

EDUCATION FOR SUSTAINABLE DEVELOPMENT

Scoping Animal Welfare Legislation and Ethical Review
Policies Across Africa

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1. Research Introduction

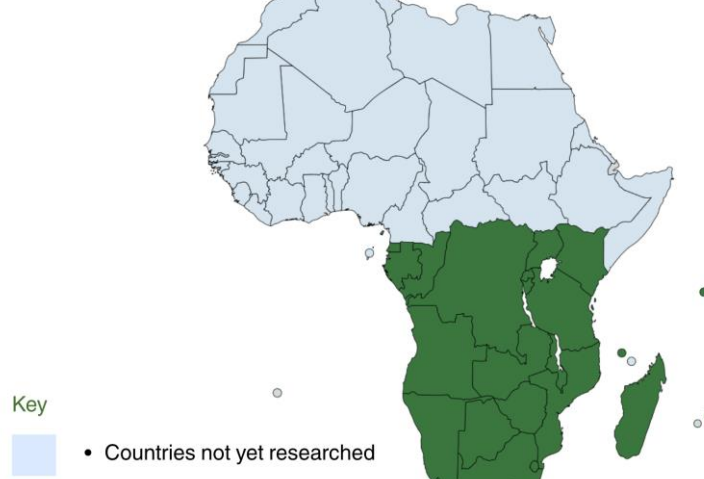
1.1 Background

Animals have been used in research across biological sciences and throughout history to develop solutions to complex challenges. From disease control, vaccine development, food security and ecological conservation, animal research can help tackle global challenges and pursue sustainable development. However, using animals in research raises ethical concerns and therefore requires regulation, guidelines and institutional practices to ensure ethical standards are upheld. Across Africa, animals are often used in research to develop solutions to some of the continent's major challenges. Despite this, there are limited opportunities for education in animal welfare and laboratory practices, and the regulatory framework for the care and use of animals across Africa varies widely (Mohr et al, 2023)

Ethical animal research practices are also a key part of the continent's sustainable development strategies through supporting responsible scientific research and innovation (SDG.9) (United Nations, 2025). Furthermore, it is explicitly set out as a goal of the African Union Inter-African Bureau for Animal Resources (2018) animal welfare strategy to transform the animal research sector through adoption of good animal welfare practices, sustainable livelihoods, reducing poverty and fostering economic growth.

1.2 Research aims and outline of scope

Despite the growing international and regional consensus that there is a need to develop strong standards for animal ethics in research, there remains a high degree of variation in how the use of animals in scientific research is regulated among African countries. Animal ethics is not regulated simply through national legislation, and there are a range of different practices, ethical review committees, research permits, international standards and institutional guidelines that are followed across the



2. Methodology

2.1 Research Design

On this research, I worked with Harry Robers-Percy and Niamh Ferrigan, two 2025 cohort Laidlaw scholars from the University of Leeds, and Kate Keddie, a research intern from the University of Alberta in Canada. The research took the form of a scoping review. Mak and Thomas (2022) define a scoping review as a “type of knowledge synthesis that uses a systematic approach to identify and synthesize an existing or emerging body of literature on a given topic”. This approach was able to provide us with a broad understanding of the diversity of governance across countries.

2.2 Search strategy and filtering

A structured literature search was conducted on PubMed to identify relevant papers published between 2024 and 2026 that use animals in research in a selected country. The search terms used were designed to filter through a large number of papers on the database to find those which were relevant to our study. Broad searches were created using Boolean logic to capture the maximum number of papers describing animal research. The full search strings used can be seen in figure two, which shows the table of our search results for Uganda. Searches one, two and three were kept the same for each country we reviewed, search four was changed to the name of the country being searched so search 5 yielded results relevant to the country we were interested in.

Results were then limited to the years 2024 to 2026 and filtered by the availability of an abstract and the free full text, as well as by “other animals” to ensure animal research rather than human research papers were being found. If we couldn’t find any relevant papers for a country on PubMed, then an alternative database (SCOPUS) was used. This was most common for smaller countries such as Eritrea or Burundi. When

searching in SCOPUS, the same search terms were used; however, filters 6, 7 and 8 are not available search features.

