

Governance of protected areas (natural World Heritage sites) in armed conflict zones in Africa



By :

Dodé HOUEHOUNHA (ERAIFT/ULiège)

Under the supervision

- Pr Baudouin MICHEL (ERAIFT)**
- Pr Cédric VERMEULEN (ULiège)**
- Pr Jean HUGE (OUNetherlands)**

Outline

- 1. Background**
- 2. Research focus**
- 3. Thesis structure & proposed scientific publications**
- 4. Next steps**



1. Background (1/2)

Earth Summit in Brazil (1992) highlighted the critical issue of environmental degradation and underscored the importance of preserving global biodiversity (Hayes & Ostrom, 2005).

Protected areas (PAs) were acknowledged as a viable strategy for safeguarding global biodiversity (Stolton & Dudley, 2010; Brockington & Wilkie, 2015).

Quantity Vs Quality: 300,000 PAs (WDPA) in 2025, but degradation continues (WWF, 2024) even for natural World Heritage sites (Highest standard for conservation).

1. Background (2/2)

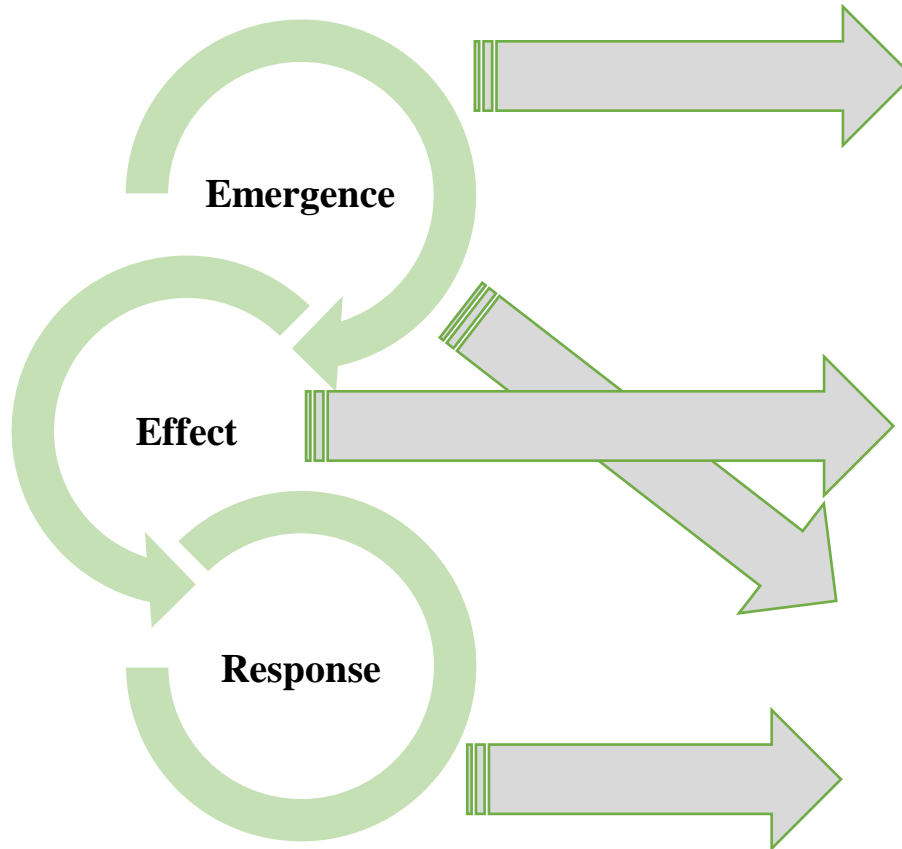
Over-representation of Africa (10/15 sites) on the World Heritage List in Danger (OUV threatened). Armed conflicts remain the leading cause of biodiversity degradation (6/10 sites).

