Validation Workshop summary report for Energy and Transport Sectors

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Republic of Sudan
The Higher Council for the Environment and Natural Resources

ICAT Initiative for Climate Action Transparency

Initiative for Climate Action Transparency – ICAT

Validation Workshop summary report for Energy and Transport Sectors

Deliverable #5

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DISCLAIMER

PREPARED UNDER

The Initiative for Climate Action Transparency (ICAT), supported by Austria, Germany, Italy, the Children's Investment Fund Foundation and the ClimateWorks Foundation.

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

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List of Acronyms

BUR	Biennial Update Report
CBIT	Capacity Building Initiative for Transparency
CBS	Central Bureau of Statistics
CC	Climate Change
COP	Conference of the Parties
CSO	Civil Society Organization
ERA	Electricity Regulatory Authority
FAO	Food and Agriculture Organization of the United Nations
FNC	Forests National Corporation
GEF	Global Environment Facility
GHG	greenhouse gases
HCENR	Higher Council for Environment and Natural Resources (Sudan)
M&E	Monitoring & evaluation
MEAs	Multilateral Environmental Agreements
MPGs	Modalities, Procedures and Guidelines
MRV	Measurement, reporting and verification
NAP	National Adaptation Plan
NBSAP	National Biodiversity Strategy and Action Plan
NC	National Communication
NCSA	National Capacity Self-Assessment
NDC	Nationally Determined Contribution
NGO	Non-governmental organization
NLDC	National Load Dispatch Centre
QA/QC	Quality assurance/quality control
REDD+	Reducing Emissions from Deforestation and forest Degradation
SCADA	Supervisory Control and Data Acquisition
SCIA	Sudanese Chambers of Industries Association
SEDC	Sudanese Electricity Distribution Company
SEHC	Sudanese Electricity Holding Company
SETC	Sudanese Electricity Transmission Company
SHGC	Sudanese Hydropower Generation Company
SPC	Sudanese Petroleum Corporation
STPG	Sudanese Thermal Power Generating Company
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Introduction

The Initiative for Climate Action Transparency (ICAT) is a global initiative that aims to improve the transparency of climate actions, policies, and support at the national and sub-national levels. ICAT provides guidance, tools, and capacity building support to countries to help them measure, report, and verify the impacts of their climate actions. ICAT has been working with a number of developing countries, including many in Africa, to improve their climate action transparency to provide guidance and tools to help these countries measure and report on their greenhouse gas emissions in a transparent manner.

This report is for the validation workshop for the Initiative for Climate Action Transparency (ICAT) project for the energy sand transportation sectors for the Government of Sudan. The workshop conducted on-line on the 22nd of January 2024. The implementation of the ICAT project was reinforced by the Government on Sudan (GoS) with support from ICAT Secretariat, ISPRA, UN Organization, UNEP –CCC and UNOPS. The ultimate objective of the project is to develop and enhance capacity for the GoS to measure the impacts of its policies and efforts on its Greenhouse gases (GHGs) emissions as per the NDCs in a transparent manner. Furthermore, these policies and efforts are to be reported publicly and transparently, thus fostering greater transparency, effectiveness, trust and ambition in climate policies globally. Consequently, the ICAT project in Sudan is aimed at fostering greater transparency in reporting its GHG emissions as per its nationally determined contributions (NDCs). This ambition is aligned and consistent to the Paris Agreement and its Enhanced Transparency Framework (ETF). Thus, the ICAT project aimed at creating an enabling environment to strengthen the current institutional arrangement and legal frameworks to ensure that the current measuring, reporting and verification (MRV) tools are transformed to ETF.

ICAT Sudan objectives have been identified by the Government of Sudan with the prioritized sectors including, Energy and Transport and their sub-categories/sectors. These have been expounded to develop the following objectives i.e.:

1. Develop a list of indicators for NDC tracking and monitoring in Energy and Transport
2. Develop capacity for data management to track NDC implementation in the transport and energy sectors based on ICAT methodologies and/or other available tools
3. Develop a road map to ensure the sustainability of ICAT outcomes.
4. Develop a M&E of the roadmap

To achieve the intended objective of strengthening the institutional arrangements and legal framework to enhance greater transparency in reporting NDCs targets, the ICAT project had a set of specific tasks as follows:

- Develop situational analysis of the existing MRV/transparency system and related support initiatives in the country,
- Conduct needs and gap assessment for MRV in energy and transport sectors,
- Provide an analysis and recommendation to strengthen the institutional arrangements for coordination of the MRV/transparency system for energy and transport sectors,

- Develop capacity for data management to track NDC Implementation based on ICAT Guidance,
- Develop an MRV/transparency tracking tool for NDC implementation in the energy and transport sectors,
- Develop a long-term Transparency Strategy to ensure sustainability of ICAT outcomes,
- Support the Higher Council for Environment and Natural Resources (HCENR) in tracking MRV/transparency initiatives and report support received in BUR,
- Support the Higher Council for Environment and Natural Resources (HCENR) in to set up a Technical Management Unit for the national MRV/transparency system;
- Support the team of international experts in the provision of training and capacity-building support to the country.

