



# TROPICAL DEMOCRATIC REPUBLIC OF THE CONGO (DRC)

## PRIMARY FOREST CASE STUDY

The need for tertiary education  
and community empowerment  
in a unique biodiversity reservoir

### BASIC METRICS

- **Primary forest area:** approximately 145 million hectares, 67% of the national territory and second largest national tropical forest in the world
- **Keystone species:** mountain gorilla (*Gorilla beringei beringei*), bonobo (*Pan paniscus*), African forest elephant (*Loxodonta cyclotis*), African leopard (*Panthera pardus pardus*), bongo (*Tragelaphus eurycerus*), giant forest hog (*Hylochoerus meinertzhageni*)
- **Supporting indigenous groups, local people:** gathering firewood, building materials and non-timber forest products, making charcoal and hunting
- **Threats:** demands by the people for their basic economic development and security, growing human populations, forest fragmentation

### Context and values

The Democratic Republic of the Congo (DRC) is located at the heart of Africa's dense forest massif, hosting approximately half of the continent's rainforest. The vast majority of the DRC's forests are old-growth primary forest, and the country is home to the second largest national tropical forest in the world. Natural forests in the DRC cover approximately 145 million hectares, or 67% of the national territory.

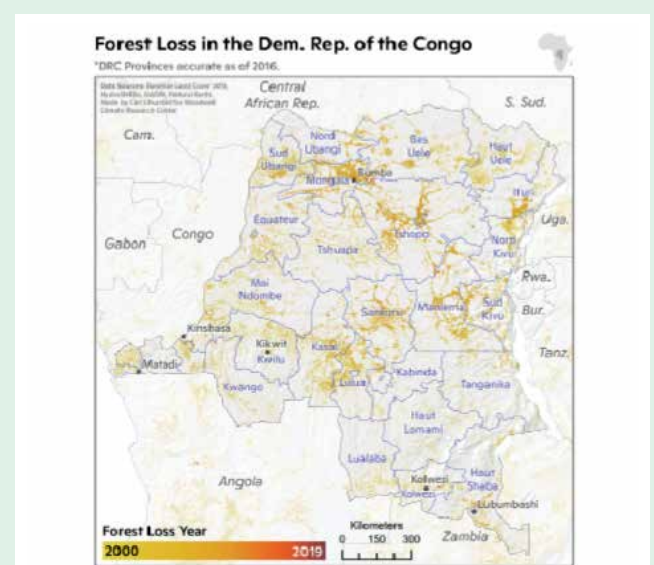


Figure 1: Primary forest loss in the DRC  
between 2000 and end of 2019. Superimposed  
on political boundaries of the DRC

Photo: Woodwell Climate Research Center



**Figure 2: Recent forest clearance next to primary gallery forest in Isangi Territory, Tshopo Province (2018)**  
*Photo: Woodwell Climate Research Center*

The DRC forest estate and associated land store vast amounts of carbon and are a vital means to mitigate global climate change. They also help to regulate one of the world's largest river basins, the Congo. The DRC is a unique reservoir of biodiversity: it ranks fifth in the world for plant and animal diversity, and it contains more Natural World Heritage Sites than the rest of Africa combined.

## Threats

Despite a variety of well-conceived and aligned policies on biodiversity conservation, forest management, climate change and sustainable economic growth, the prospect of enabling landscape-level conservation and sustainable management of primary forests in the DRC remains daunting. The country's legacy of chronic insecurity, internal displacement and weak governance

has had a profound impact on the long-term integrity and management of its forest resources. More than 26 million hectares of the DRC's forests are in protected areas, yet the trees and wildlife in these regions remain under continued threat from hunting, mining and encroachment.

Outside of protected areas, the most critical threat to the DRC's forests is from small-scale subsistence activities and slash and burn agriculture, both of which are closely tied to local poverty.<sup>1</sup> Forests are used for gathering fuelwood, building materials and non-timber forest products, making charcoal and hunting. Many forests, although remote, have already become "empty forests", mostly devoid of large animals as a result of unsustainable hunting.<sup>2</sup> Slash and burn agriculture, meanwhile, typically results in a permanent loss of primary forest: once land is cleared for cultivation it is usually only returned to a secondary forest state through a fallowing system that allows the ground to rest for 7–15 years; it is seldom allowed to return to mature natural forest cover.

