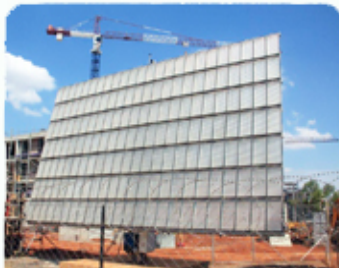


South Africa's GHG Inventory System – Overview

20 November 2020



Climate Change and Air Quality



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Presentation Overview

- ❑ MRV of emissions – overview of the building blocks
- ❑ Institutional Arrangements and the National System
- ❑ The South African Greenhouse Gas Emissions Reporting System (SAGERS)
- ❑ The GHG Inventory Improvement Programme
- ❑ The Quality Assurance Process

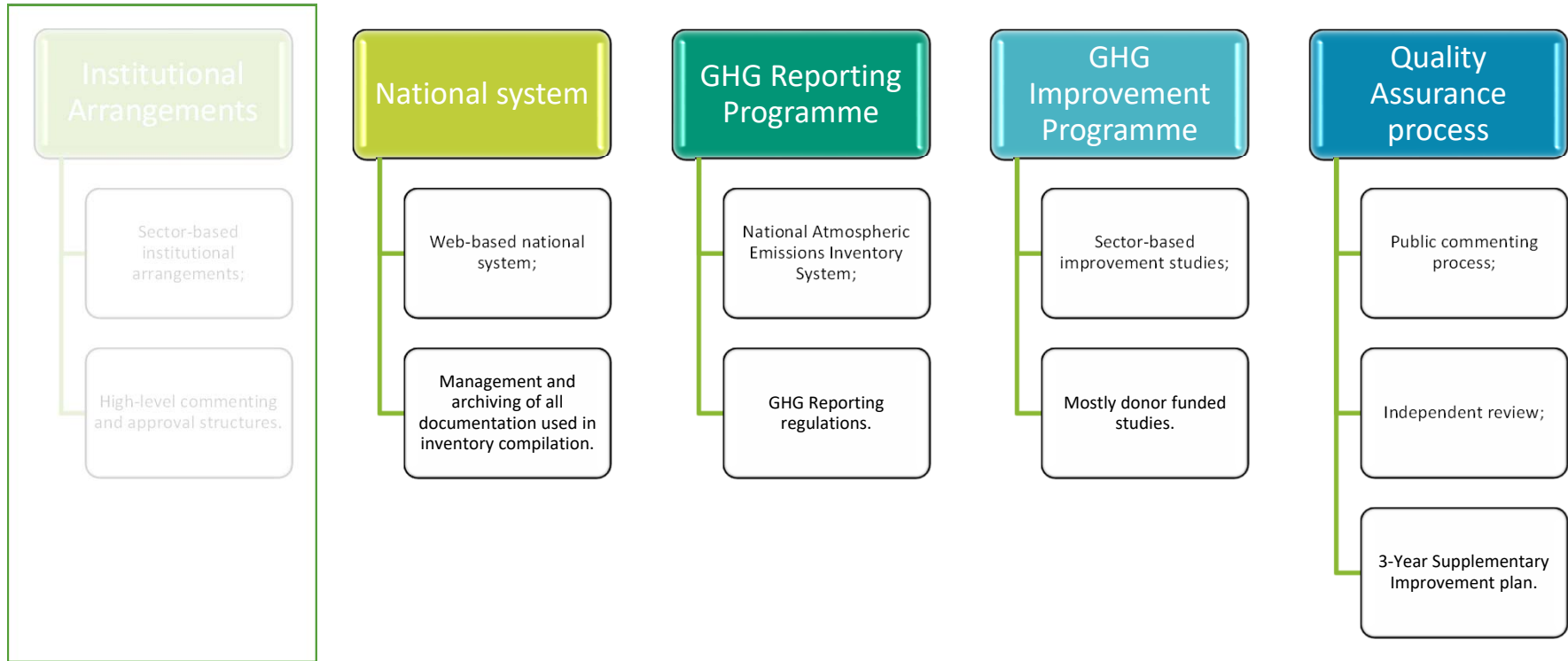


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MRV of emissions – Institutional Arrangements

