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REVIEWER'S REPORT

Manuscript No.: IJAR-52091 Date: 06-06-2025

Title: SALINIZATION AND SODIFICATION OF THE LAKE CHAD POLDERS : IMPACT ON AGRICULTURE AND LOCAL MANAGEMENT PRACTICES

Recommendation:
Accept as it is……**YES……**
Accept after minor revision……
Accept after major revision ……
Do not accept (*Reasons below*) ……

Rating	Excel.	Good	Fair	Poor
Originality			√	
Techn. Quality			√	
Clarity			√	
Significance			√	

Reviewer's Name: Tahir Ahmad

Reviewer's Decision about Paper: **Recommended for Publication.**

Comments (*Use additional pages, if required*)
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Reviewer's Comment / Report

Abstract Review:
The abstract clearly outlines the focus and scope of the study, emphasizing the causes and effects of salinization and sodification in Lake Chad's polders. It succinctly highlights the key contributing factors—natural and anthropogenic—and links them effectively to soil degradation and its impact on agricultural productivity. The description of soil characteristics (color, pH, electrical conductivity, texture) adds specificity, and the mention of physicochemical analysis supports the scientific rigor of the study. Overall, the abstract provides a comprehensive and informative snapshot of the research content.

Introduction Review:
The introduction presents a detailed and well-referenced background on the global and regional implications of soil salinization and sodification. It contextualizes the problem within a global framework before narrowing down to the specific situation in Chad. Citing FAO statistics and referencing prior studies lends authority to the discussion. The text effectively explains the agricultural and environmental implications of saline and sodic soils, particularly their impact on plant hydration and nutrition. Regional data from Chad—including temperature, rainfall, and soil types—further anchor the relevance of the study. The mention of previous findings in various Chadian regions, such as Mara, Zafaye, and Borkou, provides a historical perspective that complements the current investigation.

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Materials and Methods Review:
The study area is clearly defined, with accurate geographical coordinates and a concise description of its climatic conditions. The inclusion of data on seasonal variation, rainfall distribution, and temperature ranges from multiple years offers important context for understanding how climate interacts with soil processes. The use of historical and meteorological data strengthens the credibility and depth of the environmental analysis. The regional climatic constraints are clearly tied to agricultural vulnerability, laying the groundwork for later sections that presumably explore management practices and crop impact.

Scientific Rigor and Structure:
The structure of the text demonstrates logical organization and progression from problem identification to methodological framework. The references are varied and appropriate, drawing from institutional sources (FAO, Inseed, Sodelac) and academic literature. The terminology used is precise, technical where necessary, and accessible to an academic audience familiar with soil science and agro-environmental studies.

Thematic Relevance and Contribution:
The study addresses a pressing environmental and agricultural issue with clear socio-economic implications. The focus on local management practices within a broader climatic and ecological framework makes it relevant to both local stakeholders and the international research community. The integration of scientific analysis with practical agricultural concerns underscores its applied relevance.

Overall Evaluation:
This work presents a scientifically grounded, well-contextualized investigation into the salinization and sodification of soils in the Lake Chad region. Its comprehensive treatment of both natural factors and human practices provides a valuable contribution to the understanding of land degradation and agricultural sustainability in semi-arid regions.