

# Institutional Arrangements for MRV system in the Transport Sector – Sudan

## Initiative for Climate Action Transparency - ICAT

### Institutional Arrangement for MRV System in the Transport Sector – Sudan

#### Deliverable #2

#### AUTHORS

Quosay A. Ahmed

Abdelrahman Eltahir

National Consultants- Sudan

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# Table of contents

<b>List of Tables</b>	<b>iv</b>
<b>List of Figures</b>	<b>iv</b>
<b>List of Acronyms</b>	<b>v</b>
<b>Introduction</b>	<b>1</b>
ICAT Overview	1
Scope and Objectives	1
Methodology of the Work	2
Structure of the Report	3
<b>General Overview of Existing Institutional Arrangements</b>	<b>4</b>
Introduction to Institutional arrangement	4
Institutional flow in previous communications	4
Transport Sector Context	5
<b>Identified Gaps by Stakeholders</b>	<b>6</b>
Ministry of Energy and Petroleum (common for both energy and transport sectors)	7
Central Bureau of Statistics (common for both energy and transport sectors)	7
National Energy Research Institute (common for both energy and transport sectors)	8
Ministry of Transport	9
Ministry of interior (National Custom Authority and General Traffic Directorate)	9
Ministry of Urban Development, Roads and bridges	10
<b>The Proposed Institutional Arrangements</b>	<b>11</b>
The Key Stakeholders	11
Suggested Institutional Arrangement for transport sector	13
Roles and Responsibilities	14
<b>Recommendations</b>	<b>16</b>

<b>References</b>	<b>17</b>
<b>Annexes</b>	<b>17</b>
Annex 1: Form/ Questionnaire	17
Annex 2: Identified stakeholders	21
Annex 3: Summary of the results	22
Annex 4:	24
Annex 5: consultative workshop on institutional arrangement for Energy and Transport Sectors	25

## List of Tables

<b>Table 1-Assessment dimensions for the Ministry of Energy and Petroleum</b>	<b>7</b>
<b>Table 3- Summary of the assessment results for Central Bureau of Statistics</b>	<b>8</b>
<b>Table 6- - Summary of the assessment results for the National Energy Research Centre</b>	<b>8</b>
<b>Table 7- Summary of the assessment results for Ministry of Transport</b>	<b>9</b>
<b>Table 8- Summary of the assessment results for the National Custom Authority and General Traffic Directorate</b>	<b>10</b>
<b>Table 9- Summary of the assessment results for the Ministry of Urban Development, Roads and bridges</b>	<b>10</b>

## List of Figures

<b>Figure 1- Key components of the institutional arrangement.</b>	<b>11</b>
<b>Figure 5- Organizational structure of ministry of transport</b>	<b>12</b>
<b>Figure 6- Organizational structure of the ministry of energy and oil</b>	<b>13</b>
<b>Figure 6- Proposed Institutional Arrangement for the transport sector</b>	<b>14</b>

# List of Acronyms

BUR	Biennial Update Report
CBIT	Capacity Building Initiative for Transparency
CBoS	Central Bank of Sudan
CBS	Central Bureau of Statistics
CC	Climate Change
COP	Conference of the Parties
COVID-19	Corona virus disease, 2019
CSO	Civil Society Organization
ERA	Electricity Regulatory Authority
FNC	Forests National Corporation
FAO	Food and Agriculture Organization of the United Nations
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
MWRIE	Ministry of Water Resources, Irrigation, and Electricity (Sudan)
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
POPP	Programme and Operations Policies and Procedures
REDD+	Reducing Emissions from Deforestation and forest Degradation
QA/QC	Quality assurance/quality control
SPC	Sudanese Petroleum Corporation
SEHC	Sudanese Electricity Holding Company
SCIA	Sudanese Chambers of Industries Association
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TOR	Terms Of Reference
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

# Introduction

## ICAT Overview

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 provides guidance and tools to help these countries measure and report on their greenhouse gas emissions, as well as the impacts of their climate actions. Additionally, ICAT works with these countries to build their institutional and technical capacity to develop robust and transparent national systems for measuring and reporting on climate action.

At the national level, countries must establish systems for collecting and reporting data on their climate action plans, progress, and results. This includes developing national-level policies and regulations that ensure data accuracy and completeness, as well as establishing systems for monitoring and verifying emissions data. To achieve the desired transparency objectives, the Sudan ICAT project aimed to help to develop an effective institutional arrangement in the energy sector.

Sudan needs to establish permanent transparency arrangements to communicate, report and track data related to the GHG inventory, climate change mitigation and adaptation, progress in the implementation of its NDCs and finally the technological, financial and capacity building support needed and received. Such arrangements can further be developed benefiting from knowledge exchange and sharing of lessons learnt at national as well as international levels through being actively engaged in the capacity building initiative for transparency (CBIT) global coordination platform. Long-term transparency strategy on actions such as GHGs inventory, mitigation and adaptation is required. In particular, ICAT's guidance on transport and energy sectors in Sudan plays a crucial role in developing climate policies and actions that are more effective, transparent, and aligned with global climate goals.

Strengthen the institutional arrangement for MRV in the energy and transport sectors to improve the transparency and effectiveness of Sudan's climate actions in these sectors is a key objective for the ICAT project. ICAT aims at provide technical support to Sudan to develop comprehensive MRV systems for both the energy and transport sectors.

In the transport sector, ICAT aims at working with Sudan to develop a comprehensive transport emissions inventory and tracking system. This system can provide detailed information on the emissions from different modes of transport, as well as transport-related activities such as fuel combustion and passenger transport. The tracking system also provides a way to monitor progress towards the country's emissions reduction targets in the transport sector.

## Scope and Objectives

The report starts with institutional mapping exercise to assess the gap against the requirements. This is followed by proposing the new institutional arrangement to achieve the following objectives:

1. To identify and map the key transport related institutions in Sudan in the context of Climate Change mitigation and low carbon development.
2. To improve clarity on institutional jurisdictions, functions, and mandates; across levels of government and civil society to strengthen to support greater transparency.
3. To understand the potential influence and role can be played by key transport related institutions on Climate Change and processes for MRV of policies and actions.

Based on the findings and the identified gaps by stakeholders, this report recommends and suggests institutional arrangements and coordination mechanisms for the transport sector with the purpose of strengthening and enhancing their transparency frameworks.

## Methodology of the Work

To achieve the main objective of this assignment (strengthen the institutional arrangements for MRV in the transport sectors), two main methods were employed:

The first method was **Desk Review**. Desk review includes reviewing existing literature, reports, and publications related to institutional arrangement for transparency and best practices. This can provide a good understanding of the background, context, and key issues. This include documents such as Handbook on institutional arrangements to support MRV/transparency of climate action and support, Climate MRV for Africa and others were collated and reviewed.