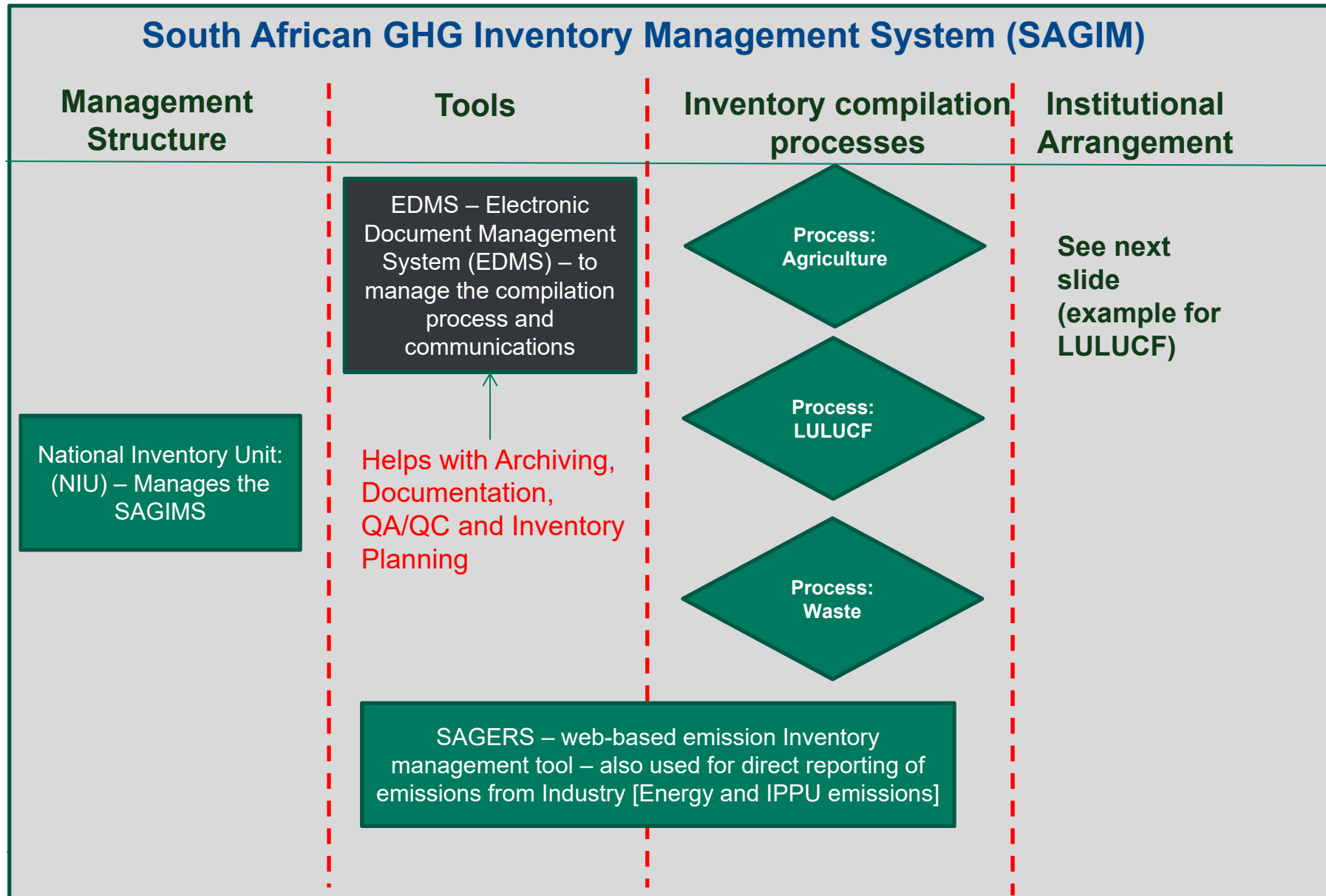


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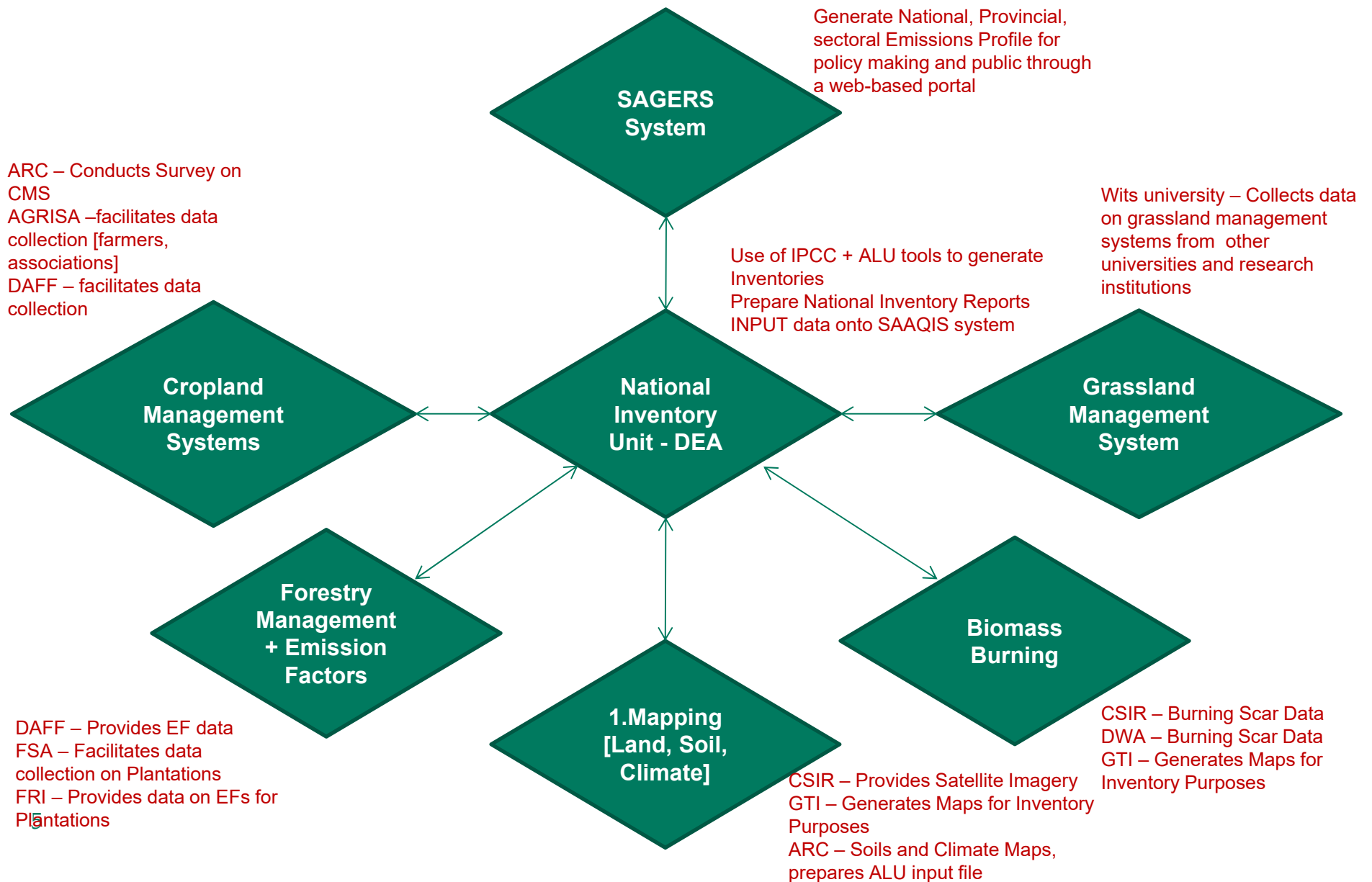
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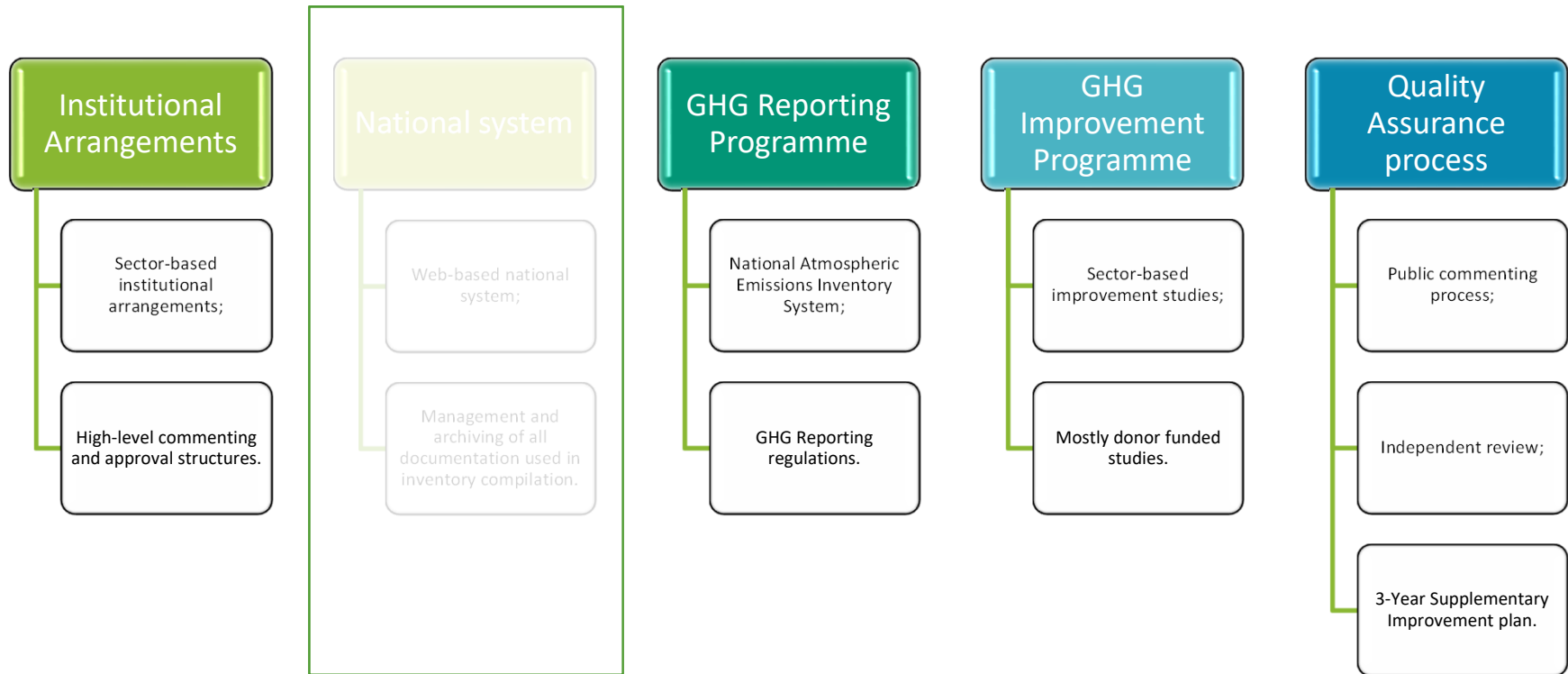
National System: Structures, Processes & Tools



