 billion by 2030.

5. Reporting annually to the Council on the status and progress of performance and implementation of all assigned climate change duties and functions.
6. Undertaking investigations and reporting the findings to the Council where an evaluation report from a statutory public body discloses unsatisfactory performance.

In setting up the MRV/transparency systems for NDC implementation in the energy and transport sectors, these specific provisions of the Climate Change Act, 2016 have to be addressed in the systems, and in a way that integrates with the national MRV/transparency system as required by the Act.

The Climate Change Act, 2016 also provides for the mainstreaming of climate change actions into County Government function, including the integration and mainstreaming of climate change actions, interventions and duties set out in this Act, and the National Climate Change Action Plan into various sectors. It identifies the development, updating and approval of the County Integrated Development Plan, and the County Sectoral Plans as a means to mainstream the implementation of the National Climate Change Action Plan at the county level, taking into account national and county priorities. While the MRV/transparency system being developed under the ICAT process will not involve county governments due to inadequate resources, including time, provision for mainstreaming climate change activities at the county level should be made in the design of the sectoral and national MRV/transparency systems to be set up.

NATIONALLY DETERMINED CONTRIBUTIONS (NDCS) AND MRV

The foundation of the Paris Agreement's structure is that all Parties will determine at the national level what actions they are able and willing to take in achieving the purpose of the Agreement.

Central to the success of COP 21 and the Paris Agreement were the Intended Nationally Determined Contributions (INDCs), which were submitted by more than 190 countries, including Kenya, during 2015[21]. These set out each country's approach and initial best efforts to reducing emissions and adapting to a changing climate, while strengthening these efforts in the years ahead.

Since COP 21, countries were invited to confirm their intentions by ratifying the Paris Agreement and submitting NDCs[22] to the UNFCCC. In future, countries will be required to submit updated and more ambitious NDCs every five years.

However, many details regarding implementation measures of the Paris Agreement, including NDCs, are yet to be negotiated and it is against this background of inadequate clarity that the Needs and Gap Analysis has been conducted. Currently, Parties' INDCs and NDCs vary widely, not only in ambition but also in format, which presents a considerable challenge for transparency and accounting. Eventually, the goal is for all states to report in a common format. The MRV/transparency systems to be set up for both the energy and transport sectors will therefore need flexibility to accommodate the results of the ongoing negotiations on the Paris Agreement, in generation, and Article 13 on transparency, in particular.

The MRV mechanisms embedded in the Paris Agreement are legally binding for Parties, including developing countries such as Kenya. However, the reporting obligations require a robust transparency mechanism, and the agreement provides for enhanced transparency of action and support through this more robust transparency framework, which this ICAT project aims to support.

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21 https://www.google.co.uk/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwiCqajboOXdAhVK16QKHZJMApsQFjAAegQICRAC&url=http%3A%2F%2Fwww4.unfccc.int%2Fndcregistry%2FPublishedDocuments%2FKenya%2520First%2FKenya_NDC_20150723.pdf&usg=AOvVaw3HuCVeuAZ8Ha6EhhPwAeN3

22 The INDCs later become Nationally Determined Contributions (NDCs) when the Party ratifies the Paris Agreement, unless the party opts to amend its INDC at the time of ratification of the Paris Agreement.

In the context of NDC implementation and according to the NCCAP 2018-2022, Kenya's MRV/transparency system will entail the process by which the following will be tracked and reported at the national and international levels:

1. The implementation and impacts of mitigation actions, including the national GHG inventory to enable tracking of progress on implementing and achieving the mitigation component of the NDC.
2. The implementation and impacts of adaptation actions, including information related to climate change impacts, vulnerabilities and adaptation
3. The external support23 needed and received towards these actions, including information on financial, technology development and transfer, and capacity building needs and support received from developed countries.

For implementation and effective MRV, Kenya plans to build on the National Climate Change Response Strategy (NCCRS 2010)[24], the National Climate Change Action Plan (NCCAP 2013 – 2017)[25] and its successor NCCAP 2018–2022., the National Adaptation Plan (NAP 2015-2030)[26] and the Climate Change Act, 2016. These laws, policies and plans set out a low carbon climate resilient development pathway for Kenya in line with Vision 2030 and the plans will not only constitute a legal framework but also an operational mechanism for NDC implementation and its MRV/transparency framework.

The NCCAP 2018-2022 development has not entailed a parallel process for the development of the MRV/transparency system as happened during the preparation of the NCCAP 2013-2017 where the MRV+ system[27] was developed and proposed. According to the draft NCCAP 2018-2022, Kenya's transparency framework is still based on the MRV+ system that was defined in NCCAP 2013-2017. Table 1 shows the specific actions that have been proposed in the NCCAP 2018-2022 as a way of progressing the establishment of the MRV+ system.

However, there are a number of initiatives working towards the development of an MRV/transparency systems for NDC implementation that focus on meeting the requirements of the enhanced transparency framework of the Paris Agreement besides the GoK's reporting requirements.

Table 1: Priority Enabling Actions for the MRV+ System

	Enabling Actions	Coordinating Institution and Relevant Partners	Expected Results (Process Indicators)
M1	Establish the monitoring and evaluation (M&E) component of the MRV+ system to report on adaptation actions and benefits, including identification and measurement of adaptation indicators (including collection of baseline information and development of gender-disaggregated data and gender indicators). *(continued from NCCAP 2012-2017:*	CCD KNBS County Governments State Departments National Gender and Equality Commission	**By 30th December 2020** – Climate registry for adaptation actions established, with information publicly available. **By 30th June 2023** – Adaptation M&E system fully functional, setting out institutional structures and role of stakeholders in reporting.

[23] Such support could be financial, technology transfer or capacity building.

[24] The strategy's primary focus is to ensure that adaptation and mitigation measures are integrated in all government's planning, budgeting and development objectives. It was the first national planning document dedicated to addressing the threats posed by climate change and taking advantage of potential climate change related opportunities. The NCCRS identified the need to develop a comprehensive national policy on climate change.

[25] The NCCAP sets out actions for low carbon climate resilient development, including the enabling aspects of finance, policy and legislation, knowledge management, capacity development, technology requirements and monitoring and reporting.

[26] The NAP presents adaptation actions that cover the time frame 2015-2030 and aims to consolidate the country's vision on adaptation supported by macro-level adaptation actions that relate with the economic sectors and county level vulnerabilities to enhance long term resilience and adaptive capacity. The NAP presents adaptation actions that cover the time frame 2015-2030.

[27] For details of the MRV+ system, refer Chapter 4 of this report.

	NPBM 1,2,3,4, 6, 7, 8)		
M2	Establish a functional system to develop Kenya's GHG inventory and an MRV system for tracking mitigation for NDC reporting. *(continued from NCCAP 2013-2017: NPBM 5)*	CCD NEMA SLEEK KNBS State Departments	**By 30th December 2020** – Third National Communication submitted, including third National GHG Inventory. **By 30th June 2023** – CCD has established systems to collate, track, analyse and report on GHG data, including a climate registry for mitigation actions.
M3	Establish a system to track and report on land-based emissions through the development of a monitoring and reporting system for transparent accounting of emissions and removals in the forestry and land-use sectors. *(continued from NCCAP I – Mitigation 8)*	CCD KFS SLEEK	**By 30th December 2020** – Six working groups under SLEEK established to provide data and information to the national GHG inventory and MRV systems. **By 30th June 2023** – Reporting on land-based emissions fully integrated in GHG inventory.
M4	Establish a Climate Business Platform to support centralised reporting requirements of private entities.	CCD Private sector	**By 30th December 2020** – Framework for large emitter reporting established. **By 30th June 2023** – Private sector large emitters are reporting to CCD on a voluntary basis.

Source: NCCAP 2018-2022

Table 2 shows the priority NDC actions in the energy and transport sectors as identified in the NCCAP 2018-2022. The details of this actions are provided in Annexes 1A and 1B of this report.

Table 2: Priority NDC Actions in the Energy and Transport Sectors

Energy and Transport
1. Climate-proof energy and transport infrastructure; encourage electricity supply based on renewable energy; encourage the transition to clean cooking; and develop sustainable transport systems
2. Promote the transition to clean cooking with alternative clean fuels such as LPG in urban areas, and clean biomass (charcoal and wood) cookstoves and alternatives in rural areas
3. Increase renewable energy for electricity generation
4. Develop an affordable, safe and efficient public transport system, including a Bus Rapid Transit System in Nairobi
5. Reduce fuel consumption and fuel overhead costs, including electrification of the Standard Gauge Railway
6. Promote low-carbon action in the aviation and maritime sectors

Source: NCCAP 2018-2022

Of special importance for the NDC implementation is the assignment, by the Climate Change Act of 2016, to each state department and national government public entities and private entities specific climate change related responsibilities, including reporting on sectoral GHG emissions for the national inventory.

While this is a good start, the national government now has to incentivise the county governments to integrate climate change into their development planning and to develop appropriate MRV systems at the county level. It is expected that through the Climate Change Act of 2016 and the new NCCAP, the MRV system will be integrated into the county government budgeting and other processes.