Impacts of armed conflicts on NWHS (Yamagiwa, 2003; De Merode et al., 2007; Beyers et al., 2011; Maystadt et al., 2014; D'haen et al., 2019; Dulias, 2022; Lhoest et al., 2022; Eizenga & Gnanguênon, 2024),

But, few studies have examined the roots causes of the armed conflicts and role of governance in mitigating these impacts.

2. Research Focus

Chapter 1. Theoretical and Analytical Framework



Chapter 2. Understanding the determinants of armed conflicts affecting protected areas: Armed conflict and governance of natural World Heritage sites in Africa (a review)

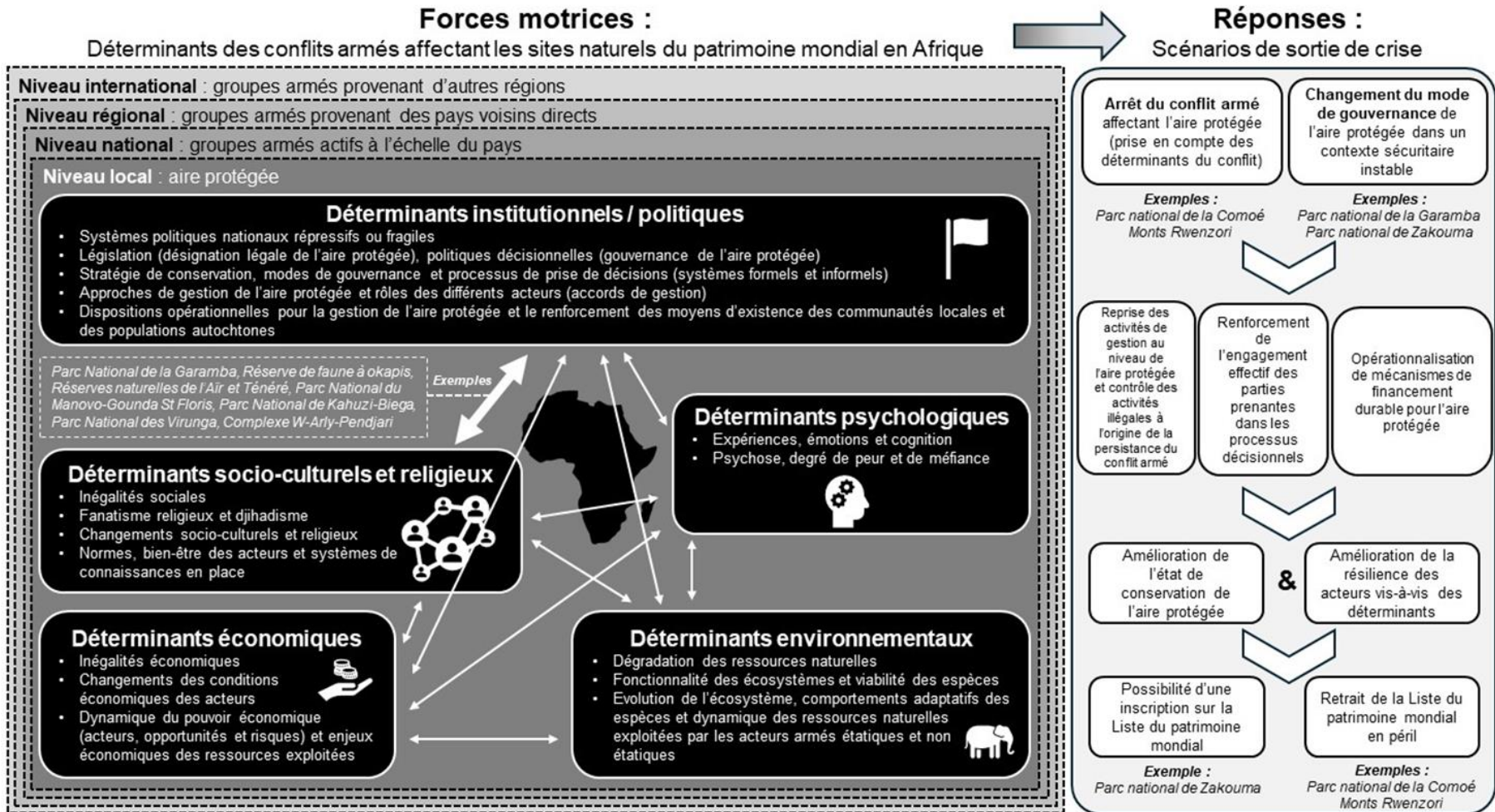
Chapter 3. Jeopardized conservation efforts by armed conflict and illegal mining: the case of the Okapi Wildlife Reserve in the Democratic Republic of Congo

