

Knowledge and Information Management

Session 3: Emerging opportunities for NCA and related initiatives in South Africa

Why do we need Natural Capital Accounts when we have State of Environment Reporting?

A presentation to the National Natural Capital Accounts (NCA) Forum, 10-11 July 2019, Statistics South Africa Auditorium, ISibalo House, Koch Street, Salvokop, Pretoria



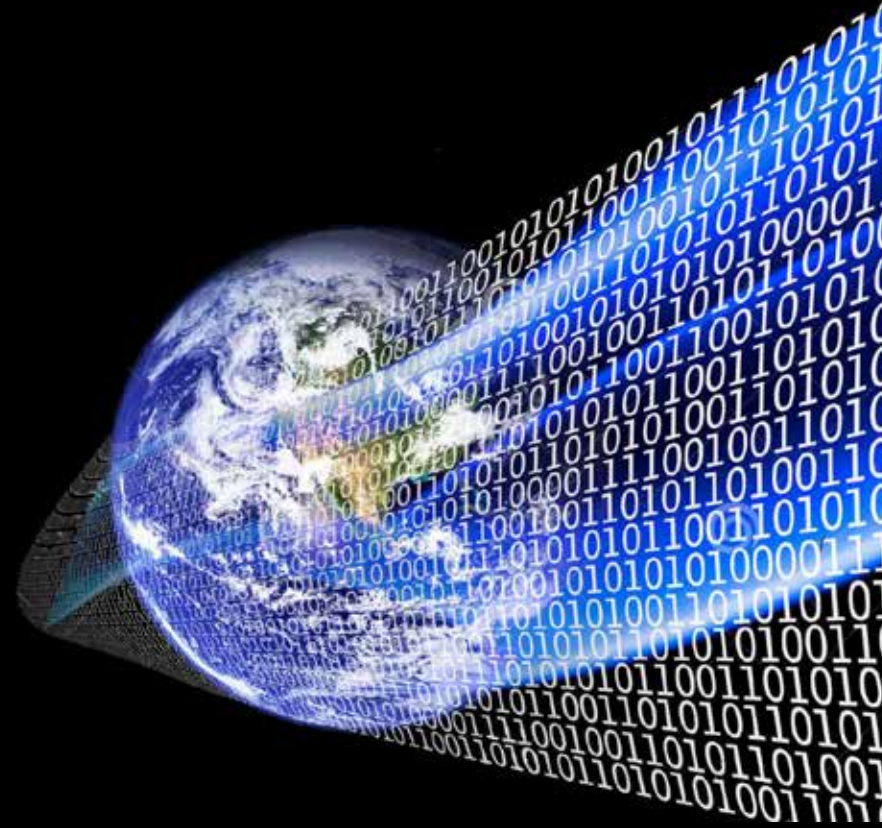
environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Bringing South Africa's
State of Environment
Reporting
Into the
Information
Age



South Africa's Policy on State of Environment (SoE) Reporting



“At present there is no comprehensive and systematically analysed information available on the state of the environment to use in developing policy and identifying priorities”

(RSA, 1997, White Paper on Environmental Management Policy)

South Africa's Policy on State of Environment Reporting (SoER)

The 1997 White Paper on Environmental Management Policy contains specific policy relating to SoER

- Information on the state of the environment and activities with an adverse or damaging effect on it is essential for effective environmental management, protection and coordination.
- The Department must monitor the state of environment;
- The Department must report on the state of the environment;

White Paper on Environmental Management Policy

Department of Environment Affairs and Tourism
July 1997

FOREWORD

When the Rio Earth Summit convened in 1992 the world came of age. The decision to adopt and promote Sustainable Development was a defining moment in the history of social progress, peace and development. The seminal agreements reached at that August summit and the strategies adopted to achieve them in the 21st century and beyond, could not have come at a more opportune moment for the billions of people on the planet. They represented an idea whose time had come.

The Rio agreements moved us, the world's people, closer to the objective of living in harmony with our environment. At Rio we affirmed the reality and truth that development and environmental issues and goals are one. Indeed, we demonstrated that the first principle of conservation is development; that sustainable development depends on good environmental management just as good environmental management depends on sustainable development.

At the time Rio was convened the world was crying out for good governance, for democracy, for human rights and for an improved quality of life for our generation and those to come. At Rio the world woke up to the reality that unless we incorporate environmental considerations into our development planning, implementation and evaluation, the future of our species, and of all the other species that constitute the bio-diversity and natural balance of our planet, cannot be assured.