Project's Deliverables

The project has four main deliverables for each sector which were submitted and had to be validated hence purposed of this validation workshop. These deliverables that have been submitted are:

Deliverable 1: Gap Analysis and Needs Assessment Report, assessing MRV systems in the energy and transport sectors in Sudan (of 41 pages. Each)

Deliverable 2: Narrative Report , on the recommendations for the envelopment of a fit-for-purpose MRV toolbox and protocol for transparency, in order to strengthen institutional arrangements for MRV in both sectors (of 33 pages each).

Deliverable 3: Narrative Report with guidance on technical support and suggestions for capacity building on how to apply ICAT guidance to policies and actions within energy and transport sectors in Sudan (of 30 pages each).

Deliverable 4: Terminal Report with recommendations for the development of a fit-for-pu

rpose MRV toolbox and protocol for both energy and transport sectors in Sudan (about 50 pages each).

Deliverable 5: Report documenting the Final Validation Workshop (agenda, presentations and list of participants) and main outcomes of the ICAT Sudan project.

Consequently, the validation workshop was undertaken in fulfillment of the deliverable 5 and it is on the basis of the validation workshop that this report is produced.

Objectives of the workshop

The overall goal of the ICAT validation workshop was for the reports produced under the ICAT project to be reviewed by the stakeholders and validated for adoption. This was deemed critical for the continuity of the ICAT project as the adopted deliverables would then be implemented.

The second objective of the workshop was to reach recommendations and identify needs for a possible further phase of the ICAT project with the assistance of the GoS through the Higher Counsel for Environment and Natural Resources (HCENR).

The workshop program and agenda

The workshop was held online on the 22nd of January 2024. The program started at 09:00 to 14:30. Annex 1 depicts the validation workshop program. The workshop attendee list is annexed in the report and constituted stakeholders from various governmental departments and business sector in addition to the representatives of the ICAT secretariat, HCENR, UNEP-CCC, UNOPS, ISPRA and UN.

Opening Remarks

The validation started with opening remarks from the ICAT Secretariat by Ms. Randa Ahmed (Program Management Officer - ICAT Secretariat), who gave a comprehensive introduction to the ICAT program and its objective which in a nutshell is to increase the overall transparency capacities of the partner countries in assessing their contribution of climate policies and actions towards their NDCs. The speaker also noted that the ICAT provides appropriate methodologies and tools to support evidence-based policies. Effectively the speakers emphasized that ICAT aims at integrate guidance, capacity building and knowledge sharing to engage countries through common framework and tools.

Then Dr. Hana Hamdalla, Director of the Climate Change Directorate, HCENR-Sudan, welcomed the floor and gave the opening remarks to be delivered by Ms. Huyam (project coordinator ICAT Sudan), who thanked the ICAT secretariat and the fund providers as well as the UNEPCCC for for provision of technical and financial support, then gave a warm congratulations to the TWGs and national consultants to accomplish the project deliverables successfully despite the current circumstances of the country and thanked the

The last speaker Alejandro Regatero Labadia, ICAT project coordinator, presented the objectives of the Sudan ICAT project and summarized the combined deliverables for the energy and transport sectors and highlighted the proposed next step and way forward. Then the floor given to Dr. Abdelrahman Eltahir Ahmed Musa, National Consultant for the Energy sector, ICAT Sudan for one hour presentation followed by Dr. Quossay Awad Ahmed, National Consultant for the Transport sector, ICAT Sudan for another one hour presentation.

Presentations on the deliverables

High-level presentations were conducted on the 4 deliverables as listed above. Covering both energy and transport sectors. The presentations commenced by giving summary of project's components and activities provided (Figure 1) and highlights under each deliverable.

