

### The Environment and Economic Growth

Environmental management is essential for economic growth and the quality of that growth. The environment directly affects growth in the agricultural, horticultural, tourism and mining sectors; and more than 60% of Rwanda's export earnings are derived from coffee, tea, tourism and minerals. Additionally, the impact on the sectors reverberates throughout the entire population, especially women and youth.

About 57% of Rwandans, a majority of them women, live in abject poverty, less than US\$1 a day, with many households not having access to basic sanitation or water supplies.

All economic activities including production, consumption and waste disposal subsist in the environment. About 45% of GDP is attributed directly to the agriculture sector; subsistence farming provides food security and employment to about 90% of the population.

With a heavy dependence on agriculture changes in the environment can have detrimental effects, such as soil erosion, which can reduce productivity and growth in the sectors mentioned above and as a result affect the demand for non-agricultural goods in the economy.

One estimate of the economic loss as a result of soil erosion in Rwanda is 2% of the GDP in 1997. The poor management of farm lands on steep slopes, increased deforestation and intensive farming have all contributed to increased soil erosion.

For example, studies conducted in the 1980s and supported by USAID (the Ruhengeri Resource Analysis and Mapping Project) indicated that cropped hillsides lose as much as 80 to 100 m<sup>3</sup> of soil per hectare per year. These fields then become infertile after only three or four years, with consequent environmental impacts downstream, including silting of streams and rivers.

The long term benefits of farming methods and other sectors with potentially great environmental impact must be balanced with the conservation of resources such as water.

### Causes of Poverty

The Ubudehe survey conducted in 2005 identified five major causes of poverty: lack of land, soil infertility, weather conditions, lack of livestock (often linked to soil infertility) and ignorance. The first four causes are linked directly to the environment.

It identified the exit strategies out of poverty to be: paid employment, commerce and livestock. Unfortunately the primary sector of the economy, which involves changing natural resources into primary products. Most products from this sector are considered raw materials for other industries, it includes agriculture, agribusiness, fishing, forestry and all mining and quarrying industries.

The primary sector employs 83.3% of the active population in urban and rural areas, according to the Integrated Household Living Conditions Survey (EICV2). This therefore, does not facilitate the acceleration of poverty reduction with the desired speed.

#### Major causes of poverty identified Source: ROR 2007

Causes	Share of respondents (%)
Lack of land	49.5
Poor soils	10.9
Drought/weather	8.7
Lack of livestock	6.5
Ignorance	4.3
Inadequate infrastructure	3.0
Inadequate technology	1.7
Sickness	1.7
Polygamy	1.2
Lack of access to water	1.1
Population pressure	0.7
Others	10.6

### Sustainable Development Goals

The achievement of national and international sustainable development goals and effective support to poverty reduction initiatives will require Rwanda to integrate environment and natural resource management principles to the national planning process for economic development.

The recognition of the strong linkage between poverty and the environment is evident in one of the Millennium Development Goals (MDG 7), which seeks to integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources.

### Millennium Development Goal 7

**Goal:** Ensure environmental sustainability

**Targets:**

1. Integrate the principles of sustainable development into country policies and programs; reverse loss of environmental resources
2. Reduce by half the proportion of people without sustainable access to safe drinking water
3. Achieve significant improvement in the lives of at least 100 million slum dwellers by 2020

Source: UNEP 2006

## Poverty, soil erosion and food security

Rwanda is among three African countries that suffers from unusually heavy soil erosion; about half of Rwanda's farm land has shown evidence modest to severe erosion. Besides being acidic and the soils have become exhausted from continuous farming by farmers who have limited, if any alternatives.

Several studies have shown the immediate effect of erosion on land productivity. A loss of an inch of top soil results in a considerable reduction of productivity for the farmers and extensive erosion has the potential to turn fertile farm land into waste land. The deterioration of soil reduces the food security for people who depend wholly on agriculture. It is estimated that about 40,000 people fail to be fed due to soil erosion (ROR 2004).

The EICV2 shows a further 45% of children under five experience stunted growth, 23% are underweight and only 44% of the total population has sufficient access to proteins per day (NISR *et al* 2008).

Poverty is directly associated with environmental degradation and with reduced environmental products, poverty will deepen increasing the pressure on the environment even more resulting in a vicious cycle where the poor are both victims and agents of environmental degradation. The prevalence of rural poverty has important implications for agriculture and environment in that it is unlikely that the rural that the rural population can afford agricultural intensification of their holdings and this further limits production\*.

## FOCUS ON: Tourism

Rwanda's tourism offering is primarily eco-tourism, which means it is based on visits to protected areas. The sector has been experiencing a good steady performance since 2002.

The Volcanoes National Park is the flagship of Rwandan tourism, due to the mountain gorillas which are the primary draw attracting more to join organized treks, this makes gorilla tourism one of the largest foreign exchange earners. In 2007 earnings from tourism were estimated at US \$42 million, according to ORTPN, exceeding tea and coffee.

## Outlook on Environment and Economic Growth\*

Despite the global economic downturn, the performance of Rwanda's economy, in the medium term, has shown some degree of resilience by showing a strong record on sound macro-economic management, adequately implementing its ICT policy and effectively implementing EDPRS.

All of these efforts are helping to attract additional investments, thus expanding employment, which in turn directly contributes to reducing the number of people dependent on agriculture with positive outcomes on the environment.

As competence grows within civil society it enables active monitoring of economic and environmental performance. Civil society and other stakeholders make further use of the results of the ecosystem assessments and economic analysis under the Poverty-Environment (PEI) program to engage in evidence-based advocacy for environment and natural resources.

\*Rwanda State of Environment and Outlook – Our Environment for Economic Development

## Food Insecurity\*

(% of food insecure households by food economy zone)

Food Economy Zone	% Food Insecure Household in Food Economy Zone
Muvumba Agra	10 – 15%
Buberuka Plateau	16 – 20%
Eastern Agro-Pastoral	16 – 20%
Volcanic Highlands	16 – 20%
Buganza-Gisaka Plateau	21 – 25%
South West/Cyangugu	21 – 25%
Central Plateau/Mayaga	26 – 30%
Eastern Curve	31 – 35%
Southern Plateau	31 – 35%
Bugesera	36 – 40%
Crete of the Nile	36 – 40%
Lake Shore	36 – 40%

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## Environment and the Economy Policy Options

There has been notable progress in integrating the environment into EDPRS and some of the District Development Plans, and there is a need to appraise the top executives in the ministries and parastatals as well as the country's legislators on the success already made and what further actions are required to sustain integration of the environment into development. Thus, to ensure the overall promotion of the environment integration agenda, the following is recommended:

1. Institutionalize integration of the environment into policies, plans and programs as provided for in the Environment Management Policy: strengthen capacity of sector and district planners and environmentalists for environmental assessment, poverty-environment mapping, policy and economic analysis on various aspects of environmental degradation, environmental public expenditure review and ensure accuracy of environmental data, including its capture in future household surveys.
2. Draw upon the good practices and lessons learned in the Decentralized Environment Management Project and similar initiatives in the East African region to develop an effective mainstreaming strategy at the decentralized level.
3. Invest in strengthening the capacity to assess the costs of environmental degradation and how various taxes and subsidies affect the achievement of environmental sustainability, with the aim of developing suitable economic instruments to complement the command-and-control regime.