Workshop Report

Southern Africa Regional MRV Network 1st Training and Peer Review Workshop

Mbabane, Eswatini

3rd – 6th September, 2019
**List of Acronyms**

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<th>Full Form</th>
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<tr>
<td>ABB</td>
<td>Activity Based Budgeting</td>
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<tr>
<td>BTR</td>
<td>Biennial Transparency Reports</td>
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<td>BUR</td>
<td>Biennial Update Reports</td>
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<td>CBIT</td>
<td>Capacity Building Initiative for Transparency</td>
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<td>CGE</td>
<td>Consultative Group of Experts</td>
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<td>EA</td>
<td>Executing Agency</td>
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<td>GEF</td>
<td>Global Environment Facility</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>GSP</td>
<td>Global Support Programme</td>
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<td>IA</td>
<td>Implementing Agency</td>
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<td>IPCC</td>
<td>Intergovernmental Panel on Climate Change</td>
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<td>MRV</td>
<td>Measurement, Reporting and Verification</td>
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<td>NC</td>
<td>National Communications</td>
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<td>NDC</td>
<td>Nationally Determined Contribution</td>
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<td>PCA</td>
<td>Project Cooperation Agreement</td>
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<td>PIP</td>
<td>Project Implementation Plan</td>
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<td>TNC</td>
<td>The National Communication</td>
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<td>UNDP</td>
<td>United Nations Development Programme</td>
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<td>UNEP</td>
<td>United Nations Environment Programme</td>
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<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
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<td>COP</td>
<td>Conference of Parties</td>
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Executive Summary

The workshop on National Climate Change Reporting and Regional Networking is one of the approaches that have been adopted by UN Environment’s Enabling Activities project team of the Climate Change Mitigation Unit and UNEP/UNDP Global Support Programme (GSP) team in trying to overcome the barriers of timely submission of climate change reports by developing countries. The Southern Africa Regional MRV Network 1st Training and Peer Review workshop took place in Mbabane, Eswatini, from 3rd to 6th September, 2019.

Participants were drawn from the Southern African countries of Angola, Botswana, Comoros, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, South Africa, Seychelles, Zambia and Zimbabwe.

The main objectives of the workshop were to; share statuses of Southern Africa countries’ MRV arrangements and NC and BUR project implementation and reporting; learn the key considerations under the Enhanced Transparency Framework; train participants on use of 2006 Intergovernmental Panel on Climate Change (IPCC) Greenhouse Gas (GHG) Inventory Software; plan activities for the East African Measurement, Reporting and Verification (MRV) Network; and peer review national draft reports for selected countries.

Most of the countries have submitted at least two NCs. They are however yet to submit their first BURs. All the countries in the network have existing MRV institutional arrangements though at different stages of development. Most of the countries reported their MRV frameworks to be in the early stages. These countries have the Ministry of Environment, or in case of Lesotho, Ministry of Energy and Meteorology, as the lead in coordination of preparation and submission of NCs and BURs. The MRVs are for GHG Inventory, NAMAs, Adaptation, and Support.

Common challenges reported by the Southern Africa countries include; lack of effective institutional arrangement, limited technical and financial resources and limited availability of qualified human resources to carry out Vulnerability Assessment using different available models. These are therefore the capacity needs for the southern Africa countries. Non-availability of relevant data; lack of disaggregated data, and where data is available, lack of institutional arrangements for data sharing have been a challenge to preparing accurate and timely reports.

Other challenges mentioned include high staff turnover that hinders progress in setting up a sustainable Implementing Agencies and change in governments.

Means to address the challenges above we offered as; recruiting more staff members, capacity building of key personnel, formalizing data collection procedures through drafting and enforcement of MoUs, and improvement of climate change tracking and evaluation systems.
Introduction

Parties to the United Nations Framework Convention on Climate Change (UNFCCC) are required to prepare National Communications (NCs) every four years and Biennial Update Reports (BURs) every two years and submit to the UNFCCC. The UNFCCC aims at stabilizing greenhouse gas emissions concentrations in the atmosphere to reduce the risks we face from future climate change. It is on this basis that about 197 parties to the convention prepare national reports to assess their overall aggregated climate change actions. Timely submission of these reports allows for a better understanding of the diversity of climate actions and strategies among developing countries. The UN Environment Climate Change Enabling Activities project team support developing countries to ensure that the reports are adequately prepared and submitted to UNFCCC in time.

Recognizing the importance of timely and transparent reporting under the Convention and expected Paris Agreement reporting frameworks, Monitoring, Reporting and Verification (MRV) initiatives are being rolled out by different international, regional and national organizations, with the objective of enhancing national climate change reports from developing countries.

The target groups for this workshop were project coordinators and finance personnel from countries in the Balkan, Asia and Pacific Island regions. Like the previous workshops, this workshop was informed by a survey conducted in March 2018 as well as lessons learnt, and gaps identified during the National Communications (NCs) and Biennial Update Reports (BURs) processes. The workshop was co-hosted by UN Environment and UNFCCC secretariat and jointly funded by UNEP/UNDP Global Support Programme (GSP) and the UN Environment climate change Enabling Activities project.

The GSP, which is jointly implemented by UN Environment and UNDP, was initiated with the objective of providing support to developing countries in preparation of National Communications (NCs), GHG inventories, Mitigation Analysis and Vulnerability & Adaptation Assessment, and Biennial Update Reports (BURs). GSP provides technical support to all countries that approach the GSP team and complements the work of other supporting bodies such as the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention.

