

**ICAT Eswatini Final
Validation
Workshop Report**

Initiative for Climate Action Transparency - ICAT

Workshop to Validate the Project on “Technical Support to Increase the Overall Transparency Capacity and Set-up of Sectoral MRV Systems in the Kingdom of Eswatini”

AUTHORS

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PREPARED UNDER

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Abbreviations

AFOLU	Agriculture, Forestry and Other Land Use
CSO	Central Statistics Office
CBIT	Capacity Building Initiative for Transparency
CSER	Centre for Sustainable Energy Research
EEC	Eswatini Electricity Company
ESA	Eswatini Sugar Association
ESERA	Eswatini Energy Regulatory Authority
ETF	Enhanced Transparency Framework
GHG	Greenhouse Gas
GHGMI	Greenhouse Gas Management Institute
GoE	Government of Eswatini
ICAT	Initiative for Climate Action Transparency
LULUCF	Land Use, Land Use Change and Forestry
MNRE	Ministry of Natural Resources and Energy
MoU	Memorandum of Understanding
MRV	Measurement, Reporting and Verification
MTEA	Ministry of Tourism and Environmental Affairs
NC	National Communication
NDC	Nationally Determined Contributions
UNESWA	University of Eswatini
UNFCCC	United Nations Framework Convention on Climate Change
UNOPS	United Nations Office for Project Services

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1. Introduction

1.1. Background

The Ministry of Tourism and Environmental Affairs (MTEA) has received support from the Initiative for Climate Action Transparency (ICAT) to improve institutional arrangements and data collection processes to assist Eswatini to meet reporting requirements under its Nationally Determined Contributions (NDC) of the Paris Agreement.

The University of Eswatini's (UNESWA's) Centre for Sustainable Energy Research (CSER) was contracted by ICAT (through UNOPS) to complete the work.

Specifically, the aims of the project were:

- To determine the state of climate change adaptation in the health and water sectors and develop a system to monitor actions in this regard. It involved a scoping exercise to determine the adaptation state-of-play for these sectors. An action plan for monitoring climate change adaptation for these sectors was developed including indicators. In addition, a Roadmap was developed for tracking and measuring of adaptations actions.
- To improve data collection in the energy and agricultural sectors to improve the accuracy of data for transparent greenhouse gas emissions estimates. A scoping exercise was conducted which provided information on the types of data collected, data sources, data gaps, and methodologies for data collection. It assisted in the development of data collection templates; in identifying required institutional arrangements; and the development of a road map to enable the ease and transparency of data flows.
- To improve transparency and accuracy of greenhouse gas estimation in the Land Use, Land-use-change and forestry (LULUCF) sector. Land use change maps were developed for each year between 1990 and 2020. Local activity data for different types of land were obtained to be used in the calculations in the estimation of greenhouse gas emissions. An updated LULUCF emissions/removal inventory was determined and baseline projections for the future were conducted.
- To determine the impact of renewable electricity policy for promoting the use of Eswatini's abundant biomass/bioenergy resources (particularly using sugar and timber residues) on greenhouse gas emissions and Sustainable Development Goals. These included consultations exercises with the timber and sugar sector key stakeholders (sugar and timber companies, Eswatini Sugar Association/ESA, Eswatini Cane Growers Association/ECGA), and with government (MNRE, Department of Energy and MTEA, Forestry Department, the Meteorology Department and the Climate Change Unit/CCU, Ministry of Finance), the energy regulator (ESERA) and the electricity company (Eswatini Electricity Company) where different policy scenarios were presented and discussed to come up with the most suitable options for biomass electricity for the country.

The work was completed under 5 activities:

1. **Activity 1:** Adaptation scoping and gap analysis for the health and water sector.
2. **Activity 2:** Energy sector GHG inventory institutional arrangements and data collection roadmap.
3. **Activity 3:** Agriculture sector GHG inventory institutional arrangements and data collection roadmap.
4. **Activity 4:** Incorporation of timber and sugarcane plantation data into the LULUCF sector GHG inventory.

5. **Activity 5:** Renewable electricity policy scenario assessment and impact modelling with recommendations for implementing NDC targets.

1.2. Objectives of the Workshop

To present outcomes of the ICAT project, focussing on the activity outputs, and to validate this through discussion with the stakeholders.