The NDC implementation plan is also closely linked to Vision 2030 implementation, which is carried out in successive 5-year Medium-Term Plans (MTP), through a number of flagship projects. Some of the flagship projects are expected to contribute to Kenya's NDC, either from a climate change mitigation or adaptation perspective. The first MTP covered the period 2008 – 2012 and the second MTP covers the period 2013 to 2017. NDC implementation is expected to start in 2018 and will therefore be aligned to the third MTP (2018-2022) and the overall Vision 2030 implementation. In accordance with the Climate Change Act, 2016 the NCCAPs will cover 5-year periods and will be aligned with the MTPs.

To effectively mainstream climate change in the development process, as required under the Climate Change Act, 2016, deliberate efforts are being taken to ensure that climate change considerations inform the budgeting, planning and finance processes. A key element to achieving the country's long-term development goal is the mainstreaming of climate change mitigation and adaptation in the MTPs for the implementation of Vision 2030. Through the NDC, Kenya aspires to introduce comprehensive programmes of mitigation and adaptation actions, which will shift the country to a low carbon climate resilient development trajectory in all sectors of the economy. Through support from the StARCK+ programme[28], Kenya has already analysed the mitigation potential of various actions in the six IPCC emission sectors. The results of the analysis have significantly informed the development of the Mitigation Technical Analysis Report (MTAR) for the NCCAP 2018-2022.

Another important process is the establishment of climate change desks in each of the line ministries, a process that was initiated nearly three years ago but did not deliver the anticipated results. The objective of setting up the desks was to create government entity focal points for climate change with the responsibility of compiling greenhouse gas (GHG) inventory-related data, among others. This process has recently been revived under the CBIT/LECRD support. In the revived arrangement, a modelling team of 20 GoK staff has been constituted for the development of the GHG Inventory. Another 100 GoK staff members from the six UNFCCC emission sectors have been identified to constitute the technical support teams for the sectors. All the identified staff have undergone some GHG Inventory training under the CBIT/LECRD projects.

1. Kenya is already implementing a number of adaptation and mitigation actions recommended in the NCCAP 2013-2017. The priority mitigation activities being promoted and implemented cover all six IPCC sectors, and include the following, among others:
2. Expansion of geothermal energy, solar and wind energy production, other renewables and clean energy options.
3. Enhancement of energy and resource efficiency across the different sectors.
4. Progressing towards achieving and maintaining a tree cover of at least 10% of the country's land area, including agroforestry, restoration of forests, and degraded lands and forests.
5. Clean energy technologies to reduce overreliance on wood fuels, including the use of improved cookstoves and liquefied petroleum gas (LPG).
6. Low carbon and efficient transportation systems with a focus on passenger and cargo shift from road to rail and bus rapid transit and light rail corridors.
7. Climate smart agriculture (CSA) in line with the newly launched National CSA Framework.
8. Sustainable waste management systems.

The MRV/transparency system to be established will be required to include these ongoing climate actions.

[28] StARCK+ was a 4-year programme (2013 to 2017) on climate change by the United Kingdom's Department for International Development (DFID) in Kenya. StARCK+ is that seeks to support Kenya's efforts in addressing climate change through catalysing private sector innovation and investment, strengthening climate change governance and supporting civil society advocacy. For details, refer http://www.starckplus.com/index.php/starck-components/ficcf.

Other related initiatives include the development of a greenhouse gas inventory system and improvement of emissions data, measuring, reporting on and monitoring forestry emissions and sinks and mainstreaming of low-carbon development options into planning processes. With the coordination of the Kenya Forest Service (KFS), the GoK also plans to develop a national forest inventory, forest reference scenario, and a monitoring and reporting system that allows for transparent accounting of emissions and removals in the forestry and land-use sectors.

GHG inventory institutional structures were reviewed in 2015. To coordinate the GHG inventory improvement work under the CCD, a National GHG Inventory Coordination Team, together with sector coordinators, has been constituted. The sector teams have been trained and have started compiling various sector data. Various data formats have been agreed upon and data exchange modalities have been proposed. Focus is now shifting towards the equipping of the GHG unit.

Through the support of the StARCK+ programme, the MEF has already started the process of designing such a Climate Change Registry and identifying projects that should be included in the Registry as required by the Climate Change Act, 2016.

The development of the MRV system for NDC Implementation in the energy sector will further support the GoK's efforts to plan and implement the required MRV of climate action for the NDC implementation.

CHAPTER 4: MEASURING, REPORTING AND VERIFICATION (MRV) / TRANSPARENCY SYSTEMS

OVERVIEW

Measuring, reporting and verification (MRV) systems track implementation and apply the lessons learned, thus enhancing analytical capacity and understanding about which policies and actions work best, and why.

In the context of NDC implementation, MRV refers to the process by which countries track and report on the implementation and impacts of mitigation and adaptation actions, and the finance, technology transfer and capacity building used to support these actions. Kenya's MRV/transparency systems will have the following three core elements:

1. The implementation and impacts of mitigation actions: This will cover the MRV of GHG mitigation all sectors of the economy at the national level but will be expanded later to include mitigation actions at county, organisation and facility levels, to create an understanding of how the sectors have reduced their carbon intensity. It will also establish the means through which reductions are realised and the levels or quantities of the reductions. This will involve sectoral mitigation MRV/transparency system for all sectors.
2. The implementation and impacts of adaptation actions: This will cover the MRV/transparency of adaptation actions where government policies and projects implementation will be assessed, and their adaptation and resilience effects and sustainable development outcomes will be monitored. The MRV/transparency on the actions will mostly monitor non-GHG and SD outcomes.
3. The support needed and received towards these actions: This will cover MRV/transparency of financing and will cover the financial sources, allocations and projects funded by external climate change funds and government's own funds which aim to address climate change. More specifically, climate finance, technology transfer and capacity building will be considered. The MRV system will track provision and receipt of climate support, monitor results achieved and assess impacts.

For the country to effectively track climate finance flows, The National Treasury (TNT), in collaboration with the Ministry of Environment and Forestry (MEF) through the Climate Change Directorate (CCD), undertook Kenya's first Climate Public Expenditure and Budget Review (CPEBR) in October 2016. The objective of the CPEBR was to conduct an analysis of Kenya's Climate Public Expenditure and Budgeting processes and provide guidance to strengthen efficiency and effectiveness of climate finance in public financial management systems. The goal was to strengthen climate finance in Kenya's public financial management systems and in the Medium-Term Expenditure Framework (MTEF) processes to:

1. Maximise budgetary allocation of public sector resources to climate change adaptation and mitigation efforts.[29]
2. Enable the tracking of public sector expenditure and its effectiveness against policies and plans (MRV of climate finance).
3. Contribute to strengthened monitoring and reporting of climate change adaptation and mitigation efforts (MRV of climate action).

To facilitate climate finance tracking and the MRV of climate finance, The National Treasury (TNT) has developed a climate coding and tracking methodology designed for use by financial officers in TNT, and eventually by other government ministries, departments and agencies (MDAs). This would allow the GoK to record and analyse climate spending in the national budget according to three climate finance categories:

[29] It is noted that this is not yet happening and sensitization by the MEF is required.

1. Climate change adaptation (CCA)
2. Climate change mitigation (CCM)
3. Climate change enabling environment (CCEE)

According to the NCCAP 2018-2022, Kenya's MRV/transparency framework is based on a measurement, reporting and verification plus (MRV+) system defined in NCCAP 2013-2017. The MRV+ system is discussed below in detail.

The MRV+ system includes MRV of emissions and removals of greenhouse gases for mitigation actions. Kenya should report to the UNFCCC through National Communications and Biennial Update Reports, which include GHG inventories in the various sectors, including energy and transport.

Adaptation actions are tracked through a Monitoring and Evaluation (M&E) system. Currently, there are no agreed adaptation indicators at the international level. Kenya made progress under NCCAP 2013-2017 and the NAP to identify relevant and appropriate indicators to track progress on adaptation and building resilience. Plans are underway to update the M & E system of the NAP for tracking the adaptation actions and their results. In this ICAT project, only the adaption actions in the energy and transport sectors will be covered.

The MRV+ system generates information for national and international reporting requirements. Reporting to the National Climate Change Council needs to demonstrate that climate change action and spending on climate change leads to real results. The results areas include GHG emissions, climate change adaptation and resilience and contributions to the SDGs. The information generated through the MRV/transparency systems in the energy and transport sectors will contribute into the national and international reporting systems.

The sectors MRV+ systems will be developed in a phased-out approach over 2018-2022. While the ICAT Guidance currently do not include adaptation, initial action under the ICAT project will work to improve the measurement of SDGs outcomes, including the identification of indicators to measure climate-related impacts and the collection of baseline data in the energy and transport sectors. The mitigation actions include the establishment of an appropriate process to collect, collate and analyse GHG emissions in the energy sector. The ICAT project build synergises with ongoing projects especially the US$ 2.2 million the Capacity Building Initiative for Transparency (CBIT) project supported by the GEF, support for the third GHG inventory from the UN Environment Programme and the Low Emission Climate Resilient Development (LECRD) project managed by UNDP and funded by the United States Agency for International Development (USAID), TraCS project in the State Department of Transport supported by GIZ and the Ambition to Action (A2A) project which is also being implemented in the energy sector.

Plans have been implemented at the national level through the CBIT and the LECRD projects to identify the needs and requirements of the various sectors with respect to GHG inventory data capturing, estimation and reporting. Similar efforts have been made by the TraCS project in the transport sector.