Therefore, the workshop on National Climate Change Reporting and Regional Networking combined with experiences and success stories shared by different participants on NCs/BURs and MRV will help parties to the convention from the target regions in meeting their obligations under the UNFCCC in a timely and sustainable manner.
Workshop objectives

- Training on Enhanced Reporting Framework of the Paris Agreement Modalities, Procedures and Guidelines
- Peer review of national reports of selected countries (Biannual Update Reports, BURs)
- Sharing of good lessons and challenges on national MRV institutional arrangements
- Identify priority areas for capacity building in the Southern Africa region and develop a training plan

Workshop intended outcomes

- Networking among Network members
- Understanding of reporting requirements
- Assistance to countries in initiating NC/BUR projects
  - INC, BUR?
  - Subsequent NC and BURs?
- Assistance to countries with expedited finishing of ongoing NC/BUR projects
  - Share challenges that are constraining the implementation or finishing of ongoing NC/BUR projects so that we can try sort them out
- Assistance to countries with improving quality of current NC/BUR project, if you have substantive improvement areas for future submissions

Workshop approach

- Presentations
- Question and answers sessions
- Group exercises and draft report reviews
- Country experiences
- Breakout group discussions
- Group feedback presentations
**Summary of discussions**

**Module A: Status of Southern Africa MRV Network and Report back from the countries; national reporting development since the 1st Network meeting**

Presentation A1: Status of Southern Africa MRV Network

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<tr>
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<th>Ave NC1/NC2 = 10.8 years</th>
<th>Ave NC2/NC3 = 6.3 years</th>
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Presentation A2: Status of MRV arrangements and NC and BUR project implementation and reporting

Presentations in this session were on the current status of MRV arrangements; strengths and gaps and, NC and BUR projects implementation; status, challenges, capacity gaps and expected submission dates.

a) Eswatini

National Institutional arrangements

- Ministry plays overall coordination for climate in Eswatini, where NFP is situated.
- The project management unit already established for the TNC, the same management arrangements
- Project steering committee and provide policy and strategic guidance for the implementation of project activities
- Project officer and project administrator will be hired to provide coordination and administration support to the project
- Continuity of staff (national climate change programme coordinator, institutional memory
- Planning of the NC process inclusive of previous coordinators

Project progress

- Project Management Unit
- National Circumstances
  - Gender analysis
  - Analysis of climate change considerations into socioeconomic development
  - Public awareness
- Mitigation Assessment
- Capacity building and public awareness
- Sustainable GHG Inventory Process

GHG Inventory Preparation

- Basic Training for waste in collaboration with GIZ
- Establishing agreements with collaborating entities
- GHG Team and Sector Lead experts
- Webinar Trainings on inventory by team lead
- Preliminary inventory and GHG inventory process launch
- Technical working groups
- Institutionalization of the GHG inventory
Challenges

- Ad-hoc basis as there is lack of adequate funds to maintain a permanent team
- Institutionalization GHG inventory system
  - Collaborations with partners institution
  - Consultants
  - TWGS
  - Delays
- Activity data
- National pool of experts (technical) - external
- Lack of awareness (data providers, partner institutions)
- Lack of institutional and technical capacity for the different thematic areas for the national communication

Opportunities

- National Adaptation Plan Readiness Project
- CBIT strengthen "National Capacity for Enhanced Transparency in Climate Change Monitoring, Reporting and Verification"
- GCF readiness Project
- Multilateral Synergies
- Southern Africa MRV Network – GSP
- Previous TNC arrangements

Capacity building and public awareness

- Capacity building
  - GHG Trainings
  - Inception, PSC Extraordinary event
  - Regional Meetings
- Political buy-in
  - Policy Makers Engagement
  - Portfolio Committees
  - PSC institutional diversity
- Increasing awareness
  - Climate Action Eswatini
  - Trade Fair Participation
  - Youth Parliament
  - CSO engagement
- Improving access to support
  - Civic Sector organization engagement
- Private sector engagement
- NDA

Capacity needs

- Sustainable GHG Inventory and Management Systems
  - Institutional arrangements and GHG data management
  - Development of national GHG manual
  - Establishment of national GHG management system
- GHG Estimation
  - Training on the use of IPCC 2006 guidelines and software
  - AFOLU land classification
  - Use of satellite remote sensing data and Geographic Information Systems
- Mitigation
  - Training on developing mitigation baseline
  - Training on the use of LEAP
  - Training on marginal abatement cost curves
- Adaptation
  - Climate scenarios
    - Training in downscaling of meteorological data and climate modeling
  - Climate impact assessments
    - Training on use statistical and dynamic crop and hydrological modeling
    - Scenario development in different sectors
  - Adaptation tools and methods
    - Training on the use of different adaptation tools and methods applicable to different sectors including economic models, biophysical models and cost benefit analysis
    - Scenario development in different sectors
- General
  - Programme and project development in climate change
  - Policy analysis
b) Zambia

Pre-Paris Agreement, Zambia has developed MRV of GHG Inventory, MRV of NAMAs, and MRV for REDD+, with varying degree of success

Post-Paris Agreement, Zambia is developing National MRV system in the Context of the Enhance Transparency Framework building on previous MRV initiatives

**GHG Institutional Arrangements**

Overall coordination of CC issues lie with the Ministry of Land and Natural Resources. The ministry reports to UNFCCC. Under the ministry there is Zambia Environment Management Authority (ZEMA). Within ZEMA there are; Inventory Coordinator, Compilers, QA/QC, IT Support and Archiving. Under ZEMA there are sectors of Waste (coordinated by Deaprtment of local government), Energy (coordinated by department of Energy), AFOLU (coordinated by Departments of Forestry, Agriculture and Livestock), and, IPPU (coordinated by Department of Commerce and Industry).

i. **Pre-Paris agreement**

**MRVs OF GHG Inventory**

- GHG Management Tools
  - GHG Inventory Preparation Instructions consisting of, data documentation, a QA/QC plan, an Archiving Plan, Key Category Analysis Procedures and an Inventory Improvement Plan;
  - Interim Inventory Management Plan;
  - GHG data collection protocol;
  - IT Platform for GHG data management; and

- Gaps and needs
  - MRV of GHG emissions is at National level
  - Organisation or facility level not yet developed

**MRVs for NAMAs**

- Small Hydro, Integrated waste management, Tramway for Lusaka and Kitwe, Sustainable charcoal production, Sustainable agriculture
- MRV was aimed at tracking progress on emission reductions, sustainable development outcomes and support flows for the implementation of the NAMA
- NAMA MRV framework was made up of the following:
  - Defined metrics for (quantitative vs qualitative, input vs. output).
  - Appropriate data collection and measurement system definition, including responsibility and frequency.
Defined reporting channels
Verification system

**MRV for REDD+**

- Work in the area of MRV for REDD+ focused on the development of a decentralized national forest monitoring system (NFMS).
- Ten provincial forest monitoring laboratories have been established and equipped with tools for forest monitoring
- Each provincial laboratory is staffed by a group of trained cross-sectoral technicians from the forestry, agriculture and planning sectors
- The laboratories will provide near real-time spatial data on deforestation and forest degradation.
- Along with this infrastructure development, extensive capacity building of provincial cross-sectoral technicians in GIS, GPS, MRV and GHG reporting methodologies has also been carried out.