IAs – Process Orientated LULUCF



MRV of emissions – National System

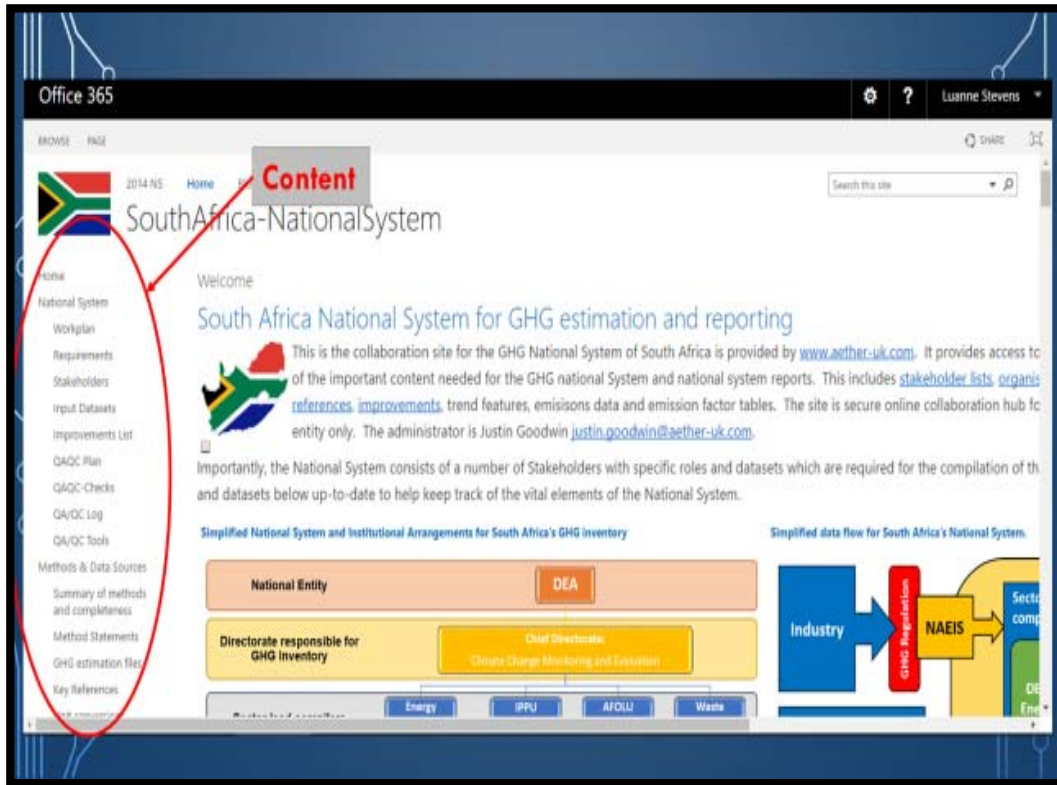


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Purpose of the National Greenhouse Gas Information System (NGHGIS)



