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LiveSys Project

Continental Stocktaking Assessment of Existing Policies and Capacities Promoting Sustainable Livestock Production Systems in Africa

Programme: Catalysing Transformation towards Sustainable Livestock Systems (LiveSys) (2024–2028)



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Contents

Tables vi

Figures viii

Acknowledgement x

Executive Summary xi

Key findings xiii

1. Policy Landscape and Integration xiii

2. Policy Coherence Assessment xiii

3. Capacity Assessment and Development Needs xiv

4. Regional Economic Communities Performance xiv

5. Policy Implementation Challenges and Barriers xiv

Recommendations xv

Acronyms and Abbreviations xvii

1 Introduction 1

1.1 Background 1

1.2 Rationale for Policy and Capacity Assessment 1

1.3 The LiveSys Project 2

1.4 The Study 3

1.5 Scope of the assignment 3

1.6 Limitations and Considerations 3

2 Methods and Approach 4

2.1 Policy Inventory 4

2.2 In-Country Policy Surveys 4

2.3 Policy Integration Analysis 4

2.4 Policy Database 6

2.5 Policy Coherence Analysis 6

2.6 Capacity Development Needs Assessment 7

3 Policy Landscape and Integration Findings 8

3.1 Policy Inventory 8

3.2 Online Survey Results 8

3.3 Current Policy Development Status 8

3.4 Policy Integration 8

4 Regional Policy Findings 14
4.1 Integration Analysis 14
4.2 Vertical Coherence Analysis 15
5 Policy Coherence Findings 17
5.1 Document Selection and Analysis Process 17
5.2 Horizontal Coherence 18
5.3 Vertical Coherence 31
6 Policy Implementation Findings 37
6.1 Policy Implementation Status 37
6.2 Institutional Roles and Mandate 37
6.3 Cross-Sectoral Coordination 37
6.4` Budget Allocation and Resource Commitment 38
6.5 Alignment Patterns 38
6.6 Regional Collaboration 39
6.7 Policy Implementation Challenges and Barriers 39
6.8 Implementation Considerations 40
7 Capacity Development Findings 41
7.1 Analytical Framework 41
7.2 Thematic Capacity Analysis 48
7.3 Priority Capacity Needs Analysis 49
7.4 Training Format Preferences and Learning Modalities 50
7.5 Rio Conventions Awareness and International Framework Engagement 51
7.6 Advocacy Capacity Analysis and Institutional Influence 52
7.7 Cross-Cutting Themes and Integration Opportunities 53
7.8 Capacity Strengthening Insights 54
8 Recommendations 55
8.1 Policy Integration and Coherence Enhancement 55
8.2 Capacity Development 56
8.3 Digital Transformation and Technology Adoption 56
8.4 Financial Mechanisms and Resource Mobilization 57
9 Conclusion 58
9.1 Implications for the LiveSys Project and Partners 58
References 59

Annexes 60

Annex 1: Policy Scoring Frameworks 61

Annex 2: Survey Questionnaires 67

Annex 3: Policy Inventory Databases 98

Annex 4: Primary Sources and Policy Documents 98

Tables

Table 1.	Integration Assessment Criteria	5
Table 2.	Policy Coherence Analytical Rubric	6
Table 3.	Policies Analysed	8
Table 4.	Policy Development Stages	8
Table 5.	Policy Integration Scores	9
Table 6.	Detailed Policy Integration Analysis	10
Table 7.	Cross-Thematic Integration	12
Table 8.	Regional Policy Integration	14
Table 9.	Vertical Coherence Matrix: Alignment of Regional Policies	15
Table 10.	Findings by Regional Policy	15
Table 11.	LiveSys Country Policy Documents	17
Table 12.	Policy Interactions in Kenya	18
Table 13.	Policy Interaction Matrix for Kenya	18
Table 14.	Cross-Sectoral Synergies in Kenya	20
Table 15.	Thematic Coherence in Kenya	20
Table 16.	Policy Implementation and Governance in Kenya	21
Table 17.	Key Observations for Kenya	21
Table 18.	Policy Interactions in Nigeria	21
Table 19.	Policy Interaction Matrix for Nigeria	22
Table 20.	Thematic Coherence in Nigeria	23
Table 21.	Cross-Policy Synergies and Gaps in Nigeria	24
Table 22.	Policy Interactions in Zambia	25
Table 23.	Policy Interaction Matrix for Zambia	26
Table 24.	Policy Interactions and Coherence in Zambia	28
Table 25.	Key Observations for Zambia	28
Table 26.	Comparative Country Assessment Matrix	29
Table 27.	Comparative Country Thematic Coherence	29
Table 28.	Best Practices Identified within Country Policies	30
Table 29.	Common Coherence Strengths and Challenges	30
Table 30.	Vertical Coherence Assessment Matrix for Kenya	32
Table 31.	Detailed Findings by Policy for Kenya	32