**ii. Post-Paris agreement**

- Zambia is in the process of establishing a National MRV system through the NDC Support Programme supported by UNDP.
- It will be developed in line with enhanced Transparent Framework under the Paris agreement
- The MRV system will build on and link with MRV system for GHGs, NAMAs and UNREDD+.
- National MRV system development is underway and it will have the following features:
  - MRV Institutional coordination structures, responsibilities and competencies.
  - Online monitoring plans
  - Facility for accrediting independent verifiers
  - Guidelines, instructions and audit procedures
  - Mechanism for tracking emissions, mitigation actions, finance, capacity building, and technology transfer
  - Interactive database and IT Platform
  - Web based, Multi-user,
  - Geospatial Database. Interactive map of Zambia
  - An interactive database showing NDC mitigation and adaptation projects, support received and SDGs progress contributions of NDC projects
- The National MRV system is being envisaged to contain three main components provided as follows:
  - MRV of emissions
  - MRV of mitigation
  - MRV of support Finance, Technology Transfer and capacity building
Proposed Institutional arrangement including National MRV Systems

- Chair
  - Vice President
  - PS National Development
  - PS Lands and Natural Resources

- Coordinating
  - Council of Ministers
  - Steering Committee
  - Technical Committee
    - Multiple sectors in line ministries (Disaster Management and Mitigation Unit – MRV of Vulnerability and Adaptation, Zambia Meteorology Dept. – Early Warning and projected climate data trends and scenarios, Ministry of Finance – MRV of financial support and resource mobilization, Zambia Environment Agency – MRV of Emissions and Mitigation Actions, Project Developers,)

- Secretariat
  - PS National Development
  - PS Lands and Natural Resources
  - Department of Climate Change and Natural Resource

- Planning implementation and M & E Framework
  - Key result area
  - Programmes
  - Projects

NC and BUR preparation Process

- Zambia’s national GHG inventories & MRV are based upon MOUs:
- MOUs were signed with lead institutions for each sector.
- It easier to involve many sectors and as well as to link up with these partners and to achieve goals;
- The Management team has been supported by Thematic Working Groups (TWGs) and Sector Leads for GHG
- The TWG members are drawn from the existing National Technical Working Group on Climate Change established by NPCC of 2016 and other key sectors
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- It easier to involve many sectors and as well as to link up with these partners and to achieve goals;
- The Management team has been supported by Thematic Working Groups (TWGs) and Sector Leads for GHG
• The TWG members are drawn from the existing National Technical Working Group on Climate Change established by NPCC of 2016 and other key sectors
• Preparation of the Third National Communication has advanced as all chapters are at draft stage with exception of one (V&A)
• Preparation of the initial BUR is also being carried in parallel with TNC
• Capacity Building for the GHG inventory was carried out during the TNC and now preparing to have refresher training during Inventory preparation for BUR
• Assigned officers are not fulltime on the project and at times some officers were changed (moved or transferred) as there was not legal obligations to maintain them in the same position;
• It was easier to collect activity data, validate the data and prepare the inventory and the chapters
• Consultants were hired to work on other chapters
• Completion of Both BUR and TNC is expected by December 2019

Challenges/needs/Gaps

• Activity data and emissions factors
• Currently using Tier 1 for all sectors except AFOLU(Land category))
• There is need to migrate to higher tiers

Some specific sector challenges included:

• IPPU
  o Activity data not captured appropriately for refrigeration, fertilisers, petroleum products (lubricants), fire protection, solvents, aerosols and N2O for medical applications by Zambia Revenue Authority
• Energy
  o Inconsistencies between the categories reflected in the national Energy Balance and the IPCC Guidelines.
  o Notable differences in the data collected for emissions estimations in the energy sector from key institution, namely, Zambia Revenue Authority, Central Statistics Office, and Energy Regulation Boards.
  o Therefore, there is a need to harmonise the database among these key institutions in the future
• AFOLU
  o Further, detailed livestock surveys, including its management systems are required to graduate to Tier 2 methodology for GHG emissions from the livestock sector.
Additionally, there is need to update the existing soil map using the latest ILUA II data as well as to enhance the forest classification from 5 to 17, including enhancement of data collection on forest disturbance.

There is also need for improvement in data collection for fertilizer and lime use by commercial farmers.

- **Waste**
  - There is need to conduct latest waste characterisation and to install facilities for measuring quantity of waste taken to waste disposal sites.

**PROCESS CHALLENGES**

- Inadequate capacity both resource and technical officers from the Sector Leads. Hence competing needs for personnel
- Limited pool of consultants, and usually quote above the budgetary

c) **Mauritius**

- The Republic of Mauritius submitted its Third National Communication in December 2016.
- The National Inventory Report under the TNC covered the period 2000-2013.
- **Capacity Buildings**
  - 3 training sessions on the 2006 IPCC Guidelines and IPCC Inventory Software
  - 1 training session on the Agriculture and Land Use Software for the AFOLU sector
  - 2 training sessions on vulnerability assessment and adaptation
  - 2 Training session on mitigation analysis and toolkits
- Development of sensitization materials (banners and Boards) for public awareness as well as sensitization toolkits for Women, NGO, Youth and Businesses

**Institutional Arrangement under TNC**

Ministry of Environment, Sustainable Development, Disaster and Beach Management coordinates climate change in Mauritius. Under the Ministry there is a Steering Committee, then a Technical Committee. Under the technical committee there are Working Groups on National Communications, GHG Inventory, Vulnerability Assessment and Adaptation, Mitigation Analysis, Research and Systematic Observation, Education, Training and Public Awareness, Knowledge Information Sharing, Networking and Capacity Building and Constraints and Gaps and Related Financial, Technical and Capacity needs. Under the Mitigation Analysis Thematic Working Group there are Sub Thematic Working Groups of Technology Transfer, Energy, Transport, Agriculture and LULUCF and Waste. Under Vulnerability Assessment and Adaptation TWG there are sub thematic working groups of Fisheries, Biodiversity, Infrastructure, Health, Agriculture. Coastal zones, Water and Tourism. Under the GHG
Inventory TWG there are Sub thematic working groups of Energy industries, Transport, Energy other sector, industrial processes, Agriculture and LULUCF and Waste.