Through the efforts, institutional setups for the MRV of GHG emissions have been proposed and some training has been conducted for all the emission sectors. The transport sector has significantly benefitted from the TraCS project, which has supported the implementation of the Climate Change Act, especially the GHG reporting aspects, in the sector. The ICAT work will aim to build on what has been developed in the energy and transport sectors, with the aim of developing MRV/transparency systems that either enhance or build on what is already in place, and feed into the national reporting system.

It is however noted that the MRV+ system was designed in 2013, before implementation of the devolved government, enactment of the Climate Change Act, 2016, the Paris Agreement and the development of the draft NCCAP 2018-2022. The proposed MRV+ system is therefore not necessarily applicable in all aspects for the current circumstances of the country. On the other hand, there is a lot of detail missing in the Paris Agreement, which is yet to be developed.

Regardless of the design, the capacity for implementation of an MRV/transparency system that meets Article 13 requirements in the energy and transport sectors is inadequate. Like most other sectors, with historically inadequate resources and technical experience, the sectors will find the prospect of regular, comprehensive reporting and review daunting. Historically, episodic project funding for the preparation and submission of greenhouse gas inventories makes it difficult for all the sectors, including energy and transport to maintain ongoing data collection and to provide regular training for experts to prepare those inventories. The Measurement and Reporting components of the transparency framework for the sectors, among other sectors, need immense strengthening if the Paris Agreement is to be implemented successfully.

For Kenya, no formal national MRV/transparency has been established at the national and sector levels, including for the energy and transport sectors. A registry has been set up at the CCD to cover mitigation and adaptation projects in all sectors but there are no formal arrangements for its update, including information sourcing. The ICAT project plans to support the setting up of such a registry in the energy sector and to propose a similar one for tracking the transport sector projects. Initially the registries would focus on the prioritised NCCAP 2018-2022 actions for the sectors.

At the national level, Parties are expected to implement the international guidelines for domestic MRV/transparency frameworks and to prepare and report information according to the guidance on reporting through national communications and Biennial Update Reports (BURs), including information on GHG emissions and removals by sinks, mitigation actions and their effects, and support needed and received. Kenya's reporting, through the NCs, has so far been at the national level as it has not been possible to report on the extent of implementation and impacts of climate actions.

Understanding of the enhanced transparency framework is therefore important for planning the MRV system for NDC implementation in Kenya as it forms a critical part of the basis for the Needs and Gap Analysis. The following is a summary of the current understanding of the UNFCCC requirements for the MRV process internationally, and specifically, with regard to Kenya, which is a non-Annex I Party. This understanding has been applied in the current Needs and gap Analysis for the energy and transport sectors in Kenya.

Measuring (M) applies both to efforts to address climate change and the impacts of these efforts, including the level of GHG emissions by sources and removals by sinks through the national GHG inventories which are reported in national communications, emission reductions and other co-benefits. Based on the decisions adopted at COPs 16 and 17, non-Annex I Parties now need to measure the specific effects of national mitigation and adaptation actions, as well as the support needed and received. Such measurement occurs at the national level and refers to GHG emissions, mitigation actions and their effects, and the support needed and received for these actions. In Kenya, measurement of climate actions, their impacts and the resources used to implement them at the sector and national levels do not meet the current UNFCCC requirements. Transparency of adaptation actions and support received for climate action in Kenya has also lagged behind and significant efforts will be required to provide more guidelines to monitor and evaluate adaptation actions in the NCCAP 2018-2022 and NDC implementation.

The methodologies for measurement are not defined by the Convention and therefore, Parties rely on methodologies developed externally, including by the Intergovernmental Panel on Climate Change (IPCC) and other organisations in undertaking measurement. However, where possible, the Conference of the Parties (COP) identifies and endorses the methodologies that Parties should use, as a minimum.

Reporting (R) for Kenya, as a non-Annex I Party, is implemented through the National Communications (NCs) every four years, which includes a national inventory report, and Biennial Update Reports (BURs)[30] every two years, where the GHG inventories, the actions to address climate change (mitigation and adaptation) and their impacts, constraints and gaps, support needed and received, and other information considered relevant to the achievement of the objective of the UNFCCC are reported.[31] Reporting is addressed at the national level and the reports have to be transparent,

[30] BURs update the information presented in the NDCs and include information on, among others, national circumstances and institutional arrangements, mitigation actions, and financial, technical and capacity needs.

[31] BURs include information on, among others, national circumstances and institutional arrangements, mitigation actions, and financial, technical and capacity needs.

accurate, complete, consistent and comparable. The first round of submission of BURs was due by December 2014, but so far, Kenya has not managed to follow the reporting frequency for the NCs and BURs, with only two NCs and no BUR submissions, respectively. While the energy and transport sectors are able to source and provide the required information for both the NCs and BURs, inadequate overall coordination, over-dependence on ad hoc externally funded support and unclear roles and responsibilities have been major challenges to the reporting process. As already decided by the coordinating team, the energy and transport sectors will collect sector data but the GHG inventories for the NDC and BUR processes will be prepared at the CCD.

The Paris Agreement and Decision 1/CP.21 emphasise the transparency of action and financial support.[32] Developing countries are currently encouraged to report information on financial support needed and received in their NCs and BURs. While Kenya, like most developing country Parties has provided some general information on her needs within her NCs and the NDC, Kenya has not been able to report on precisely what is needed, and support received. In addition, there is no common format for reporting information on financial support needed and received, nor is there a common methodology to assess the financial support needed and received. It is also not clear how technology transfer, capacity and the use, impact and estimated results of the support received in developing countries can be reported. This could better inform climate funding efforts in the future, and improve the likelihood of continuing and increasing funding levels. These challenges were experienced when carrying out the Gap Analysis of the MRV/transparency system for both the energy and transport sectors. Working closely with the treasury, the climate finance reporting framework will be enhanced for the energy sector.

Verification (V) is addressed at the international level, through the International Consultation and Analysis (ICA)[33] of BURs. It can also occur at the national level, but voluntarily. These expert reviews would represent the verification process of the MRV. Expert reviews act as a Transparency Mechanism and "the review process shall include assistance in identifying capacity-building needs." There will also be a global stocktake every five years to assess the collective progress towards achieving the purpose of the agreement and to inform further individual actions by Parties. The capacities of both the energy and transport sectors have to be enhanced to support the national level verification process.

At the national level, verification is implemented through domestic MRV mechanisms to be established by non-Annex I Parties such as Kenya. Provisions for verification at the domestic level that are part of the domestic MRV framework are to be reported in the BURs. Capacity will be required to conduct verification at the sector, county and national levels

The experience with the existing reporting and review processes shows a gradual convergence of reporting and review for developed and developing countries, with flexibilities for developing countries (particularly for LDCs and SIDS). The existing processes have also shown that reporting and review can place a significant burden on Parties, expert reviewers and the UNFCCC Secretariat, and that it requires significant financial and human resources. Nevertheless, reporting has generally improved, as has the quality of information. Presently, there is no clarity on the transition from the existing transparency system to the enhanced transparency framework. There is a need to identify the elements of the existing system that are to be maintained and to define the transition process roadmap. As long as more detailed guidance is not yet agreed, reporting on progress towards achieving NDCs as well as reviewing this progress will remain a challenge not only locally but also internationally.

The first Facilitative Sharing of Views (FSV),[34] the peer-review portion of ICA, took place in May 2016. Kenya has so far not participated in any FSVs as it is yet to submit its first BUR. The main reason for this is that Kenya has not established a sustainable GHG Inventory system that captures and processes data on an ongoing basis. Kenya's previous GHG inventory was prepared by consultants with episodic project funding. Currently, efforts are underway to prepare the GHG inventory for the third national communication, which is also overdue. Until Kenya establishes a

[32] To date there has been limited reporting of information on private financial support to developing country Parties (including Kenya) mobilised through public interventions

[33] The aim of ICA is to enhance transparency through a process that is to be non-confrontational and non-intrusive, and that respects national sovereignty. Based on the experts' report, a facilitative sharing of views will take place, which can include questions and answers between Parties. The first workshop as part of this process was held in May 2016.

[34] Process helps to identify capacity-building needs, among other benefits, for participating non-Annex 1 parties

sustainable GHG Inventory System, the country will not be in a position to prepare BURs every 2 years. However, through the CBIT, LECR, ICAT and TraCS projects, Kenya is now establishing the necessary organisational structures, defining roles and building staff capacity through training to make GHG inventory process a continuous in-house process.

KENYA'S PROPOSED MRV+ SYSTEM

At the global level, there has been no formal definition of an MRV system to date, but in 2013 during the preparation of Kenya's first Climate Change Action Plan (NCCAP 2013-2017), a national MRV+ system[35] was proposed as part of a broader National Performance Benefit Measurement Framework (NPBMF). The conceptual MRV model proposed for Kenya had three core elements:

1. Institutional
2. Legal
3. Procedural arrangements.

Since 2013, Kenya has already put in place some of the elements of the required institutional, legal and procedural arrangements that are building blocks for the proposed MRV+ system. Some of the required legal, institutional and procedural elements have been addressed through the Climate Change Act, 2016. There are significant challenges to successfully implementing the full MRV+ system, with particular effort needed to clearly define roles and responsibilities in the devolved government and a changing governance landscape. A number of regulations will be required to address the detailed procedural and institutional elements of the MRV

The first NCCAP 2013-2017 set out a vision for a low carbon climate resilient development pathway, which included a National Performance Benefit Measurement Framework (NPBMF),[36] as one of the enablers. The NPBMF comprises national and county level institutions and non-state actors (NSAs) as data suppliers. This would mean that both the energy and transport sectors' key players would be data suppliers to the system.

