Initiative for Climate Action Transparency - ICAT -

KENYA: FINAL ICAT PROJECT REPORT FOR THE ENERGY SECTOR

KENYA: Final ICAT Project Report for the Energy Sector

Deliverable #4

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October 2019

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PUBLISHED BY

The Climate Change Directorate, Ministry of Environment and Forestry, Kenya

PREPARED UNDER

Initiative for Climate Action Transparency (ICAT) project supported by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, the Children´s Investment Fund Foundation (CIFF), the Italian Ministry for Environment, Land and Sea Protection, and ClimateWorks

The ICAT project is hosted by the United Nations Office for Project Services (UNOPS)

AKNOWLEDGEMENT

We would like to acknowledge and express gratitude to Karen Holm Olsen, Peter Omeny and stakeholders who participated in the various consultations for insightful discussions and their continued support of this report.

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Abbreviations

CCD	Climate Change Directorate
GEF	Global Environment Facility
GHG	Greenhouse gas
ICAT	Initiative for Climate Action Transparency
KAM	Kenya Association of Manufacturers
M&E	Monitoring and evaluation
MED	Monitoring and Evaluation Department, National Treasury and Ministry of Planning
MOE	Ministry of Energy
MRV	Measurement, reporting and verification
NAP	National Adaptation Plan
NCCAP	National Climate Change Action Plan
NDC	Nationally Determined Contribution
QA/QC	Quality assurance / Quality control
SDG	Sustainable Development Goal
StARCK+	Strengthening Adaptation and Resilience to Climate Change in Kenya Plus
UNDP	United Nations Development Programme
UNEP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Chapter 1 Introduction

1.1 Background

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, like many developing countries, Kenya does not have the tools to measure, report and verify progress on her climate commitments and actions as required by the transparency clause of the Paris Agreement.

In response to calls for support from countries, such as Kenya, for improved transparency and capacity building related to the Paris Agreement, the Initiative for Climate Action Transparency (ICAT) [1] was launched on 14th April 2016. 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. In Kenya, the focus of ICAT has been the energy and transport sectors.

On 1st March 2019, UNEP DTU Partnership (UDP) as one of the three implementing partners and in collaboration with the Government of Kenya (GoK), contracted ClimateCare Limited to support the implementation of the project in Kenya. Through the 1½-year support contract under a project entitled 'Initiative for Climate Action Transparency (ICAT) Support to MRV in the Energy Sector in Kenya', ICAT sought 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 aimed 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 (Deliverable #1: Needs and Gap Assessment Report-Measuring, Reporting and Verification (MRV) of the NDC Implementation for the Energy and Transport Sectors in Kenya).
2. Strengthening of the institutional arrangements for MRV in the energy and transport sectors (Deliverable #2: Kenya: Strengthening Institutional Arrangements for Measurement, Reporting and Verification (MRV) In the Energy Sector).
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 (Deliverable #3: Kenya-An Assessment of the Sustainable Development Impacts of the Kenya Off Grid Solar Access Program (K-OSAP)).
4. Development of a road map to ensure the sustainability of ICAT outcomes (Deliverable #4: Kenya: Final ICAT Project Report for the Energy Sector).

[1] See details on ICAT below.

This is the final report (Deliverable #4) under the ICAT Project which follows the previous delivery of Deliverables # 1, 2 and 3.

It summarises all activities and results of the ICAT support and delivers a 'road map', including a stepwise approach, to implementation of an MRV system for the energy sector that enables Kenya to ensure the sustainability of ICAT outcomes and meet the transparency requirements of the Paris Agreement and the relevant provisions of the Climate Change Act.

In Kenya, MRV will facilitate reporting and sharing of information, both domestically and internationally, allow the National Climate Change Council to assess if National Climate Change Action Plan (NCCAP) priority actions are implemented and achieving expected results, enable Kenya and the international community to assess progress on and achievement of it Nationally Determined Contribution (NDC) and will enhance national capacities to generate, plan, implement and coordinate individual mitigation actions.

This report was validated at a stakeholder workshop held in Nairobi on 28th August 2019. The feedback received during the workshop have therefore been incorporated.