- Improve QA/QC procedures
- Improve sustainability
- Improve institutional arrangements and data flows
- All information under one system
- Easy access to previous years calculations, data sources and stakeholder lists
- Aids in continuity even if staff changes occur
- Provide a framework for inventory processes so inventory updating is easier and can be completed every two years
- Improve transparency and traceability



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Annual Inventory Workplan

BROWSE TASKS LIST
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2014 NS **2015 NS** EDIT LINKS

Annual Inventory Workplan

Home

National System

Workplan

Reporting Requirements

Institutional Arrangements

QA/QC Plan

QA/QC log

Improvement Plan

Methods & Data Sources

Method Statements

Key References

Trends & Data

GHG Estimates

UK IEF analysis

TrendFeatures

EmissionFactors

Key Categories

Gallery

Help

Method Guide

Discussion

To-Do

Recent

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Today

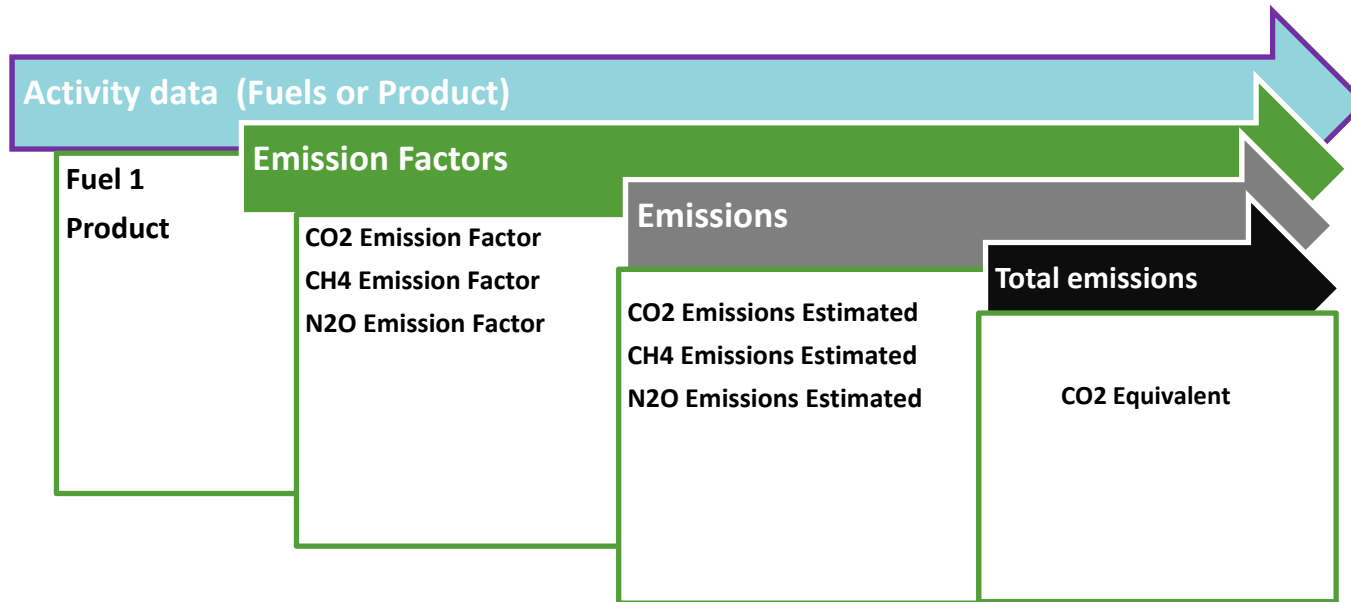
+ new task or edit this list

All Tasks Calendar Completed

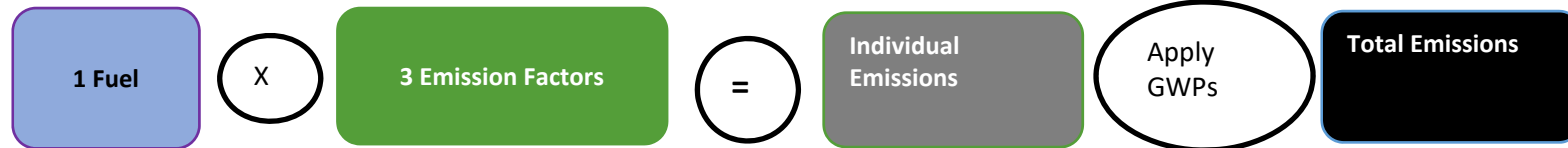
		Task Name	Start Date	Due Date	Assigned To
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Review of improvement plan	March 1	April 1	
<input type="checkbox"/>	<input type="checkbox"/>	h h h h	...		
<input type="checkbox"/>	<input type="checkbox"/>	Agree improvements	April 10		
<input type="checkbox"/>	<input type="checkbox"/>	Implement improvements	April 15	October 30	
<input type="checkbox"/>	<input type="checkbox"/>	Compile estimates	July 1	November 30	
<input type="checkbox"/>	<input type="checkbox"/>	Agriculture Peer review	Saturday	September 30	
<input type="checkbox"/>	<input type="checkbox"/>	QA/QC of estimates	May 1	November 30	
<input type="checkbox"/>	<input type="checkbox"/>	Official review of estimates	December 1	December 15	
<input type="checkbox"/>	<input type="checkbox"/>	Finalisation of data	...	December 20	

The GHG Estimation Files (Excel-based)