2. Format and Participation

The workshop was conducted over 1 day – July 19, 2022, with the participation of the project’s partners as well as representatives from the relevant sector ministries, departments and agencies , national experts, academia, NGOs, and the private sector across (see stakeholder list in Annex 1).The morning session was used for remarks by the Ministry of Tourism and Environmental Affairs (MTEA), remarks by the Ministry of Natural Resources and Energy (MNRE), Ministry of Health (MOF), Ministry of Agriculture (MOA) as well as remarks from ICAT Director. The objectives, outcomes and lessons learnt were presented in the mid-morning session by all the Activity teams, while the afternoon session was reserved for a plenary discussion (see Agenda in Annex 2).

2.1. Participation

The workshop had 45 physical participants, 10 of which were from UNESWA. They included representatives from the Ministry of Tourism and Environment Affairs (MTEA), which includes the Department of Forestry and Department of Meteorology, with its Climate Change Unit (CCU), and government personnel from respective project thematic areas including Ministry of Agriculture (MOA), Ministry of Health (MoH), Ministry of Natural Resources and Energy (MNRE), with its Department of Energy/DoE and Department of Water Affairs/DWA, Ministry of Finance (MOF), Ministry of Agriculture (MOA), Ministry of Public Works and Transport (MPWT) with the Department of Transport (DoT), Eswatini Environmental Authority (ESA), sugar companies, timber companies and both sugar and timber out-growers and their association representatives (namely the Eswatini Sugar Association and the Eswatini Cane Growers Association). In addition, the state-owned electricity utility, Eswatini Electricity Company (EEC) and the Eswatini Energy Regulatory Authority (ESERA) also participated.

There were 8 online participants from project counterparts GHGMI and ICAT, as well as from Matsapha Municipality. The ICAT Director, Professor Henning Wuester was among the 5 ICAT virtual participants. The Principal Secretary (PS) of MOA was among the 43 physical participants. The list of physical workshop participants is shown in Figure 1.



Figure 1: Workshop participants.

3. Workshop outcomes

The workshop produced a validated:

- Roadmap for adaptation in the Health and Water sectors;
- Roadmap and templates for the collection of GHG inventory activity data for the transport sector;
- Roadmap and templates for the collection of agriculture GHG emission activity data;
- Emissions/removals baseline for 1990-2050 for the LULUCF sector; and
- Renewable energy (electricity) policy assessment.

4. Proceedings of the workshop

4.1. Early Morning Session Presentations

The workshop was opened by Dr Deepa Pullanikatil, the Nationally Determined Contributions (NDC) Coordinator for Eswatini at the Ministry of Tourism and Environmental Affairs (MTEA). Dr Pullanikatil welcomed both the physical and virtual participants and apologised for MTEA representatives including the Principle Secretary and the Director of the Meteorology Department who had unfortunately been called to Parliament.

Dr Henning Wuester (Figure 2) conveyed special thanks and appreciation to the government of Eswatini and MTEA for its commitment to the project and for the support throughout the project. He also thanked the Centre for Sustainable Energy Research (CSER) at the University of Eswatini (UNESWA) and all the actors involved, including the Greenhouse Gas Management Institute (GHGMI), for their continuous support throughout the project implementation.

He highlighted the importance of climate transparency and indicated that it should not be seen primarily as an obligation but as an opportunity for evidence-based policy making. It is a foundation for turning policies into reality by mobilizing resources and provides the basis for monitoring and evaluating the implementation of NDCs to further strengthen them. Transparency will shape the NDCs to be consistent and supportive of development of the country's sustainable development objectives. He further stated that the ICAT project had a very strong focus on NDC related transparency efforts and highlighted the following outcomes:

- The improved institutional arrangements for greenhouse gas inventories and monitoring reporting and verification frameworks which will ensure the implementation of Eswatini's NDCs and assist in tracking the other aspects such as air pollution
- The roadmap for data collection and institutional arrangements for the agricultural sector (crops and livestock) which can enable the Tier 2 approach for greenhouse gas inventories
- An improved methodology and data set for mapping forestry and other land use change with an updated emissions baseline and projection for the sector
- An assessment of adaptation activities in the health and water sectors and the roadmap which offers comprehensive actions to move adaptation forward and
- The analysis of the three scenarios for the energy sector highlights that the use of renewable biomass could bring in reducing emission also generate annual revenue for the economy of the country and benefits to many small holders out growers in the sugar sector and timber out growers.

In his concluding remarks, Dr Wuester mentioned that the project also set a foundation for long-term capacity at the national level. He also stated that stakeholder engagement has been a core element of the project allowing

involvement of government and non-state actors and Eswatini will participate in knowledge and experience sharing activities.



