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**Award Abstract #0549037****A Source-to-Sink Study of Chemical Weathering in the Fly River System**

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**Program Manager:** Bilal U. Haq  
OCE Division of Ocean Sciences  
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**Investigator(s):** Andrew Kurtz kurtz@bu.edu(Principal Investigator)

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**NSF Program(s):** CHEMICAL OCEANOGRAPHY,  
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**Field Application(s):** 0204000 Oceanography

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**ABSTRACT**

Kurtz 0549037 The P.I. will test the hypothesis that the solute flux of the Fly River is dominated by the rapidly eroding uplands, while weathering in the lowland floodplain contributes additional alkalinity and dominates the flux of pedogenic clay minerals and metal-oxides to the Gulf of Paria. The PI will carry out analysis of soil cores, suspended sediments, and solutes at a number of locations through the river system. The suite of tools proposed is major element analysis, Sr and

Nd isotopes, Ge/Si of stream waters and soil samples, and quantitative mineralogy of suspended sediments and soils. The project will provide insight in the chemical weathering processes occurring along the river system within the source to sink context. In terms of broader impact, this work is part of a larger effort dedicated to understanding the global environment, which is important for society. It will also contribute to the education/training of students and will lead to collaboration between scientists from the US and Papua New Guinea.

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