

South African experience in developing the national GHG inventory system: SAAQIS

A summary of ERC research

December 2nd, 2012, WRI: capacity building for national GHG inventories
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Inventory development status

- History
 - SA has compiled 3 GHG inventories
 - 1990 and 1994 – using 1996 IPCC guidelines
 - 2000 – voluntarily using 2006 IPCC guidelines (completed in 2009)
- Current status
 - Updating the inventory (using 2007 data)
 - Aim to develop sectoral inventories (e.g. in partnership with Department of Transport)
 - Database for annual rather than every 10 years

Why the move to a database

- streamline the compilation process by guiding the user through the required inputs;
- allow all data to be saved along with the calculations and metadata;
- allow user to see what emission factors and default values were used;
- store data from each year thus making it accessible for annual comparisons;
- allow for easy updates of the inventory; and
- enable scenario testing for mitigation planning.

New regulations and developments

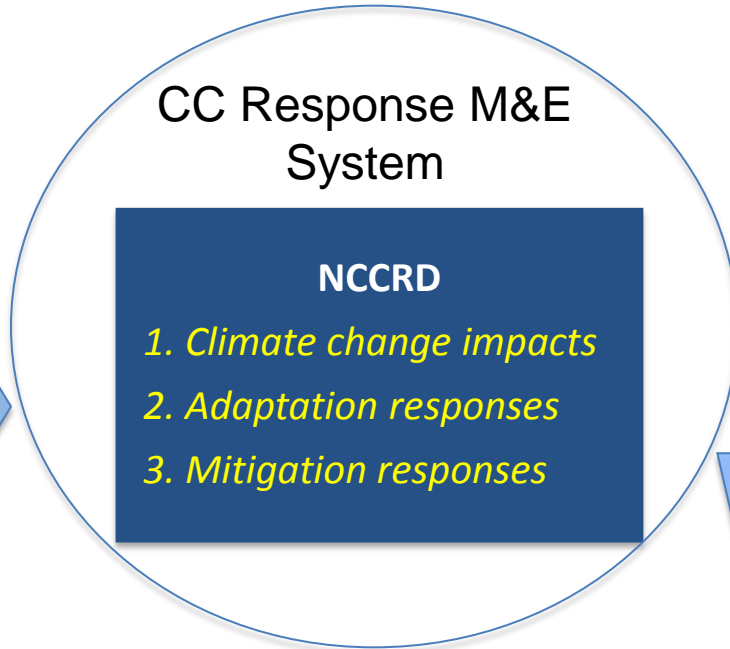
- The National Climate Change Response (NCCR) White Paper (White Paper) contemplates the development of “a national system of data collection to provide detailed, complete, accurate and up-to-date emissions data in the form of a Greenhouse Gas inventory and a Measurement and Evaluation System to support the analysis of the impact of mitigation measures” (DEA, 211: Section 6, (g)).
- This includes:
 - A web based system (part of SAAQIS) and
 - Mandatory emissions reporting for firms that emit more than 0.1 Mt of GHGs (annually) or that result in more than 0.1 Mt GHGs from electricity consumptions (annually)

South African Air Quality Information System (SAAQIS)

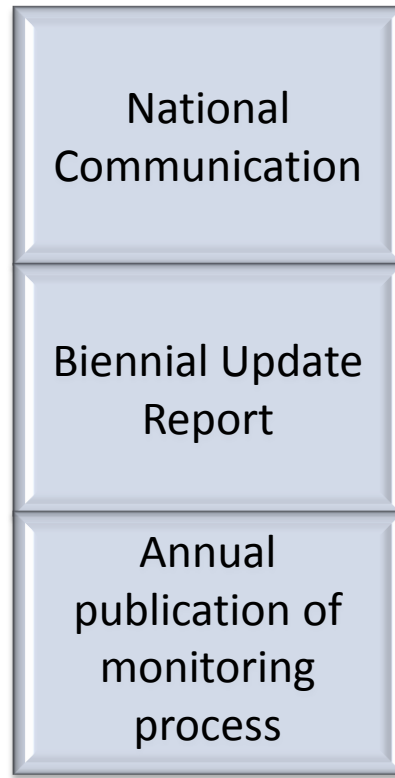
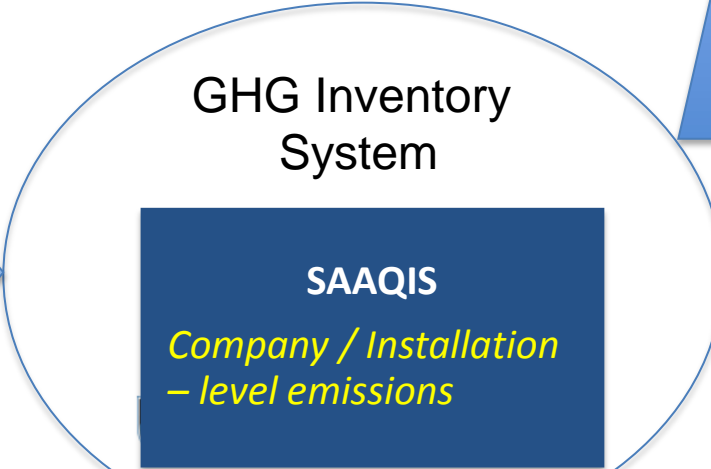
- SAAQIS: web-based emissions monitoring and reporting system that will provide accurate, current and complete information on all significant sources of identified atmospheric emissions, including greenhouse gas emissions.
- Driven by DEA but other national departments and industries in the Project Steering Committee
- Currently implementing Phase 2 of SAAQIS:
 - the design, development, testing and implementation of the National Atmospheric Emission Inventory, including the Greenhouse Gases (GHG) emission inventory.

SAAQIS in the context of SA's MRV system

- New & existing Databases
- Project owners & implementers
- Adaptation
- Mitigation
- Research institutions
- National departments
- Etc.



Companies, installations, municipalities, etc.



Air Quality and GHG emission challenges

- information gathering,
- data availability,
- data quality issues,
- technical constraints and
- resource constraints

Capacity issues

- Energy
 - New data collection: Regulations on the Mandatory Provision of Energy Data under section 19(1) of the National Energy Act (2008)
- Transport
 - Tier 2 methodology was used for road transportation (key category) & Tier 1 for others
- AFOLU
 - Used 1996 IPCC guidelines to calculate 2000 baseline- there is a project underway to update this
 - Also plan to use more SA specific data on livestock (Tier 2 approach)
 - coping project was initiated by Wits and DEA, and funded by BHC, to determine what would be required to update the Land Cover/Land Use component of the AFOLU sector

Capacity issues cont.

- Industrial Processes and other Product Use (IPPU)
 - The difficulty in collecting data was due to lack of cooperation by some industrial companies connected to the protection of confidentiality.
 - Mandatory reporting for firms that emit more than 0.1 Mt of GHGs (annually) or that result in more than 0.1 Mt GHGs from electricity consumptions (annually)
 - Voluntary collection under the CDP (also includes SoEs- Eskom and Transnet)– challenge to integrate this into the system
- Waste
 - Certain generators of waste are required to report on data using the online South African Waste Information System

....your comments and suggestions



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SAAQIS development phases

Phase 1

- Establish framework, core AQ ambient modules and scientific resource library

Phase 2

- Establish complete AQ ambient modules and public access national website solution

Phase 3

- Roll-out of Phase 1 & 2 outputs to all national stakeholders

Phase 4

- Establish core emission modules, EIA library and permits archive

Phase 5

- Establish complete emission modules and International reporting module as well as the media archive