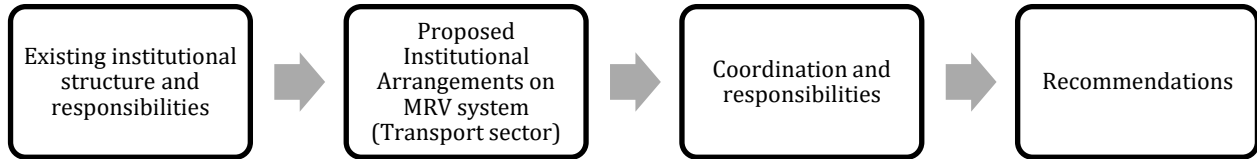
The second approach that was utilized is **Stakeholders' Consultation** through the technical working group as well as HECNR officials to gather feedback, insights, and perspectives from stakeholders. This was conducted through meeting and distributing a form that assess the key features for the effective institutional arrangement. The form is tailored to assess the institutional gap and the existing arrangements which can be strengthened for the MRV. Consultation was undertaken based on guiding questions covering the following components and assessment dimensions of the institutional arrangements for the MRV in the transport sector.

- The overall structure of the institution, overall mandate.
- Responsibility and Climate Change mandate if any.
- Capacity and resource allocated to climate change related activities in terms of both human and financial resources.
- Management Structure and processes that enable the Stability and adaptability of the existing system.
- Authority and the ability to affect the decision making and autonomy within the institution.
- Sectoral Coordination mechanisms with other institutions, both vertical and horizontal.

The key stakeholders across the related line-ministries were consulted. Annexes 1 and 2 are a list of the stakeholders consulted and the form used as well as the summary of the data collected. The consultative workshop report is presented in Annex 5 (for both Energy and Transport Sectors)

## Structure of the Report

This report is divided into main five sections; the Introduction, general overview of existing institutional arrangements in the transport sector, the proposed new institutional arrangement, the roles and responsibilities in the new institutional arrangement, and recommendations for the transport MRV system.





# General Overview of Existing Institutional Arrangements

## Introduction to Institutional arrangement

The Paris Agreement, adopted in 2015, aims to limit global warming to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C. To achieve this goal, the agreement requires countries to regularly report on their greenhouse gas (GHG) emissions and progress towards their climate targets. This reporting is done through a system called Measurement, Reporting, and Verification (MRV).

The MRV system is a crucial component of the Paris Agreement's transparency framework. It provides a standardized approach for measuring and reporting GHG emissions, as well as tracking progress towards climate goals. The institutional arrangement for MRV involves several key actors:

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.

Overall, the institutional arrangement for MRV is designed to ensure that countries are transparent about their emissions and progress towards their climate targets. By providing accurate and reliable data, the MRV system helps build trust among countries and supports effective global action on climate change.

## Institutional flow in previous communications

The Higher Council of Environment and Natural Resource (HCENR) is the leading institution coordinating Sudan's efforts to meet its MRV obligations under the UNFCCC and Paris Agreement. Addressing Sudan's obligations under the UNFCCC is characterized by significant engagement of multidisciplinary teams of scientists, engineers, and planners representing relevant national institutions (i.e., federal ministries, universities, research centers, private sector entities, NGOs and other governmental bodies).

Based on the provisions of environmental legislation passed in 2020, HCENR is chaired by the Prime Minister of Sudan, and has an Inter-ministerial Committee comprised of ministers and heads of national institutions whose mandate includes environmental protection and conservation of natural resources. A proposed new organizational structure for HCENR has been developed, approved and is currently being implemented. The new structure includes 5 General Directorates:

- 1- Policies and Planning;
- 2- Environmental Inspection;
- 3- Sustainable Resources and Environment Protection;
- 4- Climate Change, Desertification and Disaster Prevention; and
- 5- Finance and Human Resources)

In addition to 15 departments/units across those Directorates.

Under the 2020 legislation, the HCENR's Climate Change Unit operates as part of the General Directorate for Climate Change, Desertification and Disaster Prevention. It has five (5) major responsibilities as outlined below.

- Planning, preparation, compilation and submission of the national climate change reports, such as National Communications, Biennial Update Reports, Biennial Transparency Reports, National Adaptation Programme of Action (NAPA), National Adaptation Plan (NAP), Nationally Determined Contributions (NDC), etc;
- Establishment and coordination of the national climate change committee, as well as expert teams on GHG inventory development, GHG mitigation analysis, vulnerability assessment, identification of adaptation strategies, etc;
- Establishment of formal working arrangements and procedures with climate related national institutions and stakeholders;
- Definition and allocation of roles and responsibilities of the different institutions in meeting Sudan MRV obligations; and
- Management of the GHG inventory preparation processes, including technical and institutional capacity building, data collection and archiving, quality controls, technical validation, and the formal government approval process.

During the preparation of the initial and second National Communication, the institutional arrangements related to MRV were established on an ad hoc basis.

## Transport Sector Context<sup>1</sup>

The transport sector in Sudan plays a crucial role in the country's economy, as it facilitates the movement of goods and people across the vast territory. The sector comprises various modes of transportation, including road, rail, air, and water transport.

Road transport is the most dominant mode of transportation in Sudan, accounting for around 90% of passenger and freight movements. The country has an extensive road network that connects major cities and towns. However, most of these roads are poorly maintained and lack modern infrastructure, leading to delays and more fuel consumption; and consequently, more GHG emissions.

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<sup>1</sup> Based on Sudan First National Communication, Second National Communication, UNSDAF, Communication with Sectoral Focal Point and Intended National Determined Contributions.

Rail transport is also significant in Sudan, with a railway network spanning over 5,000 km. The railway system connects major cities such as Khartoum, Port Sudan, Atbara, and Wadi Halfa. However, the railway system is outdated and requires significant investment to improve its efficiency.

Air transport is relatively underdeveloped in Sudan but plays a vital role in connecting remote areas with major cities, especially Darfour region. The country has several airports that serve both domestic and international flights.

Water transport is essential for trade between Sudan and neighboring countries such as South Sudan (via the White Nile) and Saudi Arabia (via the Red Sea). Port Sudan is the country's main seaport located on the Red Sea coast.

The transport sector's impacts on the economy are significant as it facilitates trade and commerce within the country and with neighboring countries. However, inadequate infrastructure and poor maintenance lead to high transportation costs that affect businesses' profitability.

