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QUANTIFYING AND UNDERSTANDING TROPICAL PEATLAND SPATIAL
DISTRIBUTION AND CARBON STORAGE IN CENTRAL AFRICA

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ABSTRACT

Despite the increasing interest in tropical peatlands, the wetlands of the Congo, some of the world's largest, remain poorly understood and largely unstudied. However, mainly anecdotal evidence suggests there could be a substantial amount of peatland present in the Congo basin, with the occasional reference being made to peatlands of up to 30-60m deep. If this were the case, these peatlands would be, on a per area basis, one of the world's densest carbon stores. Furthermore, a recently published estimate suggested that 2.4 Pg C could be stored in African peatlands. Therefore understanding these peatlands and quantifying their carbon storage would be of crucial importance to understanding carbon cycling in Africa, modelling future climate change impacts and managing this important resource.

Here we present the results from our first field campaign to the Republic of Congo. We describe a simple remote sensing-based methodology to highlight likely areas of peat accumulation, present data on peatland extent, depth and carbon content from one Congolese site, and a description of the overlying vegetation using standardised survey techniques. We then describe our next steps towards the final objective of understanding the local environmental conditions that favour peat accumulation to allow us to estimate the carbon storage of peatlands across the Congo Basin.

KEY WORDS: tropical peatlands, Congo Basin, carbon.