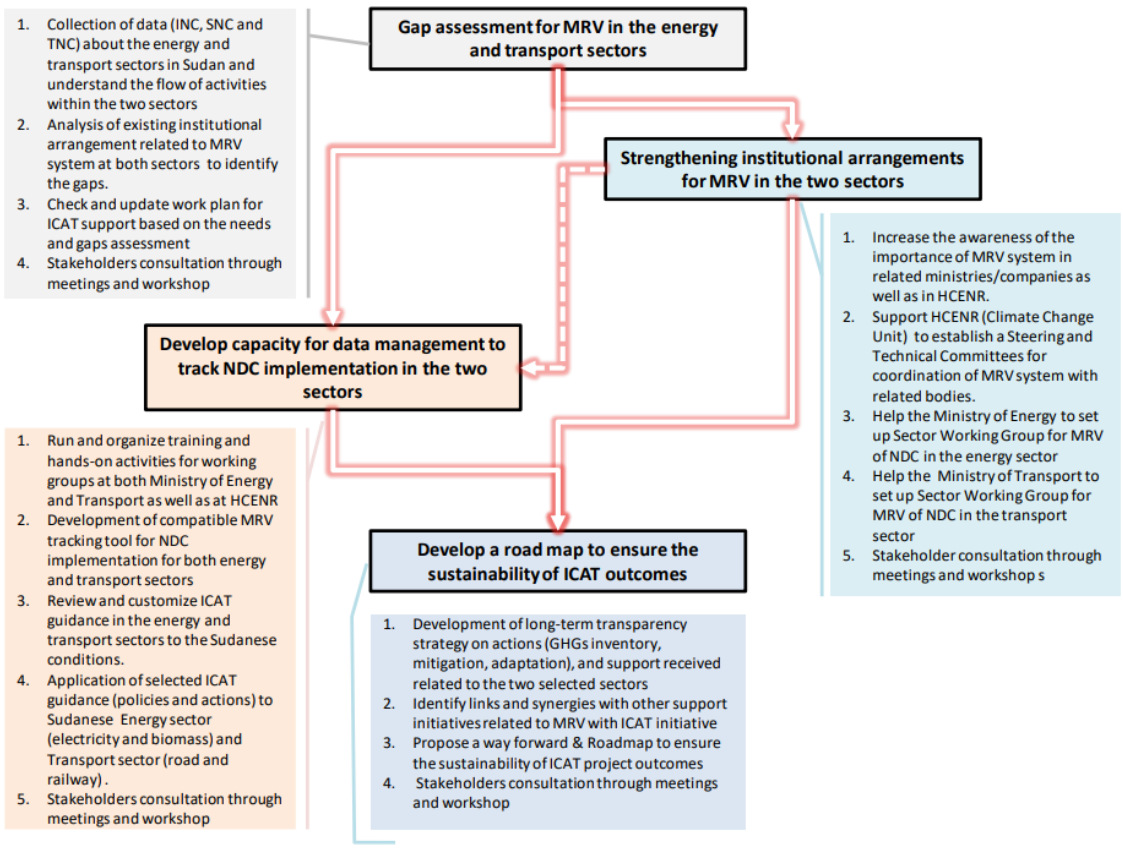

Figure 1: Summary of project components and activities

ICAT Sudan Project's Deliverables:

Deliverable 1: Gap Analysis and Needs Assessment Report, assessing MRV systems in the energy in Sudan

The gap analysis aimed at stocktaking on country's current arrangements, gaps and weaknesses on MRV/transparency systems, as well as the requirements to close the gap towards meeting ETF requirements.

The Study included data collection from local/international sources, analysis of existing institutional arrangements for MRV, and stakeholder consultation through meetings and workshops.

Gaps in Sudan's MRV system

- Poor alignment between current institutional arrangements within national relevant institutions regarding monitoring/evaluation, data collection and reporting and the transparency obligations under Article 13;

- Little to no awareness and knowledge by stakeholders and policy/decision makers regarding new transparency obligations;
- Ineffective coordination and reporting arrangements between different institutions and stakeholders in term of communications, flow of information, and the delegation of responsibility;
- Lack of proper data collection, data archiving, and Quality Assurance and Quality Control (QA/QC) systems across different institutions and stakeholders regarding GHG emissions.
- Lack of a legal and procedural basis for an operational MRV system on GHG emission reductions compatible with Sudan's obligations on transparency under Article 13.
- Inadequate institutional capacity for GHG inventory development in emitting sectors, specially ENERGY and TRANSPORT sectors; as well as for GHG mitigation analysis of priority policies and measures;
- Inadequate institutional capacity for climate change vulnerability assessment and measuring the effectiveness of adaptation actions;
- Need for transferring of tools and methods to help national teams collect and verify GHG emission activity data as well as to calculate and predict baseline emission trends and the impact of GHG mitigation measures; and
- Need for financing technical support to develop and maintain effective institutional arrangements, M&E, and MRV systems for meeting Sudan's transparency obligations under Article 13.
- **Areas of MRV improvements in the Energy and Transportation Sectors:**
- Establishing a legal framework for energy statistics in the power, biomass and transportation subsectors
- Such a mandate, along with an adequate legal framework for energy statistics that covers public and private sectors, can at least ensure that all or most of energy data are collected or submitted.
- An adequate legal framework for energy statistics in the institutions involved in conducting surveys can guarantee a budget component specific to surveys, which in turn contributes to energy statistics personnel training and recruitment.
- Setting and maintaining institutional arrangements that are based on consultations, co-operation and mutual benefit between institutions
- Utilizing a bottom-up approach in setting institutional arrangements would require extensive consultations between actors in the energy sector. These consultations can help reach data sharing agreements or any other form of agreement or understanding between actors that can sustain a certain agreed-upon data flow, with a fixed schedule that aligns with national data dissemination report timelines. This can be achieved through memorandums of understanding between different actors and the selected lead agency for energy statistics or the MRV unit.
- These agreements or understandings also include sharing of data collection and estimation methodologies, which enhances transparency. Regular consultations can help improve

methodologies used. They could also result in the avoidance of duplicate efforts, and thus, contribute to good management of resources.