World trends since Rio have shown that present and future prosperity, and the peaceful co-existence of peoples and their nation states, not only revolves around issues of exclusion from, and access to markets but also around issues of exclusion from, access to, and control of natural resources. While global resource availability is likely to keep pace with increased general consumption, frequent local and regional shortages will continue to threaten our existence and challenge present governance and management systems.

Indications are that the world's population will increase more than 20 percent between now and the year 2010. Future prospects become bleaker when we add to this a series of ominous facts. The fact that developing countries, which can least afford it, will contribute 95 percent of this population growth; that over the same period more than 45 percent of the world's people will be concentrated in the cities through relatively unplanned urbanisation processes; and that the largest sector of the population in the developing countries will be youths between the years of 15 and 25 years, of an age that is historically restive and a key source of instability. Unless action is taken now to ensure good governance and effective resource management and conservation many developing countries will not manage the threatening crisis.

Many situations point to the potential agents of crisis. Cholera has returned to Europe after 60 years. To clean the hot spots in and around the Black Sea alone will cost more than US\$18bn. Uncontrolled nuclear tests and the introduction of related technology in mining and other industries have left vast areas of land and thousands of kilometres of rivers heavily polluted. In some instances four to five times more radioactive than Chernobyl ever was.

Closer to home what began as a naturally occurring drought has resolved itself into a major conflict in Sudan. Similarly, competition over access to, and control of, environmental resources has more than



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The SoE Policy (Cont.)

- The state of the environment **must be reported regularly and periodically**;
- The state of the environment **must be reported transparently**;
- The state of the environment report **must provide accurate, timely and accessible information about the condition and prospects of the South African environment**;
- The state of the environment report **must increase public understanding** about the condition and prospects of the South African environment;

Goal 6 Information Management for Sustainable Development

Develop and maintain information management systems to provide accessible information to interested and affected parties that will support effective environmental management.

Supporting Objectives

Information management systems

- To conduct an information audit with the aim of developing an effective information management system directed at meeting user needs.
- To establish effective and efficient information systems, including the development of appropriate environmental indicators, to ensure informed decision making, measure progress in policy implementation and enable public participation in environmental governance.
- To strengthen and optimise the capacity of government to collect, analyse and use relevant information and knowledge for environmental management from all sources including formal, non-formal and traditional sources.
- To disseminate information through formal and informal channels including mass media in an accessible format.

State of the environment report

To report periodically on the state of the South African environment:

- To provide accurate, timely and accessible information about the condition and prospects of the South African environment
- To increase public understanding of these issues
- To report on the effectiveness of policies and programmes designed to respond to environmental change, including progress towards achieving environmental standards and targets.

The SoE Policy (Cont.)

- The state of the environment report must report on the effectiveness of policies and programmes designed to respond to environmental change, including progress towards achieving environmental standards and targets;
- Government will support both applied and basic research on the state of the environment;
- The department must develop indicators for the state of the environment and indicators to measure the success or failure in achieving policy goals.

Information management

Until the new legislation envisaged under Section 32 (2) of the Constitution is developed, Section 23 (2) (a) of Schedule 6 governs the right of access to information. This states:

Every person has the right of access to all information held by the state or any of its organs in any sphere of government in so far as that information is required for the exercise or protection of any of their rights.

Once the new legislation is developed it will govern the right of access to information.

Information on the state of the environment and activities with an adverse or damaging effect on it is essential for effective environmental management, protection and coordination. This information is necessary for developing and implementing environmental standards and legislation. The availability and accessibility of such information allows for prevention and mitigation. It also facilitates compliance monitoring and successful participation by interested and affected parties. Information may influence consumer behaviour and raise public and business awareness, encouraging compliance and the prioritisation of environmental issues.

Ways to promote the accessibility of information include the following:

- environmental audits and reviews
- eco-labelling
- eco-accounting
- institutional and community monitoring
- public education, awareness and debate
- industry education and awareness
- reporting and publication of information
- information exchange
- consultation
- notification of emergency situations.

Achieving effective environmental management and improving decision making requires good information. Government will commit itself to collecting, analysing and disseminating information.