Chapter 4. Understanding the conservation challenges of armed conflicts in protected areas: Insights from the W-Arly-Pendjari Complex (Benin, Burkina Faso, and Niger)

Chapter 5. Resolving armed conflicts in protected areas: Progressing towards recognition as a UNESCO World Heritage Site - the case of Zakouma National Park (Chad)

Chapter 6. Discussion

3. Chapter 2: Understanding the determinants of armed conflicts affecting protected areas



3. Chapter 2: Understanding the determinants of armed conflicts affecting protected areas – A Review



Biotechnol. Agron. Soc. Environ. 2024 **28**(3), 113-130



Conflits armés et gouvernance des sites naturels du patrimoine mondial en Afrique (synthèse bibliographique)

Dodé H.M. Houehounha ^(1, 2), Simon Lhoest ^(1, 3), Jean Hugé ^(4, 5, 6, 7), Cédric Vermeulen ^(1, 2)

⁽¹⁾ Université de Liège - Gembloux Agro-Bio Tech, Forest is life, Passage des Déportés 2, BE-5030 Gembloux (Belgique).
E-mail : dhmhouehounha@doct.uliege.be, d.houehounha@eraift-rdc.org

⁽²⁾ École Régionale Postuniversitaire d'Aménagement et de Gestion intégrés des Forêts et Territoires tropicaux (ERAIFT).

⁽³⁾ Arizona State University, Center for Biodiversity Outcomes, 400 E Tyler Mall, Tempe, AZ (USA).

⁽⁴⁾ Department of Environmental Sciences, Faculty of Science, Open University of The Netherlands, Valkenburgerweg 177, 6419 Heerlen (The Netherlands).

⁽⁵⁾ Systems Ecology & Resource Management Lab, Biology Department (DBO), Université Libre de Bruxelles (Belgique).

