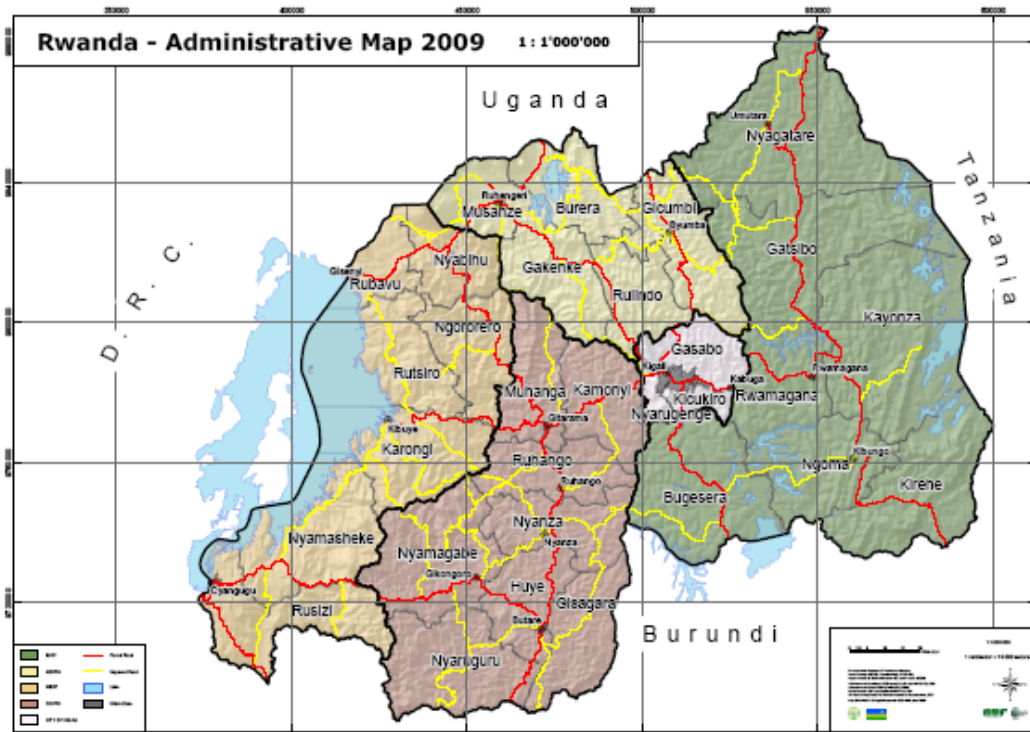


BACKGROUND AND INTRODUCTION

Overview of Rwanda

Rwanda is located in Central Africa between latitudes 1°04' and 2°51' south and longitudes 28°45' and 31°15' east. Its surface area is 26,338 km². The average population density in 2002 was 321 people per km² (INSR and ORC Macro 2006) and the physiological density (people per area of arable land) was in excess of 500 people per km² (UNDP and UNEP 2006). Figure 1 shows the administrative divisions of Rwanda.

Figure 1: Administrative divisions of Rwanda



Map production: REMA

The Rwandan relief is hilly and mountainous with an altitude averaging 1700 meters. The highest point on Mt Karisimbi is 4507 meters above sea level. Rwanda has volcanic mountains at the northern fringe and undulating hills in most of the central plateau. However, the eastern part of the country is relatively flat with altitudes well below 1500 meters. This relief pattern gives Rwanda a mild and cool climate that is predominantly influenced by altitude. Average annual temperatures are about 18.5°C and average rainfall is about 1,250 mm per annum. The lowlands of the southwest in Bugarama plain with an altitude of 900m are part of the tectonic depression of the African Rift Valley.

The country is predominantly agricultural with few options that would reduce the pressure on land resources. Agriculture contributes 47 per cent of the GNP and accounts for 71 per cent of the country's export revenue. It is the main source of income for 87 per cent of the population (MINAGRI 2006). Only 52 per cent of the land surface area is arable,

representing approximately 1,385,000 hectares (ROR 2004). High population density in fragile ecosystems exposes the country's natural resources to degradation.

