



THE OHIO STATE UNIVERSITY

Douglas Alsdorf, Ph.D.
Byrd Polar and Climate
Research Center
108 Scott Hall
1090 Carmack Road
Columbus, OH 43210-1002

Phone (614) 292-6531
Fax (614) 292-4697
<http://bprc.osu.edu/>
Email: alsdorf.1@osu.edu

March 14, 2018

Professor Raphael Tshimanga
Head, Department of Natural Resources Management.
University of Kinshasa,
Democratic Republic of Congo.
Re: Congo Basin Water Resources Research Center

Dear Raphael,

Please accept my full endorsement of your proposal for the creation of the Congo Basin Water Resources Research Center "CRREBaC". Your proposal is exciting because it will enable CRREBaC to become the world's research gateway to the Congo Basin. The hydrologic research driven by CRREBaC is required for the policy and economic decisions that continue to mount and continue to be at the forefront of daily livelihoods. For example, your Center will address issues of changing rainfall patterns resulting from global warming. Understanding these changing patterns is immediately critical for Congo's farmers who obviously must have rain to grow their food. As another example, your Center will study fluvial-wetland exchange processes and thus allow an understanding of how water, sediments, and nutrients impact navigation and water infrastructures (e.g., changes in sediment loads from fluvial-wetland processes and thus the depths of rivers).

My greatest excitement stems from realizing that your Center will enable knowledge to come to the Congo. You will teach, and together with your students, you will learn about the most recent advances in hydrologic research being conducted around the world. You will bring these advances to the Congo and, moreover, you will conduct exciting research in the Congo. This research exemplifies the Congo excellence that the world needs to learn.

Now is the time for this research excellence. I have studied the Amazon for years but it was only a few decades ago that our scientific community knew more about the Congo. Since the 1970s, the Amazon has risen to the top of global hydrologic and carbon related studies. The Amazon has attracted thousands of scientists and untold millions of dollars of research investment. But, the Amazon has become overburdened with researchers and discoveries have slowed. The Congo will overtake the Amazon as intrepid researchers, led by CRREBaC, seek and find the scientific discoveries that await us in the Congo Basin.

Sincerely,

Douglas Alsdorf, Ph.D.
Professor in the School of Earth Sciences

Professor Douglas Alsdorf – Short Biography

Ph.D. Cornell University, 1996. \$15M in grants as PI, co-PI, and co-I. 75 peer-reviewed publications.

While the majority of my career has focused on hydrology, my graduate research concentrated on the solid earth with over a dozen peer-reviewed publications in the 1990s on crustal structures and properties of Antarctica and Tibet. During the 2000s, I was heavily involved in forming the SWOT satellite mission and in understanding Amazon floodplain flows. SWOT started as a simple conversation around a table at AGU and grew primarily through the efforts of a half-dozen of us who brought together hydrologists and oceanographers toward the common goal of measuring water surface elevations. The work I helped with in the Amazon demonstrated the hydraulic complexity of floodplain waters and provided estimates of total storage, including sources and sinks of the waters. During this final decade of my career, I am excited to apply the skills I've learned toward scientific discovery in the Congo Basin. Already we have established research hypotheses that whether proven true or false should lead to important discoveries in hydrology, biogeochemistry, and climatology. These should prove particularly important for the applied sciences and helping the people of sub-Saharan Africa.

During my research career, I have helped raise significant amounts of moneys for both my own research and, more importantly, for growing our hydrologic community. The inauspicious beginning of SWOT was often a scramble for us as we sought moneys from a variety of sources whereas today the mission is a billion-dollar effort from NASA and CNES. At OSU, I am pleased to have collaborated with several researchers across campus to secure over ten-million internal dollars for a program focused on the integration of climate, water, and carbon research. I am now applying the methods I've learned from these experiences toward building an international community of researchers who seek hydrologic discoveries in the Congo. Already colleagues have had funding success for their Congo research. It is indeed an exciting time to be a part of the Congo!