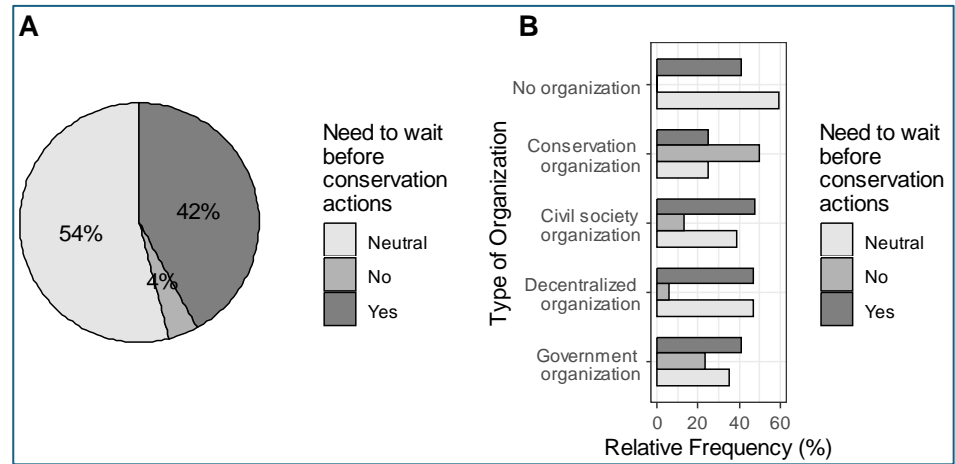
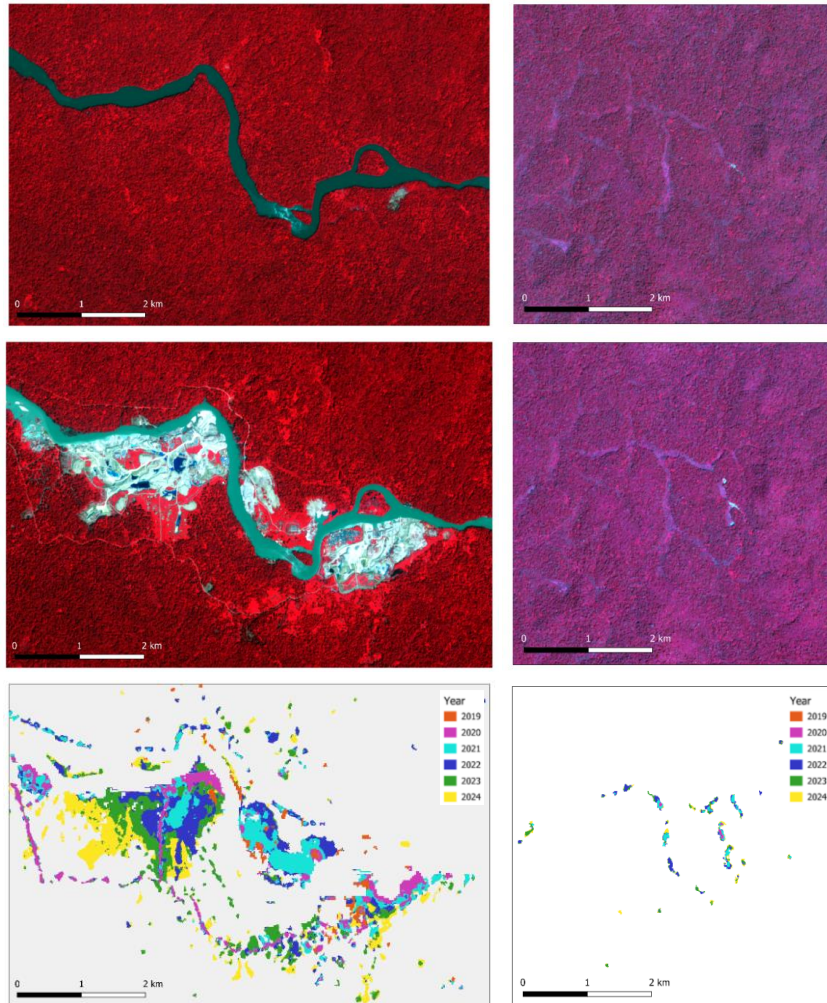
⁽⁶⁾ Ecology & Biodiversity, Biology Department, Vrije Universiteit Brussel (Belgium).

⁽⁷⁾ Centre for Environmental Science, University of Hasselt (Belgium).

Chapter published by the BASE Journal:

Houéhounha, D. H. M., Lhoest, S., Hugé, J., & Vermeulen, C. (2024). Conflits armés et gouvernance des sites naturels du patrimoine mondial en Afrique (synthèse bibliographique). *Biotechnologie, Agronomie, Société et Environnement*.

