

# Keeping Track: Digital Public Goods for the Paris Agreement

## Third Virtual Meeting of the Community of Practice

19th July 2023



# Agenda

1

Welcome and  
Introduction

Namibia's Journey:  
Adapting the DPG  
Carbon Registry to a  
National Context

2

Driving Transparency:  
Experiences in Developing an  
MRV Integrated System from  
Kenya & Open Discussion

Wrap-Up and  
Next Steps

# Update: Side events during Bonn SG-58



# Session 1: Namibia's Journey: Adapting the DPG Carbon Registry to a National Context



## Presenters:

**Reagan Chunga,**

Project Coordinator from the Ministry of Environment, Forestry and Tourism, Government of Namibia

**Uazamo Kaura,**

Programme Specialist, UNDP-Namibia CO

**Tim Reutemann,**

Digital Expert on Climate and Carbon, UNDP



## Ice Breaker

What would be a challenge in setting up a Digital Carbon Registry in your country?

# UNDP Namibia Country Office



## PROMOTION OF CARBON MARKETS IN NAMIBIA

### Namibia's Journey: Adapting the DPG Carbon Registry to a National Context Community of Practice

*"Keeping Track - Digital Public Goods for the Paris Agreement."*

19 July 2023

**Uazamo Kaura**

Head/Programme Specialist

Sustainable Environment Management, Energy and Resilience (SEMER)

United Nations Development Programme – Namibia

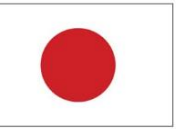
**Full Title:** Promotion of carbon markets in Namibia for an enhanced implementation of the nationally determined contributions (NDC) towards net-zero emissions and climate-resilient development, in response to the climate emergency



UN  
DP

## **An initiative to prepare Namibia to enter into Carbon Markets by:**

- ✎ Undertaking comprehensive gap assessments and institutional support needs ;
- ✎ Developing policy framework on Carbon Markets; and
- ✎ Building a robust Measurement Reporting & Verification (MRV) system, Carbon Registry for the carbon trade.



From  
the People of Japan

**Donor:** Japan

**Budget:** USD \$1,003,042.00

**Project duration:** March 2022 – June 2023

**Executing Partner:** MEFT

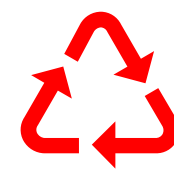


**UNDAF/CP Outcome(s):** NDP 5: Pillar 3 – Environmental Sustainability

**Expected CPD Output(s):** Output 2.2: Scaled up integrated and innovative action on climate change mitigation

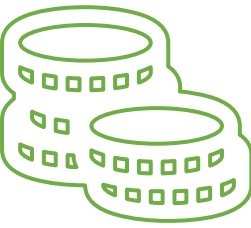
**Target beneficiaries:** Government ministries, SOEs, Private sector

**Namibia** will participate in market-based mechanisms as a financing option for meeting its mitigation targets in the Nationally Determined Contribution (NDC) and raising its mitigation ambitions



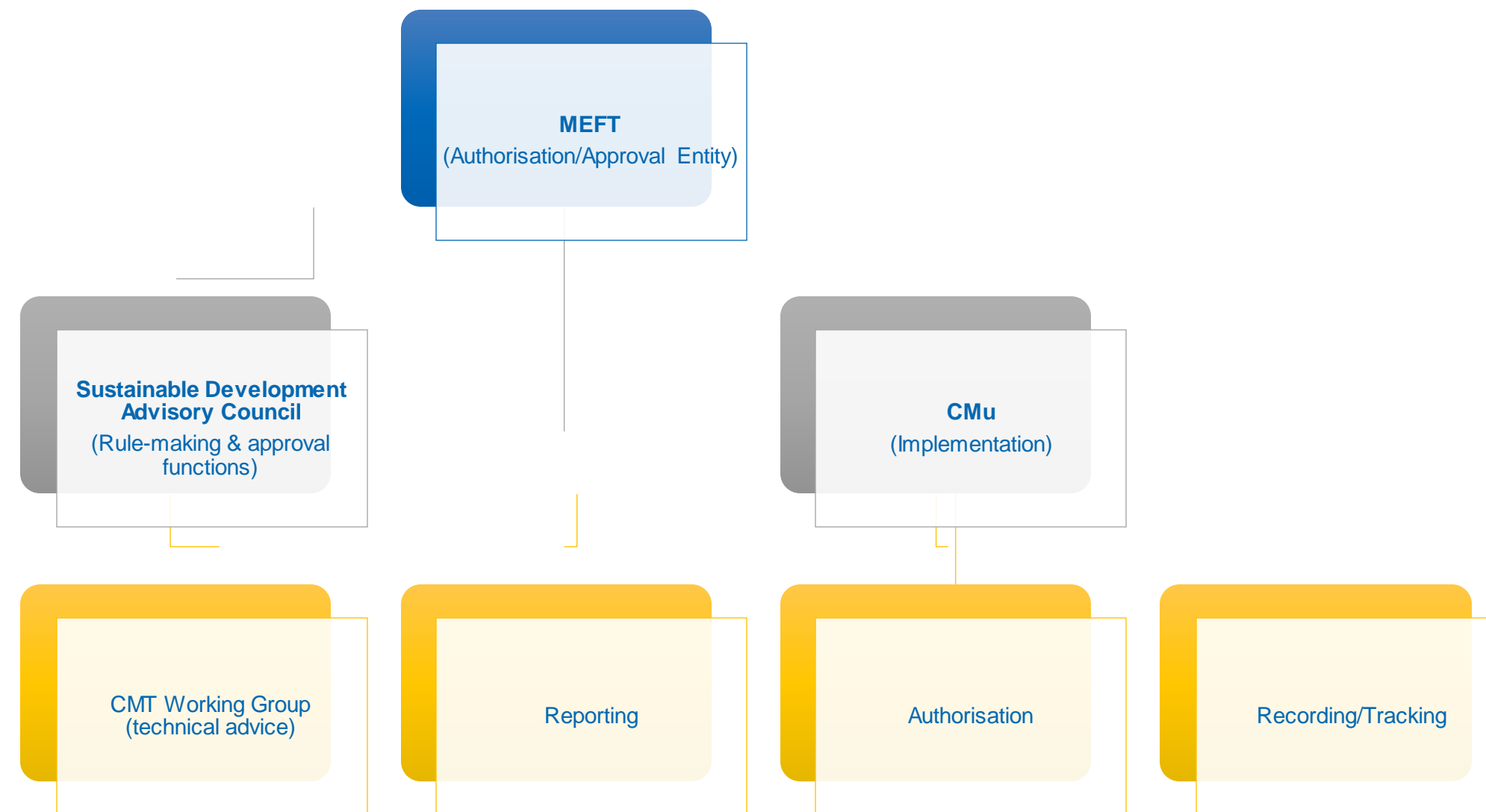
**Target sectors:** Renewable energy, Transport, Forestry, Agriculture, Waste Management

# The Promotion of Carbon Markets in Namibia project is designed to establish the enabling environment for Namibia to pursue Article 6 carbon market-based opportunities.



## Institutional Arrangements for Art. 6.2, 6.4 and VCM

- MEFT shall work **collaboratively with key sectors**, the private sector, and development partners to implement the **Carbon Market Framework**.
- The institutional setup established under the Framework shall **oversee the operationalisation** of the requirements for project development under Article 6.2, Article 6.4 and VCM in Namibia.
- Institutions shall have the mandate to make decisions on the procedures for **authorisations and approvals, accreditation, and methodologies**, recording and tracking and reporting of eligible mitigation projects and their outcomes developed under the rules of Article 6.2, Article 6.4 and VCM in Namibia.



# Namibia Carbon Registry: Introduction



Assessment done in 2022 indicated that Namibia did **not have a clear strategy** on how it will implement the key elements of Article 6.2 cooperative approach, such as authorisation, corresponding adjustment and registry for tracking and recording the international transfer of units.



JSB project through the UNDP Digital Team supported Namibia in **developing a Carbon registry for emission reduction tracking, issuance, and transfers** to enable the country to have a credible single source of Internationally Transferred Mitigation Outcomes (ITMOS).



National registries are the preferred option of most countries **to issue, record and retire carbon units in a transparent manner**, while keeping the overall carbon inventory aligned with the NDC targets.



