

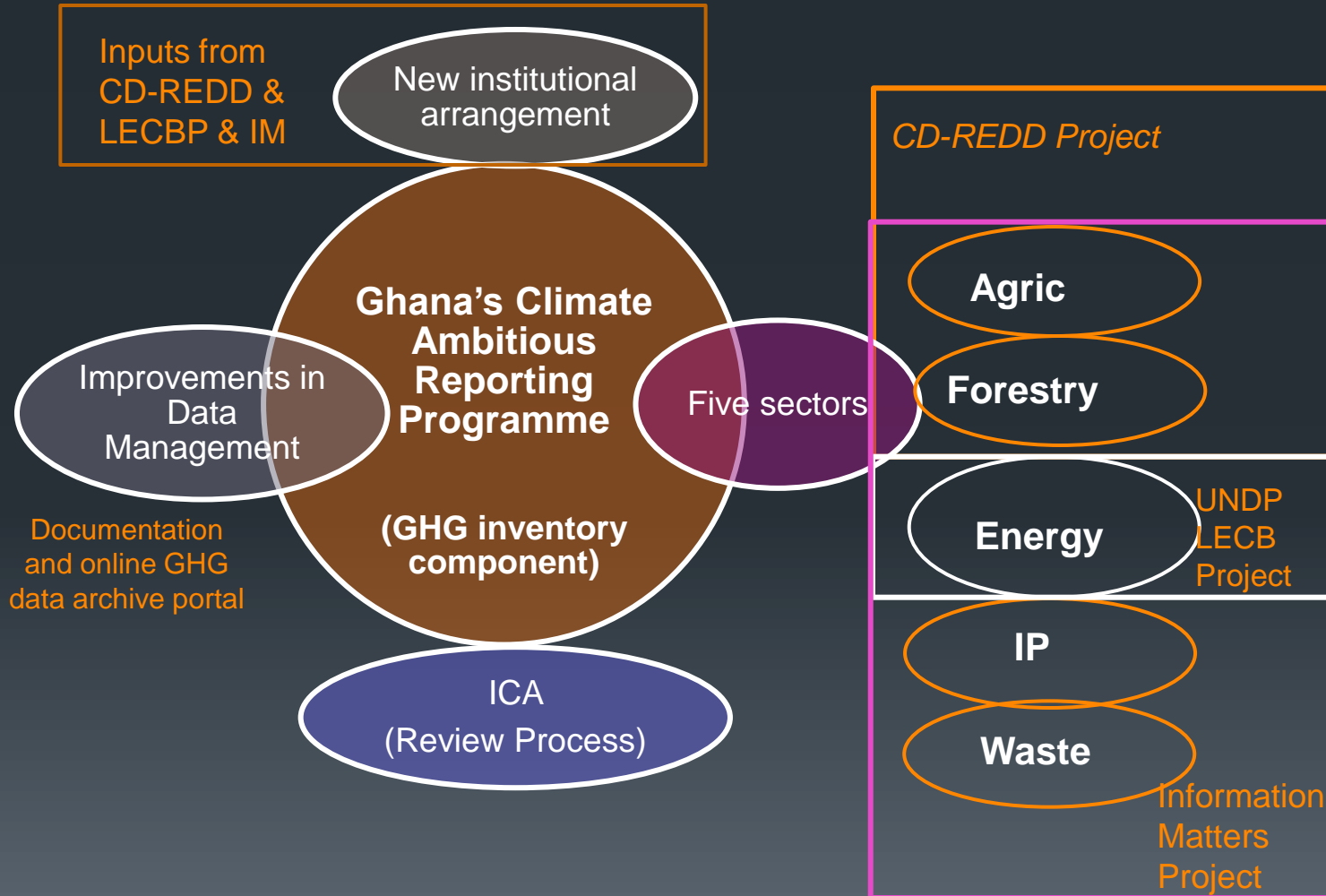
## Sharing Africa Experience on GHG Inventory and MRV of Emissions