Embedded in the wider NPBMF is an integrated framework for measuring, monitoring, evaluating, verifying and reporting results of mitigation and adaptation actions, and the synergies between them. This system sits within the wider NPBMF framework and incorporates measurement, reporting and verification (MRV) of mitigation actions and GHG emissions, monitoring and evaluation (M & E) of the adaptation actions, and MRV and M & E of development projects. Since the system combines adaptation and mitigation functions, it is called the MRV+ system.

The MRV+ system was based on the Tracking Adaptation and Measuring Development (TAMD) model and was designed to assist Kenya by:

1. Helping inform and guide the GoK on the implementation of concrete climate change response actions (both adaptation and mitigation actions), whether in the form of policies, projects, programmes or business ventures.
2. Helping Kenya fulfil its international reporting obligations, such as in developing the GHG inventory and tracking mitigation and adaptation actions for UNFCCC reporting via NCs and BURs. The MRV+ system was designed to formalise and institutionalise the process for producing the GHG inventory, NCs and BURs. However, it was designed before the Paris Agreement and therefore was not meant to address the enhanced transparency requirements, which came later.

[35] MRV+ is an integrated framework proposed for Kenya to measure, monitor, verify and report results and impacts of climate actions, together with any support required and received to implement them.

[36] The NPBMF is an integrated framework for monitoring, evaluating and reporting results of mitigation and adaptation actions, and the synergies between them.

3. Demonstrating Kenya's climate finance readiness and providing a strong platform for attracting international climate finance flows from multilateral and bilateral development partners.

The MRV+ system was designed to carry out a process that contains three main stages as follows:

1. Measurement, monitoring (and evaluation), involving the gathering of the required data and information and feeding it into the system, with appropriate data and information quality checks and evaluation to be carried out by a Data QA/QC Working Group (WG).
2. Verification, involving the cross-checking and verification of the results of the data analysis to ensure they are a realistic estimate of the outcomes being monitored through various analyses.
3. Reporting, which takes place in pre-determined formats after the results have been verified.

There are a number of core elements within the system that have been designed to carry out the three stages as listed above and to facilitate the MRV+ process. Figure 3 below is a schematic presentation of the MRV+ system that was proposed for Kenya in the NCCAP 2013-2017. In the model, a wide range of data enters the system on the far left from various sources, undergoes quality assurance and control procedures, processing, analysis and verification within the system and is then reported out of the system on the far right of the diagram in a range of formats.

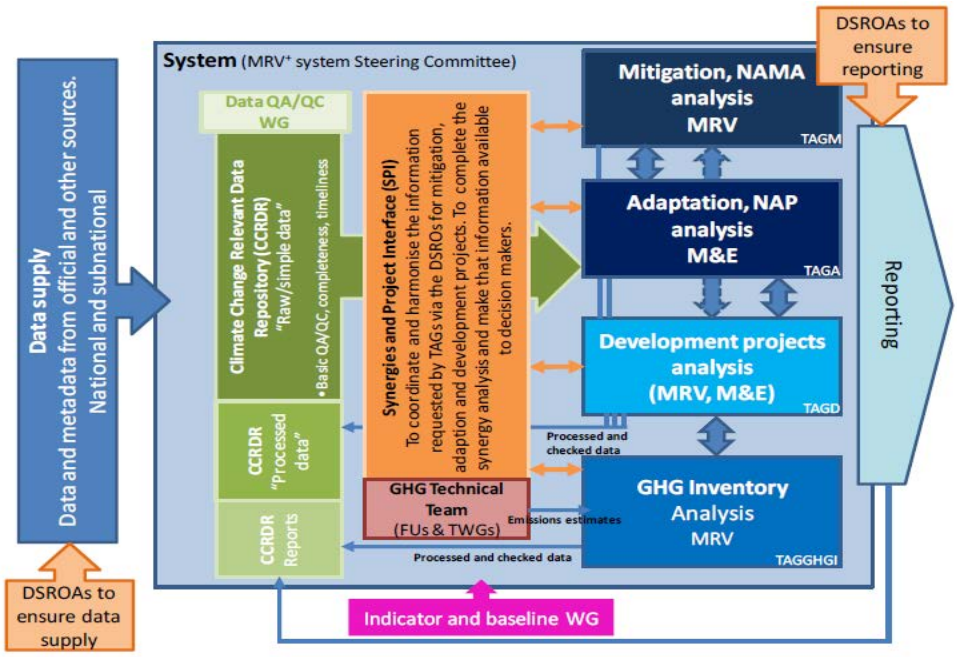
The common core components of the system are as follows:

1. Data Supply and Reporting Obligation Agreements (DSROAs) since the system needs to access a wide range of climate change relevant data and information to operate effectively, so provision of data must be enforced in an appropriate way for Kenya. The Climate Change Act, 2016, provides for assignment of such roles and responsibility to both public and private sector actors. However, such arrangements need to be formalised through regulations and agreements, which are yet to be developed and enforced. Under the ICAT Project, the agreements will be developed and implemented for the energy sector and the ToR drawn for doing the same for the transport sector.
2. Climate Change Relevant Data Repository (CCRDR). The Climate Change Act, 2016 provides for the establishment and management of a national registry for appropriate mitigation actions by public and private entities. Such a registry has been set up but is yet to be fully operational. The details of how the registry will be populated and updated are yet to be developed.
3. Indicators and Baselines Working Group.
4. Data and Quality Assurance/Quality Control (QA/QC) Working Group.

Components of the system that focus on particular technical areas include:

1. Technical Analysis Groups (TAGs) for Adaptation (TAGA) and Mitigation (TAGM)
2. Development (TAGD) and GHG inventory (TAGGHGI)
3. Synergies and Project Interface (SPI)
4. GHG Technical Team comprising Focal Units (FUs)
5. Thematic Working Groups (TWGs) for different sectors

Figure 3: The Proposed MRV+ system for Kenya

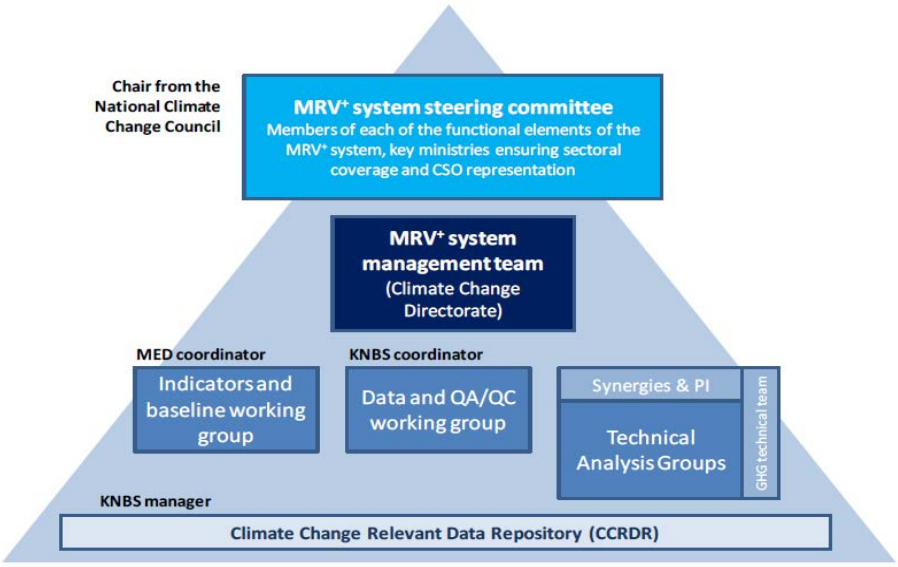


Source: GoK; NCCAP (2013-2017)

The system was designed around a number of core functional elements with optional technical areas that can be added in a modular way. To start with, the technical areas included in the system were to focus on mitigation and adaptation actions (including the mitigation/adaptation outcomes of development actions) and the GHG inventory, as these are essential to enable Kenya to assess the effectiveness of her development policies and actions while at the same time enabling international reporting obligations. After establishment of the system, further technical areas, such as climate finance, the economics of climate change or Low Emissions Development Scenarios (LEDS) could be added, as required.

The MRV+ system was to be overseen by a Steering Committee, with members selected according to specified criteria, and with a reporting line up to Parliament (Figure 4 below). The system was designed to build on existing institutions and skills and take into account the planned climate change governance structures wherever possible. A number of existing government ministries, MDAs and future proposed governance structures for climate change and M & E - related to the Nationally Integrated Monitoring and Evaluation System (NIMES) - have important proposed roles to play in the MRV+ system. The governance and reporting structures of the MRV+ system have been kept as simple as possible to avoid complex management structures, and best use has been made of existing government structures. The MRV+ system has been designed to minimise the number of extra staff needed, although some new working groups (WGs) and technical analysis groups (TAGs) would be set up.

