

CREATING INTEGRATED CLIMATE CHANGE POLICIES

THE ECONOMIC ISSUE DECISION MAKERS CAN'T AFFORD TO IGNORE

A healthy environment plays an essential role for human societies. Because climate change generates a significant impact on the environment, it is altering the basis on which our economies and societies function.

Rising temperatures and extreme weather events like hurricanes, floods, and wildfires destroy property and disrupt essential services like health care and education. Going well beyond immediate disruptions, climate change can destroy wealth,

exacerbate existing income inequalities and displace people permanently.

Without reducing emissions over the next two decades, the world will face an unprecedented impact on both humans and environmental systems. Policy makers and analysts need to consider current and future risks to find new solutions to promote a healthy, stable economy.



Tracking greenhouse gases



Identifying sources of emissions



Understanding the impacts



Finding policy responses

MEASURING WHAT MATTERS FOR A LOW-CARBON FUTURE

The System of Environmental-Economic Accounting (SEEA) is a statistical framework that allows decision makers to find effective solutions to low-carbon growth and a sustainable future on multiple fronts. The SEEA provides integrated and organized data for analytical techniques, modeling and cost-benefit analysis. Furthermore, the SEEA allows the tracking of policy success by a variety of relevant indicators that can be derived from the data.



The SEEA-Central Framework provides information on key drivers of climate change, e.g. economic activities using natural resources for production and consumption, as well as information on the generation of greenhouse gas emissions and impacts.

The SEEA-Experimental Ecosystem Accounting helps to understand how climate change impacts our ecosystems and the provision of ecosystem services to society. It allows users to measure the condition of ecosystems as well as the value of services provided, such as clean air and carbon sequestration.



SEEA air emissions accounts provide a full understanding of the economic drivers of climate change and inform the most effective pathways to sustainable growth.

SEEA energy accounts deliver valuable information on the energy products used and the energy efficiencies of various economic industries.

SEEA land accounts show changes in land cover and land use, which can be used to compare the benefits of land use activities with the resulting climate costs.

SEEA carbon accounts look at carbon stocks and sequestration and support analysis on greenhouse gas emissions, deforestation, land-use change and more.

SEEA environmental activity accounts record environmental protection expenditures, taxes, subsidies and transfers, and goods and services relevant for the understanding of policy responses and instruments.

FINDING POLICY RESPONSES TO THE BIGGEST CHALLENGE OF OUR TIME

Fighting climate change must include policy responses at different scales—global, national and local. However, all involve considerable costs. The SEEA helps decision makers find effective answers to address climate change impacts.



Mitigation consists of reducing emissions of greenhouse gases by changes to the economy or protecting and restoring sinks that store CO₂, such as wetlands.



Adaptation is the process of adjusting to a changing climate. It seeks to moderate or avoid harm to humans and help natural systems adjust.



Recovery and emergency involves addressing loss and damage from climate change impacts due to extreme events, such as hurricanes, or gradual changes, such as rising sea levels.

How much are we investing in the mitigation of climate change impacts?

What effect do expenditures on cleaner technologies have on air emissions?

What industries need to be targeted in climate change mitigation plans?

How effective are current regulatory instruments?

What impact is climate change having on our ecosystems and the value of the services they provide?

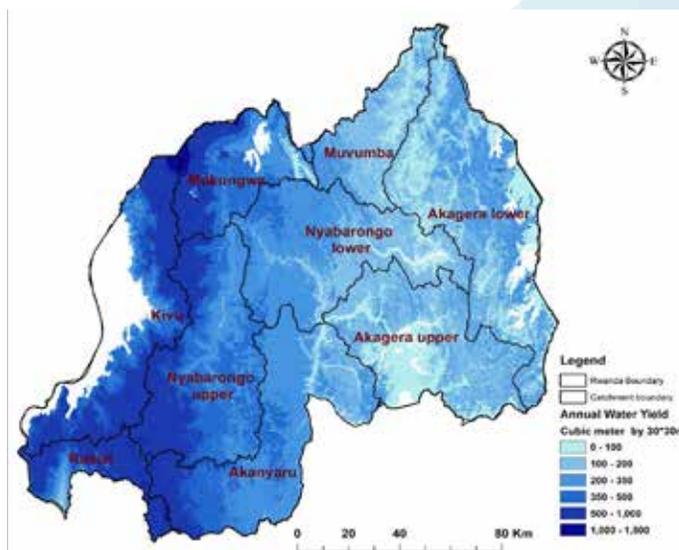
PROMOTING CLIMATE CHANGE RESILIENCE IN RWANDA

Concern over the impacts of climate change has been one of the motivations to start SEEA Experimental Ecosystem Accounting in Rwanda. While Rwanda has been endowed with abundant freshwater resources, water supply is becoming more variable and droughts and floods more common. Thus, with support from the World Bank Global Program on Sustainability, the Government of Rwanda compiled water accounts with an eye to developing more resilient catchments that can withstand the effects of climate change.

Over the last 25 years, increasingly erratic river levels have meant that the amount of fast flowing and destructive water flows has increased by 35%. Rivers are no longer able to meet a consumer demand throughout the year and Rwanda faces increased risks and costs of flooding.

Rwanda's spatially explicit water accounts are key to identifying and monitoring high-yield catchments vulnerable to flooding and land-slides. Since Rwanda has limited opportunities to influence

global climate change impacts, the development of resilient catchments that are able to withstand both global shocks and greater local pressures is a vital climate change adaptation strategy.



Source: Government of Rwanda (2019)

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Please visit seea.un.org, where you can find more information and e-learning on the SEEA and its policy applications.

Comments and questions are welcome.

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System of
Environmental
Economic
Accounting