Figure 2: Dr Henning Wuester making his remarks.

Ms Khetsiwe Khumalo, the government officer responsible for co-ordinating the Climate Change Unit (CCU) at MTEA thanked everyone who participated in the success of the project. She also thanked the CSER for the work done in the project, ICAT for opening new doors to uplift climate action, GHGMI for technical support and the different ministries for support, eye opening discussions and willingness to accept the challenge. She stated the importance of data driven policy in climate change and the need to enhance data collection and our data reporting and institutional arrangements. MTEA is willing to work with all sectors so that transparency and monitoring is done in all sectors. This will assist Eswatini in coming up with effective adaptation and mitigation actions. Eswatini is trying to create a centre for Southern Africa for transparency, monitoring and reporting.



Figure 3: Ms Khumalo making her remarks

Remarks for MNRE, Energy department were made by Mr Thembinkosi Ndzimandze. He appreciated help from ICAT for capacity building. The energy sector is the highest emitter of GHG emissions. He further mentioned that the project created an enabling platform for MNRE to interact and have fruitful and transparent discussions with the biomass industry. Mr Spencer from the Department of Water Affairs said the project yielded adaptation plans that can be implemented in the water sector to ensure water sustainability and provided indicators that will assist in achieving Sustainable Development Goal 6 (SDG6) which is water and sanitation for all.



Figure 4: Mr Ndzimandze making his remarks

Mr Vusi Lokotfwako from the MOH, gave special thanks for the project for providing solutions of adaptation to climate change in the health sector. He said the health sector has been lagging in climate change issues. The project provided an opportunity for exchange of ideas within the departments of MOH on how to be climate change sensitive and how to strengthen and improve the ministry's daily operations. He said as a way forward the ministry will be able to incorporate the different findings from the project to form a framework that will act as a guide in meaningful compliance with climate change commitments.



Figure 5: Mr Lokotfwako making his remarks

Dr. Mathunjwa (Head of CSER/UNESWA) indicated that the project was launched in September 2021 and is part of the enhanced transparency framework (ETF) in support of the Paris Agreement and the United Nations Convention on Climate Change (UNFCCC). He thanked Ms Khumalo (MTEA) and Dr Stevens and Mr Bess (GHGMI) for their assistance and support through the project. He mentioned the five key activity areas of the project and the consultants involved in each activity. The project addressed local issues and the adaptation of the findings can improve climate change actions in the country. The project addressed the following issues:

- Mainstreaming of climate change in the health sector;
- Adaptation strategies in the water sector;
- Improving the national energy balance so that it is useful for greenhouse gas emission;
- Improving data collection in the agriculture sector;
- Incorporating of timber and sugar plantation data into the land use, land-use change and forestry (LULUCF) sector and determined local emission factors and
- Renewable electricity policy scenario assessment and impact modelling with recommendation for implementing NDC targets

Dr Mathunjwa highlighted that the importance of stakeholder engagement in the project from its inception phase.

Dr. Ndlovu (UNESWA/CSER) gave a presentation on the objectives of Activity 1 (health sector), outcomes (state of play inventory, gap analysis report and the roadmap) and lessons learnt for the health sector in Activity 1. She

noted the need for continuous capacity building in climate change adaptation in the health sector.