**Initial BUR**

- Implementation started in March 2017.
- The National Inventory Report will cover 2014-2016 and review of figures 2000-2013 from TNC.
- Similar IA as in TNC.
- Team of International Consultants recruited for the GHG Inventory, Mitigation Actions and MRV Components.
- National Consultant recruited to work on National Circumstances, Constraints & Gaps, and Financial support, Capacity Building Components, amongst others.
- UNE support for the Quality Assurance expert
- Recruitment of Editor is underway.
- BUR-1 and its NIR are expected by end of 2019.
- Development of Country Specific Emission Factors (CSEF) for the crop sector as well as for the Solid Waste sector, including composition of waste. Hiring of services is underway.
- Last week August 2019, signature of PCA for an extension of the BUR-1 Project as the development of CSEF will be of a duration of a maximum of 14 months (Technical Completion December 2020).

**Fourth National Communication**

- In May 2019, the GEF approved umbrella programme to support preparation of the NC4 for the Republic of Mauritius.
- Legal Clearance has been sought on the PCA.
- PCA is expected to be signed by end of this year.
- Initiate preparation of the NC4 Project Implementation Plan by next year.

**Projects addressing MRV concepts in Mauritius**

- Initial Biennial Update Report (BUR-1) for the Republic of Mauritius
- Review and update of the Mauritius’ Nationally Determined Contributions (NDC)
- Energy Efficiency (UNDP Project)
- Capacity Building Initiative for Transparency (CBIT)
First Biennial Update Report (BUR1)

Output is Domestic measurement, reporting and verification (MRV) system and processes set up and documented.

- Capacity Building relating to domestic MRV (already done)
- IA for key sectors of energy (& IPPU), transport, waste and AFOLU, including institutional structures, legal and administrative framework, relevant information, methodologies and experts to be engaged.
- Approach used for MRV related to mitigation actions, inventory processes, support needed and received.
- Description of IA to collect information and manage QA/QC through documentation of the methodologies and data sources used.

NAMAs

- GEF funded through UNE

Objective: Ensure a low carbon economy development pathway for Mauritius by establishing the national capacity for formulating mitigation actions to implement Nationally Determined Contributions (NDC)

- Objectives of Component 3:
  - Establish Institutional framework for ETF, including link to in the national registry mechanism.
  - Develop communication strategy on ETF to enhance effective and efficient institutional coordination.
  - Design & implement a MRV system, including monitoring plan covering key parameters for the electricity generation sector.
  - Conduct training for MRV of Electricity Generation Sector

Component 3 to be led by the Statistics Mauritius and is being supported by the DTU.

- Status: Recruitment of national consultants are underway

Review and update of Mauritius NDC

- Objective: Mauritius’ NDC was submitted to the UNFCCC Secretariat in September 2015.
- Target: 30% reduction of GHG emissions by 2030.
- NDC Review for submission to UNFCCC by 2020, prior to COP 26. [assistance of French Government through the AFD (France Agency for Development)]
- Component 3: Capacity Building for the development of a domestic MRV framework regarding the NDC
Identify and assess the gaps and needs of institutions involved in the MRV of emissions, impacts and financial flow

Preparing an Action Plan for the setting of an MRV.

Specific on-the-job trainings on MRV (Requirements, international best practices, elaboration of templates, etc.) in order to co-develop with the relevant stakeholders an MRV framework.

- Recruitment of Consultants by AFD is underway

Energy efficiency project

- GEF funded through UNDP
- Objective: Operationalise the new national energy audit scheme of the Republic of Mauritius by addressing and removing technical, institutional and financial barriers to the adoption of energy efficiency measures.

Component 3: Implementation of energy management and MRV systems in large energy consumers and relevant SMEs
  - National certification scheme for ISO 50001 developed and implemented by Mauritius Standards Bureau
  - Accreditation and capacity development programme for MAURITAS and private sector certification bodies is launched and operational (taking into account gender targets)
  - Register of ISO 50001 certified firms established for 10 enterprises
  - ISO 50001-based energy management systems implemented by large energy consumers

Capacity Building Initiative for Transparency

- Support of UNDP for preparation of PIF
- PIF is being reviewed by GEF.
- Objective: Strengthening the national greenhouse gas inventory of the Republic of Mauritius to improve climate reporting and transparency
- Project funding: around 1 million USD
- Component 1: Improving the accuracy and localisation of the national greenhouse gas inventory
  - Development of country specific EFs in the energy industries, road transportation, livestock and forestry sectors as well a real time grid EF
- Component 2: Strengthening the national GHG inventory process
  - Implemented government roadmap for a permanent MRV structure, including firm government financing and institutional commitments
  - Development of an IT-based system to simplify and streamline the inventory data collection process
• Component 3: Mainstreaming the national GHG inventory to enhance transparency and support policy-making
  o Training on the use of the new IT-based system and on the use of the inventory for policy formulation, target-setting, scenario analysis and MRV of NDC commitments
  o Enhancing the role of the Climate Change Information Centre (CCIC) as a transparency portal

d) Mozambique

• Mozambique is putting efforts in addressing drivers of deforestation and forest degradation through;
  • Adoption of legal and regulatory frameworks and,
  • Implementation of Participatory Forest Management (PFM)

Status of MRV Arrangements

• In 2017, Mozambique ratified the Paris Agreement and agreed to the global target of keeping global average temperatures well below 2°C.
• To achieve this, the country is in a process of designing the National MRV system which comprises four Components:
  • AFOLU, Transport, Energy and Solid Residues. The MRV intended to conduct the following activities:
  • Monitor GHG from deforestation and forest degradation.
  • Development of the National platform for sustainable management of Natural Resources,
  • GHG reporting at national and international level.
  • Periodical evaluations of REDD+ programs and projects.
• To achieve the intended activities, ongoing efforts are taken ahead by different institutions within the Ministry of Land, Environment and Rural Development (MITADER), Ministry of Agriculture and Food Security (MASA), Eduardo Mondlane University (UEM) and Ministry of Natural Resources and Energy.
• With regards to the production of activity data and emission factors, the arrangements have been agreed to, but not formalized. One of the challenges is the formalization of institutional coordination, which requires policies on data sharing to be well defined and the institutions strategic plans harmonized.