*focus on the role of “integrated climate data management”  
In Ghana*

*Environmental Protection Agency, Ghana*



# Snapshot of the National System for GHG inventory



## GHG Emissions – TNC and BUR – Preparation of National Inventory report – 90% completed

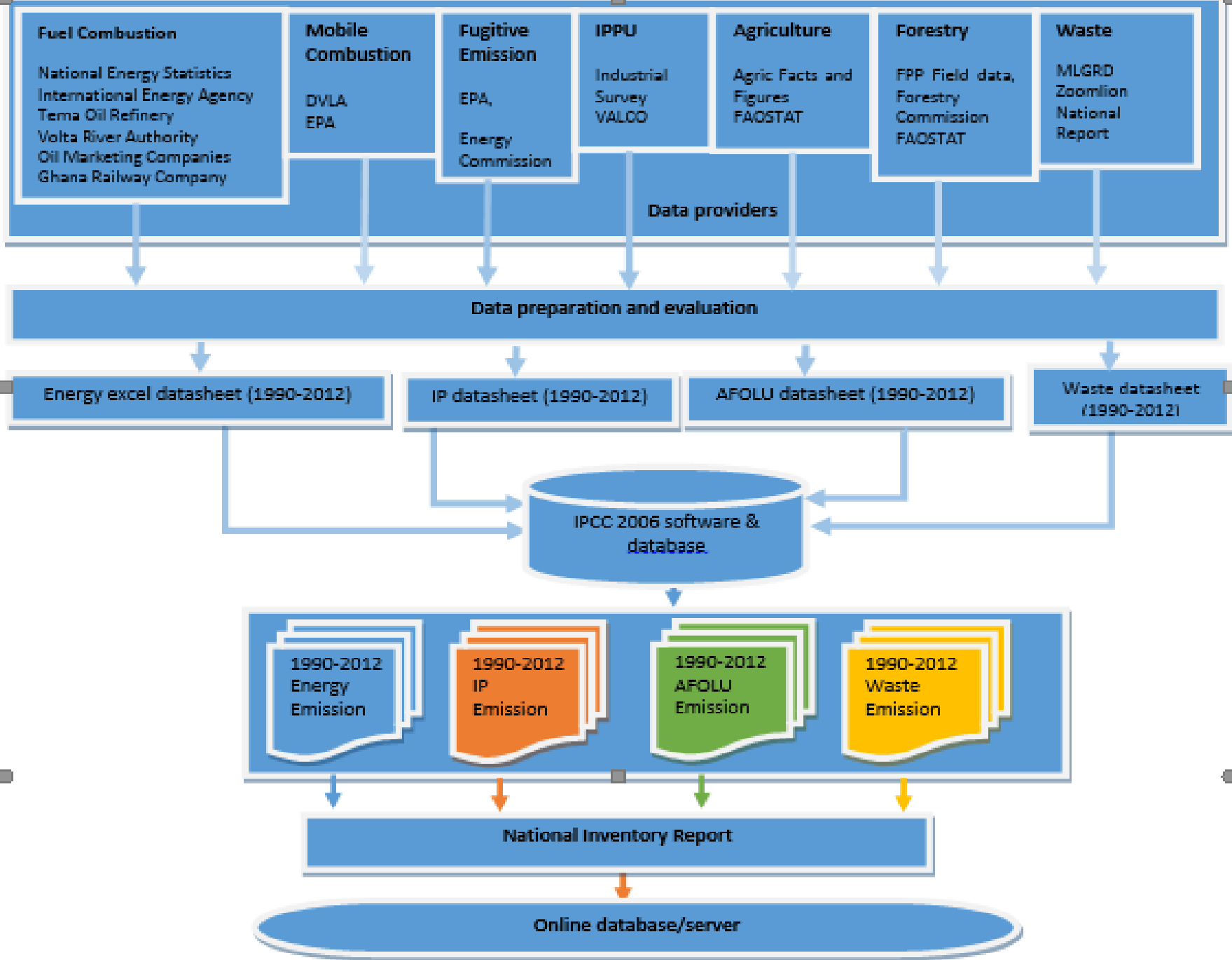


Started third party informal reviews  
AFOLU completed – EU LULUCF Expert  
Energy review is on-going (AEA-Ricardo under Information Matters Project)

**Completed national GHG inventory from 1990-2012** by sector working group.

**Status** – (a) inventory data collected, processed and evaluated, (b) 2006 IPCC guidelines and software, (c) produced inventory results 1990-2012 for 5 economic sectors, (d) National Inventory is compiled.

National and International process will kick in August (National review through the “internal disclosure mechanism” will focus on “reality check”, “key policy issues” and areas that need in improvements (including data gaps).