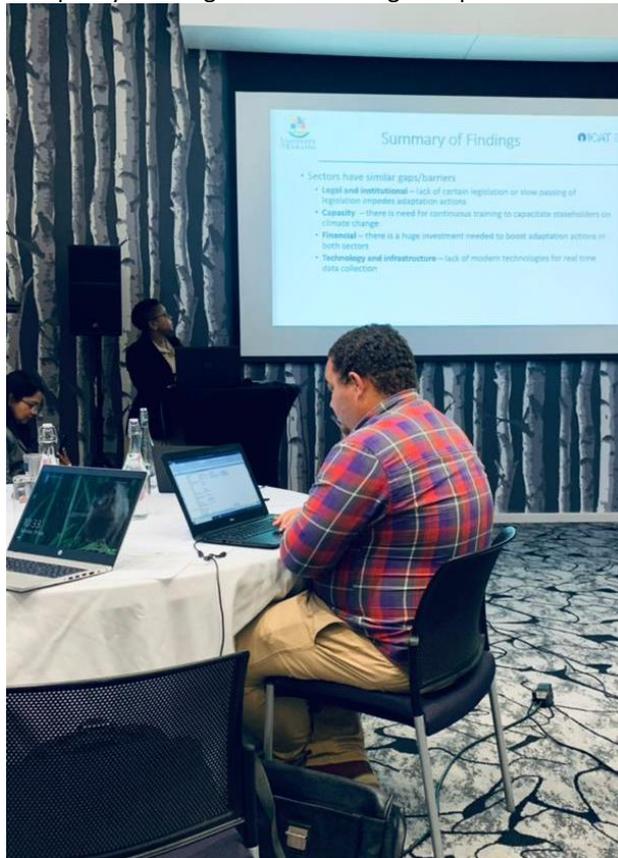


Figure 6: Dr Ndlovu giving her presentation

Dr Mafu (UNESWA/CSER) presentation was on the water sector. He stated the objectives of the project, how the stakeholder engagement process was conducted, mentioned the project outputs and the lessons learnt. He thanked the stakeholders for their support and commitment and fast response rate to questionnaires sent to them. The outputs were the state of play, scoping and gap analysis report and the roadmap for tracking adaptation in the water sector.



Figure 7: Dr Mafu giving his presentation

4.2. Mid-morning Session Presentations

The Principle Secretary for MOA in his remarks thanked ICAT for providing support to improve institutional arrangements and data collection processes in the country. He said the project outputs would enable the country to meet the reporting requirements as an obligation to the Paris Agreement. The country must adhere to the international conventions that it is a signatory. Mr Simelane emphasized the impact of climate change in the agriculture sector and indicated that the situation should be managed to guarantee food security in the country with the increase in population. However, this will be a challenge as the agriculture sector is a major contributor of GHGs. The findings of the project if implemented would help to collect more detailed data and improve emission estimates.



Figure 8: Mr Simelane, PS MOA making his remarks

Dr Sizwe Mabaso (CSER/UNESWA) gave a presentation on the findings for Activity 3, the agriculture sector. He commended the stakeholders from the agriculture sector for providing extensive information and for engaging with the CSER/UNESWA ICAT Eswatini Team. He noted the importance of quality data that will enable Tier 2 calculations in all categories in the agriculture sector. The outputs for this activity were the scoping and gap analysis report, data collection templates and the roadmap.



Figure 9: Dr Mabaso giving his presentation

Dr Wisdom Dlamini (CSER/UNESWA) in his presentation for Activity 4 stated that there is a need to conduct more field studies to derive local biomass emission factors. The data collected during this project could allow for a Tier 3 calculation, especially in the forest sector.

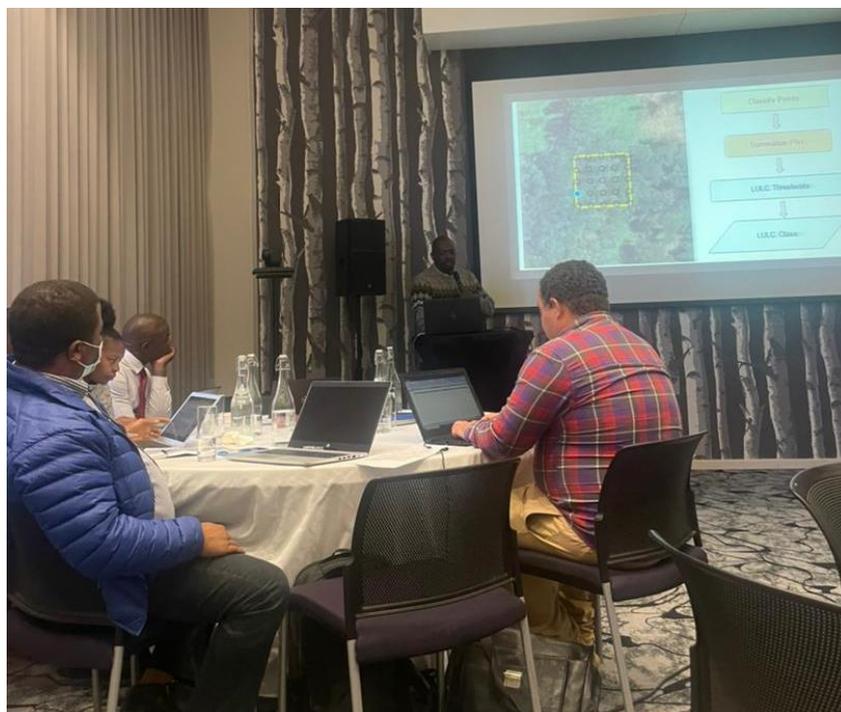


Figure 10: Dr Dlamini giving his presentation

The presentations were followed by a discussion, highlighted below.