- Strengthening methodologies and processes
- Actors involved in energy data collection using surveys must use standardized templates, across different target data groups, appropriate to Sudan. These actors should also be encouraged to follow IPCC guidelines in tabulating activity data. This contributes to the enhancement of the consistency and comparability principles for energy data.
- Digitalization of archives and documentation, with the use of cloud storage and regular backups of data, can prevent data losses and ease access, retrieval and reuse of data.

Deliverable 2: Narrative Report, on the recommendations for the envelopment of a fit-for-purpose MRV toolbox and protocol for transparency, in order to strengthen institutional arrangements for MRV in both sectors

Based on the findings of desk research and identified gaps during stakeholder consultations, this deliverable commenced with providing general overview of existing institutional arrangements and proposed institutional arrangements for energy and transport sectors then provided recommendations to strengthening institutional arrangements and coordination mechanisms,

General Overview of Existing Institutional Arrangements

1. National Focal Point: Each country designates a national focal point responsible for coordinating its MRV activities. In Sudan the national focal point is the Higher Council for Environment and Natural Resources (HCENR)

2. Designated National Authority: The designated national authority is responsible for overseeing the development and implementation of the country's MRV system.

3. Technical Experts: Technical experts provide support and guidance on the development and implementation of MRV systems.

4. Independent Review Teams: Independent review teams are responsible for reviewing countries' GHG inventories and other relevant information to ensure accuracy and completeness.

5. UNFCCC Secretariat: The United Nations Framework Convention on Climate Change (UNFCCC) Secretariat provides guidance on MRV requirements and facilitates the exchange of information between countries.

Sudan ICAT project proposed new Institutional Arrangements structure for both for energy and transport sectors uses the bottom up approach comprising the relevant informal (such as public and private sectors, NGOs,etc..) and formal data providers/ministries. The proposed a data collection unit at the CBS, then a data analysis and reporting unit to be formed with representation from all relevant sectors under the direct supervision of the HCENR, see Figure 2and Figure 3