Project Implementation

• In order to implement the REDD+ strategy, the Government of Mozambique is reformulating the policies in the forest sector, and testing the implementation of programs and projects on the ground. Two programs are being currently being implemented at sub-national level:
• The Zambézia Integrated Landscape Management Program (ZILMP) and the Integrated Landscape Management Program in Cabo Delgado Province (PROGIP-CD).
• The ZILMP was created with the aim of promoting sustainable development through the conservation and management of forests with insertion on the efforts of REDD+ in nine (9) districts of the Zambézia Province
• The second sub-national pilot REDD+ (PROGIP-CD) program covers nine (9) districts of the Cabo Delgado Province, This area has the Quirimbas National Park which cover 9 130 Km2, that is under pressure due to human activities, the PROGIP-CD was created to promoting sustainable practices in agriculture, timber extraction and in charcoal production.

Conclusions

• In terms of the MRV system for REDD+, there are also plans for future work on the production of emission factors and activity data. In 2019, the establishment of the National network of Permanent Sample plots in the country will be conducted.
• The National Platform for Management of Natural Resources that initially was being developed by DINAF is in a process of redesign due to the new requirements of the MRV system. In general, it is expected that data sharing policies, quality assurance and quality control, and institutional coordination are reflected in the reforms that are happening in the forest sector.
e) Seychelles

Situation in March 2019:

- SNC done
- Lessons learnt
- Started work on national circumstances
  - Experts recruited for all components + Working Groups
  - Data collection
  - Training & workshops
  - Chapter preparations: drafting, editing
  - Compilation, Production & Submission of TNC

Institutional Arrangement

The Ministry of Environment, Energy and Climate Change has the overall mandate of climate change issues. Under the Ministry there is a National Climate Change Committee which has; Management Unit (Project Manager, Admin and Finance and International Consultant); Project Assurance (UNEP – does backstopping); and Project Stakeholders (Ministries, Agencies, Civil Society and Academia). Under these there are GHG Inventory, MRV, Mitigation and National Circumstances Working Groups. The working groups are composed of team leaders and experts

TNC & BUR Project Progress

- Inception workshop completed
- First quarterly report submitted
- Upcoming:
  - Second quarterly report
  - Training in AFOLU
  - Contract with Vulnerability consultant

Challenges, capacity gaps and expected submission dates

- Funds managed by the Ministry of Finance
- Local experts busy with other works
- Need training in AFOLU

Situation in September 2019 for MRV

- National Expert identified
- Team being formed
  - No experts recruited – just identified
  - Data collection has begun
  - No Training & workshops yet
  - SNC recognized MRV as weak
MRV as previously done

- Heavy reliance on authority supplying the data
- Circulation of draft reports
  - Poor response from stakeholders
- Validation workshop
  - Poor attendance of workshops
  - Too brief (1/2 day or 1 full day)
  - No scientific analysis of submitted data
  - Consensus reached through discussions
  - CC Negotiator: “Science cannot be compromised.”

Common challenges and solutions

Common challenges are institutional and methodological

- Institutional challenges
  - Unclear national system. There is lack of clarity on roles and responsibilities
  - Lack of political will and buy in from across stakeholders
  - Weak coordination and capacity between national and sub national entities.
  - Difficulty in maintaining expert human resources. Loss of institutional memory and capacity
- Possible solutions
  - Establish a solid national system with clearly defined roles and responsibilities for the institutions involved.
  - Staff institutions sufficiently and provide staff with training on methodologies
  - Establish coordination mechanism between government departments
  - Develop a common understanding of the objectives across all relevant stakeholders
  - Promote awareness of the importance of a quality GHG inventory

- Methodological challenges
  - Limited technical and analytical capacity
  - Limited systems for data management and reporting
  - Lack of country specific activity data and emission factors for sources and sinks
- Possible solutions
  - Implement capacity building and identify funding and resources for training
  - Learn from other countries that have established a well-respected data management system. Consider bilateral exchanges to share experience.
  - Develop new data collection systems or augmenting existing systems
Opportunities for synergy

- SDG progress ongoing, but no contact or details
- Need for democratizing the process
- Libya & Seychelles not included in 2nd Annual Report on the progress of African countries towards the SDGs
  - Insufficient data coverage

f) Botswana

The MRV framework for Botswana is still in its early stages. Implementation is a challenge

UNDP/UNICEF= projects for data collection, processing and analysis

MENT/UNDP/UNICEF - To create one system

Insufficient capacity and resources

- Lack of or limited human capacity and/or know-how, limited
- Lack of financial and other resources

On institutional arrangement

- Lack of effective institutional arrangement
- Limited technical and financial resources
- Limited availability of qualified human resources to carry out vulnerability assessment using different available models

Constraints

- Data Organisation - Data scattered in many agencies
- Non-availability of relevant data - AFOLU is a key source greenhouse gases there is lack of data such as harvested wood, manure management. Amount of fertiliser used.
- Access to data - Lack of institutional arrangements for data sharing

BUR Guidelines

- The BUR guidelines are open to interpretation.
- More useful guidance needs to be provided so that the technical people can draft the reports and fill out the reporting tables.

