

Peer Review

Review of: "A Review of the Drawdown Zone in African Reservoirs: Current Knowledge, Understudied Areas and Recommendations for Future Research"

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Beaven Utete presents a timely and conceptually important review addressing an overlooked component of freshwater limnology in Africa—the **drawdown zone** of reservoirs. The manuscript's primary contribution lies in highlighting the persistent ambiguity in the definition and delineation of shoreline sub-zones (terrestrial, drawdown, overlap, littoral) and arguing that this conflation has limited ecological interpretation in African reservoir studies. By systematically reviewing 81 publications using a PRISMA-guided scoping approach, the author synthesizes ecological, geomorphological, hydrological, fisheries, and socio-economic dimensions of drawdown zones, while clearly identifying knowledge gaps.

Major Strengths

Conceptual Clarification and Zonation Framework

The proposed working definition and cross-sectional zonation model (terrestrial–drawdown–overlap–littoral) is the most original contribution of the review. The argument that “littoral” is frequently used as a catch-all term obscuring ecological heterogeneity is well articulated and theoretically justified. This conceptual refinement could significantly improve future shoreline research design.

Integration Across Disciplines

The manuscript successfully bridges limnology, sediment biogeochemistry, macrophyte ecology, fisheries science, geomorphology, and socioeconomics. The inclusion of anthropogenic uses (agriculture, fisheries camps, tourism, ranching) enriches the ecological analysis with socio-ecological realism.

Identification of Research Gaps

The structured summary of understudied themes (nutrient reflux, stoichiometry beyond N:P, elevational gradients, macrophyte succession, fish zonation, greenhouse gas fluxes, geomorphometry, UAV-based monitoring) is comprehensive and practical. Table 1 provides a clear research roadmap for African reservoir science.

Contextual Relevance

Given the high prevalence of reservoirs in arid and semi-arid African regions, the review appropriately situates drawdown dynamics within climate variability and water abstraction pressures.

Declarations

Potential competing interests: No potential competing interests to declare.