3. Chapter 3: Jeopardized conservation efforts by armed conflict and illegal mining: the case of the Okapi Wildlife Reserve in the DRC



3. Chapter 3: Jeopardized conservation efforts by armed conflict and illegal mining: the case of the Okapi Wildlife Reserve in the DRC

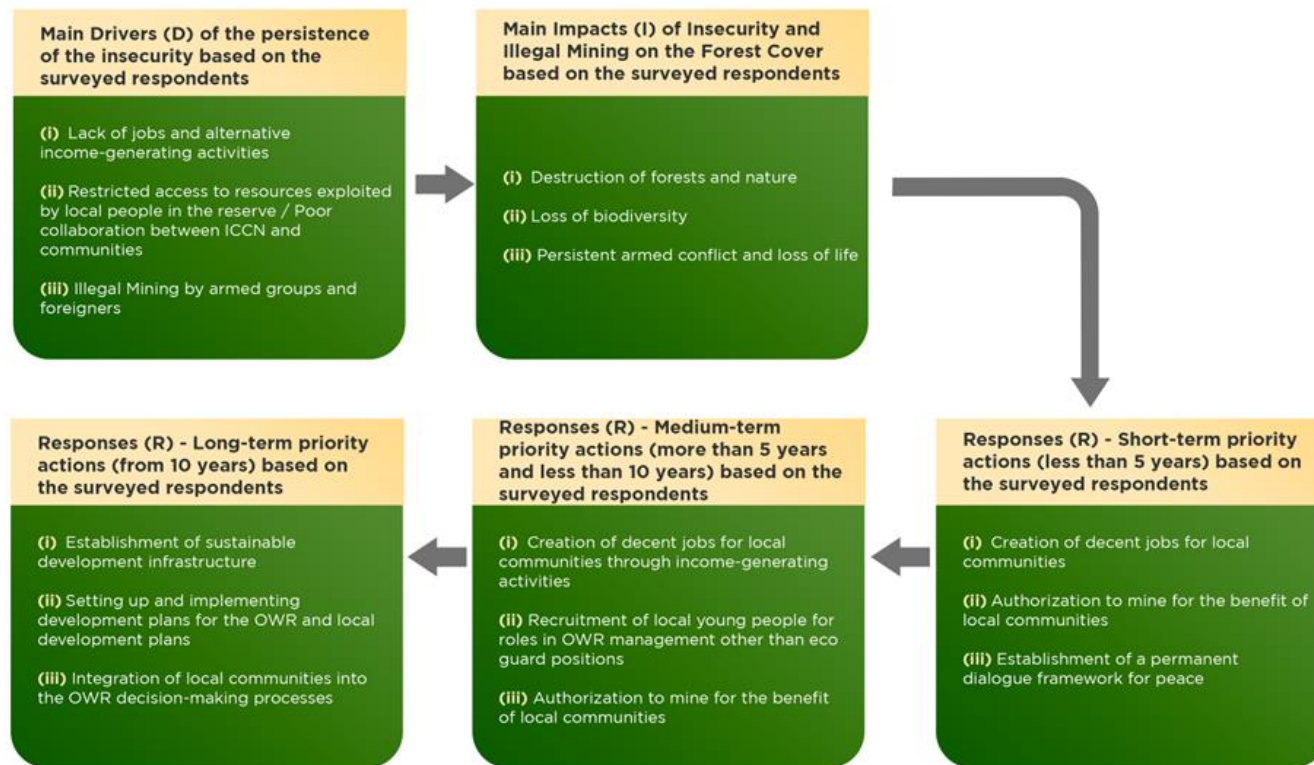