The report includes:

1. Chapter 1 – Provides the background of the ICAT Project in Kenya, its objectives and expected results. It explains the coverage and objectives of the ICAT Series of Guidance which have been applied to deliver some the project outputs.
2. Section 2 – Summarises the activities carried out under the ICAT project in Kenya and results achieved through those activities.
3. Section 3 – Provides a 'road-map', including a stepwise approach, for not only ensuring the sustainability of the ICAT results but also for establishing an MRV system that meets the requirements of Kenya's Climate Change act 2016 and the transparency requirements of the Paris Agreement.

1.2 The ICAT Series of Guidance

The ICAT Series of Guidance provide methods focused on helping users to assess the impacts[2] resulting from policies and actions that:

4. Reduce **greenhouse gas (GHG)** emissions, which are changes in GHG emissions by sources and removals by sinks.
5. 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.
6. Drive **transformational impacts**, which relate to any system changes, leading to processes of change and outcomes of change at scale and that are sustained over time.

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

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

1. **Assessment process:** The series helps 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 of the assessment were those prioritised actions 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:** The series helps policymakers and other decision-makers to 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.

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 ICAT Activities and Results

The following is a summary of the work and results that have been delivered under the ICAT Project in Kenya since inception:

2.1 Deliverable #1 (Needs and Gap Assessment Report)

Through a Needs and Gap Assessment process, and with reference to the prior climate change related work, the ICAT project identified and prioritised actions needed in both the energy and transport sectors to develop the MRV/transparency system for NDC implementation. The assessment 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 was established through interviews, desk studies and engagement with Kenya stakeholders in two workshops for feedback. The needs and gaps were then 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 were considered with a view to avoiding duplication, enhancing complementarities and building synergies with them.

The results of the assessment were then presented in a Needs and Gap Analysis Report (Deliverable #1) which provided inputs into the next activities of the ICAT project in Kenya.

The assessment and analysis showed that the capacity for implementation of the enhanced transparency framework in Kenya is not adequate, not just for the energy and transport sectors, but also for all other 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 currently, a consultant is working on the determination of an overall 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.

For details, references should be made to the ICAT project Deliverable #1 (Needs and Gap Analysis Report).

2.2 Deliverable #2 (Report on Strengthening Institutional Arrangements for Measurement, Reporting and Verification (MRV) In the Energy Sector)

The report analysed institutional arrangements for the measurement, reporting and verification (MRV) of climate change actions in the energy sector in Kenya. It set out possible institutional arrangements for the implementation of an appropriate MRV system for the energy sector that enable Kenya to meet the transparency requirements of the Paris Agreement and the relevant provisions of the Climate Change Act. In Kenya, MRV:

1. Facilitates reporting and sharing of information, both domestically and internationally.
2. Allows the National Climate Change Council to assess if National Climate Change Action Plan (NCCAP) priority actions are implemented and achieving expected results.
3. Enables Kenya and the international community to assess progress on and achievement of its Nationally Determined Contribution (NDC).
4. Enhances national capacities to generate, plan, implement and coordinate individual mitigation actions.

The report states that a robust institutional framework for effective MRV in the energy sector should encompass the relevant institutional entities, and identify the necessary staff, systems and processes. The report identifies the need for a critical and necessary oversight mechanisms that would provide coordination and oversight for MRV in the energy sector, and could include an MRV Steering Committee, Energy MRV Inter-departmental Coordination Group, together with Adaptation and Mitigation Technical Working Groups.

The following two main options for institutional lead for MRV in the energy sector:

1. CCD leads energy sector MRV, and has responsibility for climate change data collection, analysis and reporting in the energy sector.
2. MOE leads energy sector MRV, supported by CCD, and has responsibility for climate change data collection, analysis and reporting in the energy sector.

The roles and responsibilities for the two institutional options were also provided in the report. Five main roles and related tasks to deliver on the functions were identified to monitor, report and verify climate actions in the energy sector.

The report noted that financial resources for the energy sector MRV system are required to support human resources, capacity development, appropriate technology, office space and supplies.