Figure 4: Diagram Showing the Governance Hierarchy for the Proposed MRV+ system



Source: GoK; NCCAP (2013-2017)

According to the Climate Change Act 2016, the NCCAPs are to be reviewed, evaluated and updated every five years. The MRV+ system will also be used to inform each of the Medium-Term Plan (MTP) cycles under Vision 2030. These reviews are to be participatory in nature and are to be facilitated by the National Climate Change Directorate with the assistance of the required expertise. The NCCAP 2018-2022 update process is at the final validation stages.

Besides the MRV requirements of the enhanced transparency framework of the Paris Agreement, the MRV+ proposal, together with its required institutional, legal and procedural arrangements and their implementation to date, has not only informed the Needs and Gap Analysis process, but has provided important baseline information for the analysis. It has provided useful guidance in proposing the actions, structures and legal frameworks to arrive to get to the required MRV system. However, it is realised that the MRV+ system was too ambitious and needed significant resources to implement.

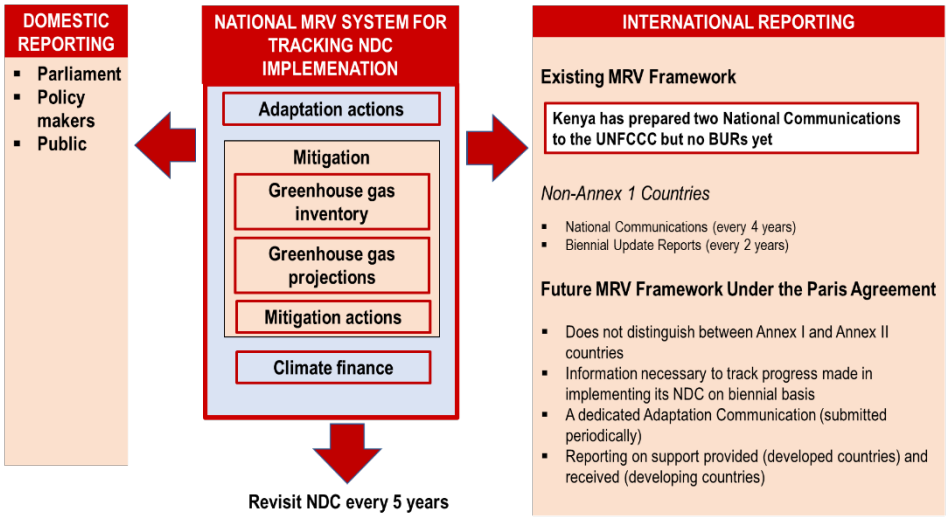
Figure 3 below shows a simplified generic model for tracking and reporting on NDC as proposed in the 'NDC Quick-Start Guide'. In the model, the National MRV System for NDC Implementation is used for both domestic and international reporting. Ideally, this is what is expected of Kenya's national MRV/transparency system into which the sectoral MRV/transparency systems, including those of the energy and transport sectors, would feed into.

In terms of implementation, the Climate Change Act, 2016 has addressed the legal, institutional and process requirements of the MRV+ system. Implementation of the Act has started, and a National Climate Change Council has been proposed, although not all those proposed were approved by Parliament. In addition, the responsibilities for data management from collection to archiving have been defined in the Act too and the CCD has started the process of developing data sharing Memorandums of understanding (MoUs)[37] with various data generators. For the GHG Inventory system, a Core Modelling Team of 20 staff has been constituted and another 100 have been identified as wider sector team members to provide technical support. Training of the staff on GHG inventory has started under the CBIT and LECRD projects and the relevant regulations are being drafted.

[37] These MOUs were referred to as Data Supply and Reporting Agreements (DSROAs).

Figure 5: Model for National MRV/Transparency System for Tracking and Reporting for NDC implementation

Source: The 'NDC Quick-Start Guide'



A National Adaptation Coordination Committee (NACC) has also been constituted to coordinate all adaption actions in the country, including establishment and overseeing the Monitoring and Evaluation (M & E) of the adaptation actions. These structures carry out the roles specified for the MRV+ system, although in certain cases they were called differently in the MRV+ system. A GHG Inventory Coordinator has been assigned on an acting capacity. This office would later play the role that was proposed for the MRV+ System Director in the NCCAP 2013-2017. It is however of utmost importance that a national MRV system framework is agreed to provide an overall framework to guide the various MRV-system building activities which are beginning to take sectoral approaches.

It is against this background that the Needs and Gap Analysis has been conducted for Kenya's MRV system for NDC implementation the energy and transport sectors.

CHAPTER 5: RESULTS OF THE GAP ANALYSIS, RECOMMENDATIONS AND CONCLUSION

A key consideration has been the form the national and sectoral MRV/transparency systems for NDC implementation will take and how they will interact with each other to enable regular reporting. It has now been agreed that the sectors will collect and provide sectoral GHG inventory data that is to be used by the CCD for GHG inventory preparation at the national level. All the GHG data will be collected and fed into the system, by the sectors, into a prescribed format that is compatible with the IPCC tool. GHG Management Institute, under a CBIT project contract, is already building the capacity of the sectors to collect and feed in the sectoral GHG data. However, the specific office within the CCD to receive the data is yet to be determined. At the same time, it has not been determined whether or not to establish sectoral registries for mitigation and adaptation, which are then linked to the main national registries, or only national registries that are updated directly with sectoral data. To this end and through a tender, the CCD is seeking the services of a short-term consultancy to update the design of the MRV system and develop regulations on the MRV of Climate Change actions and support for the Country.

It has been assumed that both the energy and transport sectors will have independent registries for mitigation and adaptation actions where climate actions, their impacts and the support used to implement them, will be captured. Both sectors will collect the GHG inventory data, carry out the necessary QA/QC activities and feed in a predetermined format before sending it to the CCD for the estimation of the sectoral GHG inventories. It is noted that the transport sector has developed a process that also includes GHG emission estimations. However, this system will be used as a check, for the time being.

It is also noted that the MRV/transparency system design keeps changing and will be reviewed over time as the various elements of the enhanced transparency framework of the Paris Agreement become clearer and regulations are established for the MRV components of the Climate Change Act, 2016.

The NDC prioritised actions for the energy and transport sectors are shown in Annexes 1A and 1B, respectively. The proposed activities for setting up the MRV system of the energy sector are summarised in Annex 2, while the Terms of Reference (ToRs) for the transport sector consultant are shown in Annex 3.

RESULTS

Table 3 below shows the results of the Needs and Gap Analysis. This is a comprehensive list of activities that goes beyond what ICAT can cover within the limits of the current budget. ICAT will cover only those aspects which are specific to the energy and transport sector that can be realistically covered by the budget. This is not easily defined at the moment because what is to be included in the national and sectoral MRV systems has not bee established yet.

The key activities for developing the MRV system for NDC implementation are captured in the first column. These are broken down into sub-activities in the second column.

A broad assessment of the sub-activities has been carried out in the third column where the sub-activities are assessed broadly as ‘Complete’, ‘Some progress made’ or ‘No progress’. These categorisations were applied for the analysis for indicative purposes. As long as a finding is not ‘Complete’, some action will be required. The basis of the categorisation and detailed analyses are presented in the fourth column before activities for ICAT implementation in the energy and transport sectors are proposed in the last column.

The assessment and analysis show that the capacity for implementation of the enhanced transparency framework is not adequate, not just for the energy and transport sectors, but also for all other sectors.

Significant work has been done under the CBIT and LECRD projects with regard to establishing a system for measuring, reporting and verifying GHG emissions in all the sectors. Both the energy and transport sectors, like all other sectors, have made significant advances at MRV/transparency of the GHG emissions, including defining institutional structures, processes and procedures, broad roles and responsibilities for capturing and reporting GHG-related data. Capacity building is ongoing and related data is being captured in appropriate formats. However, the overall MRV

framework for GHG emissions is yet to be agreed upon and a consultant is soon to be contracted to focus on the National MRV Framework. Meanwhile Kenya is lagging behind on its UNFCCC reporting obligations having submitted only two National Communications (NCs) and no Biennial Update Reports (BURs). The reporting and measurement of both climate actions and their impacts in the energy and transport sectors do not meet the requirements of the Climate Change Act, 2016 and Article 13 of the Paris Agreement. Currently, there is neither a system of tracking climate change actions in a controlled manner as per the indicators in the NCCPA 2018-2022, nor for assessing and reporting their impacts.

The ICAT Series of Guidelines, particularly the Sustainable Development Guide, will be applied to support the assessment of impacts of prioritised actions for the implementation of the NDC. For historical reasons, projects have been categorised as 'development', 'adaptation' and even 'mitigation'. The Treasury and Planning ministry has developed the National Integrated Monitoring and Evaluation System (NIMES) as the main M & E tool for tracking impacts of such projects at the national level, and the County Integrated Monitoring and Evaluation System (CIMES), for county level tracking. The MRV system for tracking the NDC/NCCAP implementation should be linked to both NIMES and CIMES, with a long-term objective of integrating them. ICAT impact assessment tools could be used to assess the impacts to be captured and reported in the systems.

Although significant effort has been made by the National Treasury and Planning ministry towards enhancement of transparency of public climate finance, implementation has not yet started. Also, it will require significant work to capture non-public climate support, including finance, technology transfer and capacity building. While Kenya has provided some information on the country's needs within its NCs, NDC and the draft NCCAP 2018-2022, it has not been able to report on support received.