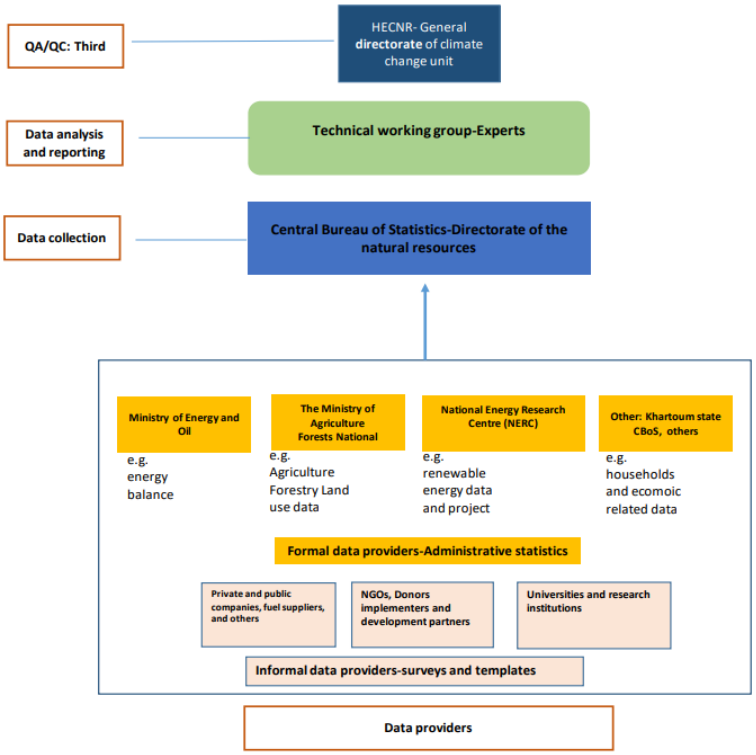

Figure 2: The Proposed Institutional Arrangements for energy sector

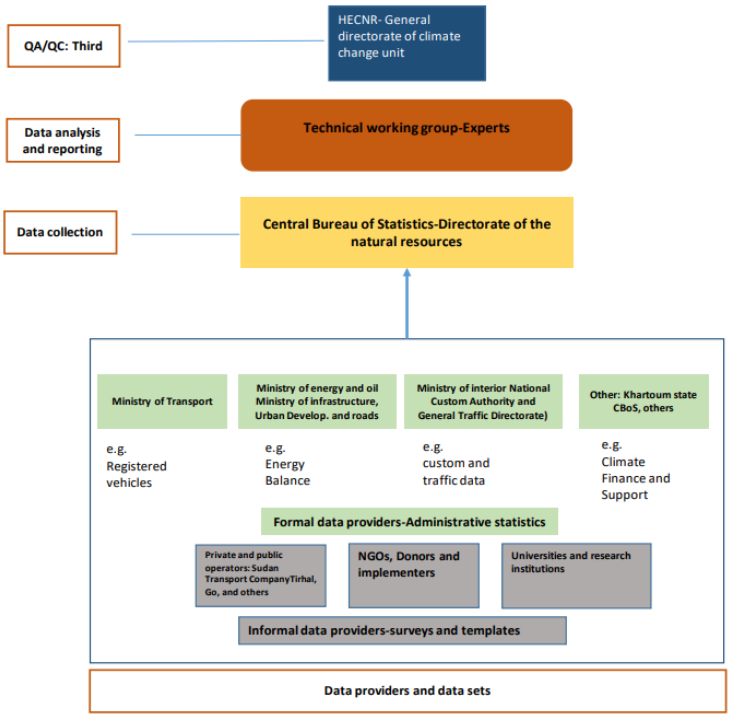

Figure 3: The Proposed Institutional Arrangements for transport sector

Recommendations

- Appointing a regulatory body: Although "Energy" is becoming a title of a federal ministry after 2019, however the ministry has no directorate or subsidiary responsible for energy policies and statistics. It is important to appoint one regulatory body to oversee the energy sector (from fossil fuel, biomass, and electricity) and ensure compliance with transparency requirements. The regulatory body should have the power to enforce regulations and impose penalties for non-compliance.
- Develop a comprehensive energy policy: Sudan should develop a comprehensive energy policy that outlines its goals, targets, and strategies for reducing GHG emissions. The policy should also include measures to promote renewable energy sources and energy efficiency.
- Increase transparency in reporting and decision-making: The Ministry of Energy and Petroleum should increase transparency in data provision and decision-making processes related to the energy sector. This includes publishing information on contracts, licenses, and permits related to energy projects and actual fuel consumption by different sectors, firms, and institutions.
- Strengthen monitoring and reporting systems within the Ministry of Energy and Petroleum and affiliated bodies to include GHG emissions from the different energy uses. This includes developing a robust data collection system and regularly reporting of activity data and emissions to CBS and consequently to HCENR.
- Engage stakeholders: including civil society organizations, local communities, and private sector actors in the development of its energy policies and decision-making processes. This will help ensure that all perspectives are taken into account and increase buy-in for sustainable energy solutions.
- Build capacity: Sudan should build capacity within government agencies responsible for implementing climate policies related to the energy sector. This includes providing training on climate change mitigation strategies, renewable energy technologies, and monitoring and reporting systems.
- Foster international cooperation: Ministry of Energy and Petroleum, FNC and NERC are recommended to foster international cooperation with other countries on climate change mitigation efforts related to the energy sector. This includes sharing best practices, technology transfer, and financial support for sustainable energy projects.

Deliverable 3: Narrative Report with guidance on technical support and suggestions for capacity building on how to apply ICAT guidance to policies and actions within energy and transport sectors in Sudan.

Application of ICAT Assessment Guides – Energy

The objective was to leveraging ICAT guidance to evaluate potential of mitigation activities and energy sector-related actions outlined in Sudan's NDC Implementation Plan.

Analysis of pricing policies in Sudan's energy sector (FiT policies, tax incentives, and auction policies) and policy recommendations for formulation of effective policies. Assessment of policy impacts of

climate change mitigation actions through the ICAT Renewable Energy Assessment Guide.

Main barriers impending implementation and adoption of renewable energy in Sudan:

- High costs associated to solar PV systems and other RE technologies
- Absence of government incentives to support homeowners and RE producers.
- Inadequate grid infrastructure to facilitate the interconnection of diverse RE sources

Application of ICAT Assessment Guides – Transport

The objective was to leveraging ICAT guidance to evaluate potential of mitigation activities relevant to transport sector, identified by Sudan in their NDC Implementation Plan

Analysis of pricing policies in Sudan's transport sector and policy recommendations for development of effective policies. Assessment of policy impacts through the ICAT Transport Pricing Assessment Guide

Practical example through assessment of a pricing policy framework for Sudan to eliminate GHG emissions from transport sector. Leveraging fuel taxes (8% diesel and 25% gasoline) to create incentive-driven systems that promotes cleaner transportation options

Main barriers to pricing and fuel switching policies in Sudan:

- Technical/infrastructural barriers i.e., lack of charging infrastructure or lack of training
- Economic barriers i.e., inflation and inequality concerns
- Financial barriers (high prices for RE alternatives, lack of customer demand or preferences)
- Institutional barriers such as lack of proper national strategies and associated institutional structures

Capacity Building Trainings on ICAT Assessment Guides for Technical Working Groups-Energy sector

- Stakeholder training held during 25-26 October 2023, and preceded by Training of Trainers (ToT) recording sessions
- Training consisted of a session introducing the ICAT RE Assessment Guide, followed by presentation of practical exercise and group work sessions
- Discussion on identification of pricing policy barriers and Q&A on the results of the practical exercise
- Completion certificates to be issued to participants

Capacity Building Trainings on ICAT Assessment Guides for Technical Working

Groups-Transport sector

- Held during 7-8 November 2023, also preceded by ToT on Transport Pricing
- Training consisted of an introduction of the ICAT TP Assessment Guide, practical exercise and group work sessions
- Discussion and Q&A during second day sessions, focusing on the results of the practical exercise
- Completion certificates to be issued to participants

Deliverable 4: Terminal Report with recommendations for the development of a fit-for-purpose MRV toolbox and protocol for both energy and transport sectors in Sudan.

