

Kolloquium:

Wind-driven lakes: The role of wind in the transfer and distribution of clastics in lakes

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A new category of lakes named “wind-driven lakes” comprises those lacustrine depositional systems for which the wind is the dominant driver regarding both cross-shore and alongshore transport, and the basin-scale (re)distribution of clastics through the generation of waves, drifts and shallow to deep currents.



Three case studies are presented to highlight the original characteristics of wind-driven lakes: Megalake Chad (Africa), Lake Saint-Jean (Canada, Québec), and Lake Turkana (East African Rift System). A number of other (paleo-)lakes distributed worldwide are also examined and contribute to strengthen the proposed depositional model.

Wind-driven lakes brings more diversity and complexity to existing depositional models for lakes, and differ from previously depicted clastic sedimentation in lakes that was mainly understood as dependent from fluvial-driven processes and settling of fine sediments in more distal areas.