The assessment shows that the two sectors, like all other sectors in Kenya, are not adequately resourced in terms of budgets and technical experience to measure, report and verify climate action, support and the results of the actions. Historically, episodic project funding for the preparation and submission of greenhouse gas inventories and NCs makes it difficult for the sectors to maintain ongoing data collection and to provide regular training for internal experts to prepare those inventories.

The current sectoral MRV/transparency arrangements do not adequately address the following:

1. The known requirements of the enhanced transparency framework of the Paris Agreement, which set up the structure for an effective transparency mechanism for accurate and precise MRV of greenhouse gas emissions, climate actions and their results, and the support required and received from all nations. Besides data on GHG emissions, data on climate actions, their impacts and the funds used to implement them are not captured in a controlled manner.
2. The requirements of the MRVplus system that was proposed as part of the NPBMF in the NCCAP 2013-2017, and the roles and responsibilities defined in the Climate Change Act, 2016 for the national and county level institutions and NSAs as data suppliers.

The above requirements have been considered as critical components of the desired future state of the MRV/transparency system for tracking NDC implementation through the NCCAP, and for both domestic and international reporting. In addition, certain systems and arrangements for data collection, sharing, QA/QC, analysis, reporting and archiving require to be either established or enhanced with formal arrangements for enforcement such as data sharing Memoranda of Understanding (MoU's) in the two sectors.

During the gap analysis, the following observations, which have informed the recommendations, were made:

1. Awareness of climate change indicators and reporting requirements are very low amongst both state and non-state actors in all the sectors. Therefore, efforts to increase this knowledge through deliberate awareness raising strategies is key to building capacities in this area. The ICAT Project will focus on raising such awareness in the energy and transport sectors.
2. Some capacity for climate change MRV and M & E exists in Kenya but mainly located within non-state actor institutions that make up the majority of climate change actors in Kenya and who therefore have more experience with assessment and reporting on climate change outcomes for their projects, especially adaptation and resilience building. The ICAT Project will strive to tap this capacity to enhance reporting through deliberate involvement of the non-state actor institutions in the MRV system set up and implementation.
3. There is a general lack of coordination of climate action (mitigation and adaptation) and even initiatives or programmes that address climate change.[38]. A similar situation exists for various projects and programmes working on various aspects of MRV/transparency of various actions.
4. While efforts are underway to set up a climate action registry at the national level, decision on whether similar registries should be set up at the sectoral levels is still pending. While the initial set up of the registry applied resources and skills availed by the StARCKplus programme, these resources are no longer available as the programme has ended. The recently launched Capacity-Building Initiative for Transparency (CBIT) project has planned several activities aimed at enhancing Kenya's MRV system at the national level while the LCRD programme is supporting GHG inventory as a priority. In addition, TraCS is supporting GHG emissions work and general compliance with the Climate Change Act, 2016 requirements in the transport sector. ICAT Project is focussed on enhancing transparency and MRV for NDC implementation in the energy and transport sectors. The GNIplus project has also started MRV work in Kenya.
5. There is inadequate country specific activity data and emission factors in most sectors. In the energy sector, and with existing data, it would not require too much resources to establish a system for updating the grid emission factor on an annual basis. Recently, through TraCS and the Stockholm Environmental Institute (SEI), some work, which is yet to be validated, has been done to generate the road transport emission factors. Other country specific emission factors in both the transport and energy sector require significant research and resources and are not considered a priority at this stage of setting up the MRV system for NDC implementation.
6. Previously, there have been inadequate measures to incorporate the devolved governance systems. This gap has been identified and the county governments are now being introduced to the requirements of the Climate Change Act, 2016, which includes MRV requirements. In addition, an awareness training programme has been developed and training has been initiated by CCD which is being provided by the Kenya School of Government.

[38] Efforts have increased over the past 1.5 years in MEF, with an MRV exchange circle, and the NDCP

Table 3: Results of the Gap Analysis- Implementation Activities for MRV of NDC Implementation

Key

- ✔ Complete
- ✔ Some progress made
- ✘ No progress

MRV/Transparency Implementation		**Needs and Gap Analysis**	**Analysis and Comments**	**Activities for implementation**
Key Activities	**Sub-Activities**			
1. Review MRV requirements and current MRV activities	1a. Review the NDC, NCCAP 2018-2022, Article 13 of the Paris Agreement, the Climate Change Act and current MRV activities for the energy and transport sectors to identify any additional MRV requirements for energy and transport sectors	✔	MRV/transparency of NDC actions in the energy and transport sectors requires MRV/transparency of mitigation (actions and results), adaptation (actions and results) and support (finance, technology and capacity building required and received). Vision 2030 and NCCAP 2018-2022 require also MRV/transparency of SDGs, including co-benefits of various climate actions. NCs and BURs require sectoral GHG inventories. Data gaps identified in both energy and transport sectors. Tier 1 estimation applied throughout but needs improvements in data quality. NCCAP 2018-2022, with priority actions (mitigation and adaptation) for the energy and transport sectors, has been prepared. Very rough budget estimates have been included in the NCCAP 2018-2022. The National Treasury and Planning has prepared climate finance accounting mechanisms, including cost centers but the system is not fully implemented. The GoK has built capacity in the M & E Department of the treasury to run the National Integrated Monitoring and Evaluation System (NIMES) and the County Integrated Monitoring and Evaluation System (CIMES).	1a. Formally agree on what is to be included in the national and sectoral MRV systems based on the identified requirements and train all the relevant staff to ensure adequate awareness and capacity for implementation. For the energy and transport sectors, initially, the MRV system to cover prioritized NCCAP/NDC mitigation and adaptation actions without detailed results, and finance received. Afterwards, the results of climate actions and other support (capacity building and technology transfer) received, together with support needed can be included as results from the NIMES begin to come in.

	1b. Review and map existing national MRV processes/systems in the energy and transport sectors		No national MRV system for NDC implementation has been established but MRV+ system proposed, and various sectoral measuring and reporting processes exist some of which feed into the UNFCCC reporting (National Communications). Nearly all these processes do not cover the results of the actions and the resources applied in a formal way (No integrated M & E system). Registries of actions missing. Climate Change Act, 2016 assigns responsibility for data capture and sharing among public and private entities but this has to be formalised in form of formal agreements (MOUs) with details on capture, distribution etc. The GHG inventory process has been an ad hoc process (no sustainable GHG Inventory system) and the GoK is yet to prepare the first BUR and GHG Inventory for the TNC. GHG data captured from sectoral data with default IPCCC emission factors but there is need to improve quality and completeness of the data for various sectors, and to ensure continuity of the process. Currently, all data is captured sectorally (by UNFCCC sectors) and to varying degrees, mainly for Vision 2030 and GoK performance reporting and policy formulation but also used for UNFCCC reporting. Climate finance and support have never been reported before, but system has been created in the National Treasury for capture and reporting of public climate finance. A Climate Change Fund has also been created by the Climate Change Act, 2016 and several counties have also set up climate funds. So far, there is no MRV for the funds. There are no sectoral climate funds. The Climate Change Act, 2016 also requires non-public entities to report climate finance to the National Treasury but not yet implemented.	1b. Map the existing MRV processes/systems at the national level with those of the energy and transport sectors. Formalise existing data capture, sharing and reporting arrangements through data sharing memoranda of understanding (MOUs) between data sharing parties that specify type, format and frequency of data with clear responsibilities for the energy and transport sectors. Set up QA/QC systems for the energy and transport sectors The energy and transport sectors to set up the MRV systems for public climate finance based on the budget codes that have been defined by the National Treasury and Planning. The energy and transport sectors' MRV system for NDC implementation to include actions and resources applied by non-public entities. In the MRV system for the energy and transport sectors, technology transfer and some capacity building to be captured for the actions prioritized in the NCCAP 2018-2022