The Deliverable #2 report, together with Deliverable #3 report (see below), were both presented and validated at a stakeholder workshop held in Nairobi on 28th August 2019. The programme of the validation workshop and the List of Participants at the workshop are annexed to this report as Annex 1 and annex 2, respectively. The feedback received during the workshop have been incorporated in this final report.

During the validation, the stakeholders unanimously agreed that the option where MOE leads the energy sector MRV, supported by CCD, was the preferred one. However, it was recommended that a

Sector Technical Review Committee, consisting of key sector players would be required under search an arrangement to carry out the QA/QC and general oversight at the sector level. It was also noted that the sector has to be adequately resourced to carry out the MRV system implementation.

2.3 Deliverable #3 (An Assessment of the Sustainable Development Impacts of the Kenya Off Grid Solar Access Program (K-OSAP))

The assessment identified the ex-ante sustainable development impacts of Kenya Off-Grid Solar Access Program (K-OSAP) currently under implementation in Kenya. The K-OSAP aims to provide access to electricity and water for rural communities in the underserved rural communities in 14 counties.

Using the Initiative for Climate Action Transparency (ICAT) Sustainable Development Guidance tool, ClimateCare assessed the environmental, social and economic impacts of the Kenya Off-Grid Solar Access Program (K-OSAP). The assessment entailed the evaluation of both short-term and long-term impacts over the whole lifetime of the project. The assessment applied both qualitative and quantitative approaches. Environmental impacts were quantified while social and economic impacts were assessed qualitatively.

Stakeholder participation (with reference to the ICAT Stakeholder Participation Guidance; Climate Community & Biodiversity Alliance & VCS, 2017) was applied in the ICAT pilot assessment of the Kenya Off- Grid Solar Access Program (K-OSAP). The stakeholder participation was aimed at building understanding and support among the stakeholders. This in turn wouldill enhance the sustainable development impacts of K-OSAP.

Ealier during project development, stakeholder consultations were conducted at various levels during the program design stage, preparation of resettlement plan framework (RPF), Social Impact Assessment (SIA) and Environmental and Social Management Framework (ESMF).

Using the ICAT Sustainable Development Guidance and stakeholder participation tool to complete the SD assessment was found to be an iterative learning process. Users including governments, donor agencies and financial institutions, businesses, research institutions and NGOs, and stakeholders affected by the policy/action can adopt the tool to assess the environmental, social and economic impacts of policies and actions. The tool was applied at the project level but is applicable to any level of government (national, subnational, municipal) in all countries and regions, and can be adopted by multiple sectors. Further it was applied for an action under implementation, but it is applicable for planned, adopted or implemented policy/actions, and for new policies/actions, or extensions and modifications of existing policies/actions.

Further, the guidance was found to be user friendly, flexible and participatory which is key in building sustainability of policies/actions. However, some aspects of the assessment such as establishing the baseline and conducting quantitative analysis were found to be technical. This can be addressed through capacity building to train the users on how to conduct the assessment effectively. Also, conducting the stakeholder consultations is resource intensive in terms of finances and time. However, given the overall outcome of the process, it is worthwhile for users to apply the guidance in order to achieve an objective, transparent and participatory reporting on sustainable development impacts of a policy/action. Additionally, this not only builds an understanding of the assessment but also creates a sense of trust and ownership by the involved stakeholders.

During the validation workshop of this report, all the stakeholders agreed that the ICAT Sustainable Development Guidance and stakeholder participation tool were very useful in their work and that they needed urgent capacity building to be able to apply the guidance on their projects and programmes.

Chapter 3 A Step-wise Approach to MRV in the Energy Sector

The MRV system in the energy sector could be established in a step-wise, phased approach. A critical first step is to determine the institutional arrangements between CCD and MOE, which could be set out in an MOU between the two ministries that includes agreement on data and information requirements and flow, resource allocations, hardware and software to undertake tasks, among others.