Information is transmitted in a variety of forms including written, electronic and oral. Information collection strategies should aim to harvest information from a variety of sources including:

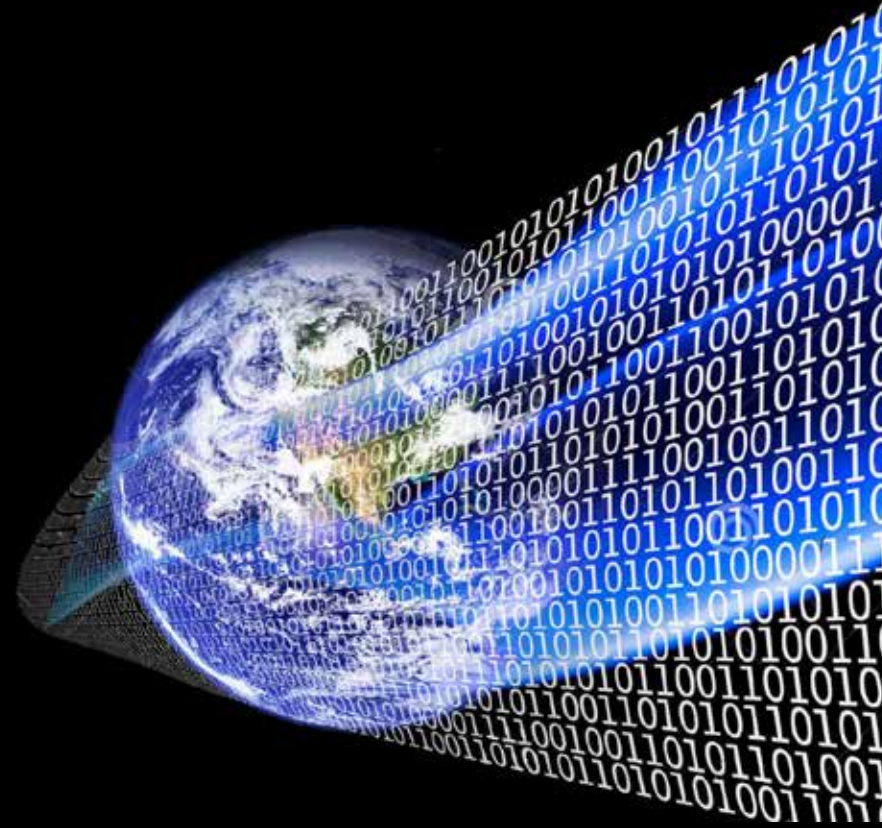
- scientific
- traditional
- local
- non-formal.

The format and process for disseminating information must be accessible to the particular user group concerned. In this respect attention must be given to both the content and the form or media used for transmitting information.

To meet user information needs the national Department of Environmental Affairs and Tourism will establish an information clearing house. It will also develop information management products to support decision making that will promote sustainable development.



The current status quo



“The technology we use to present and consume information has changed. The toddler who understands that tapping a glassy surface should make an image change demonstrates that technology is developing at an unprecedented rate, and unless we are constantly attentive we risk being left behind.”

(Zoe Sadokierski, School of Design, University of Technology Sydney, 2013)