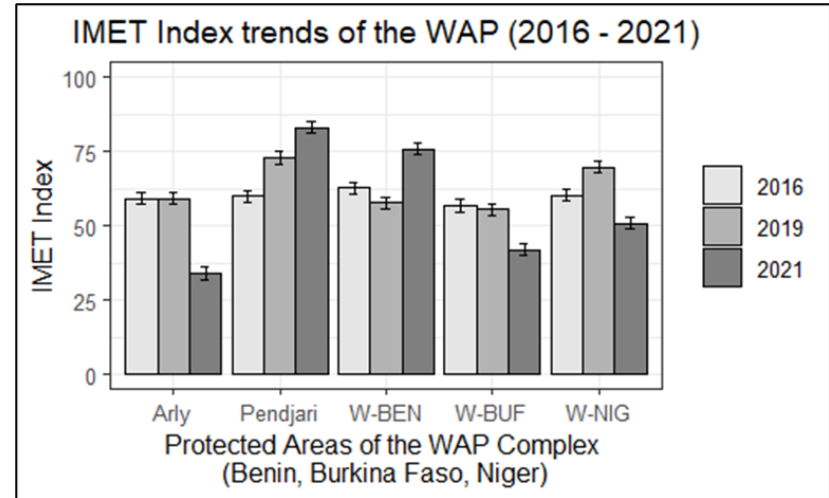
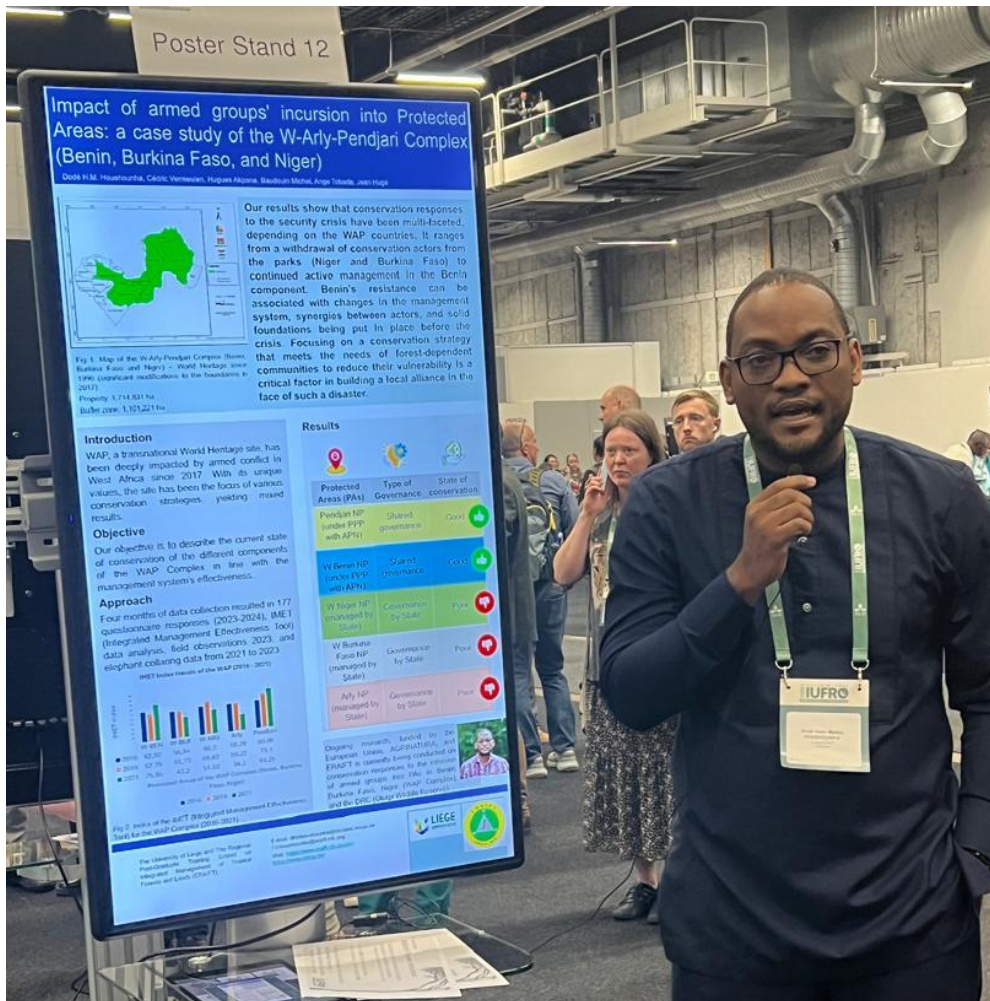
Figure: Summary of the Drivers (D) - Impacts (I) - Responses (R) framework (an adaptation of the DPSIR framework) for the Okapi Wildlife Reserve (OWR), based on the qualitative analysis of the survey findings.