The level of car ownership has been increasing steadily in Sudanese urban areas. For most people, private transportation is more convenient, reliable, and clean when compared to public transportation. Lending programs launched by Sudanese banks during the past ten years have encouraged private car ownership; and in the process inadvertently contributed to high levels of traffic congestion and associated air pollution in urban areas. These lending programs have recently been curtailed to ensure that sufficient banking resources are available for lending in productive economic sectors.

Air pollution has become a serious problem in urban areas due to the number of vehicles on the road. Although the most congested city in Sudan, Greater Khartoum, is still far from reaching the disasters pollution and congestion levels reached in cities such as Bombay, India, several measures have been adopted to curb traffic congestion, including expanding the width of roads, better management of parking and adoption of a Bus Rapid Transit (BRT) system (Zumrawi, 2020).

In conclusion, while the transport sector plays a crucial role in Sudan's economy by facilitating trade and commerce within the country and with neighboring countries, it also contributes significantly to greenhouse gas emissions that contribute to climate change. The government needs to invest in modern infrastructure and promote cleaner fuels to reduce the sector's environmental impact.

A robust MRV framework for the transport sector will closely link to and integrate with other key sectors, and therefore lead to a better understanding of the mitigation opportunities in the sector, given its potential to reduce the greenhouse gas emissions and address climate change. With the objective of communicating consistent, transparent, and comprehensive information on GHG emissions, actions, and support, the transparency of climate action and support provides an essential basis for understanding current GHG emissions inventories, the ambition of existing efforts, as well as understanding progress of the NDC implementation at national level.

## Identified Gaps by Stakeholders

The forms (presented Annex 1) were submitted to the focal points and technical working group within

the identified stakeholders. General qualitative information regarding the existing institutional arrangements were received from the consultees. As mentioned earlier, the form cover key components for the well-functioning institutional arrangement (based on Handbook on institutional arrangements to support MRV/transparency of climate action and support and best practices) the overall structure, responsibility and climate change mandate in the consultee institutions, capacity and resource allocated to climate change related activities in terms of both human and financial resources as well as management Structure and processes that enable the stability and adaptability, the ability to affect the decision making and Sectoral Coordination mechanisms.

## Ministry of Energy and Petroleum (common for both energy and transport sectors)

The ministry of Energy and Petroleum is the main source of fuel consumption data for the transport sector. The results of assessing the existing institutional arrangements for the ministry of energy and petroleum indicate that there is no lead institute to collect energy statistics. In addition, a lack of coordination between entities within the ministry leads to duplicated work and inefficient utilization of funds. In terms of human and financial resources, there are an insufficient number of staff working on energy statistics. It is concluded that there are limited resources and funds for capacity building and the enhancement of effective data collecting, handling and disseminating systems.

*Table 1-Assessment dimensions for the Ministry of Energy and Petroleum*

Institution	Assessment Dimensions					
	Climate Change mandate	Capacity and Resource	Management Structure related to CC- transport sector	Authority	Stability and adaptability	Sectoral Coordination
<b>Ministry of Energy and Petroleum</b>	Not exist	1. Only 10 employees are dedicated for climate change related data 2. There is no allocated financial resources or budget for climate change related data	There is a general directorate for information and statistics that used to publish reports about fuel consumptions in different sectors.	Limited	There are no fixed schedules for publishing energy data and statistics.	A lack of coordination between entities within the ministry leads to duplicated work and inefficient utilization of funds

## Central Bureau of Statistics (common for both energy and transport sectors)

According to the meeting<sup>2</sup> with Central Bureau of Statistics top management, the bureau has personnel experienced with qualitative and quantitative data collection for crosscutting supported with effective legal framework (e.g., The Statistics Act, 2003). The bureau has the potential to develop questionnaires, templates and survey forms for each climate change related sector and governmental entities. Furthermore, the internal system has a robust process for data validation. However, the engagement of the bureau in climate change related data gathering requires both capacity building

<sup>2</sup> The meeting is held jointly with CBIT national consultants.

and financial resources.

*Table 2- Summary of the assessment results for Central Bureau of Statistics*

Institution	Assessment Dimensions					
	Climate Change mandate	Capacity and Resource	Management Structure-climate change unit	Authority	Stability and adaptability	Sectoral Coordination
Central Bureau of Statistics	Directorate for natural resource statistics	For the time being, there are no resources allocated for climate change related statistics	Not exist	In general, CBS has the authority to collect data from all government related bodies and firms. The data collection can be in terms of administrative and technical reports generated by the governmental bodies, or it can be through census and targeted surveys	Since CBS is a governmental arm for statistics, data collection efforts and results are highly dependent on the availability of funds from the government.	Horizontal coordination with all governmental sectors

## National Energy Research Institute (common for both energy and transport sectors)

According to the meeting with NERC, there is no legal framework or any institutional arrangements in place for energy statistics. Also, energy statistics are not accounted for separately in the center's annual budget. They are only present within projects. The center's Studies Unit has personnel experienced with qualitative and quantitative data collection for energy statistics, but they are insufficient in terms of number. The center adapts questionnaires and survey forms to each project, meaning there are no standardized templates and questionnaires for energy statistics, nor do they follow any available manuals. Also, there are no particular processes followed for data validation or any methodologies documented for estimations. In terms of data dissemination, there are no fixed schedules for publishing energy data and statistics.

*Table 3- - Summary of the assessment results for the National Energy Research Centre*

Institution	Assessment Dimensions					
	Climate Change mandate	Capacity and Resource	Management Structure related to CC	Authority	Stability and adaptability	Sectoral Coordination
<b>National Energy Research Institute</b>	CC unit was established	<ul style="list-style-type: none"> <li>3 employees are dedicated for climate change related data</li> <li>there is no allocated financial resources or budget for climate change related data</li> </ul>	N/A	limited	Project based activities.	N/A

## Ministry of Transport

Many gaps have been identified, activity data related to GHG inventory and/or mitigation actions are not recorded. Reports about different units' activities are not well communicated. In addition, the legal framework with respect to the collection of statistics regarding the transport sector is unclear, different methodologies used in calculations and estimations of transport statistics in term of fuel consumption per unit traveled.

*Table 4- Summary of the assessment results for Ministry of Transport*

Institution	Assessment Dimensions					
	Climate Change mandate	Capacity and Resource	Management Structure for CC unit	Authority	Stability and adaptability	Sectoral Coordination
Ministry of Transport	Not exist	Awareness and capacity building program concerning CC actions related to the transport sector is highly needed. Currently no resources are spared and allocated for this topic.	N/A	Technical Authority and provision of data	N/A	N/A

Since the ministry of Transport has a lot of affiliated bodies and companies, it is important to structure a comprehensive capacity building program to cover all aspects related to GHG inventory and mitigation actions related to the transport sector. This may require a full funded 6 months project that may cover the following entities:

1. The Federal Ministry of Transport
2. State ministries – related to infrastructure and transport (18 states in Sudan)
3. The Sudan Railways Authority
4. The Sudan Sea Ports Authority
5. The Sudan Ships Portal
6. The Nile Valley River Navigation Authority
7. The Land Transport Unit
8. The Sudan Airways Company
9. The Sudan Shipping Lines
10. The River Transport Company
11. The River Navigation Department
12. The Roads and Bridges Corporation
13. Private and public companies provide and manage land, water, and air transportation.