Figure Two

	FILTER (PUBMED)	NO. RESULTS
1	animal*	8,463,807
2	(((((((ethic*) OR (AEC) OR (IACUC) OR (law) OR (regulation*) OR (legislation) OR (guidance) OR (standard) OR (policy) AND (conservation) OR (wildlife) OR (captive) OR (domesticated) OR (farm) OR (husbandry) OR (marine)	1,130,871
3	1+2	1,125,870
4	"Uganda"	38,074
5	3+4	2,307
6	Limit 5 to "2024 - 2026"	536
7	Filter 6 by text availability - "Abstract"	535
8	Filter 7 by text availability - "Free full text"	443
9	Filter 8 by species - "Other Animals"	174
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2.3 Screening title and abstract

The papers found via the initial search were then imported into the reference manager Mendeley and sorted by title and abstract. This was to ensure that the papers were research papers and not reviews, that they involved animal research, and that they were conducted in the relevant country. If the papers didn't meet the criteria, they were excluded.

2.4 Data Extraction and Analysis

The post-exclusion papers that met the criteria were read, with the relevant information noted in a spreadsheet. Most papers have a research ethics section, acknowledgements or methodology section where the authors would note the ethical approval committees that approved their study, the animal research laws followed, or any research permits granted. The animal species, years any samples were taken, study type and funding were also noted along with information about the paper including the authors, paper title, a journal reference and a DOI.

2.5 Limitations

The main limitation of this research at the time of writing is that it is not yet complete, therefore only offers a partial picture of animal research governance across the continent. Furthermore, it relies on the papers' authors declaring which regulation or ethical guidelines their research followed. Furthermore, some countries scoped have very limited research infrastructure and output on PubMed or SCOPUS, meaning that there were very few relevant papers to use as evidence of governance in that country.

3. Results

While we have not yet completed the entire scoping review, some notable trends have begun to emerge. In this section I will outline what these trends are and, while I can't give the overall results of this research, I will describe any notable patterns in the use of ethical review committees and permits.

Larger countries with higher GDPs tended to have more developed and thorough animal welfare governance. Notably in South Africa many papers stated that their research

required a permit under section 20 of the Animal Diseases Act. So far, this is the most widespread acknowledgement of an individual piece of legislation in any country researched so far. In smaller countries, we found less evidence of a centralised authority or piece of legislation. Many papers would state that they followed the applicable or appropriate guidelines set out by a particular department, institution animal care and use committee (IACUC) or local authority with little consistency in what these were. For example, In Zimbabwe some papers would follow the ethical guidelines of the Department of Veterinary Services, while others would follow the established guidelines of the National Animal Research Ethics Committee (NAREC) of Zimbabwe and many would state that they followed international and institutional guidelines.

Across the countries scoped so far, there has been some notable consistency in practices with regards to species. For example, research conducted on primates would often adhere to the international standards for the ethical treatment of non-human primates set out by the American Society of Primatologists. Furthermore, research conducted by academics from institutions outside of Africa would often gain ethical approval from their home university and comply with the animal ethics laws of their home country.

Across countries, most research did receive ethical approval from an ethical review committee either at an institutional or national level. Uganda has recently developed guidelines for the use of animals in research regulated by the Uganda National Council of Science and Technology, allowing it to become a node of expertise in the region (Mohr et al, 2023). This has been reflected in the comparative consistency of the ethical approval procedures followed by researchers in Uganda.

4. Discussion

From the 23 countries reviewed so far, we have found substantial variation in how animal research is regulated across Africa. However, it is important to note that continent wide conclusions cannot be drawn as the research is unfortunately not yet finished. While most papers did identify some form of ethical oversight, the mechanisms used varied considerably between countries. It was noticeable that countries with more developed research infrastructure and institutions had more consistent regulation.

It is important to understand that competing socioeconomic challenges, including poverty, political instability, food insecurity and conflict, can place pressure on limited institutional resources. Such competing priorities can present challenges for the development, implementation and enforcement of animal welfare regulation and standards. Therefore, facilitating education, training and the development of institutional knowledge can play an important role in promoting good practices. It is also a major goal of the Basel Declaration Society, which aims to bring together members of the scientific community to advance ethical principles in animal research following the establishment of the Basel declaration in 2010 (McGrath, McLachlan and Zeller, 2015).