The Carbon Registry will host **verified data on all projects** and programmes undertaken in Namibia (NDC mitigation projects, carbon projects registered under Article 6 of the Paris Agreement) relating to the NDC mitigation actions.

# Key Building Blocks for the Namibian Carbon Registry



- Development of a Namibian Carbon Registry **that will host verifiable data** on all projects and programmes undertaken in Namibia;
- **Carbon projects that are registered under different standards** such as the Clean Development Mechanism (CDM) under the UNFCCC; and independent standards;
- Once operational, the Government will be able to carry out **emission unit cancellation within the registry** based on the transactional records governed by different standards.
- **Technical capacity** building to enhance the institutional capacity of the Ministry of Environment, Forestry and Tourism (MEFT) and relevant institutions, including the private sector.

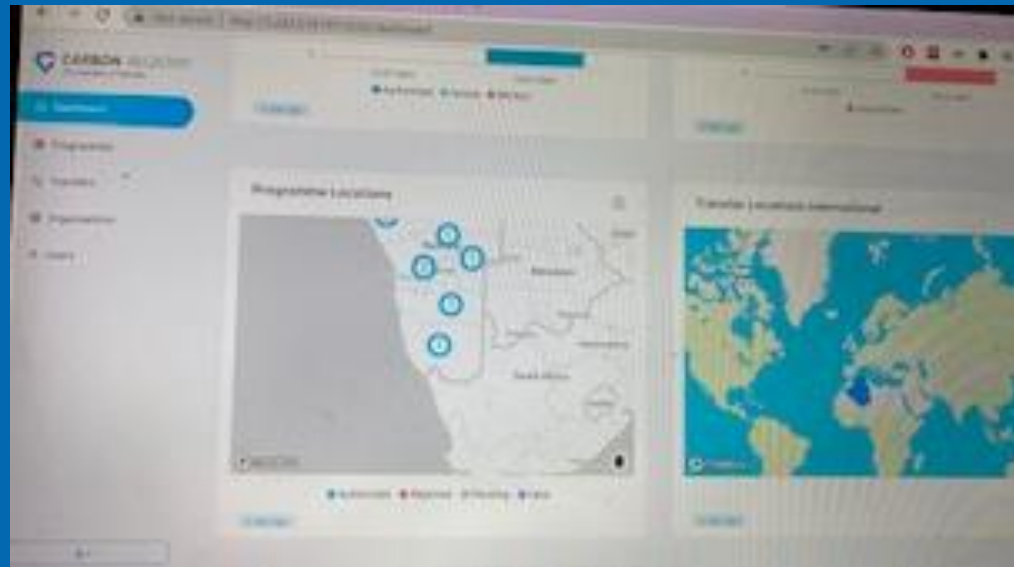


From  
the People of Japan



UNITED NATIONS DEVELOPMENT PROGRAMME

# Carbon Registry Training and Hosting



- The **National Statistical Agency (NSA)** IT Department authorized the usage of a virtual server for the Carbon registry: 10-core dedicated CPU; Memory 8 GB virtual RAM with Storage of 500 GB for a period of **three** years.
- Management of these domains and software will be facilitated through the **services provided by the NSA.**
- The UNDP Digital conducted a **Hands-on Training Workshop on the Namibian Carbon Registry on 26 – 30 June 2023** in Windhoek ( 22 participants (10 M; 12 F).
- The hands-on training provided the **foundation for understanding a Carbon Registry**, what it can do, and its applications
- Ensured that all participants can use the Carbon Registry to visualize data and manage the database with linkages to the NDC reporting via the MRV portal.



## The proposed web domains:

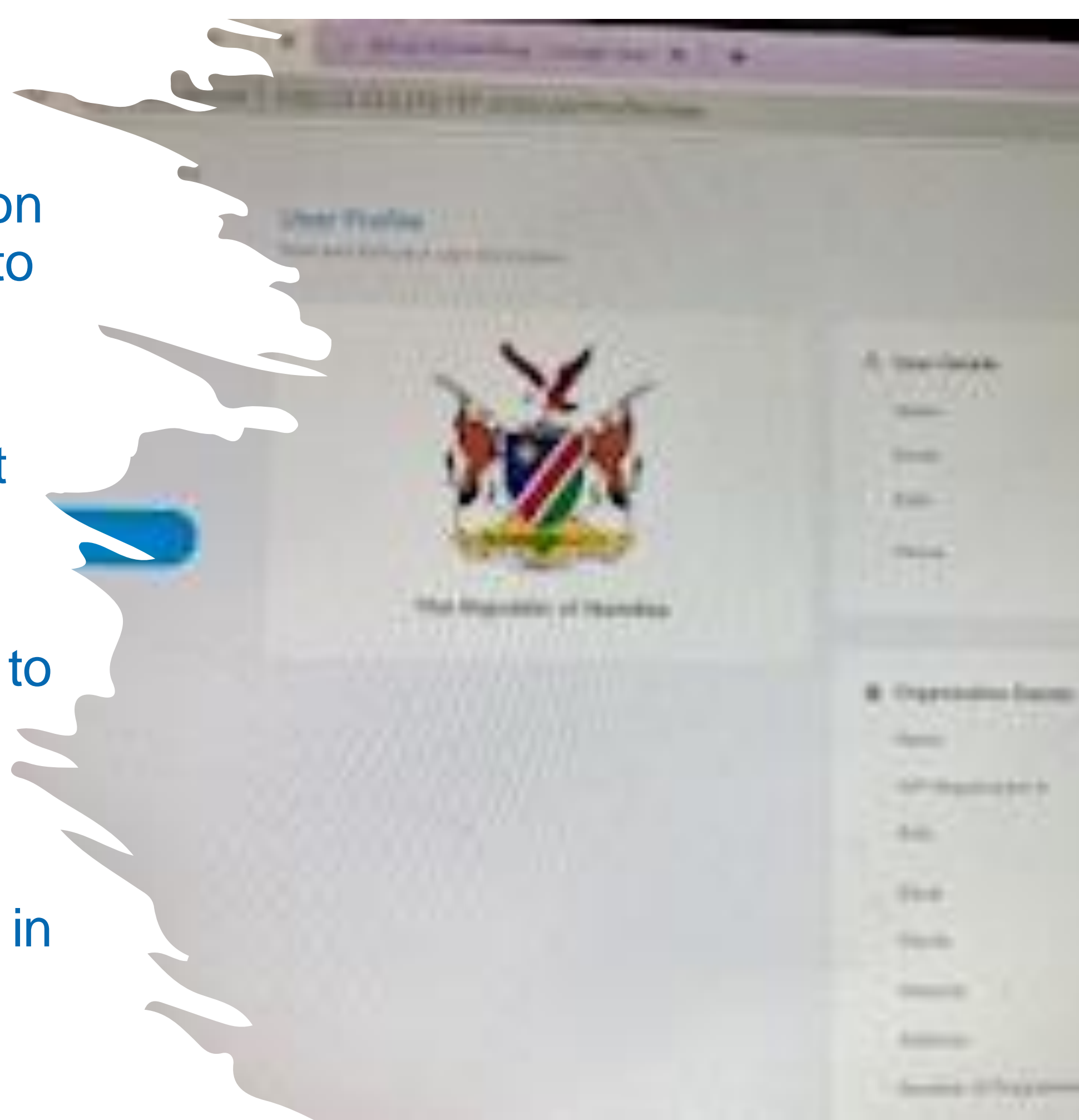
- <https://registry.meft.gov.na/>
- <https://transparency.meft.gov.na/>

## Proposed corresponding email addresses as:

- [help@registry.meft.gov.na](mailto:help@registry.meft.gov.na)
- [help@transparency.meft.gov.na](mailto:help@transparency.meft.gov.na)

# Key Challenges

- Development and establishment of a carbon registry **took longer** than anticipated due to the procurement process
- **End2end testing** of the registry using pilot projects didn't take off as anticipated
- **Training of experts** for the registry needs to be strengthened further.
- **Lack of technical experts** in the area of carbon markets to assist the country office in the implementation of the project.