3. Chapter 3: Jeopardized conservation efforts by armed conflict and illegal mining: the case of the Okapi Wildlife Reserve in the DRC

Revised Manuscript to be submitted to the Journal - Forest Policy and Economics by the **end of June 2025**

em Forest Policy and Economics					
Home Main Menu Submit a Manuscript About ▾ Help ▾					
← Submissions with an Editorial Office Decision for Author					
Page: 1 of 1 (1 total completed submissions)					
Action	Manuscript Number	Title	Initial Date Submitted	Status Date	
View Submission View Decision Letter Send E-mail	FORPOL-D-25-00161	Conservation efforts jeopardized by armed conflict and illegal mining: the case of the Okapi Wildlife Reserve in the Democratic Republic of Congo.	Mar 20, 2025	Apr 06, 2025	

3. Chapter 4: Understanding the conservation challenges of armed conflicts in protected areas: Insights from the W-Arly-Pendjari Complex (Benin, Burkina Faso, and Niger)



3. Chapter 4: Understanding the conservation challenges of armed conflicts in protected areas: Insights from the W-Arly-Pendjari Complex (Benin, Burkina Faso, and Niger)

ScholarOne Manuscripts™

Dodé Helm Myline HOUEHOUNHA ▾ Instructions & Forms Help Log Out

Oryx
The International Journal of Conservation

CAMBRIDGE UNIVERSITY PRESS

Home Author Review

Author Dashboard

Author Dashboard

- 1 Submitted Manuscripts >
- 1 Manuscripts with Decisions >
- Start New Submission >
- 5 Most Recent E-mails >