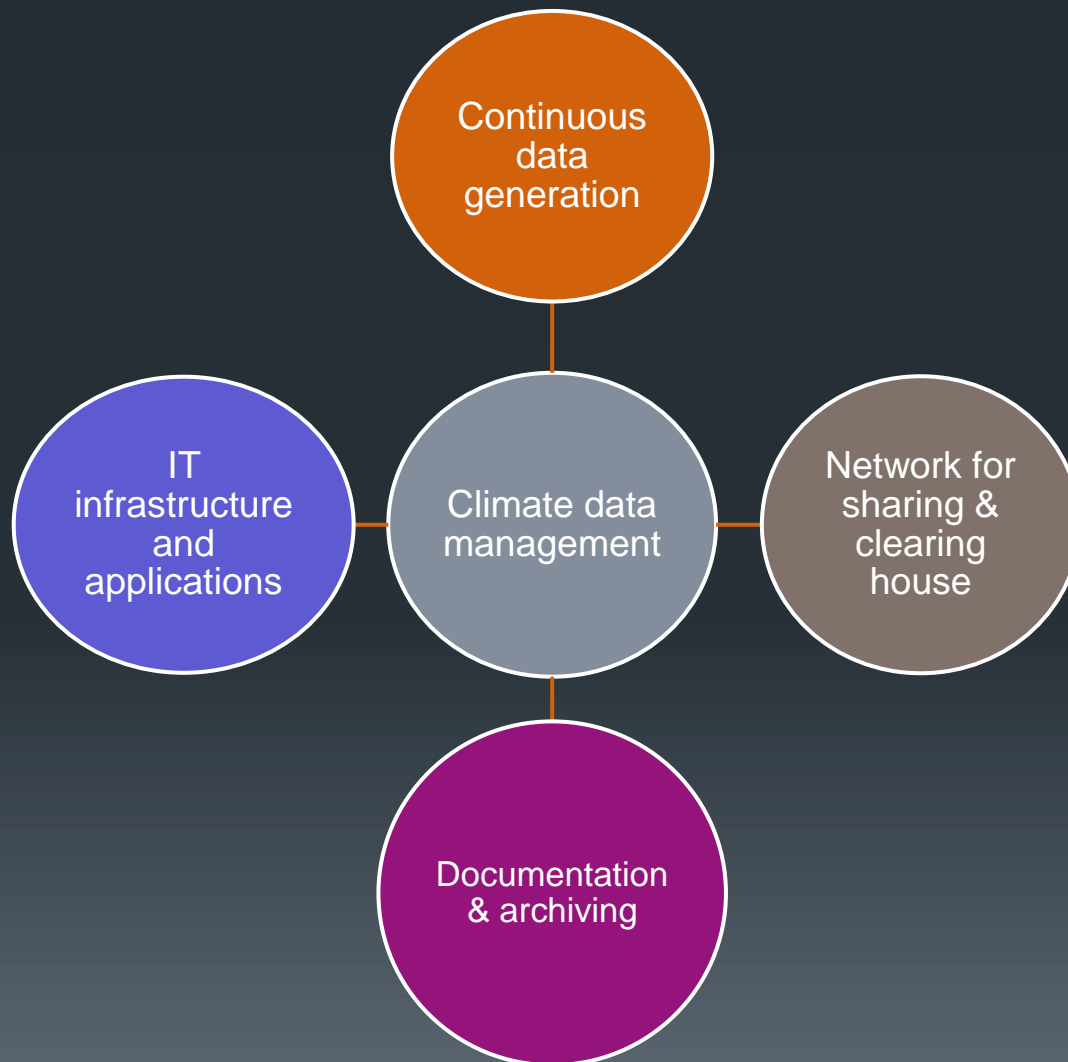


## What we have set out to do?

Put in place an “integrated climate data management” system that:

- ✓ Provides reliable basis for climate change planning
- ✓ Serves as framework for M&E or MRV
- ✓ Integrates with national statistics platform
- ✓ Kick start “facility and “national” scale GHG accounting

## Key elements of an integrated climate data management system: Ghana's vision



We keep it simple but aim at consistent improvement towards “dynamic climate data management system” in the future.