## Solutions and responses

In recent years both biodiversity and sustainable development policies in the DRC have become increasingly devolved toward local enforcement of jurisdictional and community resource rights. This change to community-based forestry and conservation is encouraging, as shifting cultivation – the predominant driver of deforestation – is determined by the poverty conditions of rural households, which in turn directly influence and are affected by the political and institutional structures of forest governance. However, the success of this approach hinges on local community empowerment and participation, not just as passive beneficiaries of policy but also as active leaders. The recent adoption of the DRC community forest law, which establishes the concept of "local community forests", is an important step in the right direction, but not without challenges in terms of harnessing benefits for local communities.<sup>3</sup>

Education on sustainable development practices, at scale, could dramatically accelerate the engagement of local communities in effective forest governance, and resolve the country's technical and organizational capacity crisis. However, a rare empirical assessment in 2018 highlighted the gap between accepted knowledge on best practices in sustainable development and student knowledge in the DRC.<sup>4</sup> Teaching staff face numerous challenges in rectifying knowledge gaps and capacity deficits, including their own, due to lack of financial, material and information resources.

The challenge now is to mobilise resources for education training and capacity building. Without a steady stream of well-trained, tertiary-educated, vocationally orientated graduates, the capacity to implement complex rural development programmes in the DRC will remain weak. There have recently been significant commitments to increase levels of funding

for rural development; however, there are presently not enough adequately trained individuals to manage these funds productively. Sustainable development practices will therefore not become operational norms unless there is a serious overhaul of the broader tertiary education system, both in terms of theoretical approaches, such as curriculum design, and practice, including tertiary education management and access to information resources and networks.

Over the last decade, the organisation and discipline of the policy, regulatory and management frameworks for primary forest protection and management have received much attention in the DRC, and these continue to be actively developed. Critical changes in national conceptions of the role of local communities have aligned sustainable development with forest conservation and stretched the concept of conservation beyond the confines of traditional protected areas.



**Figure 3: Eastern Lowland Gorillas in primary Afromontane forest, North Kivu Province**

*Photo: Gorilla Rehabilitation and Conservation Education Center (GRACE Gorillas)*



However, net zero deforestation by 2030 will not be attainable unless we systematically and rapidly address the capacity deficits of training institutions. Without support, they will be unable to meet the demands of current and future sustainable development objectives and the need for well-trained environmental professionals who can promote community-based forestry and conservation.

- <sup>1</sup> Molinaro, G., Hansen, M., Potapov, P., Tyukavina, A. & Stehman, S. (2020). Contextualizing Landscape-Scale Forest Cover Loss in the Democratic Republic of Congo (DRC) between 2000 and 2015. *Land*, 9 (1), 23. Available at: <https://doi.org/10.3390/land9010023>
- <sup>2</sup> Nasi et al. (2011). 'Empty Forests, Empty Stomachs? Bushmeat and Livelihoods in the Congo and Amazon Basins'. *International Forestry Review* 13(3).
- <sup>3</sup> Lescuyer, G., Kakundika, T., Muganguzi Lubala, I., Shabani Ekyamba, I., Tsanga R. and Cerutti, P.O. (2019). 'Are Community Forests a Viable Model for the Democratic Republic of Congo?' *Ecology and Society* 24(1): 6. Available at: <https://doi.org/10.5751/ES-10672-240106> (Accessed: 9 June 2021).
- <sup>4</sup> McNamara, E., Kermarc, M., Zambo-Mandea, J. and Bush, G. (2018). 'Tertiary Education Knowledge and Standards in Sustainable Development: A Crisis for the Democratic Republic of the Congo'. In: U. Azeiteiro, W. Leal and L. Aires (eds.) *Climate Literacy and Innovations in Climate Change Education*, pp. 85–108. New York: Springer. Available at: [https://doi.org/10.1007/978-3-319-70199-8\\_6](https://doi.org/10.1007/978-3-319-70199-8_6) (Accessed: 9 June 2021).



**Figure 4: Farmers hand weeding dryland rice cultivated in an established field with primary gallery forest in the background. Isangi Territory, Tshopo Province (2018)**  
Photo: Woodwell Climate Research Center