The step-wise approach to MRV in the energy sector set out below suggests beginning with something doable and achievable in the short term and then scaling up as learning occurs. This step-wise approach to MRV climate action in the energy sector could include:

1. **Determining the institutional arrangements between CCD and MOE as a critical first step**, which could be set out in an MOU between the two ministries that includes agreement on data and information requirements and flow, resource allocations and capacity development.
2. **Developing Kenya's third GHG inventory as a first step**, which is the basis of a transparent and sustainable MRV system to assess mitigation actions. MRV of climate actions in the energy sector will build on the data collection and GHG emission calculations undertaken for the inventory to assessing the impact of climate actions and the progress toward Kenya's NDC.
3. **Starting with the electricity supply and transport sectors to assess the impacts of mitigation actions and progress toward Kenya's NDC**. These sectors (ministries) have identified responsible officers and undertaken initial data collection for the GHG inventory. The electricity supply sector has accessible robust data.
4. **Initially reporting on GHG emission reductions achieved through electricity supply mitigation actions in the energy sector identified in NCCAP 2018-2022** (described in Section 4). This requires verifying the indicators, identifying the key data needs and data sources, establishing baseline data and tracking progress. The electricity supply sector has available robust data and meaning it is a good sector for CCD and MOE to establish and build capacity in low-carbon analysis.
5. **Initially undertaking MRV of energy actions at the national level.** NDC progress in the energy sector can initially be measured at the national level and reported on a sector basis. MRV at a sub-national/county level could come later. It will be difficult and costly to measure energy GHG emissions at the county level and will not generate sufficient additional information to warrant the cost at the early stages of establishing the MRV system for the energy sector.
6. **Phasing in reporting on energy emissions at a facility level over time**. Initial reporting by large emitters could take place on a voluntary basis, with more facilities reporting after a pilot phase and examination of lessons learned. CCD and MOE need to demonstrate effectiveness with respect to respecting the confidentiality of company information (for example, the need to publicly release aggregated information because GHG emission information by company can reveal confidential information about production levels). Additionally, CCD and MOE need to report back to facilities and demonstrate the use of information in reports and communication.
7. Building national capacity, including in CCD and MOE, to reduce reliance on external consultants, build institutional memory and minimize the loss of institutional capacity

The suggested actions are set out below for the short term to 2020, the medium term to 2022 (end of second NCCAP), and after 2022 (when Kenya will be reporting on the transparency requirements of the Paris Agreement).

3.1 Short-term Actions to 2020

The short-term actions to 2020 focus on planning and preparation including establishing oversight mechanisms, staffing/hiring consultants, accessing funding; and developing the Third National Communication, including the third national GHG inventory and a review of adaptation actions. Assessment of progress on mitigation could focus on the electricity supply sub-sector and co-benefits could be assessed using SDG indicators.

A. Planning and Preparation

Oversight mechanisms

1. CCD to appoint and convene the MRV+ Steering Committee overseeing MRV+, agree on deliverables to 2020 and timelines for deliverables.
2. CCD working with MOE to appoint and convene the Energy Inter-departmental Coordination Group, agree on process for information and data collection, expected inputs of various public entities.
3. Report on progress on MRV in the energy sector to the National Adaptation Coordination Committee and Mitigation Technical Working Group.

Human resources

1. CCD to appoint/hire MRV+ manager.
2. CCD to hire/contract MRV data management officers (interns or embedded experts).
3. CCD to appoint/contract MRV technology officer in CCD.
4. MOE to appoint Energy MRV Manager and Energy MRV data management officer.

Capacity development

1. Train MRV data management officers on data management and GHG inventory development in the energy sector.
2. Train MRV Data Management officials on low carbon analysis in the energy sector and reporting on outcomes of and progress on mitigation actions, and progress toward achievement of Kenya's NDC.

Funding

1. CCD and MOE to determine funding required to undertake MRV actions in the energy sector, with consideration of the funding required by MOE. Identify funding streams (e.g., GEF and on-going projects) and funding gaps. Pursue funding for gaps, including the re-allocation of funding within existing projects to address priority MRV actions.
2. If MOE is the agreed lead on MRV in the energy sector, CCD to develop funding cooperation agreement with MOE to enable MOE to have access to climate finance allocations for MRV (e.g., GEF funding for National Communications and Biennial Update Reports).

