



# **Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes)**

*Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada*

[Download now](#)

[Click here](#) if your download doesn't start automatically

# Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes)

*Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada*

## **Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes)**

Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada

Freshwater ecosystems of Kenya are the lifeline of economic and social development; however, most of these are threatened or on the verge of collapse. The need to maintain them in their natural condition, reduce disturbance and conserve their biodiversity has been stressed in the face of severe drought, food insecurity and water stress conditions including inability to maintain constant hydroelectric power. However, without a clear picture of how many freshwater rivers, wetlands and lakes exist and their precise locality, size, sources and uses, it would be impossible for the authorities charged with their protection to put in place management or mitigation measures. Highland freshwater ecosystems of Kenya include Mount Kenya, Aberdares, Mau Forest, Mount Elgon and Cherangani Hills, which are referred to Kenya's water towers since they jointly supply most of the freshwater resources of the country. They are fragile ecosystems with streams flowing through montane forest belts and are critical reservoirs of biodiversity. They are characterized by high rainfall; steep slopes and erodible soils induce severe surface runoff, soil erosion and landslides. Sediments from erosion cause pollution of water in the streams. In countries with limited resources such as Kenya only small portions of rivers can be effectively conserved. It is imperative that significant effort is targeted at the upper reaches, because any conservation effort in the lower reaches of the river are easily negated by upstream disturbances. Their importance is primarily due to their ability to store and distribute water to lowlands and for ground water recharge. For example, 90% of dry season flow of the Northern Ewaso Ng'iro River is derived from the Mount Kenya. Montane areas in Kenya are also often associated with sacred sites and areas of cultural and social importance to the communities around them. Kenya's highland ecosystems face great anthropogenic threats due to deforestation and agricultural pressure. These areas have been ideal for tea and coffee plantations and human settlements. The Mau Forest, which is the largest indigenous forest in Kenya, has had vast areas cleared for settlements by immigrants, which in turn has caused reduction of flows of the Sondu Miriu River, which is dammed downstream for hydroelectric power. Even though sections of the Aberdares and Mount Kenya occur in protected areas, the lack of management and inability to patrol large areas has had led to various conflicts over land and water uses. Lowland freshwater ecosystems include those occurring on the lower sections of the eastwards-flowing rivers of Kenya including Rivers Tana, Athi, Northern Ewaso Ng'iro and the Ramisi. These are areas of low altitude and the rivers are slow moving and characterized by high sediment load, which is rich in nutrients and important for agriculture along the banks of these rivers. However, reductions and changes in flow regimes in the lowlands are more recently becoming a reason for concern. In the Tana River Delta, a large number of communities and biodiversity rely on the water for agriculture, pastoralism, fishing and other socioeconomic uses related to ecosystem services. The two main factors affecting river flows in lowlands are water abstractions and land-use change and intensification, both related to growing human populations. Climate change poses a further complication to both highland and lowland ecosystems due to changes in rainfall patterns reducing not only river flows but also the high rainfall events that cause unprecedented floods.

 [Download Kenya: A Natural Outlook: Chapter 16. Freshwater E ...pdf](#)

 [Read Online Kenya: A Natural Outlook: Chapter 16. Freshwater ...pdf](#)



**Download and Read Free Online Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada**

---

**From reader reviews:**

**Ronald Ralph:**

What do you concerning book? It is not important to you? Or just adding material when you really need something to explain what the one you have problem? How about your free time? Or are you busy man? If you don't have spare time to accomplish others business, it is gives you the sense of being bored faster. And you have free time? What did you do? Every person has many questions above. They should answer that question due to the fact just their can do that. It said that about book. Book is familiar in each person. Yes, it is right. Because start from on jardín de infancia until university need this specific Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) to read.

**Ivan Caputo:**

A lot of people always spent their free time to vacation or even go to the outside with them friends and family or their friend. Are you aware? Many a lot of people spent that they free time just watching TV, as well as playing video games all day long. If you would like try to find a new activity honestly, that is look different you can read any book. It is really fun for you personally. If you enjoy the book you read you can spent all day long to reading a reserve. The book Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) it is quite good to read. There are a lot of folks that recommended this book. We were holding enjoying reading this book. When you did not have enough space to deliver this book you can buy the e-book. You can m0ore very easily to read this book through your smart phone. The price is not too expensive but this book possesses high quality.

**Michael Hale:**

Reading can called brain hangout, why? Because while you are reading a book especially book entitled Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) your brain will drift away trough every dimension, wandering in each aspect that maybe unfamiliar for but surely can become your mind friends. Imaging each word written in a guide then become one contact form conclusion and explanation in which maybe you never get ahead of. The Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) giving you another experience more than blown away your thoughts but also giving you useful data for your better life with this era. So now let us teach you the relaxing pattern the following is your body and mind are going to be pleased when you are finished examining it, like winning a sport. Do you want to try this extraordinary paying spare time activity?

**Norma Ochoa:**

Many people spending their period by playing outside using friends, fun activity having family or just watching TV 24 hours a day. You can have new activity to shell out your whole day by looking at a book. Ugh, think reading a book really can hard because you have to use the book everywhere? It all right you can have the e-book, bringing everywhere you want in your Smartphone. Like Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) which is finding the e-book version. So , try out this book? Let's view.

**Download and Read Online Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada #Z5ODCQAT9XY**

## **Read Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada for online ebook**

Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada Free PDF download, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada books to read online.

### **Online Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada ebook PDF download**

**Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada Doc**

Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada Mobipocket

Kenya: A Natural Outlook: Chapter 16. Freshwater Ecology of Kenyan Highlands and Lowlands (Developments in Earth Surface Processes) by Dorothy Wanja Nyingi, Nathan Gichuki, Mordecai O. Ogada EPub