The major problems facing the environment are pressures from the growing population on the natural resources such as land, water, flora and fauna and other non-renewable resources (MFEP 2000). This is most evident in land degradation, soil erosion, decline in soil fertility, deforestation, wetland degradation, loss of biodiversity and pollution (ROR 2004).

High population density and land scarcity has forced people to settle right along the ecologically fragile river banks leading to soil erosion and wetland degradation.



Photo credit: REMA

State of the environment reporting

Context and process

State of the environment (SOE) reporting provides information on the current state of the natural resources, underlying causes of environmental change and the responses to the changes. The aim of SOE reporting is to improve understanding of environment and sustainable development issues; and to contextualize and clarify environmental trends in order to inform decision-making. One of the fundamental characteristics of this sort of reporting is the identification of the linkage between the biophysical and socio-economic considerations within a sustainable development context.

Traditional SOE reports have the objective of providing information on environment state and trends as its key variables. However, over the past three decades this has evolved to include an assessment of the environment in a more integrated manner. Integrated environmental assessment tries to show the cause-and-effect linkages of human and natural actions and their impact on the environment. In turn, it highlights the impacts of the resultant changes in the environment on human well-being.

SOE reporting has been a legal requirement in Rwanda since 3rd April 2006. The law establishing the Rwanda Environment Management Authority (REMA) - Law No. 16/2006 in article requires REMA to *take stock and conduct comprehensive supervision of the environment, in order to prepare a report on the state of natural resources in Rwanda that shall be published every two years.*

This report is the first comprehensive SOE report for Rwanda. It is an integrated assessment and will provide a baseline for future reporting. It will also feed into other regional and global environmental reports such as the Africa Environment Outlook and the Global Environment Outlook.

The entire SOE process, from themes proposal and identification through to validation of the final report was a participatory process. It was a joint effort of REMA, lead agencies, major governmental and non-governmental stakeholders, the private sector and national experts in the different thematic areas. The participatory approach was an important component of the SOE development process from the themes proposal and identification to the validation of the final report.

REMA supervised the entire process which was made possible through support from the African Development Bank (AfDB) under the projet d'Appui Institutionnel à la Gestion de l'Environnement (PAIGER), the United Nations Environment Programme (UNEP) through the African Environment Information Network (AEIN) and the Government of Rwanda.

Methodology

The format used for the analysis is the driver-pressure-state-impact-response (DPSIR) framework. This format highlights a chain of causal links starting with **driving forces** (economic and human activities) through **pressures** (emissions, waste) to **states** (physical, chemical and biological) and **impacts** on ecosystems, human health and functions, eventually leading to political **responses** (policies, legal and institutional frameworks) (UNEP 2006).

As much as possible, the report has compiled and analysed data and indicators to demonstrate positive or negative change. Attempts have also been made to establish a baseline to inform any future assessments.

The report has used data from different sources such as policy and strategic initiatives including national planning and budget processes. By use of the integrated analysis approach, it aims to reinforce the cross-cutting nature of environment management further bringing together differing sectoral mandates in support of sustainable development.

The end result of this assessment will be more than just knowing about the state of the environment. It will provide policy-makers and other stakeholders some guidance on how to better manage the environment.

Format and content of the report

This SOE report is divided into three parts. Part 1 sets the stage for the report by providing an overview of the economy, the people and the role that the environment plays in supporting development and vice versa. It also discusses two economic themes that are particularly important to livelihoods: Land Use and Agriculture, and Industry and Mining.

In the second part, the focus turns to the natural resources that underpin economic growth and social development. It is set along five thematic areas: Biodiversity and Genetic Resources, Forest and Protected Areas, Water and Wetlands Resources, Energy Resources and Climate Change and Natural Disasters.

The third part of the report highlights the strategies (policies, legislation and institutions) the government has put in place to support the sustainable development. It also takes a look into the future through the use of scenarios.

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