## Policy

Formal approval and adoption of the framework (August 2023)

Legal or regulation development (on-going)

Development of bilateral or multilateral cooperation agreements (up to December 2024)

Discussion on revenue model (immediately before adoption of the framework)

Rolling out of institutional arrangements (immediately)

## Implementation

- Formal approval and adoption of framework (August 2023)
- Legal or regulation development (ongoing)
- Development of bilateral or multilateral cooperation agreement (up to December 2024)
- Discussion on revenue model (immediately before adoption of the framework)
- Rolling out of institutional arrangements (immediately)

# THANK YOU!!



**Uazamo Kaura**

Head/Programme Specialist

*Sustainable Environment Management, Energy and Resilience (SEMER)*

**United Nations Development Programme – Namibia**

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**Mobile:** +264 811500993

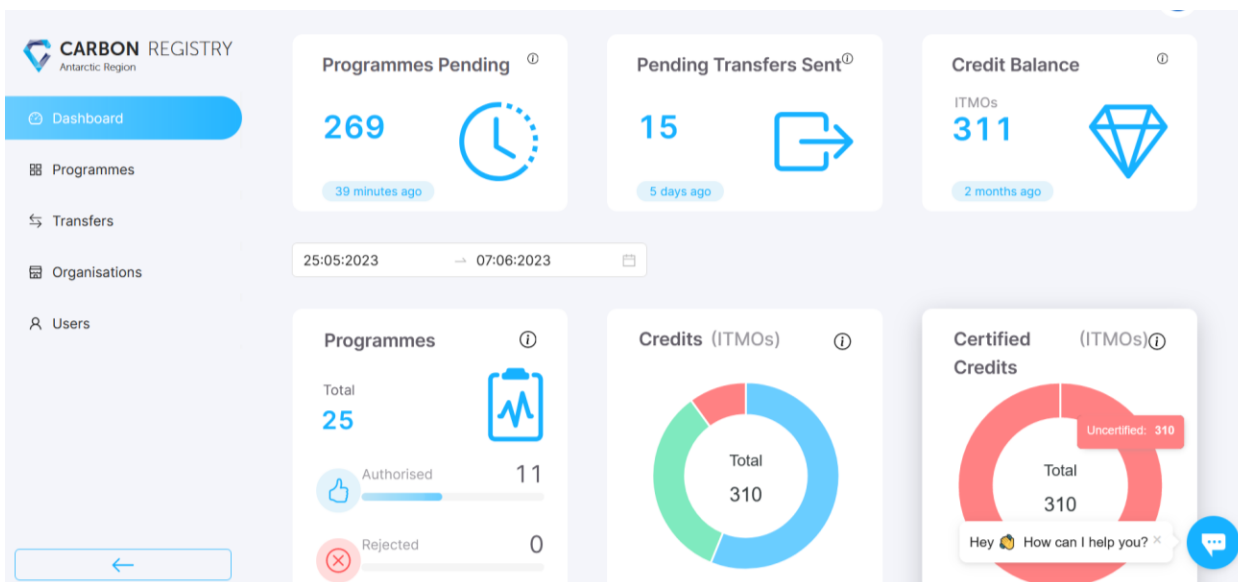
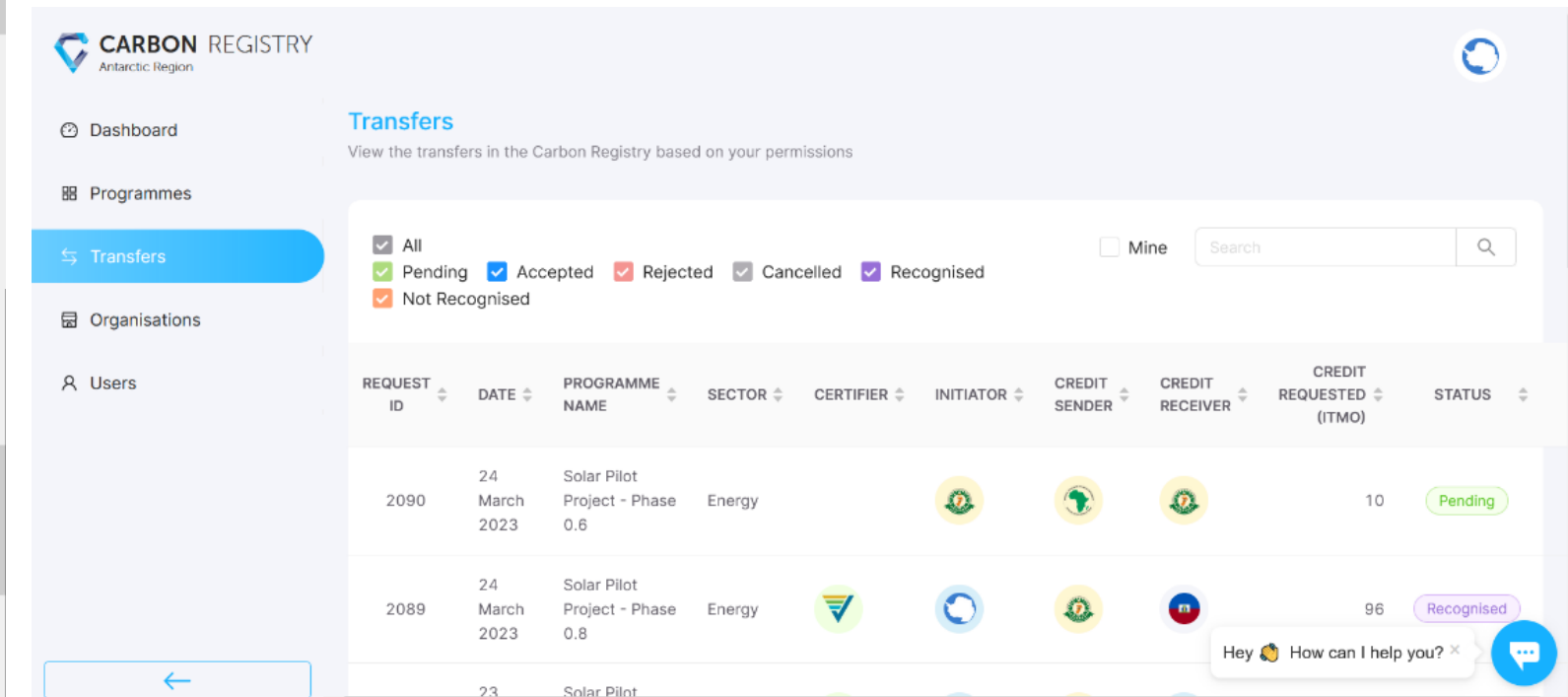
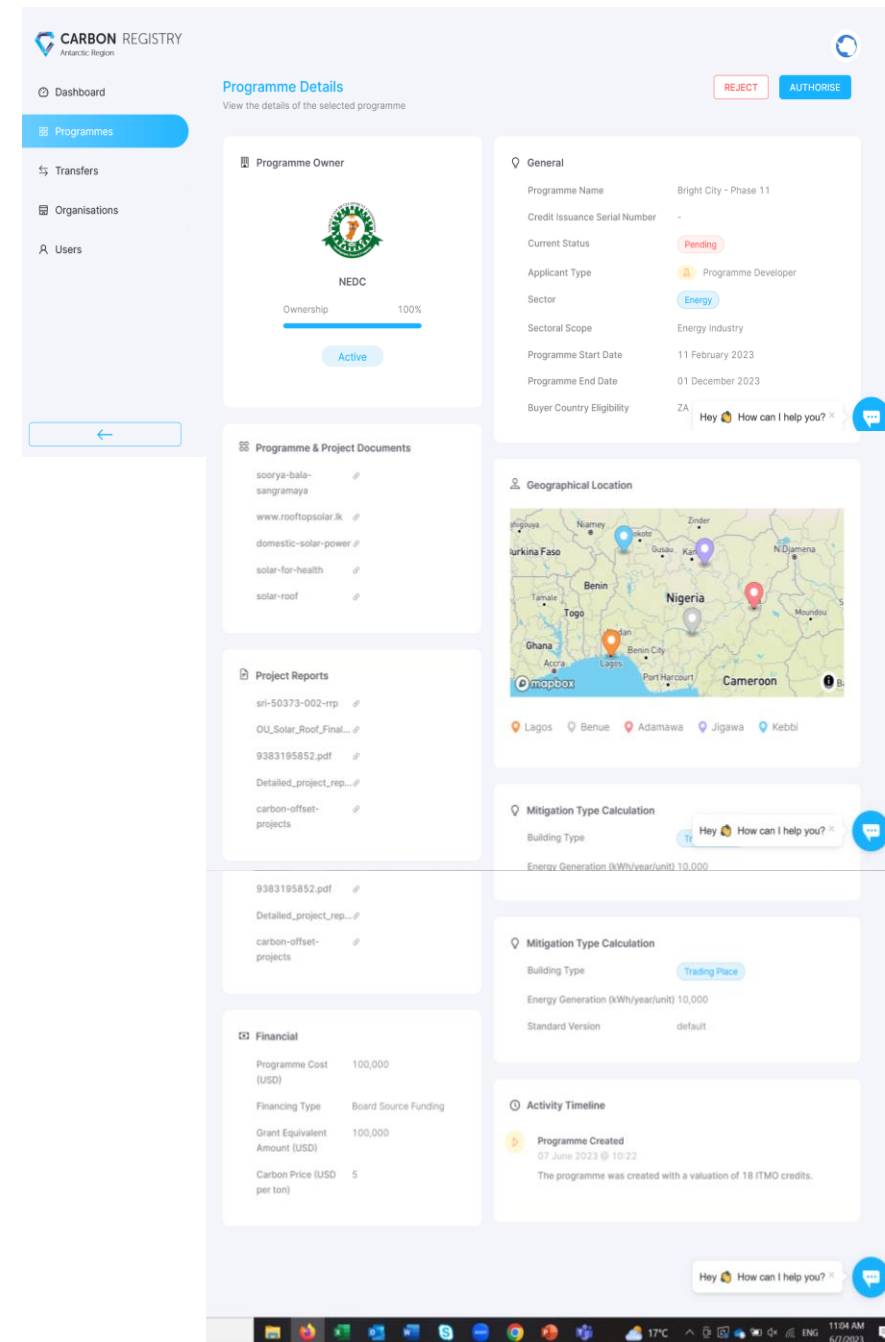
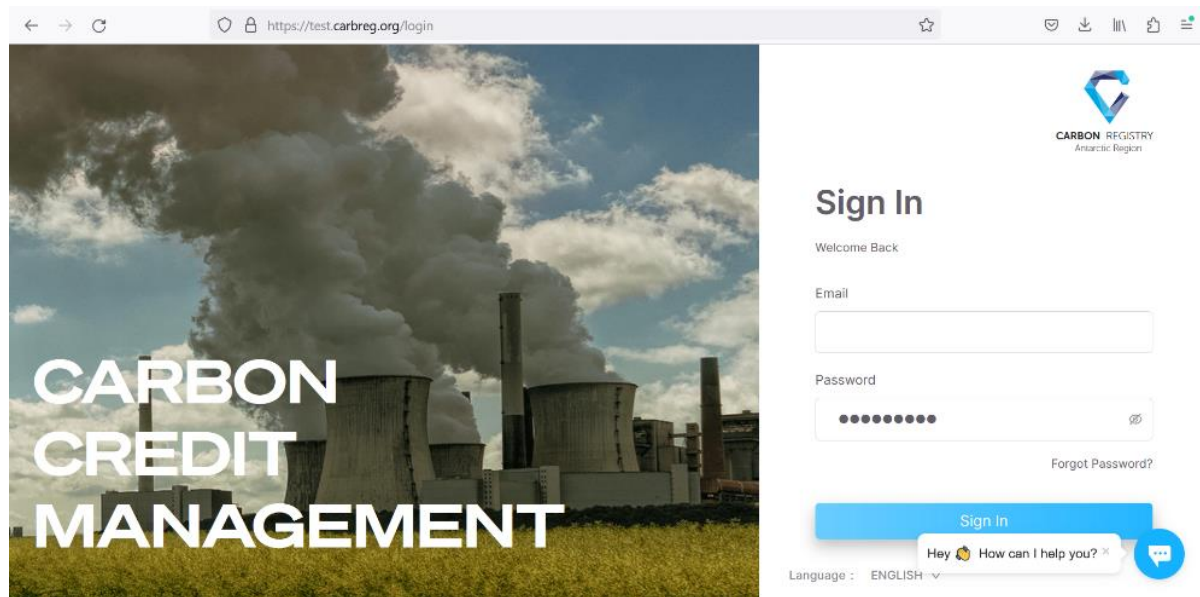
**Email:** [uazamo.kaura1@undp.org](mailto:uazamo.kaura1@undp.org)