State of environment reporting

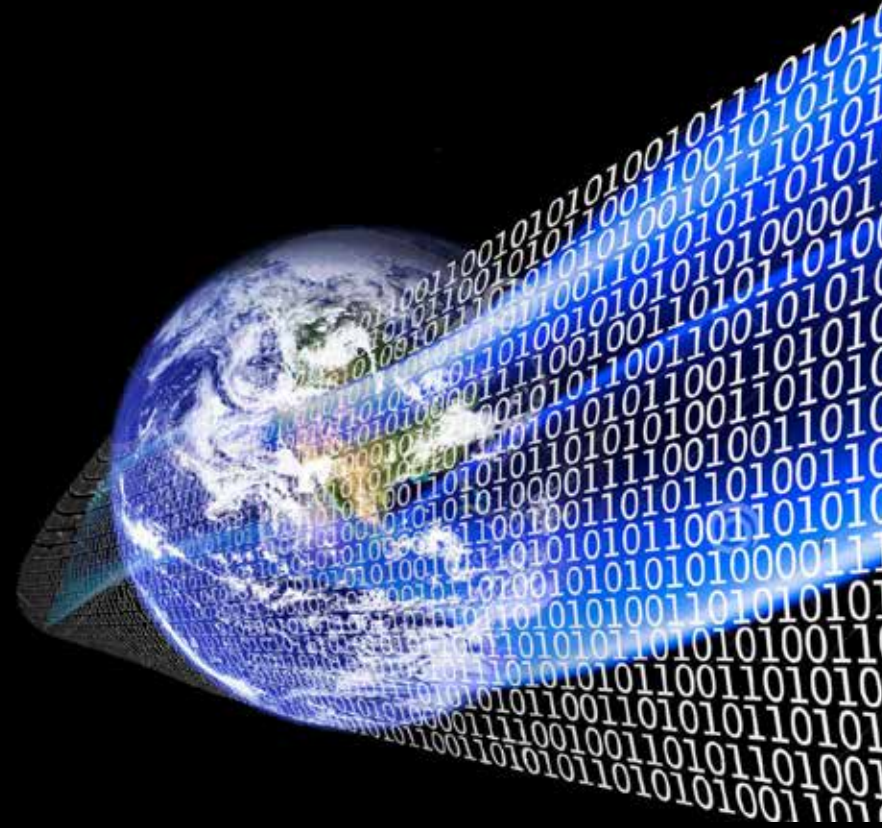
- **1999**, the “National State of the Environment Report on the Internet for South Africa” and its associated “State of the Environment South Africa 1999 - An Overview”;
- **2002**, “Environmental Indicators for National State of the Environment Reporting: South Africa 2002”
- **2006**, “South Africa Environment Outlook - A report on the state of the environment; and
- **2016**, the “2012 2nd South Africa Environment Outlook - A report on the state of the environment”



Although the department has been publishing SoERs from time to time since 1999 there appears to be a growing sense amongst internal and external stakeholders that these reports may be becoming less and less useful in this rapidly evolving Information Age that is now being referred to as the Fourth Industrial Revolution.



POST-2020 STATE OF ENVIRONMENT INFORMATION PROVISION



Summary introduction to the project aimed at
Bringing South African State of Environment Reporting Into
the Information Age

Problem Statement

- The current 5 year printed State of Environment reporting approach is outdated and is not effectively contributing to the creation and maintenance of an environmentally literate South African society.

The big picture

- The overall departmental goal –
 - Environmentally literate South Africans
- Success indicator –
 - A significant, measurable and sustained increase in public environmental literacy
- The SoE 2025 Project Objective –
 - The departmental state of environment information provision system is an important contributor to improved South African environmental literacy

SoE 2025 Success Indicators

- A significant, measurable and sustained increase in environment information provision system **website visits**;
- A significant, measurable and sustained increase in environment information provision system **website visit time**;
- A significant, measurable and sustained increase in **downloads** from the environment information provision system website;
- A significant, measurable and sustained increase in **visitor diversity**.

Project Strategy

- Start with a **basic web-based information reporting system** with basic automated functionality (e.g. live-linked documents, websites, glossary) and plan for continuous improvement and development as technology and user needs change.
- Identify the **current key target user groups**, establish what information they want and how they want it and respond accordingly.
- Identify the **desired new target user groups**, establish what information they want and how they want it and respond accordingly.
- Increase the user base with information that caters to **knowledge gaps and new and emerging issues**.

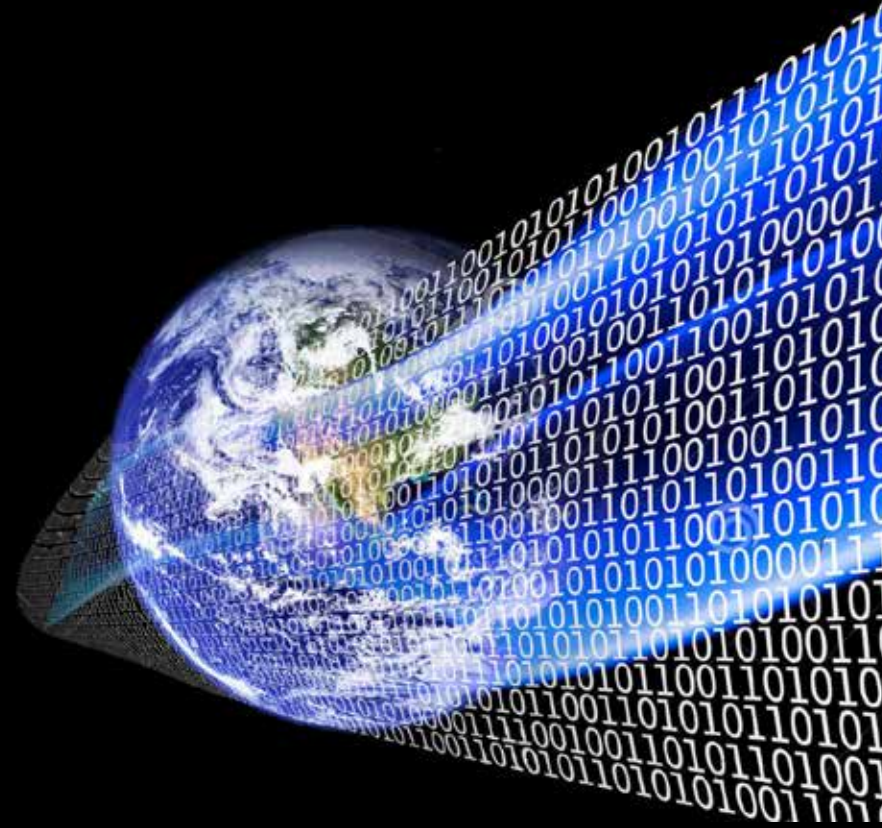
Project Strategy (Cont.)