Based on the proposed capacity building campaign, a coordination mechanism between all these institutions can be developed to QA/QC activity data flow for GHG emissions calculation and baseline projection for future mitigation actions.

## Ministry of interior (National Custom Authority and General Traffic Directorate)

Although the potential role for the national custom authority in the provision of data, there is no legal

framework or any institutional arrangements in place for sharing customs and traffic data between the Ministry of Interior and HCENR. In order to effectively utilize the available data in the Ministry of Interior, templates shall be developed and capacity building program is needed for the appointed personnel

*Table 5- Summary of the assessment results for the National Custom Authority and General Traffic Directorate*

Institution	Assessment Dimensions					
	Climate Change mandate	Capacity and Resource	Management Structure	Authority	Stability and adaptability	Sectoral Coordination
<b>Sudan Customs Authority</b>	Although no clear mandate is found, however the role of customs in protecting the environment could expand considerably with the implementation of climate change related initiatives.	Currently there are 6 employees are dedicated for environment / climate change related data	Yes	Technical authority and provision of data	Stable in terms of roles and policies	Horizontal coordination with many governmental sectors and HECNR

## Ministry of Urban Development, Roads and bridges

The Ministry of Urban Development, Roads, and Bridges in Sudan is responsible for the planning, construction, and maintenance of urban infrastructure, including roads, bridges, and other transportation infrastructure. The ministry has the potential role in promoting sustainable development and reducing the impact from emissions due to transportation on climate change as well as addressing the climate change impact. The table below shows the absence of clear climate change mandate within the ministry.

*Table 6- Summary of the assessment results for the Ministry of Urban Development, Roads and bridges*

Institution	Assessment Dimensions					
	Climate Change mandate	Capacity and Resource	Management Structure related to CC	Authority	Stability and adaptability	Sectoral Coordination
<b>Ministry of Urban Development, Roads and bridges</b>	Not exist	1. only one employee is dedicated for climate change related data 2. there is no allocated financial resources or budget for climate change related data	Not exist	Not exist	N/A	Coordination with state ministries and with the Ministry of Transport

# The Proposed Institutional Arrangements

The transition from the existing arrangements to the MRV aligned with the enhanced transparency framework (ETF) will introduce enhanced scope and depth of reporting for developing countries, which underscores the importance of having strong sustainable institutional arrangements in place (UNFCCC, 2020). effective institutional arrangements enhance and facilitate information exchange and reporting across the implementing entities (the energy and transport in case of the current project). According to UNFCCC (2020), institutional arrangements can be organized around five separate components: Organizational mandates; Expertise; Data flows; Systems and tools; Stakeholder engagement. The below figure adopted from UNFCCC, 2020 explains these components and the silent feature of a well-functioning institutional arrangement. The next subsections illustrate the proposed institutional arrangement for the transport sector.

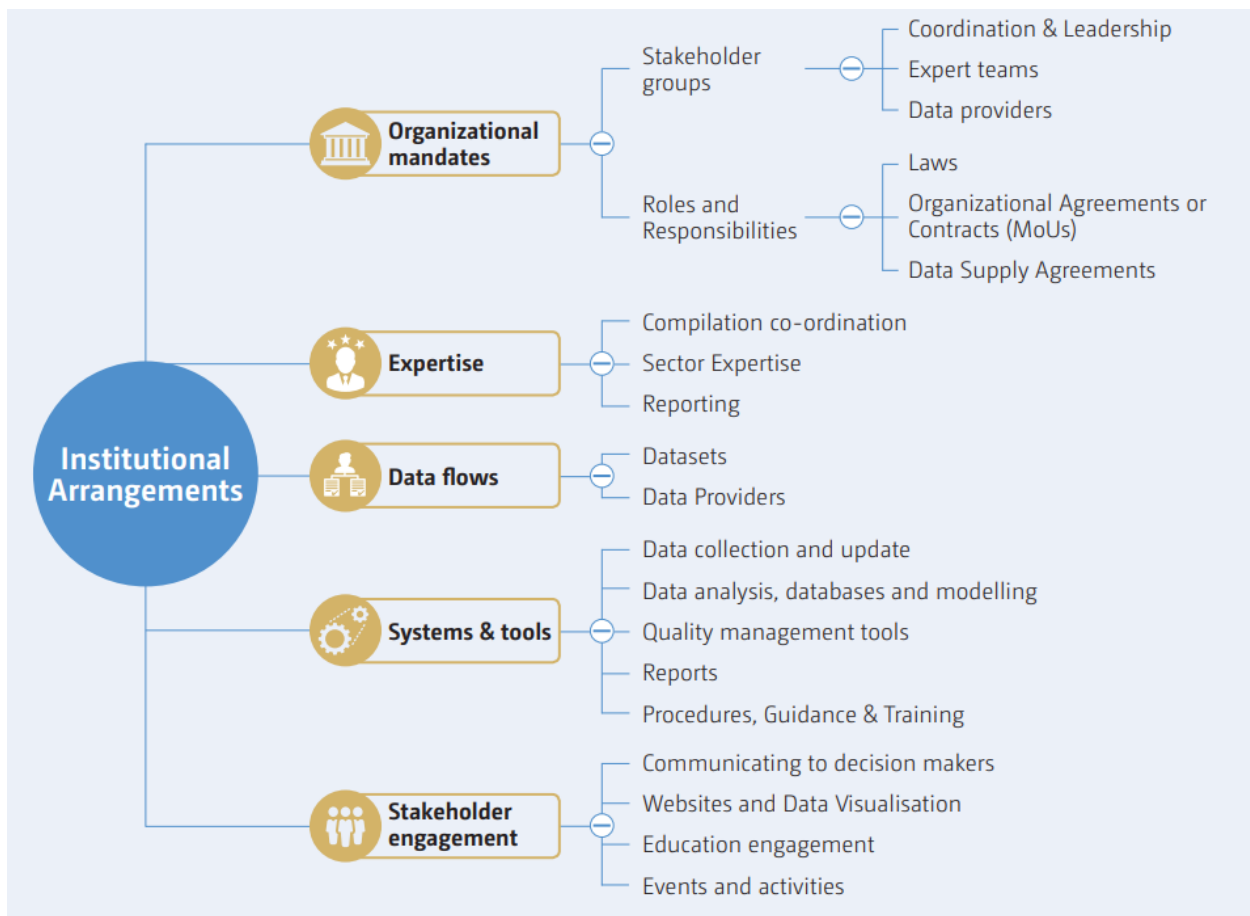


Figure 1- Key components of the institutional arrangement.  
Source: UNFCCC (2020)

## The Key Stakeholders



Existing institutional arrangements in the transport sector is relatively fragmented and not clearly defined. Which affect the reporting of mitigation actions and GHG inventories.