<https://www.undp.org/namibia>



From  
the People of Japan

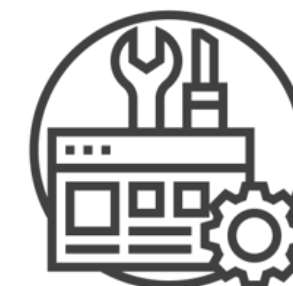
# Digital Public Good National Carbon Registry



Analytics  
Dashboard



Credit  
management



Carbon Credit  
Accounting

# Steps for Adapting the Digital Public Good Code for a National Carbon Registry

1



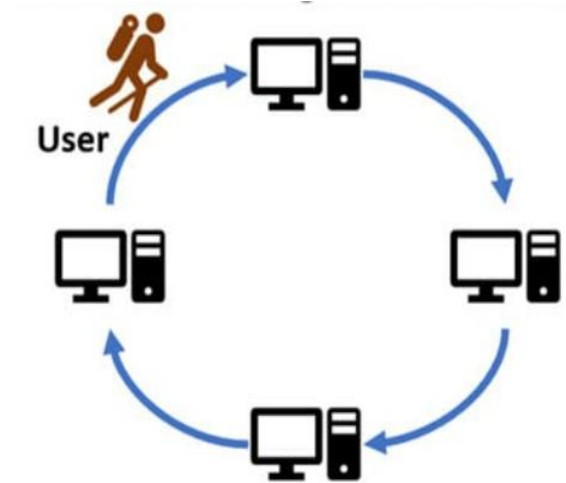
Scoping Phase

2



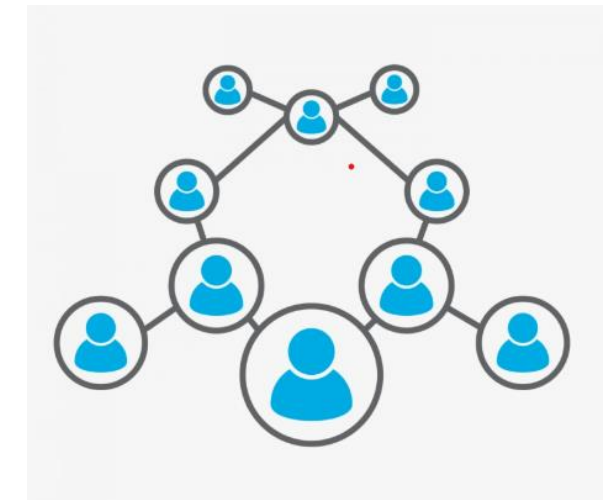
Installation

3



End-to-end System  
Test

4



Dissemination

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## Step 1: Scoping Phase

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- Design the key building blocks for the national emission system and carbon registry
- Engage national institutions and the National GHG working group
- User Interface
- Identifying Online Threats and Risks
- NDC actions



# Step 2: Country installation, configuration

## Resources Needed For National Installation



- Designer
- Developer
- Policy Expert
- Translator
- Government Focal Point
- Government IT
- Marketing



- Server (Local or Cloud)
- Service Accounts
- Email System
- API Integration



- Localization
- Installation
- Security
- Maintenance
- Budgeting
- Training
- Outreach
- Report



- Low (<\$50k): Based on Github
- High (<\$150k): Difficult API integration, new features

Note: Please reach out to Country Office for the possibility of receiving Technical Assistance from the Global Team

# Step 3: End-to-end System Testing

- End-to-end testing with a test/dummy project
- Identify potential pilot projects for the first round of actual use cases (positive in NDC, there was an actual good project in the country)
- Five technologies were identified during the workshop. CO will further engage stakeholders: Green Hydrogen, Solar Water Pumps, Biochar, Clean Cooking and Forestry.

MAIN

The chefs in our school kitchen were cooking on a very bad fireplace. It was using so much wood, we struggled finding enough for it.



But we fixed the problem with the help of our local masons:



This simple intervention saves so much firewood. Please Sir Regan, can we access Carbon Market for replication in more schools?