The presenters purposed for developing a roadmap is to provide long-term guidance to strengthen Sudan's MRV system on its way to compliance with the ETF and update of the NDC.

The main three objectives are:

1. Proposing a tracking tool for monitoring implementation of NDC in both sectors, and identification/recommendation of a list of indicators that can be used to track NDC implementation
2. Recommendations for an MRV toolkit to support the long-term transparency strategy developed, facilitating data collection, analysis and reporting
3. Introduction of a long-term transparency strategy in both sectors, highlighting objectives and recommended actions to enhance transparency and strengthen MRV systems

Discussions on the deliverables and recommendations

Operational Plan for The Long-Term Transparency Framework in Sudan's Energy and Transport Sectors

The following operational plan provides a clear roadmap for building and operating a sustainable, long-term transparency framework in Sudan's energy and transport sectors. By following these steps and continuously adapting based on progress and emerging needs, Sudan can significantly strengthen its MRV systems, enhance NDC tracking, and ultimately achieve its sustainability objectives.

Objectives

1. **Enhance transparency:** Improve data collection, analysis, and reporting on greenhouse gas (GHG) emissions, mitigation actions, and adaptation measures within the energy and transport sectors.
2. **Strengthen MRV systems:** Develop robust monitoring, reporting, and verification (MRV) systems for both sectors, ensuring data accuracy and reliability.
3. **Promote sustainable development**: Align transparency efforts with Sudan's National Development Plan and Nationally Determined Contributions (NDCs) to achieve low-carbon and climate-resilient development.
4. **Secure long-term sustainability:** Ensure the framework's effectiveness and relevance beyond the ICAT project timeframe.

Building and operating a sustainable transparency framework to enhance Sudan's MRV systems, improve NDC tracking, and advance sustainable development in the energy and transport sectors.

Building on Achievements:

- Utilize the proposed NDC tracking tool with its indicator list and design features to monitor progress towards transport sector NDCs.
- Implement the long-term transparency strategy focusing on GHG inventory development, mitigation actions, and adaptation measures within the transport sector.
- Maximize synergies with CBIT by collaborating on capacity building activities and institutional framework strengthening.
- Follow the roadmap for ICAT project sustainability, focusing on institutional consolidation, capacity building, knowledge transfer, and long-term financing.
- Continuously engage stakeholders (civil society, private sector, local communities) through the designated roadmap for communication and collaboration.

Implementation steps

- Establish a National Transparency Committee (NTC): Comprised of representatives from relevant ministries, private sector, and civil society, the NTC will oversee transparency efforts and guide framework implementation.
- Conduct capacity needs assessment: Identify specific training and resources needed to effectively operate the transparency framework for both energy and transport sectors.
- Develop training programs: Tailor training to address identified needs, focusing on GHG inventory methodologies, data collection and management, NDC tracking tools, and mitigation/adaptation strategies.
- Implement training programs: Train relevant personnel from government agencies, private companies, and NGOs on utilizing the transparency framework and tools.

- Support knowledge transfer: Facilitate knowledge exchange between national stakeholders and international experts through workshops, online platforms, and secondment opportunities.
- Refine the proposed NDC tracking tool: Collaborate with stakeholders to further develop the tool based on specific needs and data availability.
- Integrate the tool with existing systems: Connect the NDC tracking tool with relevant data sources in the transport sector for seamless data flow and efficient monitoring.
- Pilot test the tool: Use real-world data to test the tool's functionality and identify any improvements needed before nationwide implementation.
- Improve GHG inventory development: Refine methodologies and data collection processes to enhance the accuracy and completeness of emissions data in both energy and transport sectors.
- Develop baseline scenarios and projections: Establish baselines for emissions and key indicators in both sectors to track progress towards NDC targets and project future trends.
- Conduct regular reporting and analysis: Prepare and submit transparent reports on emissions, mitigation actions, and adaptation measures according to international guidelines and NDC commitments.
- Develop sustainable financing mechanisms: Explore options for long-term financial support for the transparency framework, including public-private partnerships, international grants, and carbon revenue mechanisms.
- Strengthen institutional frameworks: Foster long-term institutional ownership by integrating the transparency framework into relevant government processes and policies.
- Expand transparency framework: Utilize the initial success in energy and transport to gradually integrate the framework into other sectors (e.g., agriculture, waste) for comprehensive national transparency.
- Continue stakeholder engagement: Maintain open communication channels with stakeholders through regular consultations, feedback mechanisms, and public awareness campaigns.
- Monitor and evaluate framework effectiveness: Regularly assess the impact of the transparency framework on achieving NDC targets, improving decision-making, and promoting sustainable development.

