

International Conference on

ENVIRONMENTAL MICROBIOLOGY & MICROBIAL ECOLOGY

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International Conference on

ECOLOGY, ECOSYSTEMS & CONSERVATION BIOLOGY

July 11-12, 2018 | Toronto, Canada

The role of economic, policy, and ecological factors in estimating the value of carbon stocks in the Meme Conservation Area, South West Region, Cameroon

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Old growth forest in existing protected areas store more carbon than restored forests or plantations. Carbon storage in such forests has economic value independent of additionality, offering opportunities for policymakers to ensure their maintenance, and inclusion in climate change mitigation strategies. Old growth forests of the Meme Conservation Area (MCA), South West Region, Cameroon, though protected, face external stressors such as hydrological alterations because of flooding control structures and agriculture impacts. Moreover, decreased funding threatens the restoration of the Meme Conservation Area's old growth forest. We evaluate several economic and ecological challenges confronting the economic valuation of total (vegetation plus soil) organic carbon (TOC) storage in the MCA old growth forest. Evaluated TOC stockpiling for this forested wetland ranges begins from 70 to 537 Mg C/ha and is higher than values revealed for tropical, boreal, and mild woodlands. We calculate the average abatement cost of C specific for MCA forest to value the TOC from 20–30.4 billion CFA. The valuation of the stored/legacy carbon is based on the: 1) ecogeomorphic attributes, 2) regional socio-economic milieu, and 3) status of the MCA old growth forest as a protected area. The assessment of C storage estimates and its economic value can change public perception about how this regulating ecosystem service supports human well-being and numerous economic activities. This perception, in turn, can contribute to future policy changes such that the MCA, the largest old growth forest conservation area in Cameroon, can be included as a potential alternative in climate change mitigation strategies.

Biography

Tatiane Flore Mayo Ngouno is the Projects and Policy Analyst of the city of Kumba, the largest municipality in the South West Region of Cameroon. She started her career as a Microprojects Associate at City of Kumba. After immense progress, she received sponsorship to study International Economics at the Ternopil National Economics University, Ukraine. She obtained a Bachelors' degree in International Economics in June 2017. She then returned to city council of Kumba where she is presently working.

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