2020 International Conference on the Nile and Grand Ethiopian Renaissance Dam: Science, Conflict Resolution and Cooperation, August 20-21, 2020, Florida International University, Miami, FL USA (Virtual)

The Nile Waters and the Congo Rainforest: The Need for Regional Water Governance

Solomon Gebreyohannis Gebrehiwot[1]

Abstract

The River Nile Basin is becoming a global epicenter of hydropolitics regarding its shared waters. In addition, it is being hit by impacts of recurrent extremes of climatic change which induce food and water shortage for the Basin community. The Basin is also exposed to hydrological impacts of fast regional land use change. Specifically, regional hydrological cycle and impacts of forest cover changes remain inconclusive in East African regions. About 85% of the surface water reaching Aswan in Egypt originates from the Ethiopian Highlands which comprise less than 10% of the Nile Basin's total area (3.3 million km^2). Some of the atmospheric moisture reaching the Ethiopian Highlands crosses over the Congo Rainforest (CRF). However, CRF is undergoing an extensive deforestation in recent times. The deforestation in the CRF is more likely to alter rainfall patterns over the Ethiopian Highlands by modifying travelling atmospheric moisture and climate system. In turn, flows in the Nile River are likely to reduce accompanied with other forms of hydro-climatic changes. Transregional governance that looks beyond basin boundaries to the sources and routes of moisture transport (the precipitationshed) has yet to be integrated into land–atmosphere and water management negotiations in the Nile Basin and beyond. To better achieve sustainable land management and water resource development in the Basin, scientific and governance frameworks need to be established that include the CRF region states in the ongoing negotiations between the Nile riparian states.

Keywords: Nile waters, Congo Rainforest, Regional water governance, precipitationshed, Deforestation and rainfall pattern, Travelling atmospheric moisture

1 Ethiopian Institute of Water Resources (EIWR), Water and Land Resource Center (WLRC), Addis Ababa University, Addis Ababa, Ethiopia, Email: solomon358.sg@gmail.com