High Level Organisation of the Estimation Sheet for Tier 1 and Tier 2



OPERATIONS

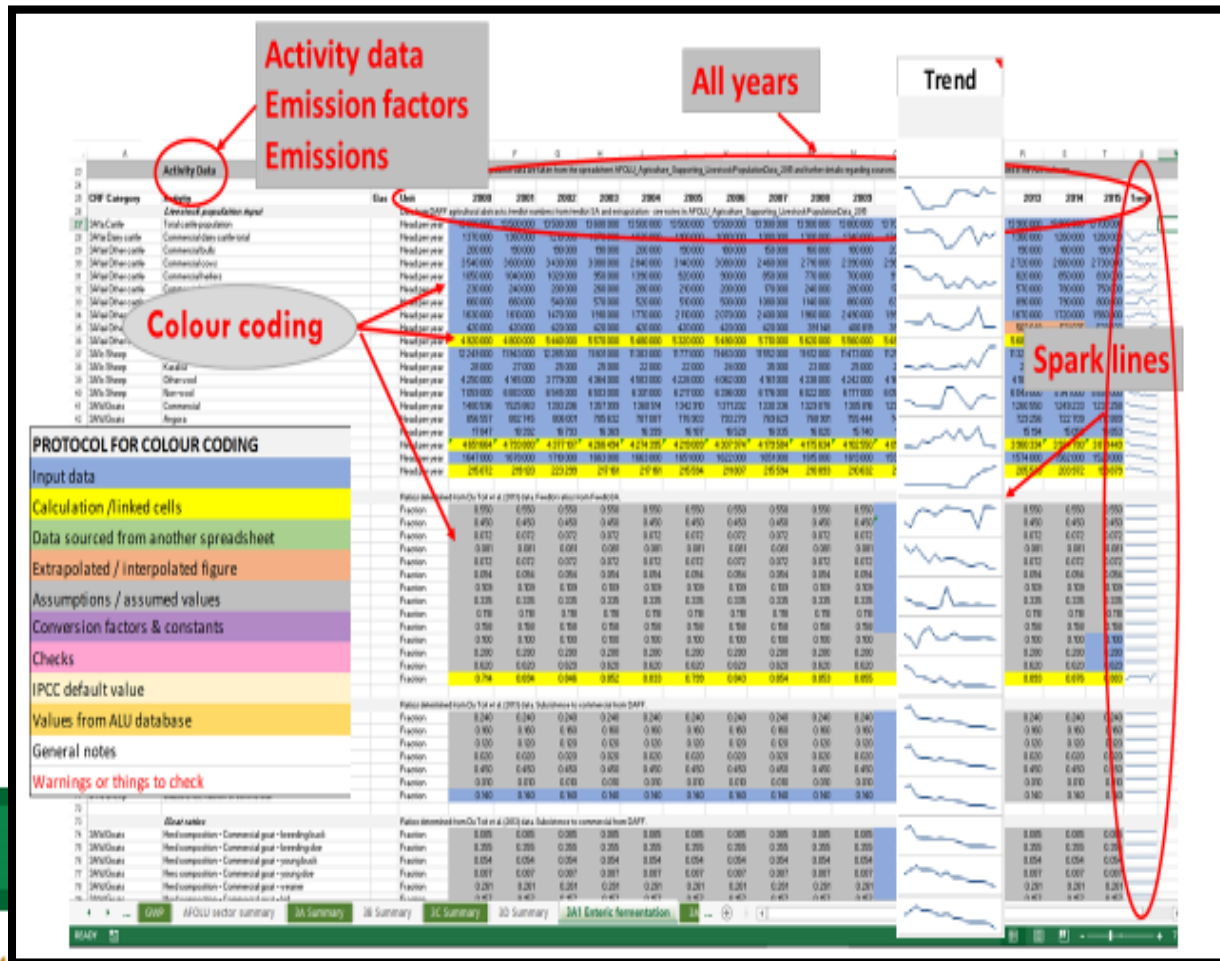


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The GHG Estimation Files (Excel-based)



- Calculation files have QC built into the files:
 - All years in 1 file so time consistency can be checked
 - Colour coding to indicate where all data comes from
 - Trend lines indicated
- System for tagging comments/problems/responses
 - QC review log sheet attached to each calculation file