B. Data Collection

1. CCD to develop energy sector reporting guidelines and protocols.
2. CCD to procure and install appropriate technology (server, computers, etc.) for the climate change data repository and management system.
3. CCD to set up and test the climate change data repository management system, using energy as a pilot sector.
4. CCD, MOE, Ministry of Petroleum and Mining and relevant parastatals to agree on energy MRV data and information to be submitted and who will submit it. This includes data and information for: the calculation of GHG emissions; baselines for agreed indicators for mitigation, co-benefits/SDGs and adaptation; tracking progress on mitigation, adaptation and co-benefits, and progress on achievement of NDC.
5. CCD to develop MOUs with MOE, Ministry of Petroleum and Mining, and relevant parastatals.
6. CCD to develop agreements with KAM, KCCA and other non-governmental groups that have relevant information and data for MRV in the energy sector.
7. MOE, Ministry of Petroleum and Mining and other relevant public entities to submit energy data for GHG inventory.
8. CCD to develop agreement with MED to access data on identified SDG indicators that help to demonstrate the co-benefits of mitigation actions in the energy sector.
9. CCD to develop agreement with the National Treasury and Ministry of Planning to access climate finance data for actions in the energy sector.

C. Data Management, Processing and Analysis

1. Aggregate and organize data and information received, including the development of protocols for aggregation and storage of data and information.
2. Select estimation methods and calculate GHG emission estimates in the energy sector, including description of methodology, results, assumptions and gaps. Complete the energy sections of the Third National Communication, including actual and expected emission reductions, progress on mitigation actions and progress on adaptation actions.
3. Undertake analysis on progress on the achievement of Kenya's NDC in the energy sector, beginning with the electricity supply sector, which has robust data. Undertake analysis to identify options for increased ambition in the energy sector for the updating of Kenya's NDC.
4. Develop a report on co-benefits in the energy sector, drawing on relevant SDG indicators and reporting, working with MED.
5. Archive relevant energy sector data, data sources and contacts, calculations, methodologies, relevant studies, documentation and reports.
6. Identify data gaps in the energy sector.

D. Reports

1. Compile report on GHG emission estimates in the energy sector for the third GHG inventory.
2. Develop report on progress on mitigation (low carbon analysis) in the energy section, and provide input on adaptation progress for the Third National Communication.
3. CCD to submit report to National Climate Change Council for approval.
4. CCD to submit Third National Communication to the UNFCCC.
5. CCD to share reports with government agencies and relevant partners, and make available on the CCD website.

E. Quality Assurance and Quality Control

1. Undertake QC of energy section of GHG inventory by CCD, Energy MRV Manager, Energy Inter-departmental Coordination Group, mitigation technical working group.
2. Undertake QC of low carbon analysis and assessment of progress on adaptation actions in the energy sector by CCD, energy technical working group, mitigation technical working group.
3. National consultation to validate reports undertaken with in collaboration with other sectors.
4. Undertake QA of inventory and low carbon analysis with external experts supported through climate finance projects.

3.2 Medium-term Actions to 2023 (within the timeframe of NCCAP 2018-2022)

MRV in the energy sector should focus on reporting on the progress on actions in NCCAP 2018-2022, which is the implementation plan for Kenya's NDC. The assessment of progress toward Kenya's NDC will include examination of GHG emission reductions in the electricity supply and energy demand sectors; and identify options for increasing ambition. The analysis will underlie the development of NCCAP 2023-2027.

A. Planning and Preparation

1. Review roles and responsibilities to identify human resource efficiencies and identify and address gaps and needs.
2. Identify training/capacity needs of CCD and MOE officials, including embedded advisors/interns that have delivered quality work, based on experience developing the Third National Communication. Provide training for officials, particularly with regard to preparing for the MRV/transparency requirements of the Paris Agreement.
3. Review effectiveness of the oversight committees and adjust as required to improve oversight and QC function.
4. Continue to access funding for MRV role.

B. Data Collection

1. Improve data collection protocols based on learning.
2. Update inter-departmental agreements as required.
3. Track and update data sources and contacts to streamline data collection function.
4. Improve and update the climate change data repository and management system for the energy sector based on learning.
5. Input updated energy data and information into the climate change data repository and management system for the energy sector.