The following table shows list of activities and the anticipated duration for each activity (in parallel form):

#		Activities	Est-period-weeks
1	**Building on the ICAT project outcomes**		**6**
	1.1	Communicate with decision makers and other stakeholders the outcomes of the ICAT project	
	1.2	Develop a detailed work program for the long term transparency strategy in both the energy and transport sectors	
	1.3	Develop a TOR for contractual services within the detailed transparency strategy	

2	**NDC Tracking Tool**		**32**
	2.1	Tool development: Finalize the NDC tracking tool based on the proposed list of indicators and design features.	
	2.2	Building and operationalize the Tool : Create a TOR for contractual services to develop an online platform customized for each stakeholder	
	2.3	Data collection: Establish data collection mechanisms for monitoring progress towards NDC targets in the transport sector.	
	2.4	Capacity building: Train relevant stakeholders on using and interpreting the tool for informed decision-making.	
	2.5	Reporting and dissemination: Regularly publish reports on progress towards NDC targets, ensuring transparency and accountability.	
3	**Long-Term Transparency Strategy**		**28**
	3.1	GHG inventory development: Enhance the national GHG inventory system for energy and transport sectors through building and disseminating data gathering, calculation spreadsheets.	
	3.2	Mitigation action tracking: Develop a system to track and monitor the implementation and effectiveness of mitigation actions in both sectors using ICAT guidance	
	3.3	Support Needed: Collaborate with technical partners for technological support and capacity building.	
	3.4	Adaptation measure monitoring: Establish a system to monitor the progress and impact of adaptation measures implemented in the energy and transport sectors.	
	3.5	Regular review and update: Regularly review and update the strategy to reflect evolving national priorities and international guidelines.	
4	**Synergies with CBIT**		**48**
	4.1	Joint workshops and trainings: Organize joint workshops and training sessions on transparency, MRV, and NDC implementation for both ICAT and CBIT stakeholders.	
	4.2	Knowledge exchange platform: Establish a knowledge exchange platform to share best practices, methodologies, and resources between ICAT and CBIT projects.	
	4.3	Joint advocacy initiatives: Collaborate on joint advocacy initiatives to promote the importance of transparency and climate action in Sudan.	
5	**Roadmap for ICAT Project Sustainability**		**32**
	5.1	Institutional framework consolidation: Strengthen institutional capacity within the Ministry of Environment, Energy, and Infrastructure to manage and sustain the transparency framework.	
	5.2	Capacity building: Develop and implement long-term capacity building programs for stakeholders involved in data collection, analysis, reporting, and communication.	
	5.3	Knowledge transfer: Develop mechanisms for transferring knowledge and expertise gained from the ICAT project to relevant institutions and stakeholders.	
	5.4	Long-term financing mechanisms: Implement sustainable financing mechanisms to support the long-term operation and maintenance of the transparency framework.	
6	**Continuous Stakeholder Engagement**		**36**
	6.1	Strengthening institutional setup: Signing NDA and MOA between the institutions as proposed in the ICAT project and develop standard operating procedures (SOPs)	
	6.2	Stakeholder networking : Establish platforms for information sharing and knowledge exchange.	
	6.3	Regular consultations: Establish regular communication channels and platforms for ongoing consultations and feedback from stakeholders.	
	6.4	Capacity building for stakeholders: Train and empower stakeholders to participate actively in transparency processes through running a monthly hands-on training session by ICAT experts	
	6.5	Public awareness campaigns: Raise awareness about the importance of transparency and climate action among the general public through the TWG and National consultants (weekly webinar)	
7	**Monitoring and evaluation**		**48**
	7.1	Develop a detailed timeline for implementing the activities outlined above, with clear milestones and deliverables.	
	7.2	Establish a robust monitoring and evaluation system to track progress and assess the effectiveness of the framework.	
	7.3	Conduct regular reviews and adapt the plan as needed to ensure its ongoing relevance and effectiveness.	
8	**Scalability**		**20**

8.1	Extend the framework to cover other sectors beyond energy and transport.	
8.2	Contribute to the development of a national transparency system for broader climate action monitoring.	

Discussions of the outcomes

Following the presentations of the key deliverables for the energy and transport sectors, the floor was opened for discussions and recommendations. The following are the issues that were raised by the stakeholders:

1. **ICAT Secretariat**
    - The need to enhance the Institutional Arrangements for the next step
2. **HCENR**
    - Tracking NDCs is a country approach it needs a robust transparent MRV system across sectors.
    - It is important that all results and outcomes of the ICAT as well as the CIBT to be implemented to ensure consistency and to avoid duplication.
3. **Technical working groups (TWGs)**
    - It was advised that to establish a permanent structure to replace the technical working groups that would be more suitable and appropriate for the supporting the MRV/EFT program and to assure the participation of all sectors.
    - Suggested a formation of a dedicated body rather than the HCENR to be responsible for data collection on regular bases according to the agreed upon formats and reporting system.
    - Having known that there is a huge wealth of data and information within the HCENR, it is strongly suggested to form a task force to review and to sort out all the all accomplished and current projects to avoid double efforts and make use of the results and recommendations.
    - To ensure data quality and efficient data communication according to clear agreements.
    - To make sure on operationalization of ICAT project's results.
    - All the uncertainties in data quality and is a result of the absence of the responsible regulatory body.