- Find ways of presenting information in ways that interest and **engage the youth**.
- Find ways of engaging users in **fun learning activities** – games, scenario generators, etc.
- Provide for two-way **interaction** – user registration, user notifications, warnings, etc.
- Provide for **citizen science** input.
- Facilitate regular user **feedback**.
- Run focussed **awareness-raising campaigns** around identified areas of low awareness.
- **Monitor** the basic success indicators and **adjust the strategy accordingly**.

Project Phasing

Phase	Description	Success Indicator	Means of measure
Phase 1: The Design Phase (April 2019 to March 2020)	The participatory development of the detailed description and plan for practical implementation stages of a new approach to state of environment and outlook reporting that exploits the immense information management and dissemination potential of the information age in order to realise the project objective.	A detailed, broadly supported, project document	A DEA/Mintech approved project document
Phase 2: Stage 1 Development (April 2020 to March 2022)	The implementation of the first stage of the project implementation plan being the development, testing and launch of the initial components of the new state of environment information provision system	The SoE 2025 Stage 1 project is completed as planned, on time, and on budget	Project implementation progress reports and completion report
Phase 3: Operation and expansion (April 2022 to March 2025)	The operation and maintenance of Stage 1 components of the new state of environment information provision system and the design and implementation of approved additional components and functionality	Improved state of environment reporting system user satisfaction	Results of periodic user satisfaction surveys

POST-2020 STATE OF ENVIRONMENT REPORTING AND NATURAL CAPITAL ACCOUNTS



Natural Capital Accounting (NCA) is not just a tool for bean counters. NCA is a way of understanding our world, and the choices we make as a society.

“[The] State of the environment report [must] ...provide accurate, timely and accessible information about the condition and prospects of the South African environment; ...increase public understanding of these issues; [and] ...report on the effectiveness of policies and programmes designed to respond to environmental change, including progress towards achieving environmental standards and targets.”

(RSA, 1997, White Paper on Environmental Management Policy)

Natural capital accounting (NCA)

- NCA links natural capital to a country's system of national accounts. Using best available knowledge and robust, globally endorsed methodologies, it can help public and private sector actors to **understand more about the interactions between the economy, society and the environment**.
- NCA can be applied to **monitor progress** against achieving the goals of the National Development Plan (NDP) and the global Sustainable Development Goals (SDGs).
- It helps us **know more** by providing consistent, comparable information from one year to another - suitable for trend analysis, forecasting, footprint analysis, and integrated planning and assessment.

Natural capital accounting (NCA)

- It provides another source of statistical information that **adds to the richness of evidence** available to policy and decision-makers and policy-shapers.
- NCA is a tool to support South Africa **moving towards a green economy** as a sustainable development path in line with the country's NDP.
- This is particularly important given the growing recognition of the benefits that ecosystems and ecological infrastructure provide to people, including for **food and water security and adapting to the impacts of climate change**.

Conclusion

- State of Environment Reporting and Natural Capital Accounting are not in competition
- Natural Capital Accounts **add to the richness of evidence** available to policy- and decision-makers and policy-shapers

Natural Capital Accounts will be a fundamental component of state of environment reporting in the information age.

Let's Bring South Africa's State of Environment Reporting into the Information Age



**Thank
You For
Your kind
Attention**