			Unlike the NCCAP 2013-2017, the NCCAP 2018-2022/NDC does not propose an MRV system but refers to the MRV+ system of NCCAP 2013-2017. Indicators for M & E of NAP (energy and transport sector actions) exist but require refinement. Current NDC does not stipulate any specific MRV approach but the Climate Change Act, 2016 specifies NCCAPs as the means of climate action, including the MRV. Mechanism for MRV of other support (technology transfer and capacity building) yet to be developed.	
2. Establish institutional arrangements for the oversight and coordination of MRV activities in the energy and transport sectors	2a. Set up an MRV steering group for the energy and transport sectors		The CBIT and LECRD projects have set up sector intuitional arrangements for GHG inventory. LECRD is working to engage a consultant to develop a National MRV Framework. This can be applied for all the sectors' transparency and MRV system for NDC implementation, albeit with some modifications within the specific sectors NCCAP 2018-2022 is already aligned to the 5-year NDC through the NCCAPs and the MTP process for Vision 2030 implementation.	2a. The National MRV Framework (to be developed) to be used as the basis for the energy and transport sectors' intuitional arrangements for MRV/transparency of the NDC. but with possible modification. Include oversight of the stepwise design and implementation of the energy and transport sectors MRV system for mitigation, adaptation and climate finance in the ToR of the assigned players.
	2b. Agree an overall lead institution for the MRV system and define working arrangements with the energy and transport sectors		The Climate Change Act, 2016 assigns responsibility for the oversight and coordination of MRV to the CCD (which has capabilities across mitigation and adaptation). A functional MRV oversight and coordination function is yet to be established within the CCD. There is need to redefine roles/responsibilities within CCD and formalise appointments for MRV responsibilities in the energy and transport sectors.	2b. Appoint specific staff within the CCD and the energy and transport sectors, with responsibilities for the coordination and oversight of the national and sectoral MRV work, respectively and build capacity through training as appropriate. Build on CBIT and LECRD work and training to formalize the roles and responsibilities in the two sectors.
	2c. Develop appropriate rules and guidance for the energy and transport sectors		Relevant broad rules and general guidance on data sharing have been defined in the Climate Change Act, 2016. However, details/regulations (what, by whom, frequency), including MRV-related technical guidance, are yet to be developed, for all sectors, including energy and transport.	2c. Develop and publish appropriate rules and guidance on data sharing and information management, clearly defining which data is to be shared, by whom, and how often between various government units and within the sectors, the required QA/QC, with clear instructions to guide

				various staff involved, and to ensure compliance with international level agreements for the energy and transport sectors
	2d. Develop plans for reporting for the energy Climate change annual reporting is already in progress for the transport sector		Planning for local and international reporting (audience including parliament and public, needed data, formats, frequency and responsibility) should be part of the MRV system for NDC/NCCAP 2018-2022 implementation. This will be based on the sectoral, national and international audience, including current UNFCCC reporting requirements and transparency requirements. How to capture and report actions at the county level is yet to be established.	2d. Develop plans for reporting, considering the intended audience, needed data and their formats, frequency and responsibilities for the energy and transport sectors
3. Assess data gaps and needs for the energy and transport sectors	3a. Assess and prioritise data gaps in the energy and transport sectors		Data required (what and when) across mitigation (national GHG only but not individual actions), adaptation, finance and other areas to track the NDC implementation have been identified through sectoral analysis, NAP process and by the National Treasury through CPEBR process. These include data required for the energy and transport sectors. Registries of actions (mitigation and adaptation) to be established to track and report climate actions and finance/support. Consider MRV requirements for SDG reporting as well. Review data not yet collected, not available, not in the right format or frequency or not of the required quality in the energy and transport sectors. While some assessment has taken place through the NDC sectoral analysis process, there has been no prioritization	3a. Assess and prioritise data gaps, identifying data which are not yet collected, not available, not in the right format or frequency or not of the required quality in the energy and transport sectors. Priority to be on the basis of the relative importance for domestic and international reporting. Set up registries for climate action (mitigation and adaptation) in the energy and transport sectors
	3b. Identify how existing MRV systems can be extended to address data gaps in the energy sector		Consider how existing data flows, responsibilities and processes could be adjusted and extended to build a system which can collect the required data for tracking NDC and SDG implementation, including options for integrating gender considerations into the MRV system for the energy and transport sectors. This step has not been done formally and documented but some considerations have been made at different fora.	3b. Identify how existing MRV systems can be extended to address data gaps in the energy sector in order to include both climate and SDG indicators. For transport sector this was covered under TraCS. Report is being finalized

4. Design the MRV system for mitigation, adaptation and finance for the energy and transport sectors				
4.1 Design and implement a mitigation MRV system for the energy and transport sectors	4.1a Design and develop a greenhouse gas inventory for the energy and transport sectors		Under the CBIT and the LECRD projects, the GHG inventory system is being developed. The institutional set-up has been agreed and training of the involved staff for all sectors, including the energy and transport sectors has started. For the transport sector, the TraCS project is supporting the GHG inventory system. Data collection takes place and the data is used to estimate the GHG inventory in all the sectors, including energy and transport sectors. Currently, there is no coordination of data capture, sharing, QA/QC and archiving.	4.1a Review, design and develop a greenhouse gas inventory system covering data capture and sharing, QA/QC, archiving and the coordination of the activities for the energy and transport sectors that is to be integrated with the national MRV system for GHG inventory
	4.1b Design a system for the monitoring and evaluation of mitigation actions in the energy and transport sectors		A mitigation action registry has been proposed and tentative design proposed under the StARCK+ programme. This is also a requirement of the Climate Change Act, 2016. To capture the results, the registry should be linked to the National Integrated Monitoring and Evaluation System (NIMES) that is being run by the M & E Department of the National Treasury and Planning ministry.	4.1b. Design a system for the monitoring and evaluation of mitigation actions that builds on all existing M & E arrangements in the energy and transport sectors, with reference to the ICAT Series of Guidance
	4.1c Develop projections for greenhouse gas emissions for the energy and transport sectors		A forecasting tool needs to be developed and applied for the projections in the energy and transport sectors. Previous projections have been developed externally by consultants for different sectors applying different tools.	4.1c Develop a system/tool for forecasting and building projections for greenhouse gas emissions in the energy and transport sectors
	4.1d Develop interim milestones for the energy and transport sectors		A number of broad milestones have been developed and included in the NCCAP 2018-2022, which is the means for NDC implementation. The details of the energy and transport sector-specific milestones need to be developed.	4.1d Develop and apply the milestones for the energy and transport sectors during phase 2 of the ICAT project. The milestones to be aligned with NCCAP 2018-2022 and workplans of CBIT, LECRD, A2A projects for the prioritized actions
4.2 Monitor and report on progress and the effectiveness of	4.2a Review the NDC to identify any additional MRV requirements in the energy and transport sectors		There are no additional MRV requirements for NDC implementation other than those in the NAP and the NCCAP 2018-2022. Development projects with adaptation, mitigation or SD benefits should be monitored and reported via the NIMES.	4.2a Develop an MRV requirements document for adaptation and development actions in the energy and transport sectors, with approriate indicators to be included in the NIMES

adaptation actions in the energy and transport sectors	4.2b Apply Element D of the National Adaptation Plan process technical guidelines		The NAP has been prepared and implementation is starting. Application of the MRV will be improved over time starting from the M & E Plan of the NAP which is to be enhanced for the NCCAP 2018-2022 prioritised adaptation actions.	4.2b Implement the NAP and the NCCAP 2018-2022/NDC M & E for the energy and transport sectors, applying the appropriate indicators to be included in the NIMES
4.3 Design and implement a climate finance MRV system for the energy and transport sectors	4.3a Identify climate-related spending across all relevant finance flows for the energy and transport sectors		A system has been designed for tracking public climate finance. The system also identifies public climate finance. The climate finance MRV system for NDC implementation in the energy and transport sectors will be built on the public climate finance tracking system that has already been designed.	4.3a Implement the public climate finance MRV system for the energy and transport sectors.
	4.3b Track and report climate-related spending across all relevant finance flows in the energy and transport sectors		System has been designed and ready for implementation with respect to public climate finance for all sectors.	4.3b Implement the public climate finance tracking system in the energy and transport sectors
	4.3c Expand and improve the MRV of climate finance for the energy and transport sectors to cover non-public climate finance		By applying the Climate Change Act, 2016 requirements for reporting climate finance, the MRV system will be improved over time by addition of non-public climate finance. This will require more time and will go beyond the ICAT project life.	4.3c Implement public climate finance MRV and stabilise implementation in the energy and transport sectors before expansion to non-public sectors begins. The expansion of the MRV system is likely to go beyond the ICAT project life.
5. Establish data management processes for the energy and transport sectors	5a Develop systems to improve data quality for the energy and transport sectors		Currently there is no robust system of data verification, audits, quality checks or consultations with stakeholders. A system needs to be put in place covering all sectors.	5a Develop and apply guidelines for data verification, audits, quality checks and stakeholder consultations for the energy and transport sectors.
	5b Develop data management systems for the energy and transport sectors		Currently there is no clear and transparent archiving of data. A data archiving system (preferably on line) needs to be set up. However, for transport sector there is a data centre which they often request to be operationalized.	5b Develop and apply guidelines for data management, including archiving, for the energy and transport sectors.
	5c Address data gaps for the energy and transport sectors		Currently, both energy and transport sectors rely on non-desegregated activity data, inaccurate and old data on biomass energy, and default IPCC emission factors. Both the energy and transport sectors should continue to apply the default values until the data can be improved.	5c Develop and implement a plan for addressing sectoral data gaps in the energy and transport sectors.