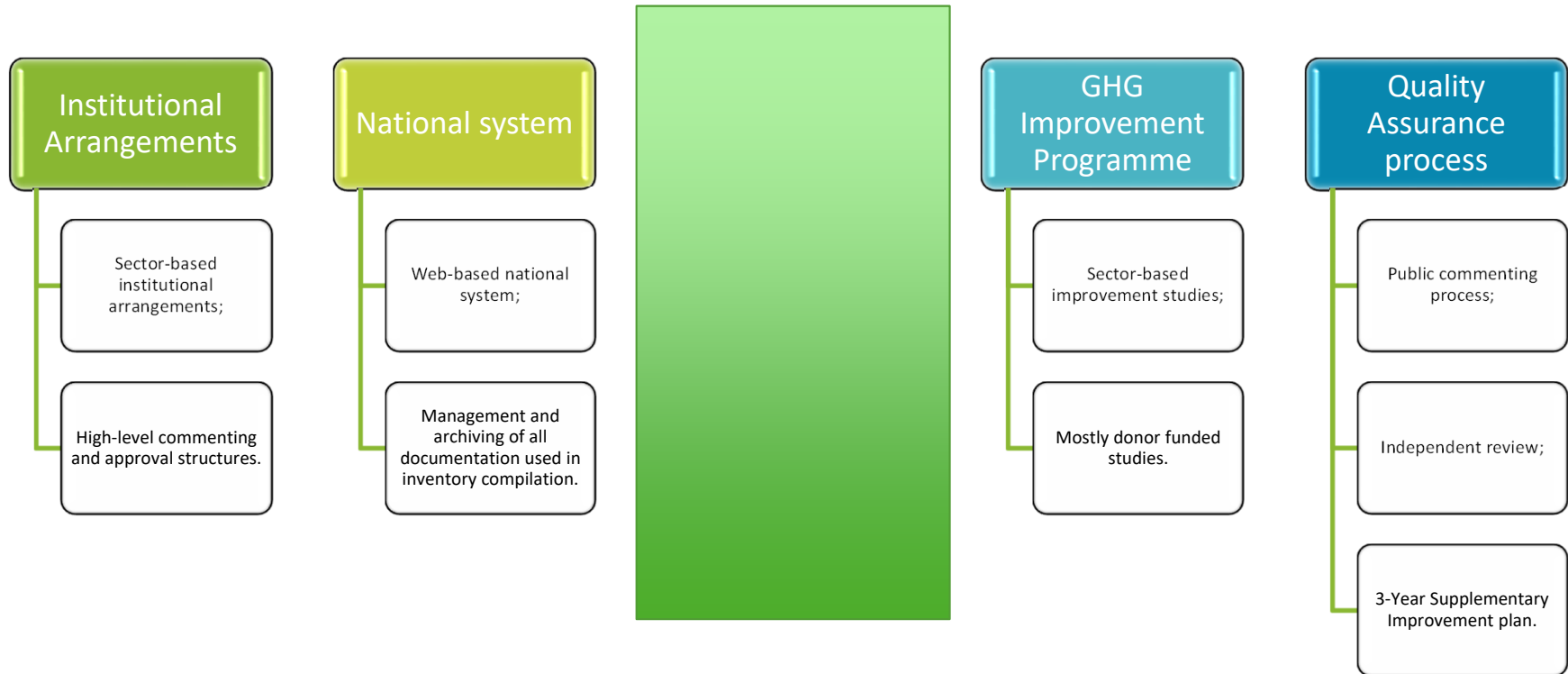


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MRV of emissions – GHG Emissions Reporting



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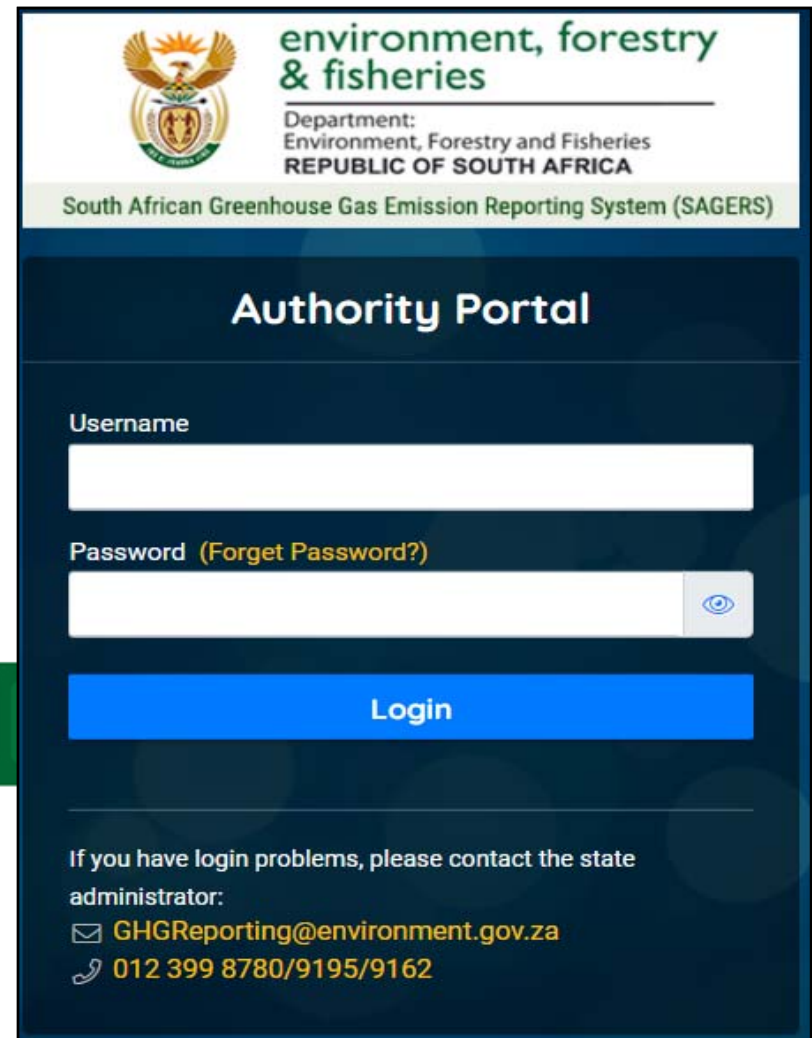


South African Greenhouse Gas Reporting System (SAGERS)

The South African Greenhouse Gas Reporting Emissions System is an online portal for the implementation of the online registration and reporting by industry in fulfilment of the National Greenhouse Gas (GHG) Reporting Regulations.

The reporting platform is based on the 2006 International Panel on Climate Change (IPCC) reporting methodology. The portal is implemented and coordinated by the Department of Environment, Forestry and Fisheries (DEFF).

The SAGERS serves as a data collection platform for activity data and emissions from industry by IPCC activities.



The screenshot shows the login interface for the South African Greenhouse Gas Emission Reporting System (SAGERS). At the top left is the South African coat of arms. To its right, the text reads "environment, forestry & fisheries" in a bold, sans-serif font. Below this, it says "Department: Environment, Forestry and Fisheries" and "REPUBLIC OF SOUTH AFRICA". A light green banner below the header contains the text "South African Greenhouse Gas Emission Reporting System (SAGERS)". The main content area has a dark blue background with the title "Authority Portal" in white. Below the title are two white input fields: "Username" and "Password (Forget Password?)". The password field has a small eye icon on the right side. A prominent blue button with the text "Login" is positioned below the password field. At the bottom of the page, there is a white text block that reads: "If you have login problems, please contact the state administrator: GHGReporting@environment.gov.za 012 399 8780/9195/9162".

South African Greenhouse Gas Reporting System (SAGERS)

19834 Editing In Process Ntate Jaane

1 Emission Information 2 Attachment 3 Review 4 Submission

Substance	Notation Key	Emission Factor Value(KG/TJ)	Amount Captured(Tonne)	Annual Emission(Tonne)
NATURAL GAS		92	0	19,31999613
N2O				
E.F. Tier: Tier 1				
DIESEL - (OCEAN-GOING SHIPS)		2	0	3,47472
NATURAL GAS		3	0	0,629999874

Substance: + Add Substance

Summary

- Ntate Jaane
 - CO2 230609.3
 - CH4 32.1115
 - N2O 6.6247
 - HAE
 - CO2 230
 - CH4 32.1
 - N2O 6.6
 - Back up gen se

