

MOUNTAIN ADAPTATION OUTLOOK SERIES

Sustainable mountain development in East Africa in a changing climate



UNEP



Mount Elgon EbA site, Uganda

Summary

People who live in the world's mountainous areas are particularly vulnerable to climate change. In 2014 a global project that supports developing countries with mountain regions was launched to support the integration of climate change adaptation practices into development policies, plans and strategies. The project focuses on five mountainous regions of East Africa, Tropical Andes, Balkans, South Caucasus, and Central Asia.

This summary focuses on East Africa, primarily Member States of the East African Community and neighbouring countries with which the Community shares mountain regions.

Overview

The mountains of East Africa share the same characteristics as many other similar regions in offering a variety of ecosystems such as forests, scrublands and grasslands. Such areas are vulnerable to extreme natural events such as droughts and floods that can dramatically alter landscapes. The differences include that East Africa's mountainous areas support large human populations. One densely populated mountain area is the Ugandan side of Mount Elgon where the population averages 900 people per square kilometre. Mount Elgon is shared by Kenya and Uganda, and the high population density is due to the region's cooler temperatures, more stable and predictable rainfall and more fertile soils compared with adjacent lowlands.

The rivers that flow out of the mountains have significant, but largely unexploited, hydropower potential. Other economic opportunities in the mountain areas are related to hiking and wildlife-



based tourism. The magnificent scenery with its snow covered mountain peaks, glaciers and dense forests are a natural attraction for tourists. The famous mountain peaks of the area, including Mt. Kilimanjaro, attract increasing numbers of tourists and new initiatives, such as ecotourism, are being developed.

Mountain regions around the world are under threat from climate change and East Africa is no different. Many changes have already been observed, and severe impacts are increasingly taking place. According to the 2014 Intergovernmental Panel on Climate Change Fifth Assessment Report, the average temperature in Africa has risen by at least 0.5°C during the last 50–100 years. Other research notes that the temperature can be expected to increase by approximately 3.2°C by 2080.

Such an increase in temperature will have dramatic effects on the people of East Africa, including affecting the suitability of some commonly grown crops such as maize, and causing the need to introduce other crop types. East Africa's mountain glaciers have already shown dramatic declines during the last decades and increased temperatures will only accelerate the rate of melting. Since the 1990s the surface area of the

glaciers in the region has decreased by 80 per cent, and it is projected that glaciers will totally disappear within a few decades.

The last 30-60 years have also seen an increase in extreme weather events such as heavy rainfalls and droughts. Precipitation trends for East Africa have been inconsistent, although a general decrease has been observed for the long rainy season that runs from March to June. Nevertheless, future scenarios indicate a wetter climate for East Africa with fewer droughts. The expected increase in precipitation will increase the risk of flooding.

So far, the impacts of climate change have been seen in crop failures and famine, while the increasing number of floods and droughts has severely degraded productive agricultural land. With the majority of the mountain population living on small farms, these impacts will increase and also threaten buildings and infrastructure. The vulnerability of the mountainous areas, and the risks to the people who live there, calls for improved governance of mountainous areas that takes into account the effects of climate change in regions like East Africa.

Issues and problems in the mountainous areas of East Africa are generally dealt with through sectorial institutions related to tourism, agriculture and rural development, among others. There are no public institutions in any East African countries designed to address mountainous regions as distinct and specific areas. Some countries, including Kenya, Tanzania and Uganda, have policies related to mountain issues but climate change is not adequately addressed. There is much room for improvement.

Key Messages – What needs to be done

Climate change already affects East Africa's mountain regions

The mountainous areas of East Africa are densely populated due to the favourable natural conditions for agriculture. The population of East Africa depends on the mountains for various goods and services, including food and water. Due to climate change the region experiences extreme weather events such as flooding and droughts that alter the landscape and cause severe human, ecological and economic impacts.

Mountain governance systems are weak

East Africa faces mountain governance challenges, including lack of specific and direct policies about mountains and climate change. In addition, the majority of the countries in the region do not have mountain specific institutions to drive the region's mountain agenda. In as much as East Africa is bound by the goals and aspirations of the East African Community, the majority of the countries also belong to other regional economic communities such as the Southern Africa Development Community,



Snowcapped summit of Mount Rwenzori



Ol Doinyo Lengai mountain, Tanzania



Common Market for Southern and East Africa, and the Inter-Governmental Authority for Development. Such overlapping membership creates challenges of coordination while also stretching human and financial resources. Where regional and global policies exist, these are rarely domesticated at the country level for them to have legal effect.

The good news: Developing an East Africa Mountain Agenda

Steps are being taken to recognize the environmental, social and economic value of mountainous regions in Africa. The most recent example was expressed at the 15th Session of African Ministerial Conference on the Environment (AMCEN) held in Cairo in March 2015. The AMCEN conference declared that member states will develop appropriate institutions, policies, laws and programmes, as well as called upon to strengthen existing trans-boundary and regional frameworks on sustainable management of mountain ecosystems in Africa. In addition, the Conference agreed to prepare a regional mountain agenda and to establish and strengthen the Africa Regional Mountains Forum to facilitate knowledge and information exchange, and for policy dialogue in close cooperation with the Mountain Partnership.