Annex I: The workshop program

22 January 2024, 09:00 – 14:30 CEST

09:00 – 09:30	Opening remarks	HCENR/ICAT
09:30 – 10:00	Introduction to the ICAT Sudan project	Alejandro Regatero (UNEP-CCC)
10:00 – 11:00	Presentation of project work – Energy sector	Abdelrahman Eltahir (ICAT Sudan)
11:00 – 12:00	Presentation of project work – Transport sector	Quosay Ahmed (ICAT Sudan)
12:00 – 13:00	*Lunch break*	
13:00 – 14:00	Discussion and Recommendations	Quosay Ahmed (ICAT Sudan)
14:00 – 14:15	Deliberation and endorsement of project activities	HCENR and ICAT Sudan stakeholders
14:15 – 14:30	Wrap-up and closing of the Validation Workshop	All participants

Annex II- *List of Contributors*

National Consultants:

Dr. Abdelrahman Eltahir Ahmed Musa	Energy Sector
Dr. Qousay Awad Ahmed	Transport Sector

Higher Council for Environment and Natural Resources (HCENR):

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Ms. Huyam Ahmed	Project Coordinator

Resource Persons and Contributors:

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Eng. Shoroog Siddig	GHG emission inventory - Resource Person
Eng. Yasen Hatim Abass Ahmed	Mitigation Measures Modeling - Resource Person
Eng. Yousif Ibrahim Hamza Mohammed	Data collection and reporting - Resource Person

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Ms. Rihab Kamal Omer	Ministry of Energy &Petroleum
Mr. Mohamed Elmukhtar	Ministry of Energy & Petroleum
Mr. Mudathir Abdalla Adam	Sudanese Mineral Resources Company
Mr. Abdelhafiz f. Babiker	Electricity Regularity Authority
Ms. Amira Elnour	Ministry of Industry
Ms. Safaa Ahmed Beraima	Forest National Corporation
Ms. Khalda Abbas	Forest National Corporation
Mr. Mohamed Elfatih	TPRA
Mr. Mohamed Elmustafa	National Customs Authority
Ms. Remond Ali Mohamed	National Energy Research Centre
Prof. Muna Mahjoub	Institute of Environment Studies - University of Khartoum
Ms. Hind Mohamed	Haggar Group - Private Sector
Ms. Afaf Mohamed	Ministry of Energy &Petroleum
Mr. Awadelkareem Gafar Mohamed	Traffic Police - Ministry of Interior
Mr. Ahmed Awad	CTC Group Ltd- Private Sector
Mr. Hamad M.Elsharief	Ministry of Urban Planning, Roads and Bridges
Ms. Somaya Sirlkhatim M.	National Centre for Research
Ms. Nimat Mustafa Omer	Kenana Sugar Company
Ms. Amgaad Abdelwahab	Central Bureau of Statistics
Ms. Doa Abdalla Ibrahim	Central Bureau of Statistics
Ms. Ikhlass Nimer	Journalist

ICAT- Project Coordinator:

Alejandro Regatero Labadia

Annex III *List of Attendance*

	Females	
SN	**Name of Members**	**Affiliation**
1	Muna Mahjoub	Institute of Environment Studies
2	Arig Gafar Bakhit	NDC Partnership
3	Islam Mohammed Mahmoud Awad	CBIT Project
4	Amira Elnour Hammad	Ministry of Industry
5	Khalda Abbas Hassan Elgzouli	Forest National Corporation
6	Shoroq Siddig EL Amin Hussien	University of Khartoum
7	Amgad Abdelwahab Ibrahim Abdelwahab	Central Bureau of Statistics
8	Doaa Abdalla Ibrahim alnour	Central Bureau of Statistics
9	Safaa Ahmed Beraima Hamid	Forest National Corporation
10	Huyam Ahmed Abdalla Ahmed	HCENR
11	Hana Hamdalla	HCENR
12	Randa Ahmed	ICAT Secretariat
13	Remond Ali Mohamed	National Energy Research Centre
	Males	
SN	**Name of Participant**	**Affiliation**
1	Nader Mohamed Ahmed Khalifa	Ministry of Energy & Petroleum
2	Mohamed ELmustafa Fadul Mustafa	Customs
3	Abdelhafiz Fadlalla Babiker Alabbas	Electricity Regularity Authority
4	Amr Nasreldin Abdelhadi	CBIT Project
5	Hamad Mohamed Alshareif	Ministry of Urban & Development
6	Yousif Ibrahim Hamza Mohammed	Enerqa Consultancy
7	Yasin Hatim Hatim Abass	Enerqa Consultancy
8	Abdelrahman Eltahir Ahmed Musa	ICAT National Consultant- Energy Sector
9	Quosay Awad Ahmed	ICAT National Consultant- Transport Sector
10	Alejandro Regatero Labadia	UNEPCCC