The Dangers of Deforestation in Kenya By Kevin Chapman

Kenya's forests are a very important part of the country's ecosystems. They are habitats for many diverse species, such as elephants, rhinoceroses, monkeys, flying foxes, birds, toads, and frogs. Forests also produce oxygen gas and take in carbon dioxide, thereby providing animals with the oxygen necessary for their survival and alleviating the buildup of greenhouse gasses in the Earth's atmosphere. Many African tribes and rural communities are dependent on forests for food, shelter, and medicinal herbs.

Yet forests around the world are constantly threatened by deforestation, the act of permanently uprooting trees to clear land for human activity. In fact, from 1990 to 2010, an estimated average of over 12,000 hectares of forest were destroyed per year. In the decade from 2000 to 2010, forest cover was reduced by 50,000 hectares in major regions, which decreased the availability of the equivalent of 62 million cubic meters of water. In 2012, deforestation caused Kenya's economy to lose \$5.8 billion, according to Prof. Noah Wekesa, then Kenya's Minister of Forests and Natural Resources.

Raw materials that can be obtained through deforestation, such as wood, are in high demand due to their many variegated uses. Kenya's rapid urbanization is one primary cause of the marked increase in logging activities in the country. Due to the rapid growth and development of many of Kenya's cities, construction companies need more lumber than ever for building projects and furniture production. In addition, charcoal has been increasingly used as fuel in Kenya, as more companies have been transitioning away from furnace oil due to an increase in its cost. The use of personal charcoal kilns in homes has been rising as well. A huge demand for timber has led to illegal deforestation when some sawmill owners collaborate with locals. Although instances of illegal logging have lessened recently, it is still a prominent issue.

Many forests are also cut down to clear land used to graze livestock. While many pastoralist communities depend on the cultivation of their animals for survival, some overgraze their livestock, which renders grassy land barren, thereby forcing many communities to move or to cut down even more trees to sustain themselves. Yet since one common effect of deforestation is desertification (the degradation of soil into infertile desert), the land soon becomes unsuitable for grazing, which forces herders to move more often to find new land and water sources. Thus, the rate at which the ecosystem deteriorates is hastened.

Aside from desertification, deforestation has many other negative effects on the environment. Drought is one related consequence. Not only do forests store moisture that evaporates to form clouds, thereby increasing the incidence of rainfall, they also retain moisture in the soil by storing it in tree roots. When forests are uprooted, these moisture stores are lost, which leads to drought and desertification. The removal of trees that prevent movement of the sediments themselves can have the opposite effect: flooding. When soil near a riverbank is loosened, the riverbed expands, causing its risk of breaking to increase dramatically. When it does so, whole towns can be inundated in water, putting many lives and property at risk of

destruction. Furthermore, the consequential increase in the area of the river water provides an optimal breeding ground for mosquitoes, which are responsible for spreading lots of deadly diseases such as malaria and yellow fever.

Thankfully, there are steps we can take to alleviate the problem of deforestation. Some government action has already been taken. For example, Kenya's Forest Conservation and Management Act was passed in 2016, which has decreased instances of indiscriminate logging but is oftentimes not enforced stringent enough to have a significant environmental impact. Collaborative approaches between the Kenyan government and locals has been suggested, as the former has the legal prerogative to penalize those who deforest excessively, while the latter has experience with native flora and fauna. Eco-tourism, another potential solution, is a growing enterprise where tourists participate in sustainable activities that increase their appreciation for Kenya's natural beauty and diversity, such as safaris, birdwatching, cleanups, and cultural immersion experiences. Much of the money used goes towards efforts by local organizations to raise awareness of issues surrounding deforestation and take action to reduce its impact. By supporting efforts to conserve Kenya's precious natural resources, we can help improve the lives of both the Kenyan people and the diverse species that they coexist with.

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