Signed  
Juuso Shikongo Senior Secondary School Climate Club

# Step 3: End-to-end System Testing

Juuso Shikongo Climate Club Startup, Namibia, The Namibian Association of Masons and the Panafrican Green Startup Acceleration Fund of South Africa (hereinafter referred to as "The Parties") agree to the following:

The Namibian Association of Masons is responsible for the construction and maintenance of stoves.

Juuso Shikongo Climate Club Startup is responsible for outreach to schools and monitoring of stove performance.

The Panafrican Green Startup Acceleration Fund is responsible for financing of the ongoing cost until authorization as well as technical support.

To facilitate that cooperation, the parties jointly offer an Investment Vehicle. The vehicle will offer international buyers to purchase the ITMOs generated by the school stoves. The income from selling the ITMOs will be distributed as follows:

Benefits Sharing:

- 20% of the ITMO revenue shall go to a fund administered by the Ministry of Education to support the schools with other needs.
- 20% of the ITMO revenue shall go to the Juuso Shikongo Climate Club Startup
- 20% of the ITMO revenue shall go to the Namibian Association of Masons
- 40% of the ITMO revenue shall go to the Panafrican Green Startup Acceleration Fund

Transparency:

ITMO sales contracts including prices shall be published for all ITMOs created under this program.

Signed

The Parties



2023/ June25/

Dear Juuso Shikongo Senior Secondary School Climate Club

Letter of Intent for 1234: Green Schools Program Namibia

We confirm that we have interest in the further consideration of the mitigation activity described in the Mitigation Activity Idea Note (MAIN) entitled "Green Schools Program Namibia". We created the entry on August 5<sup>th</sup> 2023 under reference number 1234.

Based on the information available, we do not have any indication that this mitigation activity would not qualify to achieve authorization under Article 6.3 of the Paris Agreement.

We are looking forward to hearing from you soon.

Yours sincerely,

Regan from MEFT

0.60	School Days/Year		2	Share of school days per year
0.24	t woody biomass per student		calculated	
0.3	fnrb		1	non-renewable biomass factor
112	Emission factor wood tCO2/TJ		1	Emissions by Energy
0.015	TJ/tWood		1	Energy by Wood
0.504	tCO2/tBiomass		calculated	Emissions by Wood
0.15	efficiency BL		1	Thermal efficiency Baseline
0.3	efficiency project		1	Thermal efficiency improved stove
<b>Reduction</b>	50 %	% biomass reduced	calculated	
	0.12	t wood per student	calculated	
	<b>0.06</b>	<b>tCO2 per Student per year</b>	calculated	
<b>Per School</b>	500	Students per School Stove	From Pilot	
	<b>30.24</b>	<b>tCO2/Stove/year</b>	calculated	

Monitoring Report Green Schools Program Namibia on day 100					
tCO2 per day	0.00016438			total CO2	52.92
School Name	Installation D	Maintenance	total days	nr. of student	tCO2
abc school	0		100	560	9.21
123 school	10	5	85	2140	29.90
xyz school	30		70	1200	13.81

## Validation Report

The numbers provided in the MADD for the Green Schools Program Namibia are all good, the monitoring solid and the proposed technologies in line with all applicable laws and regulations.

Signed

Namibian Quality Assurance Operation

## MITIGATION OUTCOME PURCHASE AGREEMENT

### PARTIES

- MITSUBISHI CORP. OF JAPAN
- CONSORTIUM (CARBON STARTUP, MASONS, STARTUP FUND)

### TERMS

MITSUBISHI AGREES TO PURCHASE ALL ITMOS RESULTING FROM THE GREEN SCHOOLS PROGRAM NAMIBIA, REGISTERED UNDER NR. XXX ACCORDING TO THE TERMS BELOW.

THE CONSORTIUM AGREES TO EXCLUSIVELY SELL ALL ITMOS RESULTING FROM THE GREEN SCHOOLS PROGRAM NAMIBIA, REGISTERED UNDER NR. XXX ACCORDING TO THE TERMS BELOW

- 20'000 NAM for each evidence video of a stove installation upon verification of the video by the Namibian Quality Assurance Operation.

- 500 NAM per ITMO upon issuance in the Namibian Carbon Registry

## Verification Report

We watched all the videos and can confirm that the stoves are constructed according to specifications.

We also confirm that the number of students per school is reported correctly.

We further confirm that the timestamp on the installation video was not tampered with.

Signed

Namibian Quality Assurance Operation

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## Step 4: Dissemination

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- Training
- Sensitization of stakeholders



# Session 2: Driving Transparency: Experiences in Developing an MRV Integrated System from Kenya & Open Discussion



**Presenter:**

**Yvonne Nyokabi,**  
Project Officer – NDC, Kenya



# Kenya's Integrated Monitoring, Reporting and Verification (MRV) Tool

Lessons on implementation  
Yvonne Nyokabi  
19/07/2023

# Brief introduction to Kenya

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**Population:** 49.4 Million

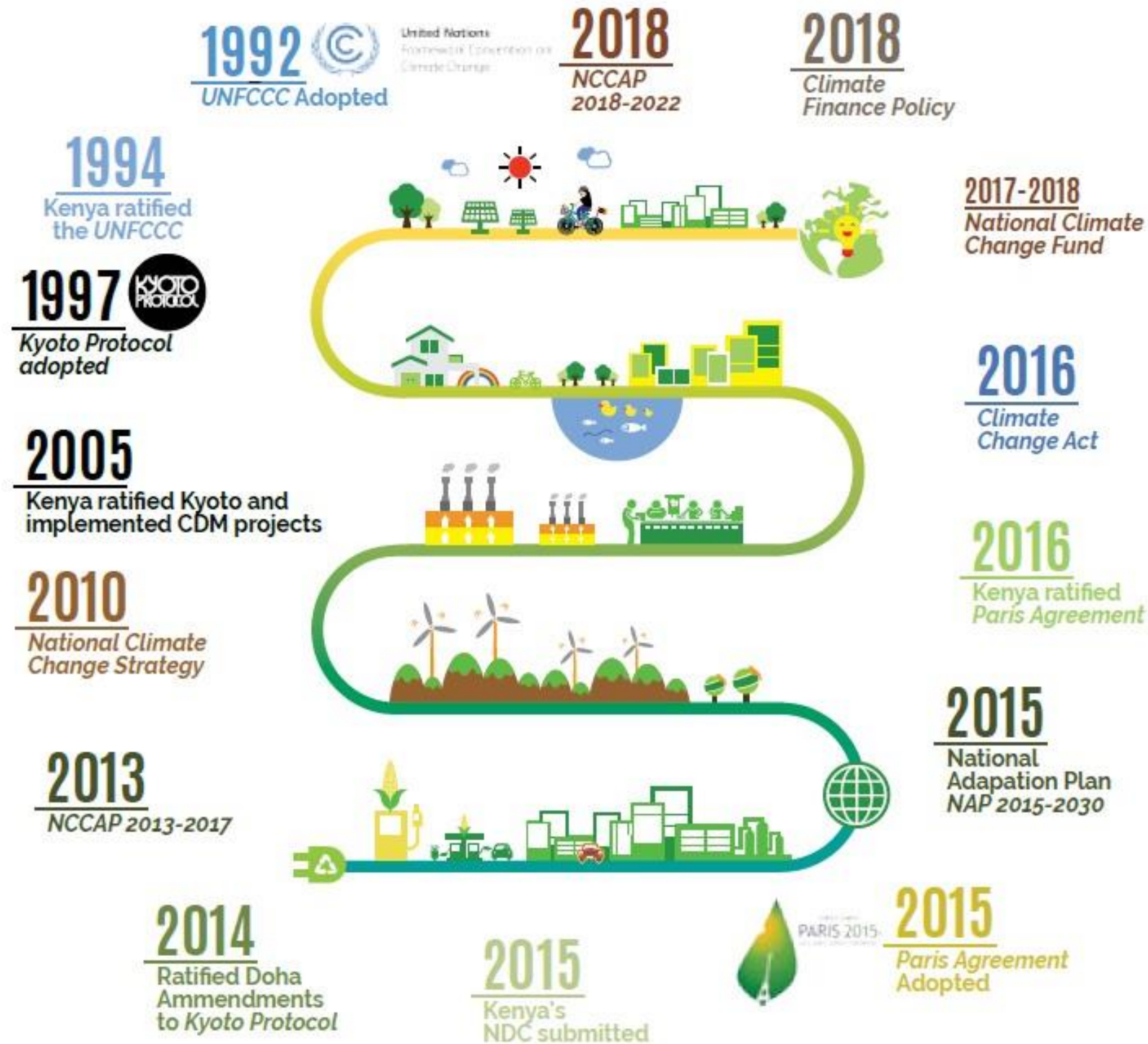
**Key Economic Activity:** Agriculture, Tourism, Manufacturing (mainly agroprocessing)

