

KZN Coastal and Marine Science Seminar Series



Friday 28 August 12:30 – 13:30



Speaker: **Dr. Gabriel Akoko Juma**

Gabriel is Postdoctoral researcher at the University of KwaZulu-Natal. He investigates the transfer, budget and fate of terrestrial organic matter in the land ocean continuum, and how terrestrial input affects estuarine and nearshore planktonic organisms. He holds a PhD in Coastal and Marine Ecology from the University of Bremen.

Terrestrial or marine carbon: What supports Arctic marine food webs along eroding permafrost coasts?

Rapid Arctic warming is eroding permafrost into coastal waters, but how does it affect marine life? In the Canadian Arctic, we demonstrate that terrestrial input darkens nearshore waters, boosting bacteria and small-sized grazers while suppressing phytoplankton. Offshore, clearer waters allow phytoplankton to thrive. Isotopic analysis further reveal that the nearshore consumers rely mostly on fresh marine organic carbon (OC) (60%) and young topsoil carbon (35%), while ancient permafrost provides only 5% of OC to consumers. Terrestrial runoff reshapes coastal ecosystem structure, even if ancient carbon rarely enters the food web.



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Hosted by the School of Agriculture and Science

Venue: UKZN Westville Campus, Biological Sciences Building; Seminar Room 3&4

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