**The ministry of transport** as a governmental body aimed at establishing of an integrated network of infrastructure for transport and communications projects, such as railways, river, sea, air and continental lines, to connect the country's parties with its own and neighboring countries, in accordance with universally recognized technical specifications and to be perceived as a national wealth to be preserved and protected by law. The figure below explains the technical part of the ministry as well as the main affiliated bodies.

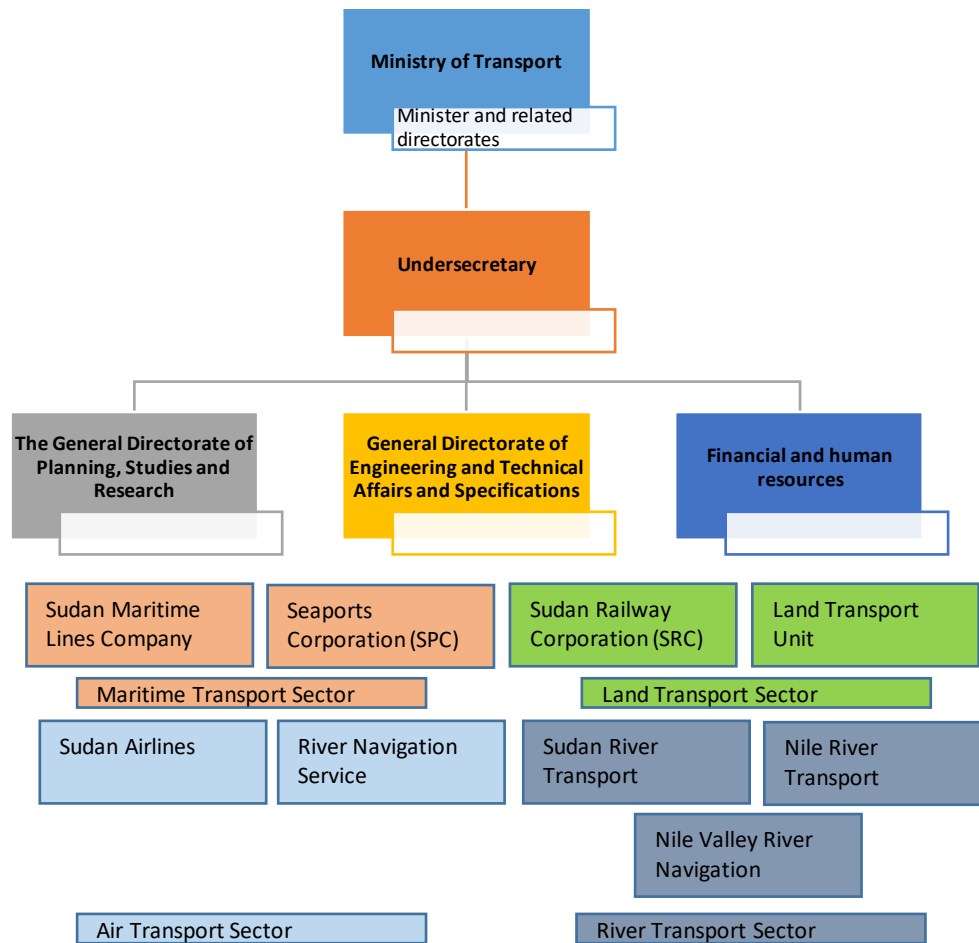


Figure 2- Organizational structure of ministry of transport

**Ministry of Energy and Petroleum** includes the Electricity sector, and Oil sector, in which the electricity sector is represented by the Sudanese Electricity Holding Company (SEHC) and the oil and gas sector is represented by the Sudanese Petroleum Corporation (SPC).

The SPC via its subsidiaries collects data on oil production, imports, exports, consumption,

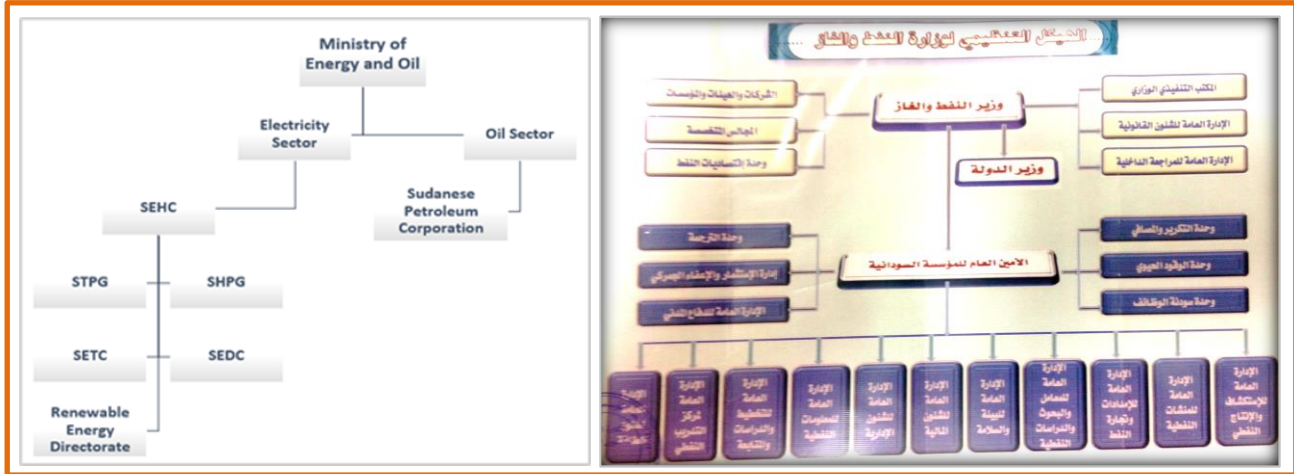


Figure 3- Organizational structure of the ministry of energy and oil

international marine bunkers, international aviation bunkers and stock changes as estimation reports monthly. Data focus on energy use. This is done through its various directorates, especially downstream entities:

- General Directorate of Supplies and Marketing of Petroleum
- Bashair Pipeline Company (BAPCO) and Petrolines Company (PETCO) crude transportation companies.
- Refineries and distribution companies for petroleum products

Data is provided and managed in files and papers. Oil data is considered confidential and official permission is required to obtain the data.