**80%** of Land area is Arid and Semi Arid

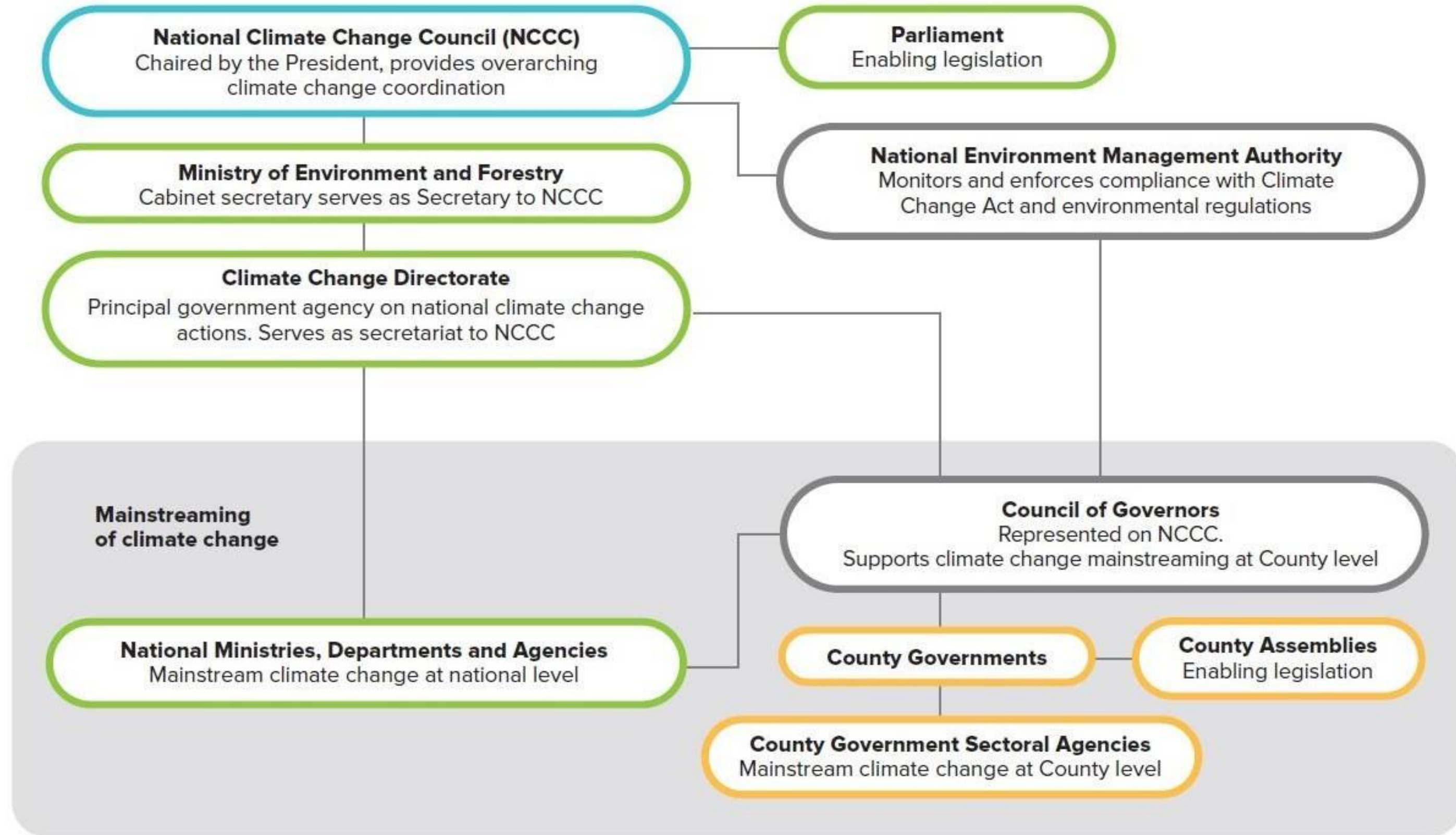
Devolved Governance – 47 County Governments