- Mr Simelane (PS, MOA) encouraged data sharing as this benefits the country. He suggested that if there is a need for data from MOA, a formal request should be sent to his office.
- Mr Dladla noted that land degradation is higher than preservation and asked if there is a land use policy to regulate land use issues.
- Mr Jele (Department of Forestry) asked how ministries could collaborate on data collection and dissemination. He specifically enquired about how the Central Statistics Office (CSO) can help in this regard. Mr Fakudze (CSO) said there was a drive towards the national statistical system which would consider the national statistical development system (NSDS), unfortunately this initiative did not materialise.
- Dr Pullanikkati clarified that data is generated by the sectors not by the CSO, there is a need to identify the data challenges in the sectors. Mr Dladla suggested the need for data collection on amount of fertilizer applied and asked how as a ministry they could be supported to create a facility to do this. Dr Mabaso said this data can first be sourced from the industries that use significant amounts of fertilizer, like the sugar industry, but data sharing agreements should be set up first. Extension officers can be guided by an MOU to collect data in nation land as suggested in the roadmap.
- Still on data issues, Mr Fakudze (MOF) asked why it was difficult to assess data from the CSO. He said they struggled at MOF to get data from the CSO, and finally they got the data from the International Monetary Fund (IMF) site. He supported the idea that data should be in the public domain and easily accessible. Mr Spencer encouraged that data sharing laws be put in place and all stakeholders should comply. Mr Fakudze from the CSO agreed that there is a need to have systems that will enable data sharing and coordination.
- Mr Tfwala (RES) asked how Eswatini compared with some of her undeveloped neighbours in terms of progressions in climate change issues. Dr Pullanikkati said this needs to be investigated and this would serve as knowledge sharing among countries.
- Mr Spencer suggested coordination between the water and health sectors and asked how the health sector can be capacitated to undertake climate change activities. Dr Ndlovu said there is a WASH forum which should have representatives from all relevant sectors and still needs to be strengthened to enhance efficient coordination.
- Mr Sigudla (MOH) agreed that the WASH forum can effectively collaborate climate change issues in the water and health sectors. He further said the interventions they implement currently does not integrate climate change, but their engagement in the project made them realize the need to integrate climate change in their strategic approach as well as reporting.

4.3. Afternoon Session Discussions

Prof Mkhonta gave a presentation of objectives and outcomes of Activity 2 which were the scope and gap analysis report for the energy sector, improved data collection templates and the roadmap with proposed institutional arrangements. He indicated that accurate calculations for the GHG inventory needs quality data. One of the highlights of stakeholder engagement in this activity was raised awareness and capacity building in climate change issues in the transport department. The current transport policies exclude climate change action processes.

Mr Lukhele, the Director of the Transport Department under the Ministry of Public Works and Transport (MPWT), was excited about the knowledge they gained from the stakeholder engagement activities and said that they will use this knowledge to better link transport priorities with the broader climate change policy process.



Figure 11: Prof Mkhonta giving his presentation

Dr. Mavimbela (UNESWA/CSER) gave a summary of the findings and lessons learnt from Activity 5. He discussed the four scenarios of electricity generation which were created as part of this activity and stated that only two of the renewable energy policy scenarios showed a significant reduction in GHG emissions. As a country, Eswatini should invest in more modern technologies which will produce more electricity from the same amount of feedstock. The potential independent power producers (IPPs), which are the sugar and timber industries, showed commitment in this activity and this shows the level of interest they have in biomass electricity. The timber out growers and sugar cane farmers who had previously been left out in discussions of biomass electricity were part of the discussions in this project and their role was seen to be significant in the biomass resource chain. The recommended option for biomass electricity was the auction, however, this can be enhanced to come up with an option that suites all players in the biomass sector. The biomass group platform should be revived to look at such matters.