## Suggested Institutional Arrangement for transport sector

The suggested institutional arrangement is designed to articulate the transparency obligations. The framework shows the interaction between the identified key institutions involved in the MRV process. Processes such as data collection, QA/QC, reporting of climate mitigation actions and GHG inventories. It is structured to define all the roles and responsibilities (see the next section) of the identified stakeholders and institutions involved. Figure below shows the proposed Institutional Arrangement with identified stakeholders in the transport sector.

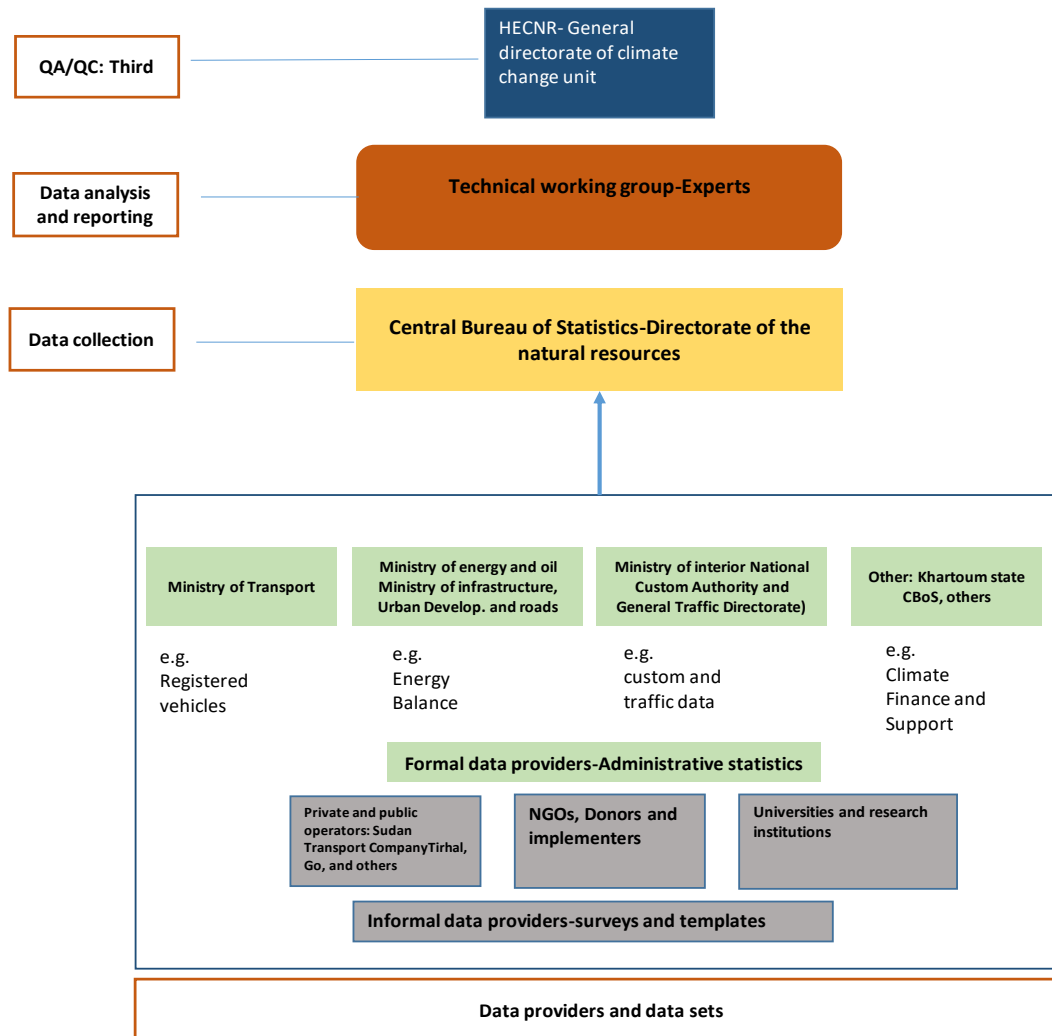


Figure 4- Proposed Institutional Arrangement for the transport sector

## Roles and Responsibilities

**HECNR-CCU** is key link to the intergovernmental process and the international community responsible for the following:

- Setting the overall frameworks for national and international climate change related reporting. All information on climate impacts and action and will bring together information from a range of ministries and agencies, the private sector, academia and subnational governments.
- Identifying The methods, procedures and guidelines including the templates, format and quality assurance.
- Coordinates the activities needed to ensure that outputs are prepared and are of sufficient quality to meet the country's commitments.

**Technical Working Group/expert**, as HECNR operates in an administrative manner, technical functions are suggested to be delegated via clear mandates and terms of reference, to a specialized climate change, environmental or statistical experts/agency with the relevant technical expertise.

**Central Bureau of Statistics CBS** currently operates under the 2003 Statistics Act which empowers the Director General to collect, analyse and disseminate statistical information and provide technical advice to the government departments on statistical matters. The Central Bureau of Statistics is responsible for coordinating statistical activities throughout Sudan and for producing and disseminating official statistics on the country's population, economy, society, and environment. The 2003 Act contains some important new features, including the setting up of National Statistical Council, and makes the CBS responsible for the overall coordination and supervision of the production of statistics in the country.

The proposed institutional arrangement assumes a critical role for the CBS based on the 2003 Statistics Act as major data-generating agency in the country and, according to the Statistics Act, mandated to provide statistical advice to government departments. CBS is supposed to be the leader in terms of coordinating, collecting and gathering the climate related data from the relevant ministries and entities.

The Sudanese Statistical Law provides a legal framework for the collection, compilation, analysis, and dissemination of climate related data in a coordinated and integrated manner. The law aims to ensure that statistical data is of high quality and meets international standards.

**Data providers** can be divided into formal and informal. The formal data providers are the key ministries and governmental agencies e.g. ministry of transport, ministry of energy and oil and other relevant institutions including ministry of finance and economic planning and Central bank of Sudan. The other data providers include the private and public operator companies, universities and research institutes.