**Climate Change Impacts:** Floods, Droughts, Landslides



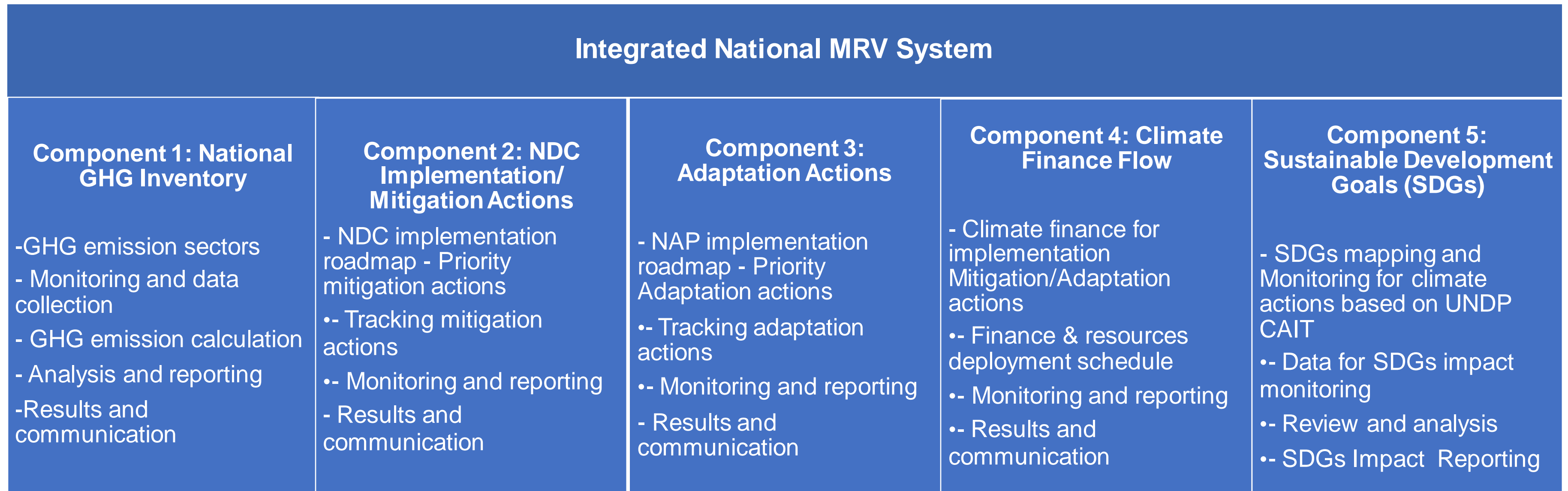


# Kenya's Climate Change Journey including legal frameworks



# CLIMATE CHANGE GOVERNANCE IN KENYA

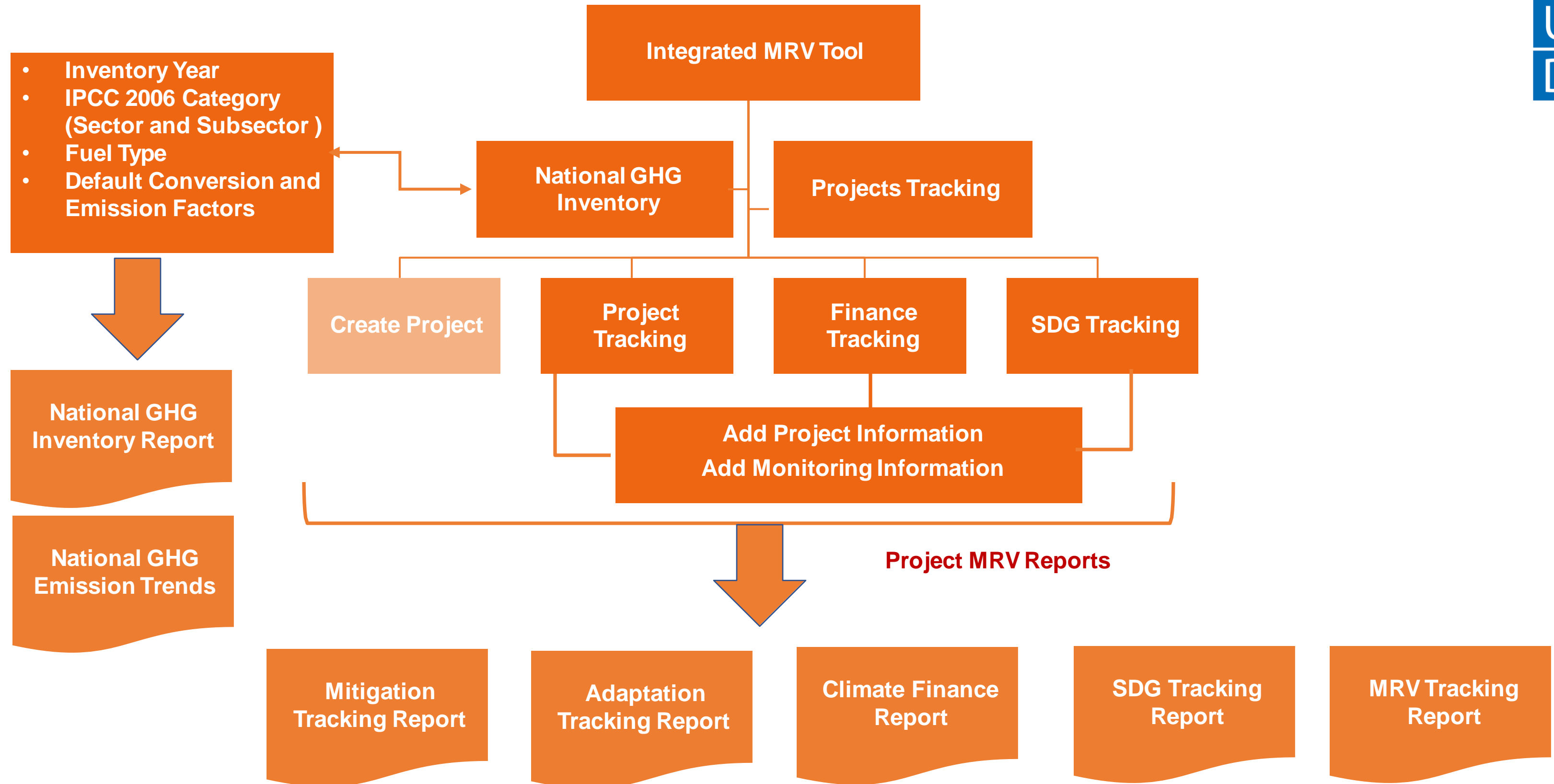
# Elements/Components of Kenya's Integrated MRV System



## Reports

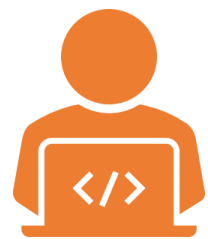
Integrated MRV Report , NDC progress Report, National GHG Inventory Report (NIR), Biennial Update Reports (BUR), International Financial & Technical Support Reports

# Operational Structure of Kenya's Integrated MRV Tool



# User Management for Integrated MRV Tool

- The users of iMRV tool are the members of the CCD team (or any other relevant team (s) assigned by CCD for preparation of national GHG inventories, NDC Actions/Mitigation/Adaptation Monitoring, Climate Finance/Support monitoring and SDG Tracking



**MRV Administrator:** Shall have overall responsibility of iMRV Tool implementation and functions.

MRV Administrator will be a Master User with all privileges and rights; shall also Approve, edit and delete user registration and access, approve/edit emission factors, database etc. on recommendation of MRV Coordinator or Nodal Officer.



**Nodal Officers:** Shall have the right to Validate and Verify the entered activity data.

Each Module shall have at least one Nodal Officer; designated by the MRV Coordinator. Nodal officer shall validate and verify the activity data entered in the iMRV tool i.e. approve or reject.



**MRV Module and Sector User Group:** Will have the right to enter/edit data in respective sector(s).

Module or Sector User will be provided these rights by the MRV Administrator on recommendation of their Nodal Officer or MRV Coordinator.

- Each user is assigned a role and different levels of the access rights, roles are not necessarily identical to a person's title (e.g. National Focal Point) and that a person can take on several roles.



MINISTRY OF  
ENVIRONMENT  
AND FORESTRY

Climate Change Directorate

## National Climate Change Action Plan 2018-2022

Second Implementation Status  
Report for the FY 2019/2020



DECEMBER 2021



# BENEFITS OF MRV

- ✓ Informed decision making for national and international policymakers
- ✓ Provide the information basis for planning and implementing climate actions
- ✓ Unlock new sources of finance to combat climate change by documenting impact and good governance practices
- ✓ Identify needs for technical and financial support and assist in institutionalising activities related to reporting on climate change
- change
- ✓ Build national capacities and ensure sustainability of reporting processes

# LESSONS LEARNED

- ❑ **Need for a transparency working group** - The transparency working group constitutes a team of experts trained and working in the sectors to monitor, report and verify project activities in the country. The group should constantly have their capacities built and participate in national reporting processes.
- ❑ **Legal and Regulatory framework** – Kenya’s MRV regulation will be critical in providing the legal basis for consistent MRV.
- ❑ **Leverage the system** – carbon registry can be an add on to the system providing all information at a glance
- ❑ **Coordination** - Poor coordination among the different actors leading to duplication of efforts and risk of double counting. A good number of national government institutions and county governments did not clearly indicate whether the results being reported were as a result of their own efforts or a joint effort with other actors including another level of government, the private sector and CSOs.

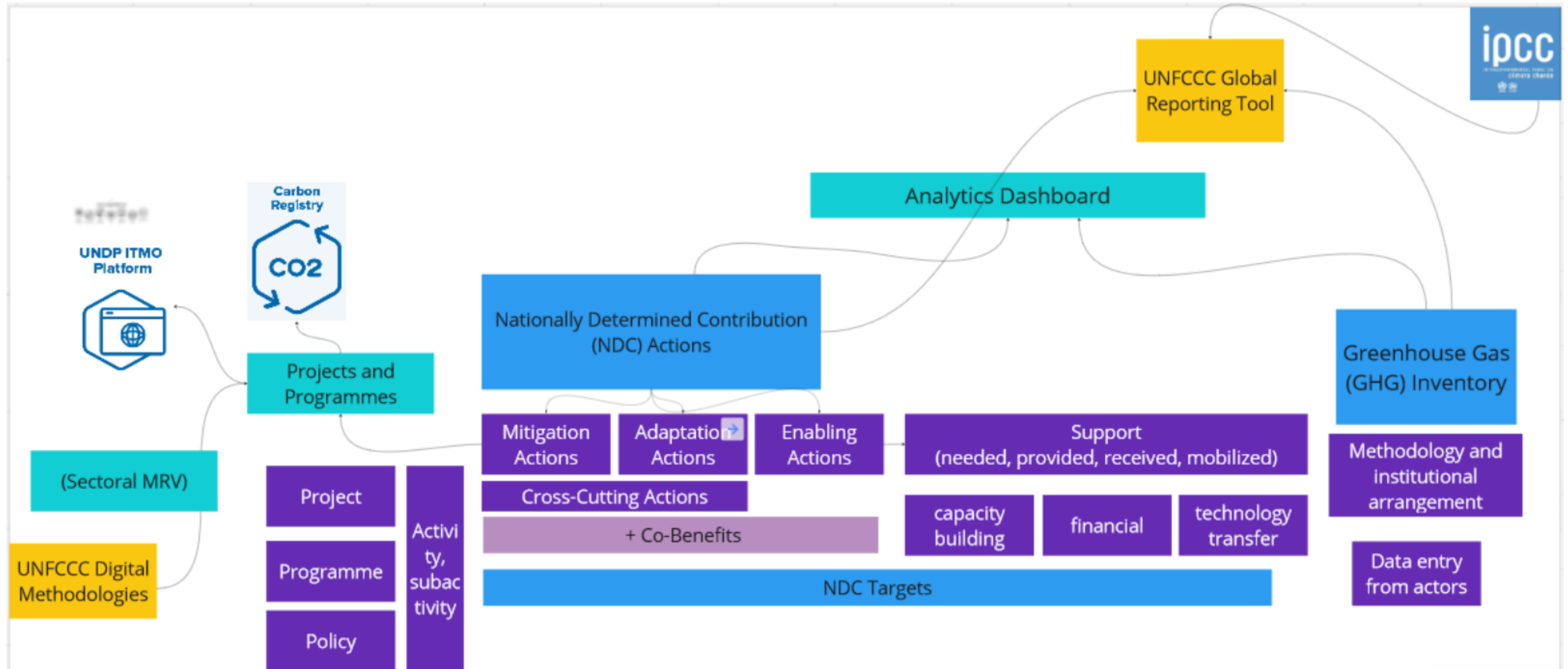
**Thank you!**



A decorative graphic on the left side of the slide. It features two overlapping blue speech bubbles, one slightly behind and to the left of the other. To the right of the speech bubbles is a large, thick, grey arc that curves from the top left towards the bottom right. The background is white.