Data Provider Overview

- Ntate Jaane
 - HAE
 - 1.A.3.a.i

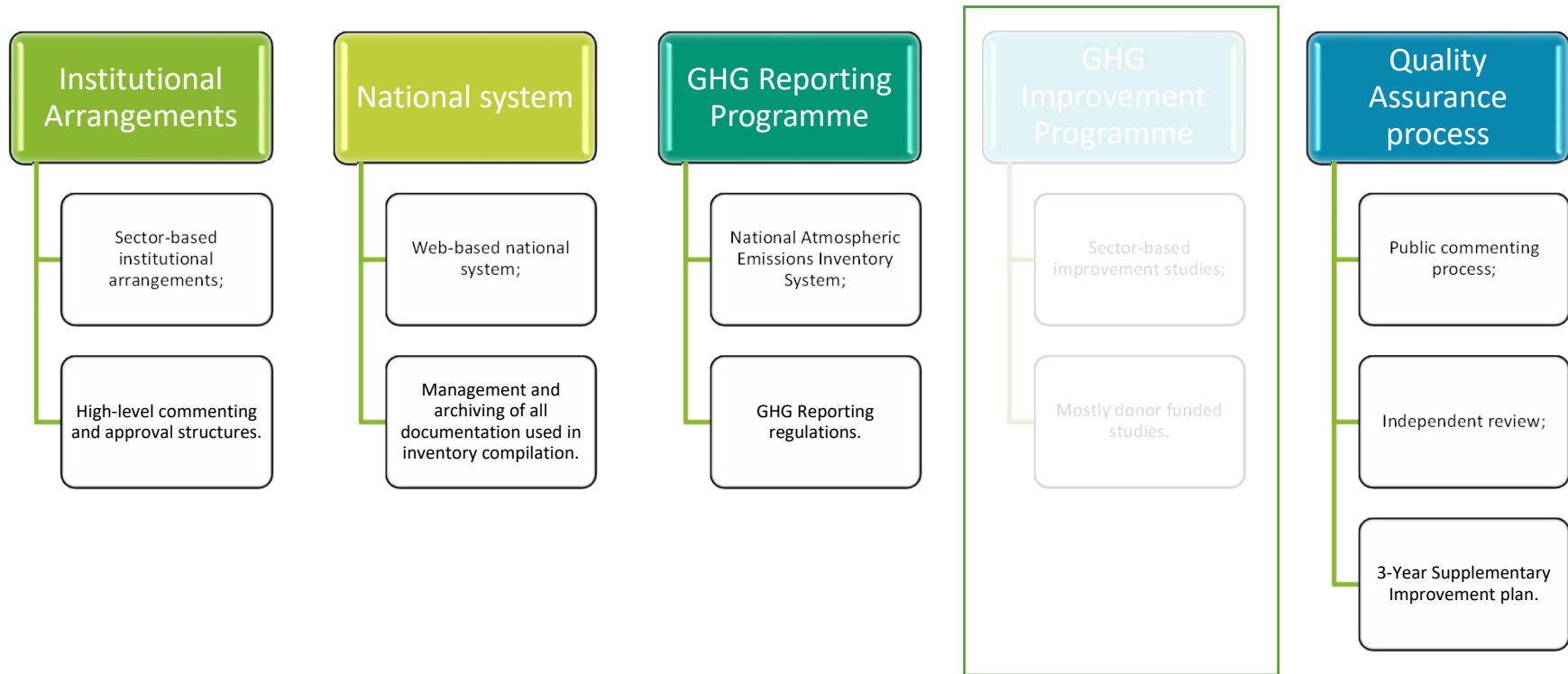


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MRV of emissions – GHG Improvement Programme



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GHGIIP Projects - Underway

Improvement Project	Baseline	Nature of methodological improvement	Partner	Completion date
Transport sector Emissions Modelling	Using IPCC default emission factors	Estimate Vehicle-Kilometre travelled by vehicle type	DOT, GIZ	December 2020
Waste-sector Data Improvement	2012 National Waste baseline Study	Activity Data and Waste model parameters (Solid waste and wastewater treatment)	Sasol	April 2020
Ferro-alloy production	Using a combination of IPCC default factors and assumptions based on material flows	Shift towards an IPCC Tier 2 approach	Xstrata, Ferro-Alloy Producers' Association	December 2020
Country-specific CO2 emissions factors for liquid fuels	IPCC Default Emissions Factors	Derive fuel Carbon content for all liquid fuels from Refineries	SAPIA, GIZ in collaboration with all refineries	December 2021
2 nd Energy Sector Fuel Consumption Study	Inconsistency and gaps in energy data	Improved energy activity data on fuel consumption for solid, liquid and gaseous fuels	DoE, GIZ	April 2020

