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Journal Name:	International Journal of Environment and Climate Change
Manuscript Number:	Ms_IJECC_131033
Title of the Manuscript:	Wildfires and Their Impact on Species Composition and Ecosystem Services in Ghana’s Northern Savannah Ecoregions
Type of the Article	Original Research Article

PART 1: Comments

	Reviewer’s comment Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.	Author’s Feedback (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.	The manuscript is full of multiple ideas which does not justifies the significance of study, Well defined research need to be mentioned along with previous studies.	
Is the title of the article suitable? (If not please suggest an alternative title)	Title is suitable but the content does not justifies the title	Changed to : Wildfire Impacts on Species Composition, Land Use Dynamics, and Ecosystem Service Vulnerability in Northern Ghana’s Savanna Ecoregions
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.	Abstract needs to be more scientific covering major objectives, methodology and findings	Rewritten: in the northern savanna regions of Ghana, encompassing the Northern, Upper East, Upper West, Savannah, and North East regions. The study analyzed data collected between 2001 and 2022 using a combination of remotely sensed satellite data (MODIS NDVI, Sentinel-2 images) and field observation. Species composition was assessed through vegetation inventories, and statistical models, including regression analysis and multivariate techniques, were applied to determine fire-induced changes in tree structural diversity and land use patterns on 30m x 30m plots of land (30 in total), across ten (10) communities. Land cover classification and change detection were performed using supervised classification in QGIS. The results showed a clear-cut reduction in forest cover and increased shrubby savannah and agroforestry types driven by recurring fires and agricultural land conversion. Fire-prone areas, particularly rangelands and vegetation zones near settlements, accounted for over 70% of recorded fires, making them the most frequently affected by wildfires. The dominance of fire-adapted species, such as Vitellaria paradoxa (14%) and Parkia biglobosa (11%) of the total species recorded, was observed. In contrast, fire-sensitive species declined in areas with high fire frequency.
Is the manuscript scientifically, correct? Please write here.	Manuscript needs to written scientifically concise	Agreed and ceratin parts re-written
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.	References needs to be comprehensive	Worked on

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Is the language/English quality of the article suitable for scholarly communications?	Yes	
<u>Optional/General</u> comments	<div>1. The trend mentioned in table 3 does not match with the Fig. 4 LULC for 2001, 2006, 2011, 2016, and 2021 in northern Ghana.</div> <div>2. The causes of fire in Ghana are not described briefly.</div> <div>3. Fig 11 and 12 shows that very high fire susceptibility areas are overlapping with major river which is contradictory.</div>	<div>1. The changes in land cover from 2001 to 2022 (Table 3) below are across five major LULC classes: Forest, Shrubby/Woody Savannah, Agroforestry parks/Fields/Fallow lands, Water Bodies, and Human Settlement.</div> <div>From 2001 to 2022, 10.86% of forest cover declined due to deforestation, agricultural land expansion, and frequent fires. However, a single spike was observed in 2016. Shrubby savannahs have continuously declined at a rate of 38.82% over the study period. Agroforestry lands have increased immensely, with a 145.17% expansion between 2001 and 2022. Water bodies have increased by 170.76% over the study period, whereas human settlements have expanded substantially, recording a 177.12% increase from 2001 to 2022.</div> <div>2. (Added to the introduction) Wildfires in savannah regions in Ghana have both naturally and anthropogenically fueled sources. Sustained drought during the dry period, supplemented with strong Harmattan winds, creates combustible environments supporting rapid wildfire expansion (USDA Forest Service, n.d.). Fires, however, are mostly initiated through anthropogenically fueled sources. Traditional agricultural slash-and-burning, agricultural and settlement encroachment, burning for charcoal, and unregulated hunting have immensely fueled wildfire events (Asante et al., 2022). Policy loopholes and lack of proper management have, in turn, produced recurring and unregulated fires, contributing to augmented degradation of the environment and loss of ecosystem function (National Wildfire Management Policy, 2006). Fire management and suppression are legislative underpins in the Ghana National Fire Service Act (1997). Poor community mobilization and poor compliance with legislation have, nevertheless, continued to hinder the effective suppression of wildfires.</div> <div>The spatial distribution of wildfire occurrences and vulnerability in Northern Ghana reveals a high level of congruence between high-fire areas and important river networks.</div> <div>(Figure 15) showed how water bodies are exposed to wildfires as a primary ecosystem service, most noticeably in regions with high human activity in terms of settlements and agricultural activity. Areas closer to water bodies (darker blue) show fewer fire occurrences, while areas farther away (lighter blue) indicate a high number of fires. This observation suggests that fires are not randomly distributed but rather strongly associated with land use near water bodies</div> <div>A look at Figure (16) revealed that very high-vulnerability areas are visualised as red and have a severe environmental threat, mainly connected with alternative ecosystems, such as water supply and agricultural productivity. Where high vulnerability is concentrated near large forest preserves and major rivers. While rivers are generally perceived as natural firebreaks, this spatial trend indicates that riparian areas may, in fact, contribute to fire dynamics rather than prevent them. The flammability of riparian vegetation, particularly during the dry season, plays a key role in this phenomenon. Riverbanks often support dense vegetation, which, when dried out, has high volumes of</div>

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		combustible biomass, making these zones susceptible to fire spread. 3.
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PART 2:

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Are there ethical issues in this manuscript?	(If yes, Kindly please write down the ethical issues here in details)	