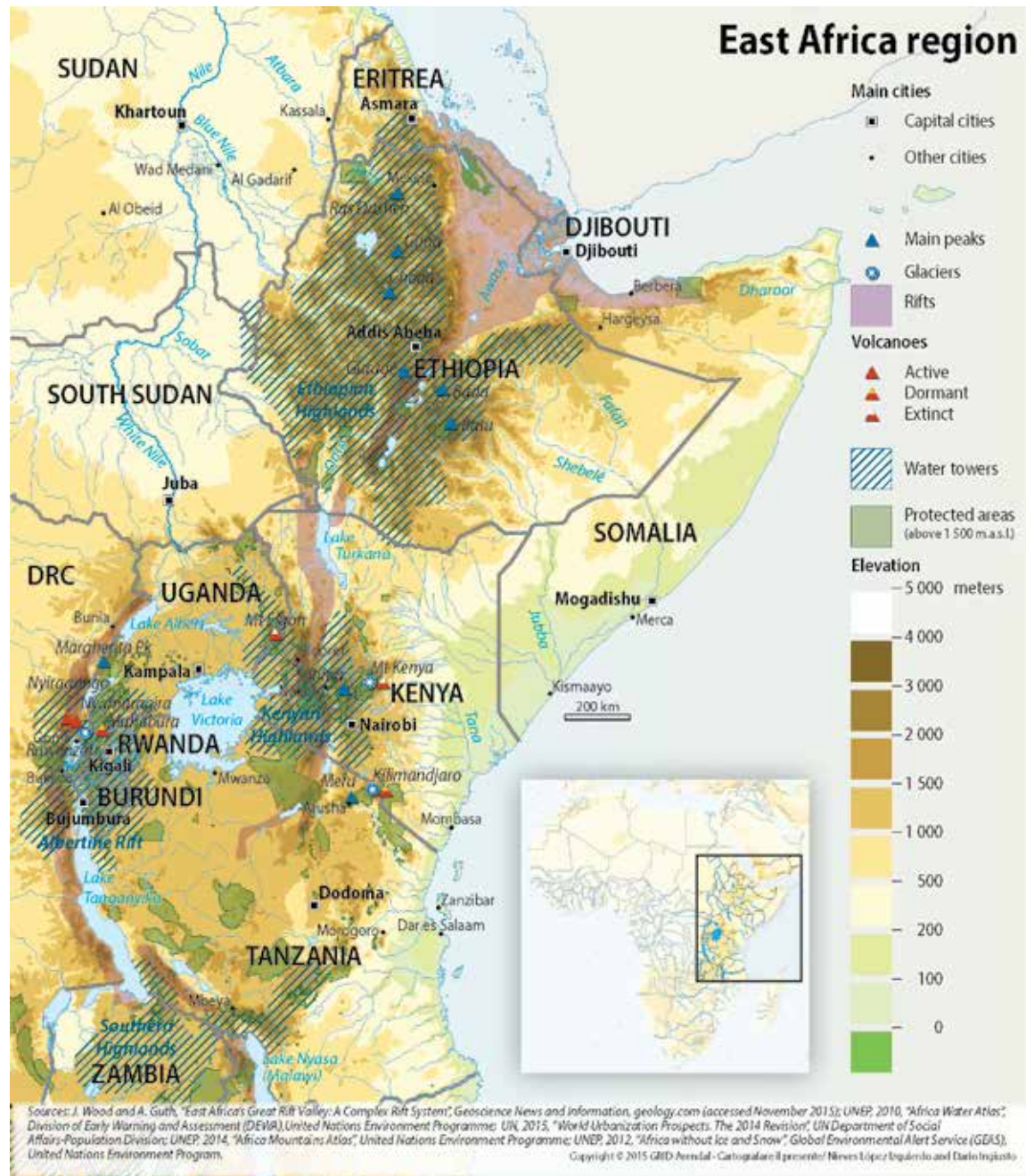
These efforts mark a major step towards achieving sustainable mountain development in Africa and form a basis for discussions on a proposed Agenda for the East Africa Mountains. A possible Eastern African Mountains Agenda will be anchored in the global mountain agenda from UNCED 1992 to Rio+20 and



its outcomes; the 2030 Agenda under Sustainable Development Goals; and Africa's Agenda 2063.

The proposed elements for such an East Africa Mountains Agenda include:

- The development and/or strengthening of the policy and institutional arrangements and mechanisms for enhanced governance in mountain ecosystems;
- Increased investment in mountain development and conservation, and enhancing mountain ecosystems and involvement of mountain communities; and
- Putting in place measures for adaptation to the impacts of climate change in mountain areas





Agenda 21

Mountain areas were for the first time recognized and distinctly addressed during the Rio Summit in 1992. Agenda 21, the outcome of the summit, addresses mountain issues in chapter 13 “Managing Fragile Ecosystems – Sustainable Mountain Development”.

AMCEN

African Ministerial Conference on the Environment is increasingly focused on mountain issues. In March 2015 it committed to new initiatives that will strengthen sustainable development in Africa’s mountain ecosystems. It emphasized the importance of trans-boundary and regional frameworks.



Simien mountains, Ethiopia

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Front and back cover photos: Mubuku Valley in Rwenzori Mountains National Park, Uganda

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