There was overall more oversight of conservation biology in the countries scoped so far, with research conduct in national parks often requiring permits or ethical approval from additional authorities. This may be partly related to the taxonomic biases associated with what Prokop et al (2022) described as “large, charismatic animals”. Such species can generate stronger emotional responses among scientists, the public and policymakers, potentially contributing to increased regulation into research involving these animals, such as large mammals and primates. While this increases the welfare protection for certain species, it also raises ethical challenges. Animal welfare and ethical standards in research should be based on an animal’s sentience and a moral conviction to minimise harm and suffering (for example see Directive 2010/ 63/EU of the European Parliament on the protection of animals used for scientific purposes).

While we must acknowledge the importance of not universalising western values in our analysis of a culturally, economically and ecologically diverse continent where ethical standards emerge from a myriad of religious and cultural knowledge systems, there are also “golden threads” throughout different world views through which shared values and conventions emerge (Brink and Lewis, 2023). Therefore, building international consensus through facilitating education, multilateral declarations and international cooperation is fundamental to promoting animal welfare, research ethics and good scientific practices.

5. Conclusion

This research has identified substantial variation in regulation across the 23 African countries scoped so far. This forms the foundation for the broad picture of animal welfare governance across the continent we set out to build. Countries with more developed research infrastructure such as South Africa or Uganda, appear to have more consistent governance practices. Furthermore, the greater requirements for permits or increased ethical scrutiny among larger, charismatic species raises questions about the influence of taxonomic bias or economic importance of certain animals on regulatory priorities. While we have not yet completed the review, these findings are already beginning to highlight the importance in developing education, training and institutional capacities in animal welfare and research ethics.

6. Personal Reflection

6.1 Research reflection

Prior to starting this research, as a student of economics and geography and having not studied anything related to biological sciences since GCSEs at 16, I felt a little out of my depth. I was concerned that my lack of technical knowledge in this field would slow me

down and, while admittedly I was overwhelmed by a lot of the technical language used in some of the papers, I found that trying to solve these challenges first and then using the support of my fellow scholars and supervisor if I couldn't, allowed me to develop my research skills quickly.

One thing I was surprised by was how mentally tiring I would find the methodical, and often time very repetitive, process of researching. This was particularly noticeable for a scoping review as it involves lots of filtering, scanning, reading and data extraction. At the start of my research period, I found staring at a laptop with a high degree of concentration on one thing difficult. When researching or revising for my course I can move between analytical, critical and more creative modules regularly, allowing me to give each one my full concentration for a period of time; the possibility for this in my research, given the methodology we used, was limited. I therefore found that taking regular screen breaks, going for a walk, chatting with friends etc allowed me to maintain high levels of concentration for longer. In future, I would ask questions sooner. I felt that I was often hesitant to ask as I wanted to be able to figure things out for myself. While this is useful, I believe I could have found more of a balance.

6.2 Leadership reflection

In terms of leadership, the nature of this research as a team project provided plenty of opportunities to use and develop several of the Laidlaw leadership capacities. For example, I was keen to ensure that Kate, the research intern from Alberta, felt welcome and settled when she arrived in Leeds. I sent her an email to introduce myself and the project, gave her a tour of the campus and we worked closely to begin with as we both sought to refine our understanding of the methodology.

Working with scholars on different time zones, with Niamh in Kenya on her LIA and Harry in Santiago, presented unique organisational challenges. I quickly learned the importance of clarity in communication and paying close attention to details when organising a Teams call where everyone interpreted the agreed time for the meeting at

their local time. Organising regular meetings emphasised the importance of leading yourself before you lead others. This is particularly important with regards to micro rather than the macro elements of leadership, such as ensuring you have good WIFI, prepared notes and questions and enough charge on your laptop.

6.3 Dissemination of research and future career opportunities

In the future, once completed, this research should be published in a science journal, allowing for its findings to be used to develop professional education courses. In addition, over the course of the summer, I have become increasingly passionate about animal welfare and ethics in research, in particular with regards to the inequality of protection based on the “charisma”, human emotional connection to or potential economic value of certain species. I am most passionate about ensuring that my research has real world consequences outside of academic circles and want to use the leadership opportunities Laidlaw can provide to do this. Once completed and published, it should be used to develop professional education courses across Africa, but I also want to use the opportunities I can get to spread it in governmental and intergovernmental circles, as this can be a forum for genuine change. Given the nature of the careers I’m interested in (diplomacy, ecological conservation and working with international organisations and NGOs) this work is not only super interesting for me but also presents unique opportunities to present and gain connections within these industries.

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