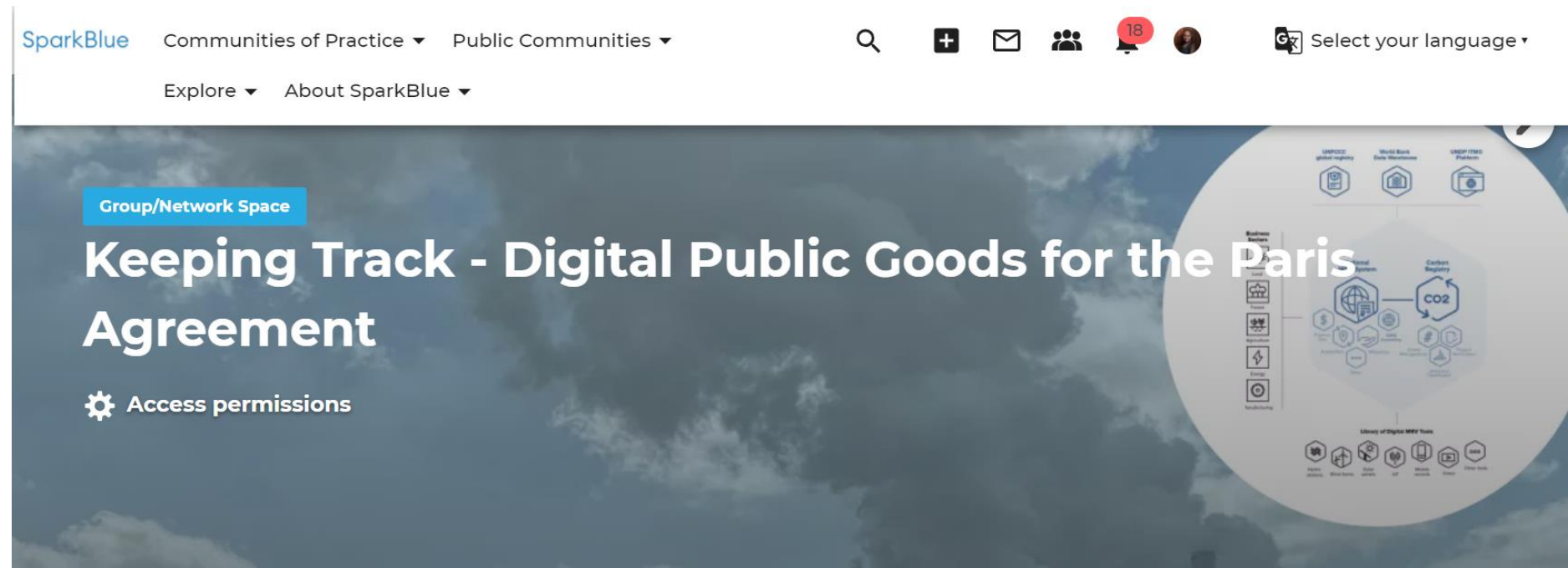
**Interactive session**

# Activity: Feedback to High-Level Diagram of a National MRV System



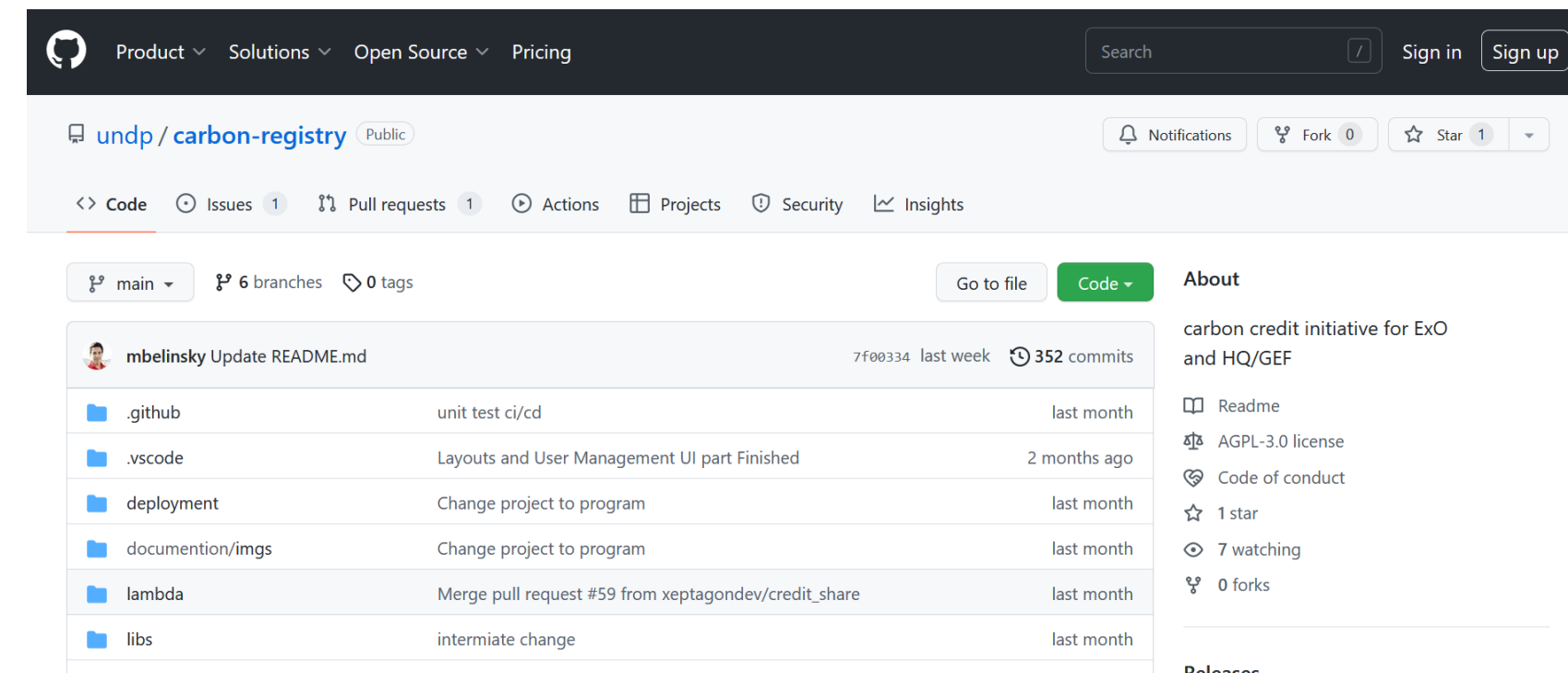
# How to stay engaged

Join the Online Community of Practice



<https://www.sparkblue.org/group/keeping-track-digital-public-goods-paris-agreement>

Stay Updated on GitHub



<https://github.com/undp/carbon-registry>



# Wrap Up – Next Steps

Any requests for guest speakers, topics, discussion?

For Government Partners, please inform your Country Office focal point and email [digital4planet@undp.org](mailto:digital4planet@undp.org) to request demo or test account

Next CoP: In early October





# Thank You!

For further information, please contact:

**Dominique Miegum Ngninpogni**

Digital Country Coordinator

[dominique.miegum.ngninpogni@undp.org](mailto:dominique.miegum.ngninpogni@undp.org)