Status of BUR/NC

- Report complete
- Undertaking stakeholder consultations
g) Comoros

Institutional arrangements

- Implementing agency Vice Presidency in charge of Ministry of Agriculture, Fisheries, Environment, Territory Development and Urbanization through the Climate Change Unit.
- Steering Committee (Project Advisory Committee)
- Project Management Team
- Working groups (WG 1 on GHG Inventory; WG 2 on National Circumstances and other information relevant to the Convention; WG 3 on Mitigation; WG 4 on Vulnerability and Adaptation)

Outputs of the NC preparation process from October 2018 – September 2021)

- National circumstances
- Greenhouse Gas Inventories
- General description of steps
- Programmes containing measures to facilitate adequate adaptation to climate change
- Programmes containing measures to mitigate climate change
- Other information considered relevant to the achievement of the objective of the convention
- Constraints and gaps, related financial, technical and capacity needs

Challenges

- Lack of Data and emission factor
- Limited capacity
- Need for outside expertise
- National ownership of the process
- Institutional arrangement
- staff turn-over hindering

Opportunities

- Previous NC arrangement
- National climate change committee
- GCF readiness project
- Bi and multilateral synergies
- National adaptation plan
- National climate change policy and implementation strategy
Needs

- Harmonized data collection at the institutional level

**h) Lesotho**

**Lesotho’s progress on reporting**

- National Communications
  - 1st and the 2nd National Communications completed
  - 3rd National Communication ongoing (currently working on V & A)
  - 3rd National GHG Inventory Report Completed

- Biennial Update Report
  - 4th National GHG Inventory Report Under Peer Review
  - 1st BUR ongoing

**Institutional arrangements for the fourth inventory**

- Ministry of Energy and Meteorology (Lesotho Meteorological Services)
  - Energy
    - Ministry Energy and Meteorology
    - Department of Energy
    - Ministry of Public Works and Transport
    - Department of Transport
    - Ministry of Development Planning
    - Bureau of Statistics
  - IPPU
    - Ministry of Development Planning
    - Bureau of Statistics
    - Ministry of Trade and Industry
  - AFOLU
    - Ministry of Agriculture and Food Security -
      - Department of Crops
    - Ministry of Development Planning
    - Bureau of Statistics
    - Ministry of Forestry, Range and Soil Conservation
    - National University of Lesotho
  - Waste
    - Ministry of Tourism, Environment and Culture
      - Department of Environment
    - Ministry of Health -
      - Department of Environmental Health
Ministry of Development Planning
  • Bureau of Statistics
  • Water and Sewerage Company

Key elements of the MRV framework

• National greenhouse gas inventory: sectors, activities, gases
• Adaptation and mitigation measures: sectors, impacts and associated tracking methodologies
• Support needed and received (technical and financial)

Suggestions for MRV Arrangements

Designated National Coordinator (Ministry of Energy and Meteorology/LMS CCU)

• Reporting entities
  o National Focal Point (NFP) National GHG Inventory
  o NFP Adaptation
  o NFP Mitigation
  o NFP Climate Finance
• Monitoring entities
  o Bureau of Statistics + selected sectors
• Verifying entities
  o Internal review (LMS CCU)
  o Working committees (Experts)
  o Government departments (As required)
  o Public participation (Stakeholders)

Proposed domestic verification

• Internal review
  o By LMS CCU
  o Involves information and completeness check and proof reading
• Working committee reviews
  o By expert peers including academia
  o Involves confirming the content in further detail and identification of gaps.
• Department reviews
  o By government departments/parastatals
  o Involves informing related policies and strategies and confirming roles, findings and conclusions
• Public reviews
  o By public stakeholders
Integrate valid and applicable comments

Challenges

- National ownership of the processes
- Institutional Arrangements
- Data
- Limited Capacity (national Pool of Experts)

Opportunities

- GHG inventory data collection tool and Archiving system
- National Climate Change Committee
- Lesotho Climate Action Information System
- National Climate Change Policy and Implementation Strategy
- Drafting of the National Climate Change Bill

i) Zimbabwe

Institutional arrangements for implementation of the NC4 and BUR1 Project

Key components of the project

- A national inventory of GHGs
- Impact analysis of key sectors to adverse impacts of Climate Change
- Vulnerability assessment of key sectors to CC
- Analysis of GHG mitigation options and possible measures of reducing emissions of GHGs
- Elaboration of programmes including measures aimed at facilitating adequate adaptation to CC
- Education, training and public awareness
- Research and Systematic Observation
- Technology Development and Transfer
- Gender and Climate Change
- The preparation of the Fourth National Communication of Zimbabwe and First Biennial Update report to the Conference of Parties (COP)

National Circumstances

- Describe institutional arrangement for the preparation of NCs and BURs with roles and flow of functions carefully assessed for effectiveness with recommendations for improvements.
• stock taking exercise and stakeholder consultations in the description of the National Circumstances; i.e. description of geographic characteristic; population; economy and sector profiles; education;
• Focusing on features which may affect the country ability to deal with mitigation and adaptation to climate change, information regarding the specific needs and concerns arising from the adverse effects of climate change and/or the impact of the implementation of response measures.
• Data and information compilation for the sections constituting the National Circumstances of the Fourth National Communication to the UNFCCC has commenced and is ongoing.
• Most of the information required for the compilation of the chapter is compiled through desk study means as the information is available in the public domain.

GHG Inventory

• Technical capacity building including participation in international/regional/national workshops/trainings or meetings on greenhouse gas inventories.
  o Workshop on the National GHG Inventory system was undertaken which highlighted some of the issues to be tackled under the current NC4 project e.g.
  o STIZ-NDC project funded by the Russia/UNDP undertook some company visits which included NC4 experts
  o The GHG Inventory team together with Climate Change Mitigation experts convened a training workshop for Biennial Update Report compilers entitled; EXPERT TRAINING WORKSHOP ON THE PREPARATION OF ZIMBABWE’S FIRST BIENNIAL UPDATE REPORT (BUR1).
  o Participated in the training workshop on Improved Tools and Methodologies for development of an MRV system, based on IPCC guidelines specifically for the AFOLU sector.
• Vulnerability and Adaptation Assessment
  o An assessment trip was carried out to the Eastern Highlands targeting cyclone Idai ravaged areas and project sites.
  o Another trip was also undertaken to Muzarabani which shall be a focus of a case study under the NC4 project
  o Data collection has commenced.
• Mitigation Analysis
  o The ‘Climate Change Mitigation Assessment Team’ (CCMAT), was established and the Team Leader (CCMATL) and national experts (NEx) in targeted areas of relevance (energy, industry, agriculture, forestry and waste management) were identified.
  o Mitigation studies have commenced; data collection and analysis in all the sectors, Energy, Industrial processes, Waste and Agriculture is in progress.
A climate change mitigation technical training workshop was held in Kadoma 18-19 May 2019 on the LEAP software. The purpose of the workshop was aimed at increasing national capacity for climate change mitigation assessment and modeling. This will improve the quality of both the process and outcome of mitigation assessments and reporting in the country.