# Recommendations

Based on the situational analysis of key institutions in the Sudanese Transport sector and the current institutional arrangement, the following recommendations are drafted for meeting the transparency requirements of the Paris agreement through efficient institutional arrangements:

1. **Develop and implement a comprehensive legal framework:** it is crucial to develop and implement a comprehensive legal framework that outlines the roles and responsibilities of all stakeholders in the transport sector. This framework should include provisions for transparency, accountability, and stakeholder participation. It is assumed that by the end of the Sudan CBIT project, a high level legal framework for CC actions and reporting in Sudan will be established through the ministry of cabinet affairs.
2. **Establish an independent regulatory body:** To ensure sustainability and robustness of the transport MRV system, an independent regulatory body should be established to oversee the transport sector in Sudan. This body should have the power to enforce regulations, investigate complaints, and impose penalties for non-compliance.
3. **Increase stakeholder participation to include beneficiaries and transport service providers:** It is important to increase stakeholder participation in decision-making processes related to the transport sector. This can be achieved through public consultations, stakeholder forums, and other mechanisms that allow for meaningful engagement.
4. **Improve data collection and reporting:** The Sudanese government should improve data collection and reporting mechanisms in the transport sector through strengthen the mandates and capacity of the CBS. This will enable better monitoring of emissions and other environmental impacts of transport activities.
5. **Strengthen capacity building initiatives:** Capacity building initiatives should be strengthened to enhance the skills and knowledge of stakeholders in the transport sector (specially the bodies under the Ministry of Transport). This will enable them to better understand their roles and responsibilities under the Paris Agreement.
6. **Enhance public awareness campaigns:** Since the public citizens and private sector are the main beneficiaries for the transportation industry, public awareness campaigns should be enhanced to educate citizens about the importance of reducing emissions from transport activities. This can be achieved through media campaigns, educational programs, and other outreach initiatives.
7. **Foster partnerships with international organizations:** The key stakeholders in the transport sector should foster partnerships with international organizations that can provide technical assistance, funding, and other resources to support efforts to strengthen institutional arrangements in the transport sector.

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# Annexes

## Annex 1: Form/ Questionnaire

<b>Inputs provided by:</b> (please provide the Official name of your organization)
<b>1. Structure of the institution and institutional mandate</b>
(Please elaborate and provide information on the overall structure of your Institution, mandate, functions and objectives including the relationship with other governmental institutions/organizations and the cabinet. Please feel free to expand the boxes as needed throughout the form)
<b>2. Affiliated bodies</b>
<b>3. Mandate of the institution: clear mandate on climate change</b>
(Is there any clear mandate, legal or institutional framework/policies on climate change, If yes elaborate in the mandate, roles and responsibilities and attach the relevant/support documents.)
<b>4. Capacity and resource constraints</b>
<b>4.1 Availability of human resources: The ability of an institution to allocate sufficient human resources</b>
(Are there any dedicated employees for climate change data, statistics, issues. If yes, elaborate on the following: Number, skills, training, and responsibilities and attach the relevant/support documents.)

**4.2 Availability of financial resources: The ability of an institution to allocate sufficient financial resources**

(Is there any allocated funding, budget for climate change data, statistics or issues, specify the source of fund, organizational own fund, special fund, international funds. Please elaborate in the sustainability of the fund and attach the relevant/support documents.)

**5. Management practices and processes**

**5.1 Management Structure**

is there any sustainable management structure for addressing the climate change. If yes, kindly indicate the structure/component of the existing unit/position/committee, Does the key unit/body responsible have a sustainable development roadmap or strategy in place with clearly defined roles and targets?

**5.2 Authority (the ability to influence key governmental decisions/to allocate resources)**

is the defined unit, position, or committee having the authority or the legal framework to influence the decision, Is the unit/body strongly supported by the highest levels of institution.)



**5.3 Stability/adaptability of the institutional framework**

is the defined unit, position, or committee adaptable in terms of new roles, approaches or policies

**6. Sectoral coordination: Coordination mechanisms**

(Does your institution/ organization have a coordination mechanism in place to foster horizontal coordination across sectors, and vertical coordination across government levels in issues **other than** climate change. If yes please elaborate in the mandate, objectives and institutional network)

(Does your institution/ organization have a coordination mechanism in place to foster horizontal coordination across sectors, and vertical coordination across government levels in issues **related** to climate change. If yes please elaborate in the mandate, objectives and institutional network.)

## Annex 2: Identified stakeholders

#	Stakeholders Entities
1	Ministry of Interior (Sudan Customs Authority)
2	Ministry of industry
3	Ministry of Finance and National Economy
4	Ministry of Energy and Petroleum
5	Ministry of Agriculture and Forestry (Forests National Corporation (FNC))
6	Ministry of Transport
7	Ministry of Urban Development, Roads and Bridges
8	Central Bureau of Statistics
9	National Research Centre
10	Energy Research Centre
11	Electricity Regulatory Authority

## Annex 3: Summary of the results

#	Institution	Assessment dimensions					
		CC mandate	capacity and resource	Management Structure	Authority	Stability and adaptability	Sectoral Coordination
1	Ministry of Energy and Oil	Not exist	1. only 10 employees are dedicated for climate change related data 2. there is no allocated financial resources or budget for climate change related data	Not exist	Limited	N/A	A lack of coordination between entities within the ministry leads to duplicated work and inefficient utilisation of funds /A
2	Ministry of Urban Development, Roads and bridges	Not exist	1. only one employee is dedicated for climate change related data 2. there is no allocated financial resources or budget for climate change related data	Not exist	Not exist	Not exist	N/A
3	Ministry of Industry	Ozone office (Unit) under Montreal Protocol	There are limited number of staff	Not exist	Technical Authority and provision of data	Stable in terms of roles and policies	Existing coordination mechanism with (1) Higher Council for Environment & natural Resources (2) General Directorate for Industrial Production Metrological Organization
4	Ministry of Transport*	Not exist	Not exist	Not exist	Technical Authority and provision of data	Not exist	Existing coordination mechanism with Higher Council for Environment & natural Resources
5	National Energy Research Institute	CC unit was established	1. 3 employees are dedicated for climate change related data 2. there is no allocated financial resources or budget for climate change related data	Not exist	limited	Not exist	Not exist
6	Central Bureau of Statistics	Directorate for natural resources	Not exist	Not exist	Technical authority	Not exist	Horizontal coordination with

		statistics			and provision of data		many government sectors
7	<b>Forests National Corporation (FNC)</b>	<ul style="list-style-type: none"> <li>GHG Unit under MRV Unit</li> <li>(LoA) between FNC and TNC</li> </ul>	<ol style="list-style-type: none"> <li>10 employees are dedicated for climate change related data</li> <li>there is no allocated financial resources or budget for climate change related data</li> </ol>	N/A	N/A	N/A	Horizontal coordination with FNC's offices in states and vertical coordination with (1) HECNR and (2) Ministry of Agriculture
8	<b>Sudan Customs Authority**</b>	(SCA) Monitors the application of the provisions of the relevant international conventions The role of customs in protecting the environment could expand considerably with the implementation of climate change related initiatives.	<ol style="list-style-type: none"> <li>6 employees are dedicated for climate change related data</li> <li>The organizational own fund</li> </ol>	Yes	Technical authority and provision of data	Stable in terms of roles and policies	Horizontal coordination with many governmental sectors and HECNR
10	<b>Electricity Regulatory Authority</b>	N/A	<ol style="list-style-type: none"> <li>only one employee is dedicated for climate change related data</li> <li>there is no allocated financial resources or budget for climate change related data</li> </ol>	N/A	Provision of performance indicators and energy efficiency to be used by related bodies	N/A	Existing coordination mechanism with (1) Electricity Company (2) Sudanese Chambers of Industries Association (3) Sudanese standard Metrological Organization

\*Based on submitted forms of CBIT project.