We try to clearly define:

- (a) **why** we need documentation,
- (b) **what** to document,
- (c) **how** to document,
- (d) **who** documents,
- (e) **where/how** to store and retrieve

# On-climate data – three interfaces



## Climate Change Data Hub



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### WELCOME

The Ghana's climate change database hub and project registry has been developed as part of the reforms introduced into the national system for climate reporting under the third national communication. The hub contains data and information collected from various actors in the implementation of the climate change activities in Ghana. The data was collected through internet and field surveys to identify, profile and map out institutions, projects and policies under implementation. The hubs provided seamless access to three dataset on climate change in Ghana. These are (a) greenhouse inventory data, (b) domestic registry of climate change initiatives and (c) dashboard of climate change policies and measures. The data and information contained in hub are already processed and updated to 2012 and will be regularly updated as new dataset come through the data exchange pipeline. The data in the hub is publicly available except the GHG database that some of the data will be restricted because of its confidential nature. The purpose of this hub is to be able to collect, collate, process, compile and disclose (a) data sources for estimating GHG emissions (b) tracking all climate change projects and programme and assess its impacts and above all (c) monitor the progress of implementation of climate change and related policies and measures in Ghana. It is the expectation of the Agency that, this hub will be useful to policy makers, researchers, students, business and the private sector and the general public to access regularly updated information and data on climate change in one-stop-shop dashboard, ensure frequent flow and exchange climate change information among the key actors, (c) help tracking the impacts of policies, measures, programmes and projects in addressing the impacts of climate change as well as addressing any future climate change.

### EMMISSION DATABASE

The GHG emissions database contains archive data (mainly activity data) used for the generation of the national estimates. The database is designed to help improve archiving all data used in the GHG inventory and also ensure that the general public have access to them in near real time. Apart from providing improved access to the emission data, it will also serve as an hub for data sharing among the data providers. The data models are designed in two formats.

Part of the database contains all the data files of activity data used in all the GHG inventory sectors from 1990 to 2012. The other part of the database contains primary data inputs from the disaggregated sub-categories to the sector level. The access to different parts of the database is restricted. The general public can have access to the open-source end of the database which contains publicly-available national data in file formats. Access to the primary data section is restricted.

### DOMESTIC ELECTRONIC REGISTRY SYSTEM (DERS)

The DERS is a centralised data point for climate change and related initiatives in Ghana. The database contains information on all climate change initiatives in Ghana that have been implemented or under implementation and being planned. Additional information on the sources of support available to the initiative and monitoring of impacts of implementation are provided in the database. At this initial stage, the DERS is anchored on a simple spreadsheet designed to support; (a) tracking climate change initiative and support in Ghana, (b) assess the overall impacts and (c) disclose them to the general public bi-quarterly. As the data increase in capacity, the database will be regularly updated to accommodate it.

### DASHBOARD OF GHANA'S CLIMATE CHANGE POLICIES & MEASURES DATABASE

The D-PaMs is the dashboard of policies and measures of all climate related policies and measures in the productive economic sectors in Ghana. The dashboard has a tracker which is meant to track the progress of implementation towards attainment of its goals. The impacts, achievement and envisaged actions toward achieving its strategic objectives are also contained in the database.

[Ministry of Science, Environment](#)

[National Development Planning Commission](#)

[Ministry of Finance](#)

[Ministry of Energy and Petroleum](#)

[Ministry of Lands & Natural Resources](#)

[Ghana Statistical Services](#)

#### Ghana Climate Trends

##### Emission Baselines

- National Emissions Stock (2012)
- National Emissions Stock (1990)
- Emission Per Capita
- CO<sub>2</sub>/GDP @ Constant Price
- Projected Future Emission
- Key Emission Sources

##### Mitigation Actions

- Renewable Energy Targets
- Feed in Tariff Rates
- Electronic Appliances Standards & Labeling Schemes
- Universal Access to Electricity by 2020
- 50% LPG Penetration Target
- Petroleum Products/ Utility Price Rationalization Policy
- Kerosene Lamp Replacement Program

## A. GHG emission database

- Contains **archived data** (mainly activity data) used for **generation of national GHG inventory estimates**.
- Designed to help improve archiving of all data used in the GHG inventory and also ensure that general public has access in near real time.
- Apart from providing improved **public access to the emissions data**, database will also serve as a hub for data-sharing among the data providers.
- Contains all activity data used in all GHG inventory sectors from 1990-2012
- Also contains primary data inputs from disaggregated sub-categories to the sector level.
- General public has access to the open-source end of the database which contains publicly- available national data. Access to the primary data section is restricted.



