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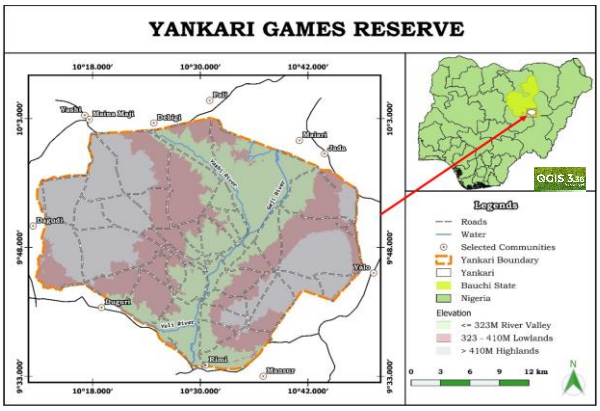
POLICY BRIEF

Yankari Game Reserve (Alkaleri LGA), Bauchi State, Nigeria - All photo credits: Author

SAVANNA DYNAMICS AND CONSERVATION CHALLENGES: ASSESSING THE STATUS OF LIONS AND OTHER CARNIVORES AND POLICY GAPS IN NIGERIA'S YANKARI GAME RESERVE

Yankari Game Reserve (YGR), Nigeria's most iconic savanna, faces biodiversity loss and declining populations of carnivores, especially lions, who are critically endangered in West Africa. Currently, over 30% of YGR is degraded due to agriculture, logging, grazing, poaching, and weak governance.

Climate variability worsens water scarcity and plant shifts, bringing carnivores nearer to humans and triggering conflicts. The current state of YGR signifies not only a biodiversity crisis but also a loss of opportunities for ecotourism, sustainable development and community empowerment.



Map of YGR in Bauchi State, Nigeria, created with QGIS 3.36.1.

OVERVIEW

Rising livestock losses and retaliatory killings are reported in the communities residing in close proximity to the reserve.

This policy brief proposes Nature-based Solutions (NbS) such as wildlife corridors, community-led conservation initiatives and improved multi-level governance to restore ecosystem resilience and human-wildlife coexistence in YGR.

Mountain path through which carnivores attack local communities' livestock.

POLICY RECOMMENDATIONS

1. Reinforce legal and institutional frameworks

The Federal Government should take back management, update wildlife and land-use laws to reflect International Union for Conservation of Nature (IUCN) standards and strengthen enforcement and penalties for offenders.

2. Empower community co-management

The Federal Government should formally integrate local and traditional institutions into reserve governance through legally recognized co-management frameworks.

3. Invest and promote NbS

Environmental agencies, local communities and international partners should promote NbS such as ecological restoration and buffer zones to reduce human-wildlife conflict.

4. Enhance research and monitoring activities

Research institutes and conservation agencies should expand biodiversity monitoring with more camera traps, spatial maps and early-warning and report systems for conflict monitoring.

POLICY BRIEF

KEY FINDINGS

- **Lion and Carnivore Status:** No lions or leopards were observed during the surveys, indicating possible population decline or local extinction. The presence of smaller carnivores suggests an imbalanced ecosystem.
- **Habitat Change:** Vegetation analysis indicates that woody growth in YGR has increased over the past 30 years due to fire suppression and climate change, reducing grassland quality and prey availability for large carnivores.
- **Human Pressure:** Buffer zones around YGR are used for farming, grazing, and resource extraction, disrupting habitats and increasing human-wildlife interactions. This worsens conflicts and leads to biodiversity loss.
- **NbS:** In YGR, NbS such as predator-proof biomass are used to reduce human-carnivore interactions. While effective and accepted, these short-term strategies do not address habitat degradation or long-term carnivore recovery.
- **Policy Gaps:** The 2006 transfer of YGR management to state authorities weakened governance and led to poor federal coordination, hindering conservation efforts.
- **Weak Governance:** Weak coordination among agencies, insufficient integration of Indigenous knowledge, and limited youth engagement hinder adaptive management and conservation sustainability.

Setting up camera traps and some captured images of some carnivores.

RESEARCH APPROACH

- The study examined the existing knowledge gaps regarding carnivore populations, environmental changes, conflict drivers, and governance frameworks in YGR.
- Carnivore presence was assessed using field-based wildlife survey methods, while long-term environmental change (1990–2024) was analyzed using satellite imagery and historical climate data.
- Drivers of human-carnivore conflict were examined through a survey (271 respondents) and focus group discussions, using a framework linking environmental pressures, social responses, and policy outcomes.
- Lastly, policy analysis helped assessing governance impact.

Interview with a stakeholder on wildlife conflict.

CONCLUSION

The future of YGR stands at a critical crossroads. The continued decline of lions and other carnivores reflects a broader crisis in Nigeria's governance of protected areas, where outdated policies, weak enforcement and insufficient community involvement threaten long-term ecological stability.

Restoring YGR requires a shift from species-focused conservation to ecosystem restoration and co-managed governance, with federal leadership and community participation, to boost socio-economic resilience.

Nature-based Solutions such as wildlife corridors, will provide an integrated pathway for achieving this transformation by linking biodiversity recovery with community development and climate adaptation.

REFERENCES

Adelakun, K. A. (2025). *Savanna dynamics and conservation challenges: Assessing the status of lions and other carnivores and policy gaps in Nigeria's Yankari Game Reserve*. Master's thesis, Université Félix Houphouët-Boigny (UFHB), Abidjan. 82 p.

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