\*\*Based on submitted forms of CBIT project.

**Annex 4:**

Meeting with the Central Bureau of Statistics, March, 2023



## Annex 5: consultative workshop on institutional arrangement for Energy and Transport Sectors

INITIATIVE CLIMATE ACTION TRANSPARENCY

### Energy and Transport Sectors TWGs Workshop-Khartoum Sudan

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Report

**Dr Abdelrahman Eltahir Ahmed and Dr. Qousay Awad Ahmed**  
**2/20/2023**

*ICAT Project – Sudan TWGs Workshop*

**Initiative Climate Action Transparency  
TWGs Meeting/Workshop Report  
Faisal Bank Cultural Center- Khartoum- Sudan  
20 February 2023**

**1. The Workshop**

This TWGs Meeting/Workshop was an intended meeting for the Initiative Climate Action Transparency project undertaken under the ICAT Secretariat and the UNEP-CCC partnership. The overall objectives of the workshop were to give an overview on the project first deliverable (**Gap Analysis and Needs Assessment on MRV System in the Energy and Transport Sectors, Sudan**) as well as to highlight the requirements from all participants for the project's second deliverable (**Institutional Arrangement in the Energy and Transport Sectors, Sudan**). Two PPTs are attached.

**2. Participants**

The Workshop was attended by 19 participants, five apologies and five absent (attendance sheet attached). The consultants will make sure to have face to face meeting with those who didn't attend to ensure the dissemination of information and quality of the second deliverables.

Faisal Bank Cultural Center- Khartoum- Sudan

*ICAT Project – Sudan TWGs Workshop*

**Table 1: Stakeholders Targeted by ICAT Project**


SN	Stakeholders Entities
1	Ministry of Interior
2	Ministry of Communications and Digital Transformation
3	Ministry of Finance and National Economy
4	Ministry of Energy and Petroleum
5	Ministry of Agriculture and Forestry
6	Ministry of Transport
7	Ministry of Urban Development, Roads and Bridges
8	Central Bureau of Statistics
9	National Research Centre
10	Energy Research Centre
11	Private sector and industrial facilities (Food Industry, Cement factories, Sugar companies, Energy, MOil & Gas industry)
12	Unions, chambers of commerce and other associations
13	The Higher Council of Environment and Natural Resources (HCENR)



*ICAT Project – Sudan TWGs Workshop*

**3. Workshop approach and methodology**

The workshop was based on provision of presentations and the effective participation of the participants through open discussion. To that end two Power Point Presentations were prepared (in English), and the discussion carried in Arabic to assure the participants' understanding of the objectives and outcomes of the project as well as to agree on the roles and responsibilities of all participants in the coming deliverables.

<p><b>The Second Presentation (Attached)</b></p> <p><b>Initiative Climate Action Transparency (ICAT) Project – Sudan</b></p> <p><b>MRV SYSTEM FOR ENERGY SECTOR IN SUDAN</b></p> <p><b>By Dr. Abdelrahman Eltahir</b></p>	
<p>Content:</p> <ul style="list-style-type: none"> <li>✓ ICAT General Objectives</li> <li>✓ ICAT Specific Objectives (Sudan Project)</li> <li>✓ Gap Analysis and Needs Assessment on MRV System- Energy and Transport sectors</li> <li>✓ Areas of MRV Improvements</li> </ul>	
<p><b>The First Presentation (Attached)</b></p> <p><b>Initiative Climate Action Transparency (ICAT) Project – Sudan</b></p> <p><b>MRV SYSTEM FOR TRANSPORT SECTOR IN SUDAN</b></p> <p><b>By Dr. Qousay Awad Ahmed</b></p>	
<p>Consent:</p> <ul style="list-style-type: none"> <li>✓ General Background</li> <li>✓ Potential of Transparency</li> <li>✓ Institutional Arrangement</li> <li>✓ Energy Sector – Transport Sector</li> <li>✓ Questionnaire</li> </ul>	

**Table 2: Selection of the technical working groups Energy & Transport**

Faisal Bank Cultural Center- Khartoum- Sudan

*ICAT Project – Sudan TWGs Workshop*

<b>TWG Energy Sector</b>		
<b>SN</b>	<b>Name of Members</b>	<b>Affiliation</b>
1	Nader M. Khalifa	Ministry of Energy & Petroleum
2	Rihab Kamal Omer	Ministry of Energy & Petroleum
3	Mohamed Elmukhtar	Ministry of Energy & Petroleum- Absent
4	Mudathir Abdalla Adam	SMRC- Absent
5	Abdelhafiz f. Babiker	Electricity Regularity Authority
6	Amira Elnour	Ministry of Industry
7	Safaa Ahmed Beraima	Forest National Corporation
8	Mohamed Elfatih	TPRA- Absent
9	Mohamed Elmustafa	Customs- Absent
10	Remond Ali Mohamed	National Energy Research Centre
11	Muna Mahjoub	Institute of Environment Studies- Excused
12	Hind Mohamed	Haggar Group
13	Arig Bakhit	NDC Partnership (Resource person)
<b>TWG Transportation Sector</b>		
<b>SN</b>	<b>Name of Participant</b>	<b>Affiliation</b>
1	Afaf Mohamed	Ministry of Petroleum - Absent
2	Muawia Ali Khalid	Ministry of Transport –Other representative attended
3	Awadelkareem Gafar Mohamed	Ministry of Interior - Absent
4	Ahmed Awad	CTC Group Ltd
5	Hamad M.Elsharief	Ministry of Urban & Development
6	Somaya Sirkhatim M.	National Centre for Research - Excused
7	Nimat Mustafa Omer	Kenana Sugar Company - Absent
8	Amged AbedAbdolw	Central Bureau of Statistics- - Excused and other Representative attended
9	Ikhlass Nimer	Journalist- Absent
10	Hana Hamdalla	HCENR (Resource Person) - Excused

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