



SAEON
Data Management

University of the Witwatersrand
13th September 2010

INFORMATION MANAGEMENT

A key focus area for SAEON

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SAEON

South African Environmental
Observation Network

SAEON

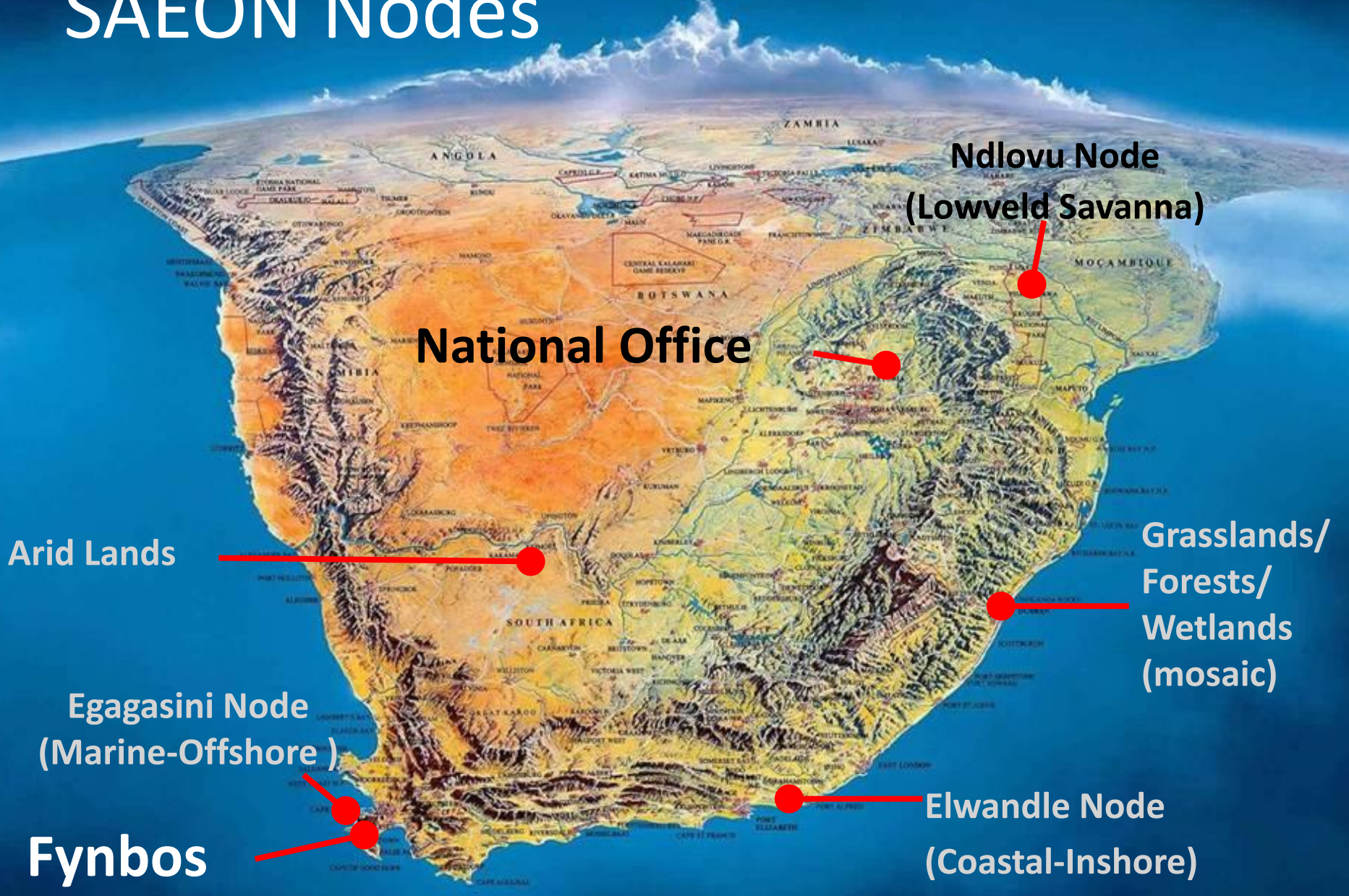
Established to provide terrestrial and marine environmental observation in order to monitor and understand global change to inform decision making

Objectives

- Manage an information network to secure long-term data for current and *future analysis* of environmental change
- Observation aimed at identifying the drivers of change, and monitoring and understanding their impact over time
- Building the knowledge society of the future through developing capacity



SAEON Nodes



**Ndlovu Node
(Lowveld Savanna)**

National Office

Arid Lands

**Grasslands/
Forests/
Wetlands
(mosaic)**

**Egagasini Node
(Marine-Offshore)**

Fynbos

**Elwandle Node
(Coastal-Inshore)**

SAEON's VISION

*A comprehensive, sustained, coordinated and responsive South African Earth observation network that delivers **long-term reliable data** for scientific research and informs decision-making for a knowledge society and improved quality of life.*



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Metadata

- Metadata are defined as the ‘data about data’
- The purpose of metadata is to describe data so that they can be used in the future with no confusion about its content or purpose
- Metadata can be created for a vast range of electronic and physical items such as raw data, books, CDs, DVDs, images, maps, database tables, research projects and web pages
- A number of different fields can be captured and constitute metadata



Typical Metadata fields

Title	Subject	Date	Creator
Individual	Organization	Address	Contributor
Keywords	Abstract	License	Usage Rights
Methodology	Language	Format	Object Name
Attribute Name	Definition	Type of Value	Units
Location	Longitude	Latitude	Start Date
End Date	Temperature	Taxonomy	Online distribution
Metadata standard	Custodian	Contact Information	Sampling technique