C. Data Management, Processing and Analysis

1. Review scope and accuracy of energy sector data; develop data improvement plan for the energy sector to ensure adequate information and data to meet the transparency reporting requirements under the Paris Agreement.
2. Undertake analysis of energy data, including:
    - Assessment of implementation of NCCAP 2018-2022 actions in the energy sector (which is the NDC and NAP implementation plan), including reporting on progress toward the achievements of Kenya's NDC in the energy sector. This could include an improved assessment of the LPG and biomass cookstoves mitigation options based on information from the 2019 census that intended to collect data on cookstoves use at the household level.
    - Analysis of energy mitigation and adaptation actions for the third NCCAP (2023-2027).
    - Report on mainstreaming of climate change in the energy sector for the Medium Term Plan process.
    - Energy section of the Biennial Update Report, including updates to the GHG inventory, low carbon analysis of energy mitigation options, assessment of progress on adaptation actions in the energy sector.
    - Explore the development of indicators to track co-benefits that go beyond the SDG indicators.
    - Develop a report on support received in the energy sector, working with the National Treasury and Ministry of Planning
    - Energy section for reports to the National Climate Change Council and Parliament.
3. Input information on energy actions to the registry of migration actions, following guidelines developed by CCD.
4. Archive relevant energy sector data, data sources and contacts, calculations, methodologies, relevant studies, documentation and reports.

D. Reports

1. Compile report on progress toward energy sector mitigation and adaptation goals set out in NCCAP 2018-2022, including estimated GHG emission reductions resulting from action.
2. Compile report on GHG emission estimates, progress on mitigation and progress on adaptation in the energy sector for the Biennial Update Report.
3. CCD to submit report on progress on the NCCAP 2018-2022, including energy information, to National Climate Change Council.
4. CCD to submit Biennial Update Report to the UNFCCC.
5. CCD to share reports with government agencies and relevant partners and make available on the CCD website.

E. Quality Assurance and Quality Control

1. Undertake QC of NCCAP 2018-2022 report and biennial update report by CCD, Energy MRV Manager, Energy Inter-departmental Coordination Group, mitigation technical working group.
2. National consultation to validate report on NCCAP 2018-2022 undertaken with in collaboration with other sectors.
3. Undertake QA of Biennial Update report with external experts supported through climate finance projects.

3.3 Long-term Actions – 2023 onward

The actions will be modified based on learning and meeting the enhanced transparency requirements under the Paris Agreement that require Kenya to report information necessary to track progress every two years from 2024, including national inventories, progress made in implementing and achieving the mitigation component of Kenya's NDC, adaptation communication, and report on support received.

Most of the above actions will continue, and could include:

1. Adjusting and improving the MRV+ system for the energy sector based on learning and built capacity. For example, consider moving from top-down accounting at the sector level to exploring the impacts of separate mitigation actions.
2. Continuing training to improve capacity for assessing progress on achievement of Kenya's NDC in the energy sector, including low carbon scenario assessment of electricity supply and energy demand mitigation options.
3. Improving reporting on climate finance to develop a report on support received for climate change actions in the energy sector. Consider developing an analysis of energy mitigation actions that offer the best value for money, offer greatest co-benefits per unit of GHG emission reduction, etc.

4. Improving reporting on co-benefits and highlighting these benefits in domestic reporting, for example, national development benefits of climate action in the energy sector, climate finance allocations that meet energy sector goals.
5. Introducing reporting templates for County Governments to feed information into the energy sector MRV reports.
6. Introducing voluntary reporting for large emitters in the energy sector (e.g., KAM group of large electricity consumers), and using that information to improve the GHG inventory, assessment of mitigation options, and progress on the achievement of Kenya's NDC.
7. Developing energy sector reports that meet the transparency requirements of the Paris Agreement, every two years, including reports on NDC Implementation, dedicated Adaptation Communication and Report on Support Received.
8. Developing reports on climate action in the energy sector for domestic reporting, including reports to the Council and Parliament.

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