## B. Domestic Electronic Registry System (DERS)

- DERS is a centralized data point for climate change and related **initiatives in Ghana.**
- Contains information on all climate change initiatives in Ghana that have been **implemented, are under implementation, or are being planned.**
- Includes information on the **sources of support available to the initiatives** and monitoring of impacts of implementation
- At this initial stage, the DERS is anchored on a simple spreadsheet designed to support: **(a) tracking of climate change initiatives and support in Ghana, (b) assessment of overall impacts, and (c) disclosure to the general public semi-annually.**
- As the data from the sources increase, the database will be regularly updated/upgraded to accommodate it.

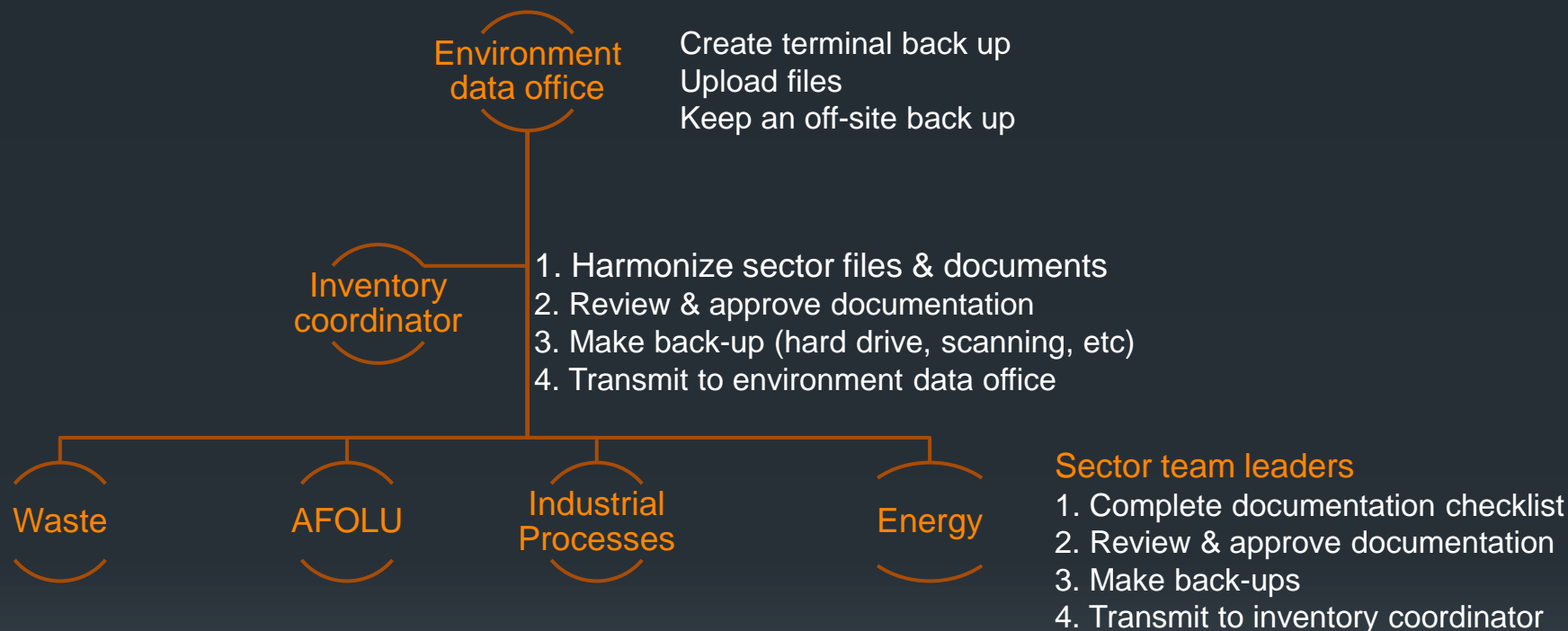


## C. Dashboard on climate policies and measures (D-PAMs)

- D-PAMs captures all climate-related **policies and measures in productive economic sectors in Ghana eg. Agriculture and Energy**
- The dashboard has **tracker to assess progress of implementation towards attainment of goals.**
- The impacts, achievement, and envisaged actions toward achieving its strategic objectives are also included.
- Useful for part of **“nationally determined contributions”**