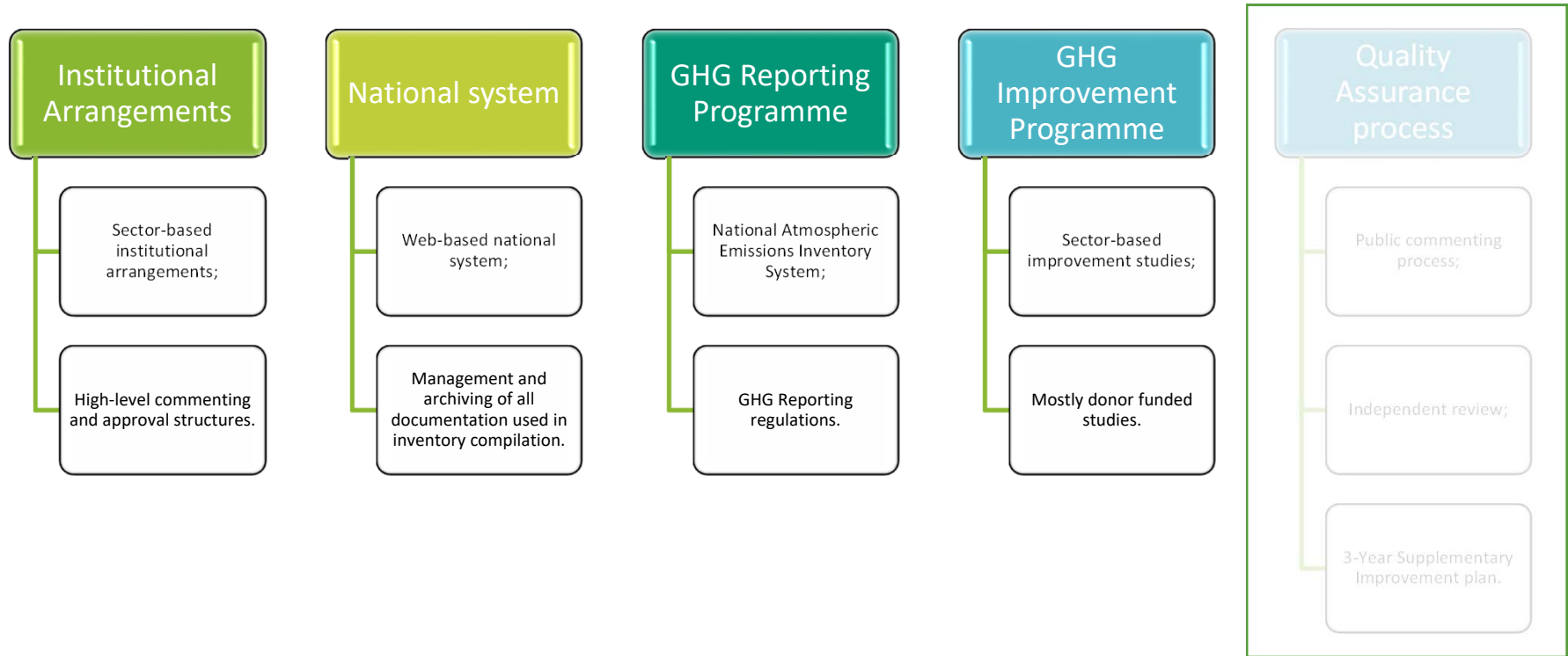


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MRV of emissions – Quality Assurance

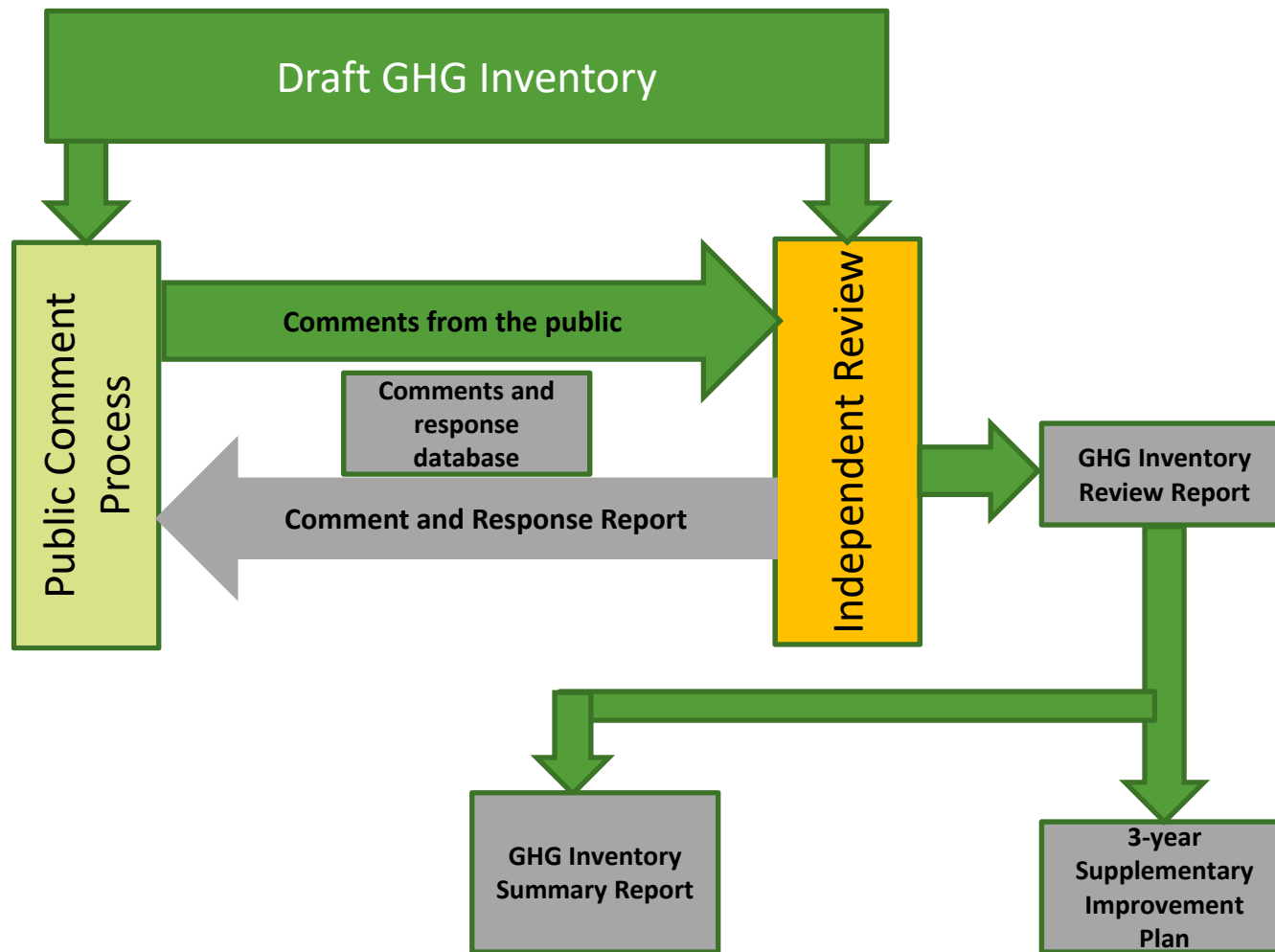


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Quality Assurance Process



Conclusions

- The GHG national system is building from the ad-hoc GHG inventory processes that started in 2008
- Most inventory compilation tools have been developed but documentation of procedures is still underway
- GHG Reporting regulations will influence how technical guidelines are developed
- Implementation of the web-based GHG inventory management system will have improved the accuracy, completeness and Consistency of the GHG Inventory



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Thank You



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