			Development of the systems for collection and reporting activity data in the energy and transport sectors to be prioritised	
	5d Develop data improvement plans for the energy and transport sectors		Plans for data improvement for the energy and transport sectors currently do not exist but should cover suggested responsibilities, timelines and resource requirements.	5d Develop and apply guidelines for data verification, audits, quality checks and stakeholder consultations for the energy and transport sectors.
6. Build MRV capacity in the energy and transport sectors	6a Assess capacity building needs and prepare a capacity building plan for the energy and transport sectors		Assess capacity-building needs for the design and implementation of each element for the energy and transport sectors. Capacities of county governments should be enhanced over time to coordinate cohesive tracking of development plans linked to the SDGs and NDC. Capacity building at the county level to be linked to the County Integrated Monitoring and Evaluation System, the National Integrated Monitoring and Evaluation System (NIMES) and the County Integrated Development Plan (CIDP)	6a Assess and plan capacity-building needs for the design and implementation of each element. Capacities of county governments should be enhanced to coordinate cohesive tracking of development plans linked to the SDGs and NDC for the energy and transport sectors, and should be linked the County Integrated Monitoring and Evaluation System, NIMES and CIDP
	6b Implement capacity building plan for the energy and transport sectors		Implement the planned capacity building activities for the energy and transport sectors.	6b Implement the capacity building plan for the energy and transport sectors
7. Improve the MRV system over time for the energy and transport sectors	7a Ensure MRV reports are relevant for the energy and transport sectors		Initially the MRV reports will be limited to what is considered critical for transparency, accountability and national reporting for the energy and transport sectors	7a Review all reports against identified requirements for the energy and transport sectors
	7b Consider options for continuous improvement for the energy and transport sectors		A system for internal review, feedback and improvement will be required to ensure continuous improvement for the energy and transport sectors	7b Design and implement a system for continuous improvement for the energy and transport sectors

RECOMMENDATIONS AND ACTIONS FOR PHASE 2 OF THE ICAT PROJECT

In the methodology applied, it was assumed that the following challenges faced by Kenya in implementing the country's climate policy would be separately addressed in detail in relation to governance, and not as part of this analysis in a detailed manner:

1. Building awareness of the need for, and benefits of, action among stakeholders, including key government ministries such as Ministries of Energy, Petroleum and Mining, Transport, Infrastructure, Housing and Urban Development.
2. Mainstreaming and integrating climate change into national planning and development processes.
3. Strengthening the links between county and central government plans on climate change.
4. Building capacity to analyse, develop and implement climate policy and development and implementation of the NIMES.
5. Establishing a mandate for coordinating actions around NDCs and driving their implementation.

In order to establish an MRV/transparency system for NDC implementation for the energy and transport sectors that meets the national and international reporting requirements, the following are recommended:

1. Conducting nation and sector wide climate change and MRV awareness training and capacity-building[39] to enable different stakeholders to understand their roles and how to play that role with regard to the MRV system implementation. The field of MRV and M & E of climate change projects is rather new and therefore this capacity has not yet evolved to the required level in Kenya. Strengthening capacities for data collection, archiving, analysis and management is necessary. There is a need for deliberate, pre-planned and budgeted capacity building and training for GoK officials, especially those in the Central Planning Units of the energy and transport sectors responsible for ensuring information transmission on progress and outcomes of development projects through the existing electronic M & E and financial systems of government, specially the NIMES, together with the county government officials.
2. Establishing and implementing a systematic, standardized process and formats to collect, assess and share activity data and/or maps and documentation, including setting up institutional frameworks[40] that support the capture and reporting of climate actions and there results, the resources used to implement the actions and the implementation and maintenance of sustainable national GHG Inventory management system, especially to facilitate data collection, sharing, reporting, QA/QC and archiving. Data collection at the county level and other levels will be included gradually to enhance the system. Presently, the TraCS project is working to set up the institutional frameworks in the transport sector as required by the Climate Change act, 2016. However, the project activities are limited to GHG inventory system in the transport sector and excludes other MRV activities required by Article 13 of the Paris Agreement.
3. Although the energy sector, through biomass cooking, impacts heavily on the LULUCF sector and the integration of the energy sector emissions with those in the LULUCF sector would be

[39] The training and capacity building should target central and county government staff, private sector, civil society and research institutions together with universities that are key players in the energy and transport sectors.
[40] The institutional arrangements should cover data capture, sharing and reporting, QA/QC and archiving, including data provision MoUs, which formally operationalise the requirements of the Climate Change Act of 2016.

beneficial for both national level policy analysis and international reporting, it is not recommended and planned to carry out this action in the next phase as it requires resources that are not available at the moment. Integration of GHG requirements for the energy and transport sectors into annual national reporting/statistics reports would be considered in phase 2 of the ICAT project implementation once the national system is determined. The MRV system to be set up in the energy and transport sectors in the next phase of the ICAT Project will include analysis of the impacts of various projects in the energy sector.

4. With climate change being a cross cutting issue, the new MRV system structure requires that several staff from key ministries, MDAs, counties and NSAs be engaged and work together within an all-encompassing governance structure. However, indications are that already these MDAs are operating far below the required capacity both in terms of human resource numbers, awareness and knowledge of climate change measures, reporting requirements and frameworks. Development of the MRV system therefore needs to be approached in an inclusive, participative and integrated manner, ensuring that the relevant stakeholders are on board with adequate capacity and commitment, at both the national and sub-national levels.

5. Duplication of efforts and funding avenues for development projects by state and NSAs pose a special challenge to accurate and honest feedback on climate change impacts and on measuring contributions and attributing outcomes to specific interventions by specific institutions or groups. Enhanced coordination by the CCD of such initiatives using appropriate climate action registries[41] would improve efficiency and effectiveness of effort, while minimising competition for key stakeholders' time and commitment among the initiatives. In the next phase of the ICAT project, specific arrangements and systems will be put in place to ensure adequate coordination within the energy and transport sectors. At the same time, during phase of the ICAT project implementation, coordination with other ongoing MRV and transparency related activities to avoid duplication and ensure synergy.

6. Similarly, the lack of formal arrangements amongst key MDAs, as well as those comprising NSAs, pose potential risks for non-compliance on climate change data sharing and reporting. Implementation of the Climate Change Act, 2016 in terms of setting up appropriate data collection and sharing arrangements should be accelerated and data sharing MoUs should be enforced. The next phase of the ICAT project will facilitate the implementation of such arrangements in the energy and transport sectors.

7. For the enhancement of the MRV system for NDC implementation in all sectors, including the energy and transport sectors, continuous research and improvement is required. A notable limitation is the lack of budget and time for a more comprehensive study with wider coverage of climate change actors in the sectors, including the energy and transport sectors. More analysis on the capacity considerations for climate change will be necessary before any meaningful conclusions can be made in this area.

8. Since climate change mitigation, adaptation and even financing are often embedded in the same actions, it is important that synergies are identified, and duplications of effort are avoided. Such synergies will include identifying opportunities for applying the MRV systems used for NDC implementation to track SDG implementation, especially the goals related to mitigation, adaptation and finance, as well as the gender impacts of climate actions and the effectiveness of gender mainstreaming initiatives. For the energy sector, the ICAT Series of Guidance will be applied in phase 2 while setting up the MRV system for NDC implementation in the sector.

[41] The registries are to be used for the capture, coordination and tracking of climate actions and their results.

CONCLUSION

The arrangements for national reporting have evolved over time resulting into a more comprehensive measuring, reporting and verification (MRV) framework. One of the key elements of the Paris Agreement is its enhanced transparency framework, set out in Article 13. Transparency of action (both mitigation and adaptation) and support (in form of finance, technology and capacity building) is important for building mutual trust and confidence and promoting effective implementation

A Needs and Gap Analysis based on a future state that considers Article 13 of the Paris Agreement, Kenya's Climate Change Act of 2016, the Draft NCCAP 2018-2022 and the NDC, has been successfully conducted for the energy and transport sectors. The current MRV/transparency system state was established through interviews, consultations and document reviews. The Needs and Gap Analysis has compared the future state and the current state of the MRV/transparency system for tracking NDC implementation. The Needs and Gap Analysis has helped to establish the status of Kenya's energy and transport sectors with regard to the MRV/transparency for NDC implementation, and to create a common understanding of the status and what is required. The analysis has further been used to develop a list of prioritised actions to be implemented in the next step of the ICAT project for the energy sector, and to draw the ToR for a consultant to work on the transport sector. The results from the actions are MRV/transparency systems for the two sectors that meet the requirements of the country's Climate Change Act, 2016, national reporting requirements and the enhanced transparency requirements of the Paris Agreement.

The Needs and Gap Analysis shows that the capacity for implementation, in terms of technical skills, adequate staff, budgetary resources, processes and procedures, is inadequate in the two sectors. The two sectors, just like the other sectors in Kenya and in most other developing countries with historically inadequate resources and technical experience, will find the prospect of regular, comprehensive reporting and review daunting. Historically, episodic project funding for the preparation and submission of greenhouse gas inventories makes it difficult for Kenya, among other developing countries, to maintain ongoing data collection and to provide regular training to experts to prepare those inventories, in any sector, including energy and transport. The Measurement and Reporting components of the transparency framework for the two sectors, need strengthening if the Paris Agreement is to be implemented successfully in the energy and transport sectors. The strengthening should focus on capacity building, including enhancement of technical skills, adequate staffing, clear definition of roles, tools, procedures and processes. Provision of adequate budgetary resources is also a priority. The critical activities required for Kenya to bridge these needs and gap have been identified and prioritised in this report for implementation in phase of the ICAT Project implementation.

In conclusion, this report recommends the following as four broad priority activities for strengthening Kenya's MRV system:

1. Carry out sector-wide climate change and MRV awareness and capacity building activities involving targeted central and county government staff, private sector, civil society and research institutions together with universities.
2. Set up institutional arrangements for data capture, sharing and reporting, quality assurance/and control (QA/QC) and archiving, including data provision Memorandums of Understanding (MoUs), which formally operationalise the requirements of the Climate Change Act (2016).
3. Set up appropriate climate action registries, including climate change -related initiatives, for the capture, coordination and tracking of these actions and their results.

4. Provide adequate budgetary resources to make it happen.