- National Biodiesel Project Familiarization Visit was undertaken in conjunction with CTCN in Mutoko and Mudzi Districts from 28 – 30 April 2019.
- A BUR training workshop was carried out at Jameson Hotel to familiarize members with requirements under this project on 23rd March 2019.

- Education, Awareness and Training
  - The ‘Education, Training and Public Awareness Team’ was established.
  - Information on education, training and public awareness is being assessed.
  - Data and information collection has commenced and the following are some of the areas of focus under their purview;
    - Assess the general level of awareness and understanding of climate change issues and policy toward climate change education, training and public awareness.
    - Assess the National Curriculum and the efforts made by the Government (e.g. Ministry of Education) with regard to primary, secondary and tertiary climate change education.
    - Assess the available information on the implemented or planned public information initiatives, campaigns and programs.
    - Assess the available information on the implemented or planned training programs.
    - Assess the available information on climate change information centres.

- Research and systematic Observation
  - Collection of information and data towards the compilation of the chapter on Research and Systematic Observation for the Fourth National Communication for Zimbabwe will commence during the 3rd quarter of 2019.

- Technology transfer
  - A Technology Development & Transfer expert was recruited and it shall focus on; Technologies for adaptation and mitigation to climate change in Meteorology, Hydrology, Energy, Industry and Agriculture

- Gender and Climate Change
  - Assess and report on various existing policies and strategies relating to gender and climate change.
  - Gender is a cross cutting issue and hence we expect all teams to report on the gender responsiveness of their programmes and activities.

- Constraints and gaps (financial, technical, capacity needs and policy)
  - Work on constraints, gaps, capacity needs and policy review will commence in 3rd quarter of 2019.
**j) Namibia**

**Institutional arrangements**

- Ministry of Environment and Tourism is tasked by government to coordinate all climate change issues and focal to UNFCCC
- National Climate Change Committee established in 2001 to provide overall oversight
- Climate change unit established in MET
- Project Management Unit under CCU
- Decision taken after BUR1 & NC3 to move from outsourcing
- This lead to the establishment of various national working groups

**Institutional Arrangements for GHG Inventory**

GHG Inventory Coordinator (CCU of MET) has the overall mandate of coordination. There are 4 coordinators under the GHG Inventory Coordinator. These are in charge of; QA/QC; Archiving National Statistics Agency and CCU Unit of MET; Computation of Emissions and QA (International Consultant); and, Capacity Building, IPCC process and COP Decisions (CCU Unit of MET and International Consultant). Below the four coordinators there are sector leads of the areas under GHG inventory i.e. Energy, IPPU, AFOLU and Waste, all derived from their respective ministries. Lastly, there are data providers (NSA and other stakeholder) and emission factor improvement (research institutions and universities) institutions.

**Status of reporting**

- Initial National Communication – 2002
- Second National Communication – 2011
- First Biennial Update Report – 2014
  - First round of TTE review and FSV
- Third National Communication – 2015
- Second Biennial Update Report – 2016
  - Second round of TTE review and FSV
  - Standalone NIR (2000 – 2012)
- Third Biennial Update Report – 2018
  - Standalone NIR (1994 – 2014)
  - Currently undergoing the TTE review
- Fourth National Communication – 2016 – 2019
- Fourth Biennial Update Report – 2019 – 2020
Progress

- Fourth Biennial Update Report PIF and Prodoc approved awaiting project document signature
- NC4:
  - GHG inventory 1991 – 2015 being finalised
  - Mitigation analysis being finalised
  - National circumstances and other chapters being finalised
- NC4 to be submitted in December 2019

Future plans

- CBIT PIF Approved:
  - “To enhance Namibia’s institutional and technical capacities to establish a comprehensive Transparency Framework for Monitoring, Reporting and Verification (MRV) of climate actions and to report on NDC implementation under the Paris Agreement”
- Formalizing MRV systems
- Revising the NDC

Challenges

- Lack and unavailability of data
- Staff turn-over hindering progress in setting up a sustainable IA
- Lack of capacity amongst working group members to fully take over the NCs and BURs processes
- Climate change an MET problem, slowly changing
- GEF Implementing Agency processes

k) Madagascar

Madagascar’s context

Ministry of Env. : National Office for CC and Redd+ Coordination:

- UNFCCC and GCF National Focal Point
- Coordination of National Communication(NC)
- Coordination of Biennial Update Report (BUR)
- All National strategic documents related to UNFCCC (NDC, NAMA, NAP)

NC/BUR Implementation and Reporting

- National Communication:
  - First NC – 2003
Second NC – 2010
Third NC – 2017
Fourth NC – 2023 (2019-2023)

Note: Signature of PCA

- BUR
  - BUR 1 – 2022

Note: elaboration PIP

- Opportunities: CBIT (data collection, Carbon registry,…), Adapt ‘Action projects and USAID project/REDD+ initiative on GHG inventory (forest sector

Institutional Arrangement

In Madagascar the overall coordination lies with the ministry of environment (national Office for CC coordination). The ministry of environment coordinates the Ministries of Energy (provides Energy Information System); Water (obtains data from Towns/Municipalities); Industry (data); Agriculture (provides data); Forest (National Office for CC Coordination and is in charge of REDD +); and Transportation (provides data of vehicles registration and insurance).