The presentation was followed by discussions:

- Mr Thwala (RES) said it is tricky for Eswatini to embrace the auction option as there are 3 players in the biomass space, he recommended a blend of the auction coupled with feed-in-tariffs. He also suggested that a sustainable tariff should be set to allow return on investment for the private sector.
- Mr Dladla (MOA) enquired about returns for the out growers for sugarcane, how the scenario could be made attractive to them and how they can be aligned to the benefits accruing from selling packages to the millers . Dr Mavimbela said from this is a conversation that the activity team had with the out growers, and the millers said that bagasse is an input in the sugar processing process itself even if electricity is generated from it, it is still an input in the sugar processing as there are some processes in there that require electrical power. Mr Oloff (RES) said the sugar act states that bagasse required to produce sugar should be supplied free of charge
- Dr Mathunjwa indicated that the ICAT project had more stakeholder engagements than other ICAT project Also this project provided a platform where government and the private sector could discuss biomass issues and this engagement has enabled an environment for further discussions as both parties are on the same page now.
- Dr Stevens (GHGMI) thanked all stakeholders and everyone who had made the project a success. The project produced high quality outputs which assist Eswatini to enhance transparency and improve NDCs in the future. Mr Bess (GHGMI) appreciated collaborating with stakeholders in the project. He thanked the stakeholders for their commitment, willingness and support throughout the project. He said there is a potential for a follow-up project.

5. Closing remarks

Ms Khumalo in her closing remarks thanked everyone involved in the project. She said the outputs of this project will be used as inputs to other ongoing projects (CBIT) and assist the ministry to put in place sustainable reporting processes for climate change. The outputs will also inform the next phase of the project. Reporting should be done at sector level, and departments should be able to compile their own GHG inventories so that they understand the information better and are able to use the information to form policies. In this way the country will be able to effectively integrate and advance climate action in the different sectors. The outputs highlighted gaps where government can improve, what needs to be reinforced and where external assistance is required. She recommended the reconstitution of the biomass group which was a good platform to discuss biomass issues. She said she was delighted that the project had built capacity and recommended the researchers who were working on the project to use the knowledge they gained to inform students research projects.

Annexures

Annex 1: Workshop Participants list

Online participants:

First Name	Surname	Organization	Position	Email address
Mike	Bess	Greenhouse Gas Management Institute (GHGMI)	Technical Advisor	mike.bess@ghginstitute.org
Simphiwe	Thwala	CONCO Ltd.	EOSH Analyst	simthwala@coca-cola.com
Boyce T.	Malima	Ministry of Agriculture - Dpt. of Vet. & Livestock Services	AHO - Information	pasekmailma@gmail.com
Eleni	Patra	UNOPS/ ICAT		elenipa@unops.org
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Mancoba	Zwane	Matsapha Municipality	Environmental Health Manager	zwanem@matsapha.co.sz
Mancoba	Zwane	Matsapha Municipality	Environmental Health Manager	zwane.mancoba@gmail.com

Annex 2: Workshop Agenda; 19 July 2022 Hilton Garden Inn Mbabane

July 19, 2021		
09:00 – 09:15	Registration	CSER
09:15 – 09:30	Welcome Remarks	Programme Director
09:30 – 09:45	Opening Remarks	MTEA Minister/PS
09:45 – 10:15	ICAT Opening Remarks	Dr. Henning Wuester, ICAT
10:15 – 10:30	Remarks by the Project Coordinator	Ms. K. Khumalo
10:30 – 11:00	Tea break	
11:00 – 11:10	Remarks by MNRE	MNRE
11:10 – 11:20	Remarks by MoA	MoA
11:20 – 11:30	Remarks by MoH	MoH
11:30 – 11:35	Objectives of the Validation Workshop	CSER
11:35 – 11:50	Activity 1: Health Sector Presentation	Activity 1 Team
11:50 – 12:05	Activity 1: Water Sector Presentation	Activity 1 Team
12:05 – 12:25	Discussion on Health and Water Sectors	All
12:25 – 12:40	Activity 2: Energy Sector Presentation	Activity 2 Team
12:40 – 13:00	Discussion on the Energy Sector	All
13:00 – 14:00	Lunch	ALL
14:00 – 14:15	Activity 3: Agriculture Presentation	Activity 3 Team
14:15 – 14:30	Activity 4: LULUCF Presentation	Activity 4 Team
14:30 – 14:50	Discussion on Agriculture and LULUCF	All
14:50 – 15:05	Activity 5: Biomass Electricity Presentation	Activity 5 Team
15:05 – 15:25	Discussion on Biomass Electricity	All
15:25 – 15:40	Tea Break	
15:40 – 16:00	Way forward and links with other projects and activities	Ms Khumalo
16:00 – 16:20	Q&A	All
16:20 – 16:30	Closing Remarks by MTEA	MTEA