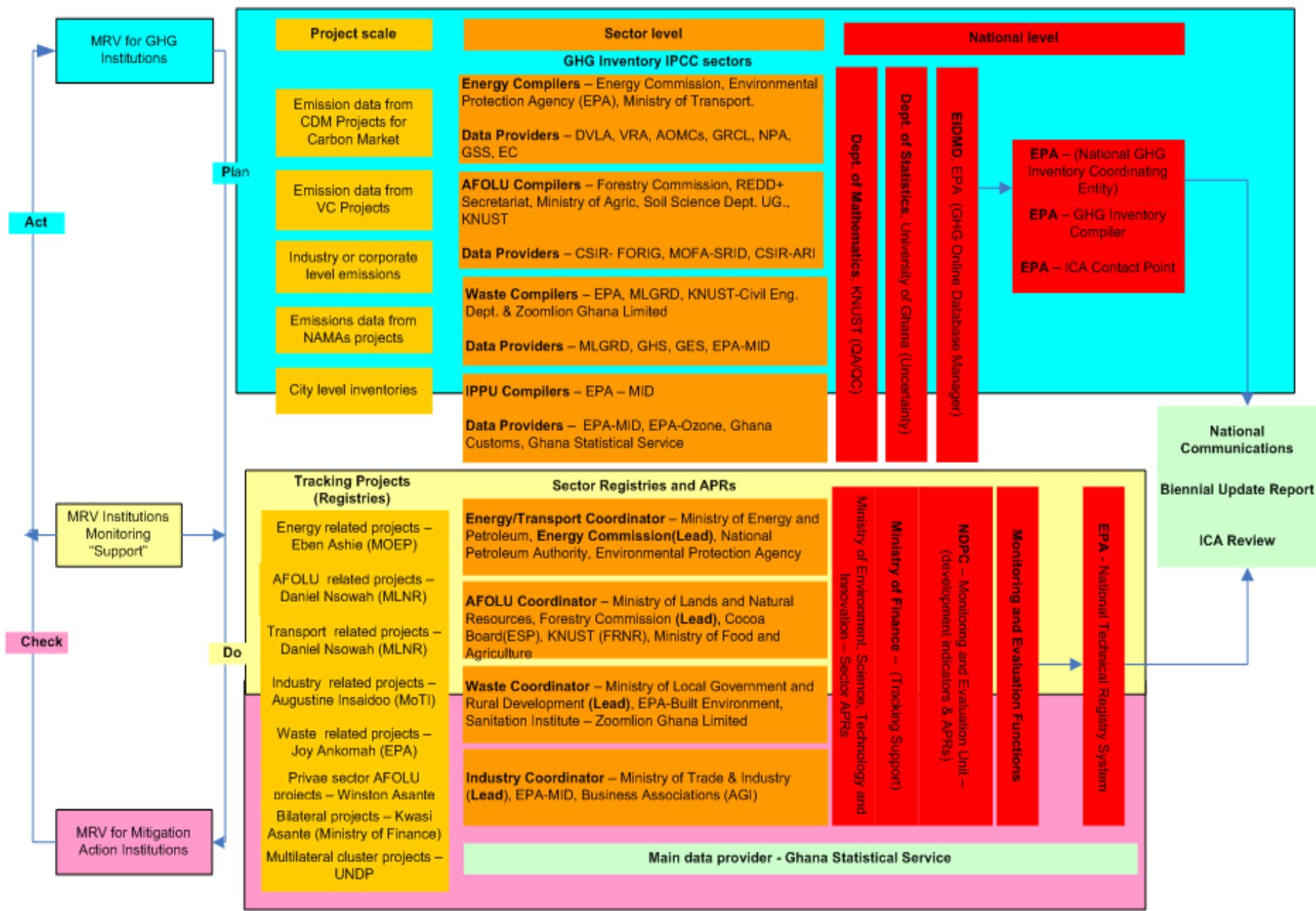
## Data flows into the database.....example of GHG related data

### Transmission and storage of “documentation”



Hint: All “specifics” are contained in the MOUs signed between the GHG inventory office and the inventory team institutions

## Functional Institutional Arrangements for Domestic Monitoring Reporting and Verification System





## “Some lessons learnt so far”

- Slow pace in establishing “data sharing network”.
- Data generation can be expensive. Funding is a problem. Our priority
- Difficulty in data sharing
- Data confidentiality??? Industry
- Setting up stand-alone IT infrastructure and maintenance can be expensive.



Thank you