Quality Management for Collecting Data

Quality at Source \(\rightarrow\) Ministries \(\rightarrow\) Data Processing

Ministries;

- Participative and iterative verification of data or tab of data
- Elaboration of data collect process
- Based on quality management, elaboration of action plan to collect data

Lessons learned

- Conflicts encountered about data and taxes (declared taxes and real taxes);
- Collaboration with equipment suppliers and customs department Collaboration with other Ministries concerned, directly or indirectly, with the collect of data (cross check and verification)
- Collect of data and Ministries’ priorities; Negotiation to integer collect of climate change data in Ministries’ AWP
I) Angola

Inception Process

- Listing the relevant institutions
- Invite Relevant Institutions
- General and thematic issues

Implementation

- Training identified experts;
- Technical working groups;
- Contract the relevant ones;
- Collection of information;
- Organize validation workshops;
- Recording of what happen source of information

Institutionalization process

- Involve the consultant and involve institution
- Explore best options for inclusion of the needs on institutional normal process
- Work on Government data as primary source of information, include, UN data, other institutions data were possible and agreed by the government. In some cases specialist calculations

Monitor the process

- Listing of relevant findings, Positive, negative aspects and challenges;
- Provide necessary recommendation to specific institutions;
- Organize a steering committee mitting's

Challenges

- Movement of people in institution
- Change government
- Receiving Funds
- Appropriate data (estimations)
- Non existing same time of data (west sector)
m) Malawi

National Circumstances

Policy Development

Institutional framework for MRV in Malawi

- Measurement, Reporting and Verification [MRV]
- In order to track the impact of the various climate change activities (NAMA, NDC and NAPA), the Government will enhance the existing measurement, reporting and verification structures.
- Currently, the mandate of monitoring and evaluating government programmes and projects is vested in the Ministry of Finance, Economic Planning and Development (MFEPD).

Status of TNC and BUR for Malawi

- Sector reports in progress;
- Report consolidation underway;
- Final TNC and BUR should be ready for submission by November, 2019.
- GHG–IS excel based software developed to assist Malawi to calculate GHG emissions with support from USAID-PERFOM project. IPCC or country based emission factors can be used.

Performance requirements (measurement)

- For NAMAs
- NDCs
- NAPA

Capacity requirements

- As shown in NDCs across sectors
- Training Experts

Technology requirements

- As shown in NDCs across sectors
- Check internet

Financial requirements

- As shown in NDCs across sectors
• Project upscale implementation
• For capacity building of data collectors and experts

The way forward

• Develop MRV implementation plan
• Train data collectors for sectors
• Develop data collection tools based on standard guidelines [IPCC and Sector guidelines]
• Engage academia and private sector in research to develop local emission factors
• Lobby for finance [internal, external] to undertake the assignment.
• Prepare reports on progress

n) South Africa

BUR and Institutional Arrangements

Minister, Department of Environment, Forestry and Fisheries who is reported to by the Director General Department of Environment Forestry and Fisheries who is reported to by the Deputy Director General of Climate Change Sustainable Development and Air Quality. Under the Deputy Director General there are Chief Directorates for CC Monitoring and Evaluation, CC Adaptation, CC Mitigation, International CC Relations and Negotiations, International Governance and Resources and Air Quality Management. Under the Chief Directorate International CC Relations and Negotiations, there are the Directorate of International Mechanism and Reporting and UNFCCC. Under the Directorate of International Mechanism and Reporting, there is a Deputy Director of International Reporting and a Project Manager. There are Project Coordinators of CBIT, NC&BURs and NDC who report to the Deputy Director. The projects Coordinators coordinate the TWGs on Mitigation and Adaptation.

International Reporting status

• 1st NC 2003
• 2nd NC with GHG Inventory 2011
• 1st BUR (2000 - 2010) 2014
• 1st BUR Technical Analysis 2015
• 2nd BUR 2017
• 2nd BUR Technical Analysis 2018
• 3rd NC 2018
• 3rd BUR (2000-2015) 2019
Institutional arrangements for GHG Inventory

- National Entity (DEA)
- National Inventory Coordinator (Chief Directorate CC M&E and Sub Directorate GHG Inventory Compilation)
- Sector lead compliers (Energy, IPPU, AFOLU, Waste)
- Data providers (various agencies, departments, parastatals and non-state actors)

Challenges

- Changes/Losses in key staff members/fewer personnel
  - Full implementation of QC procedures
  - Hence relied quite a lot on QA process to resolve inventory errors
  - Delays in submission of reports
- Some institutional arrangements not yet formalised (work in progress)
- Loss of contacts on data providers
- Using the NGHGIMS system (still new, not everyone has been trained)
- Lack of disaggregated data – GHG Reporting Programme
  - Data often collected at national levels rather than point or direct sources for some categories
  - Making it challenging to use higher tier methods for some key categories
  - Tracking progress (sectoral departments still require capacity with tracking of the mitigation actions as well as associated effects). Ongoing work on identifying sector specific indicators to track our NDC
  - Climate finance in SA is not centralised, thereby making it difficult to track

Addressing challenges

- Recruiting more staff members (sector compliers of GHG Inventories)
- Capacity Building for key personnel
- Formalising data collection processes (MoUs)
- Mandatory GHG emissions Reporting Programme & Guidelines (including amendment)
- Using the NGHGIMS to document all GHG inventory compilation procedures including data archiving
- Improving the accuracy estimating our through the GHG Reporting Programme (In BUR-2, SA used country-specific emission factors for major fuels such as coal, used country-specific data for estimating emissions from F-Gases, used tier 3 methodologies in Aluminum production & working towards inclusion of all categories)
- Improvement of the climate change tracking and evaluation system of South Africa. Also incorporate tracking of climate finance. Continue to track progress towards achievement
of our NDC, i.e. remaining with the PPD trajectory range & evaluate the effectiveness of our PAMs.

**Preparation for ETF**

- Use of 2006 IPCC guideline
- Country specific emission factor - higher Tier methodologies for key categories
- Recalculation of entire time series (introduction of new methodologies)
- Consistent time series, 2000 base year. Draft 2000-2017 NIR to be submitted with BUR-4 in December 2020. 1st attempt at X-3?
- Tables on Support Received & Needed
- Some more work needs to be done

**Support Needed**

- Development of sectoral indicators to track progress (financial and technical support needed)
- Operationalisation of the M & System (SA’s CBIT Project)
- Incorporation of Climate Finance tracking into the system (financial support needed)
- In country analysis of Draft NIRs, BURs (Secretariat assisted with the 2000-2017 NIR)