Metadata Standards

- Metadata elements grouped into sets and designed for specific purposes are called *metadata schemes*
- For every metadata element, there are rules governing the content of that element, representation and allowed content
- Many different metadata standards exist and are applied to specific types of data – domain specific



Metadata Standards

Standard	Application
Darwin Core	Geographic occurrence of species and the existence of specimens within a collection
Dublin Core	General Purpose
EML	Ecological data - species
ISO19115	Geographic information
SANS1878	Spatial data
FGDC	Geographic data



SAEON Data Portal

- The SAEON Data Portal is a collaborative platform for the sharing of data and metadata
- It provides extensive search capabilities which can be tailored to serve specific user communities
- It provides support for domain specific metadata standards
- Designed to integrate data from different sources, in different formats, scales and resolutions, into an integrated product



Data Archiving

- Data archiving is critical for the long-term preservation of data
- The Portal provides a platform to archive data and make it publically available for future use
- It can be used for archiving data until the project is complete – Backup tool
- Platform for researchers and students to access other datasets which are of use for their research
- The Portal allows the user to search through 1000s of metadata records, stored in a huge variety of locations



Meta-analysis

- Potential to access multiple datasets which can be used for meta-analysis – no fieldwork needed
- Projects or surveys can be repeated – short-term now could mean long-term in a few years time
- Data archiving and accurate metadata is needed to make these follow-on's successful and worthwhile



Data Access

- SAEON promotes the responsible archiving and broadest possible dissemination of data
- Data archived with SAEON can fall into the following groups:
 - Publically available
 - Sensitive data
 - Embargoed data
- Data provider can specify the conditions access
- Metadata for sensitive or embargoed data will be available, with data owner contact details





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CoGIS, SAEON, CSIR, and Stakeholders



What is CoGIS?

CoGIS is a collaborative platform for the sharing of spatial data and its meta-data. It is also capable of handling non-spatial data and document content, and provides support for additional domain-specific meta-data standards. It provides extensive search capabilities that can be tailored to



What is SAEON?

The South African Earth Observation Network (SAEON) is a major user of the CoGIS portal. SAEON consists of a number of biome-specific nodes, located throughout South Africa. SAEON's mandate includes long-term earth and environmental observation, education, and information management in support



CoGIS Stakeholders

In addition to SAEON the CSIR is a major contributor to the development, maintenance, and extension of the CoGIS platform. Past contributors include the Department of Mineral and Energy Affairs (DME) and the National Research Foundation (NRF). Possible future

Searches

- [Advanced Search](#)
- [Community Search](#)

« February 2010 »

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MinX

MaxX

MinY

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MetadataCollection

Title	Type
MetadataCollection	Collection
Monthly bird lists and bird arrival dates, Birmingham, Timbavati	Metadata
Manyeleti vegetation surveys 1989-1991	Metadata
Nest mounds of the granivorous harvester ant <i>Messor capensis</i> , Tierberg, 1991 -2005	Metadata
Rainfall data for Manyeleti Nature Reserve 1985-2000	Metadata
Andover game Counts, 1983-2003	Metadata
Aerial game counts	Metadata
Temperature data - Antares Field Guide Training Centre, Balule North Nature Reserve	Metadata
Climatic data for Phalaborwa 1960-2007	Metadata
Quality measures on and off <i>Messor capensis</i> mounds	Metadata
Rainfall - Birmingham Farm, Timbavati	Metadata
Manyeleti Nature Reserve Game Count	Metadata
Klasierie VCA 1996-2006	Metadata
Rainfall data of the lowveld	Metadata
Rainfall and Temperature data - Klasierie Private Nature Reserve	Metadata
Palaborwa Mining Company/ Phalaborwa Bird Club Bird Counts 2003-2007,	Metadata
Cleared plots, Tierberg	Metadata
Andover Rainfall Data 1985-1997	Metadata
Monthly rainfall, temperature and humidity data - Hans Hohelsen Research Facility, Orpen	Metadata
Species cover 1988-2006, Tierberg Research Center	Metadata
Andover Vegetation Surveys	Metadata

Searches

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Cape Vulture Monitoring data - De Hoop Nature Reserve

 — filed under: [Western Cape Biodiversity Conservation Fauna Land-use Bird Demography Fynbos Wildlife management Cape Vulture Gyps coprotheres vulture](#)

Type EML
Metadata Title Cape Vulture Monitoring data - De Hoop Nature Reserve
Date 2006-01-23 00:00:00
Organization

Abstract The Potberg Cape Vulture population on the De Hoop Nature Reserve has been monitored since 1972 and on a more regular basis since 1977. The dataset consists of the numbers and demography of the population as well as breeding records including breeding success.

Keywords Western Cape Biodiversity Conservation Fauna Land-use Bird Demography Fynbos Wildlife management Cape Vulture Gyps coprotheres vulture

Online**Resource****Scale****Custodian** [SAEON](#)**Contact****Person****Portal****Contact** [root test user](#)
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Summary

- SAEON Data Portal provides an opportunity for accessing data which has already been collected, or preserving your data for future use.
- Data archiving and accurate metadata for each of your datasets will mean less work for you in future when revisiting your data.
- Detailed metadata will allow follow-up projects to be set up in such a way that the data can be compared and analyzed over a long time period.
- Student projects can be registered with the SAEON GSN or actually with a SAEON node if your topic is in line with the monitoring work of the node.



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