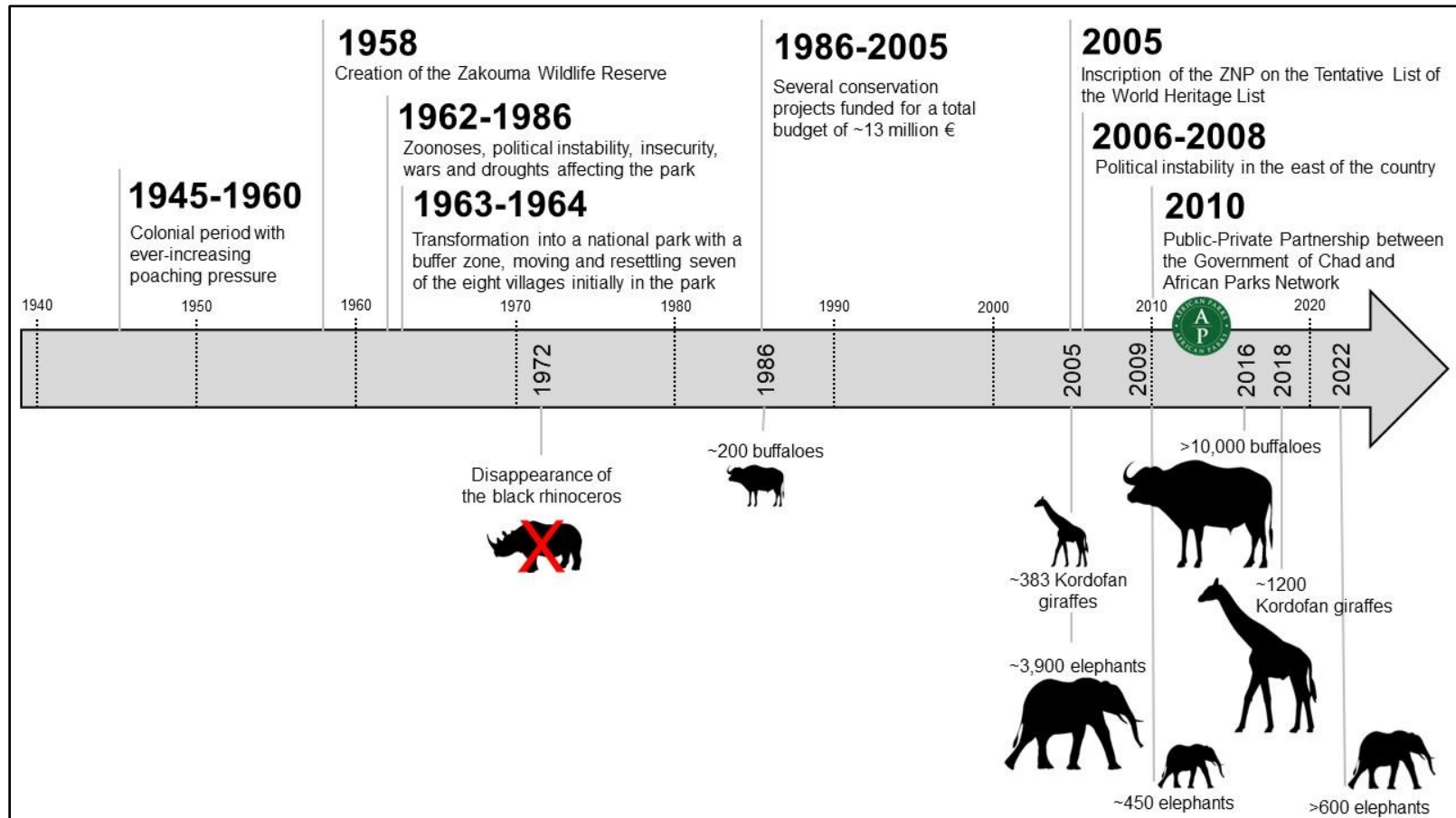
Submitted Manuscripts

STATUS	ID	TITLE	CREATED	SUBMITTED
✉ Contact Journal Ed. Office: Sinnett, Emma	ORYX-2025-0054.R1	Understanding the conservation challenges of armed conflicts in protected areas: Insights from the W-Arly-Pendjari Complex (Benin, Burkina Faso, and Niger) View Submission	18-May-2025	24-May-2025
• Awaiting Editorial Office Processing		Cover Letter		

?



3. Chapter 5: Progressing towards recognition as a UNESCO World Heritage Site: the case of Zakouma National Park (Chad)



3. Chapter 5: Progressing towards recognition as a UNESCO World Heritage Site: the case of Zakouma National Park (Chad)

Revised Manuscript to be submitted to the Journal – Conservation Science and Practice by the **end of August 2025**

The screenshot shows the ScholarOne Manuscripts Author Dashboard. At the top, the journal name "Conservation Science and Practice" is displayed with an "Open Access" badge. Below the journal name, there are navigation tabs for "Home", "Author", and "Review". The "Author" tab is selected, leading to the "Author Dashboard".

On the left side of the dashboard, there is a sidebar menu with the following items:

- 1 Manuscripts with Decisions >
- 1 Manuscripts Awaiting Resubmission >
- Start New Submission >
- 5 Most Recent E-mails >

The main content area is titled "Manuscripts with Decisions" and contains a table with the following data:

ACTION	STATUS	ID	TITLE	SUBMITTED	DECISIONED
create a resubmission	Contact Journal SAE: Mwampamba, Tuyeni ADM: Loganathan, Vigneshwari	CSP2-24-0331	Progressing towards recognition as a UNESCO World Heritage Site: the case of Zakouma National Park (Chad) View Submission	07-Aug-2024	13-Jan-2025

4. Next steps – June to September 2025

1. Complete the review of the two articles (Okapi [chapter 3] & Zakouma [chapter 5]).
2. Finalize the abstract [under review], introduction [under review], discussion, and conclusion chapters.
3. Prepare for the final Thesis Committee meeting scheduled for July 2025.

THANK YOU



Sincerely thanks to the European Union, ERAIFT, AGRINATURA and ULiège for their support