Table 32.	Vertical Coherence Assessment Matrix for Nigeria	33
Table 33.	Detailed Findings by Policy for Nigeria	34
Table 34.	Vertical Coherence Assessment Matrix for Zambia	34
Table 35.	Detailed Findings by Policy for Zambia	35
Table 36.	Vertical Coherence Across Countries	36
Table 37.	Categorized and Grouped Challenges	39
Table 38.	Capacity Needs, Gaps, and Priority Assessment (Integration, Practices, and Knowledge)	42
Table 39.	Capacity Needs, Gaps, and Priority Assessment (Governance and Conventions)	43
Table 40.	Capacity Needs, Gaps, and Priority Assessment (Tracking)	45
Table 41.	Capacity Needs, Gaps, and Priority Assessment (Data)	46
Table 42.	Capacity Needs, Gaps, and Priority Assessment (Policy Impact Analysis)	47
Table 43.	Thematic Average Scores	48
Table 44.	Thematic Capacity Distribution	48
Table 45.	Top Priority Capacity Needs	49
Table 46.	Preferred Training Formats	50
Table 47.	Rio Conventions Awareness Distribution	51
Table 48.	Advocacy Capacity Scores by Thematic Area	52

Figures

Figure 1.	Policy Development Stages	8
Figure 2.	Policy Thematic Scores	9
Figure 3.	Survey Results: Livestock Integration Across Policies	11
Figure 4.	Survey Results: Thematic Integration into Livestock Policies	12
Figure 5.	Policy Interaction Heatmap for Kenya	20
Figure 6.	Policy Interaction Heatmap for Nigeria	23
Figure 7.	Policy Interaction Heatmap for Zambia	25
Figure 8.	Multi-Level Governance Framework for Vertical Coherence Analysis	31
Figure 9.	Vertical Coherence Across Countries Analysis – Alignment Scores Across Governance Levels	36
Figure 10.	Implementation Planning Status	37
Figure 11.	Institutional Leadership and Roles	37
Figure 12.	Cross-Sectoral Coordination	38
Figure 13.	Budget Allocation	38
Figure 14.	Policy Alignment	38
Figure 15.	Regional Collaboration	39

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Executive Summary

The **economic, social, and ecological significance of livestock systems in Africa** is difficult to overstate. Approximately **600 million people** depend on livestock for their livelihoods, with women accounting for about half of livestock keepers, often managing smaller animals. Livestock production plays a crucial role in ensuring food and nutritional security and serves as an important financial asset, particularly for poor households, providing a buffer during times of crisis.

At the same time, livestock systems can contribute to biodiversity loss, land degradation, and climate change. Globally, livestock production is responsible for approximately **15–18% of greenhouse gas emissions.** Despite their **importance for livelihoods, food security, and economic development,** livestock systems are often insufficiently reflected in global, regional, and national development strategies. Understanding the extent to which livestock systems are integrated into policy frameworks and the institutional capacities available to support their sustainable transformation is therefore critical.

This continental stocktaking study was conducted under the **Catalyzing Transformation towards Sustainable Livestock Systems (LiveSys)** project, which aims to promote sustainable, resilient, and nature-positive livestock food systems and biodiversity protection across Africa and selected regions. The project is funded by the **German Federal Ministry for Economic Cooperation and Development (BMZ),** with support from **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ),** and is implemented jointly by the **African Union Inter-African Bureau for Animal Resources (AU-IBAR),** the **International Livestock Research Institute (ILRI),** and the **Alliance of Bioversity International and CIAT.**

The study was designed to (i) assess the **policy and institutional capacity landscape** governing sustainable livestock production in Africa; and (ii) examine the degree of integration of four core thematic areas **(climate change, livestock development, biodiversity protection, and gender**) across national and regional policy frameworks. The analysis combined a structured **desk review of 196 unique policy frameworks** identified and retrieved online with a survey component covering African Union Member States. A total of **55 Member States** were targeted through an online questionnaire, resulting in **23 validated responses from 17 countries** across different **Regional Economic Communities (RECs).** The dataset includes both national and regional policy instruments, reflecting varying degrees of policy development and institutional engagement across countries and RECs. The findings were further enriched through a **validation process involving Member States (MS) and RECs,** strengthening ownership and contextual relevance. This validation process confirmed both the relevance of the analytical framework and the practical utility of the findings for ongoing policy harmonization and implementation support.

Overall, the assessment reveals a **highly developed but uneven policy landscape.** Across Africa, livestock-related considerations are frequently embedded in broader agricultural, climate, biodiversity, and development frameworks, but they are often weakly mainstreamed as standalone or fully integrated livestock-specific priorities. One of the most significant findings is that l**ivestock-specific policies demonstrate weaker thematic integration** than broader environmental and climate policies. This challenges conventional assumptions about sectoral policy effectiveness. The weak integration performance of livestock-specific policies further indicates that sectoral approaches may be insufficient for addressing the complex challenges facing livestock systems. In particular, livestock systems are insufficiently integrated within biodiversity frameworks such as **National Biodiversity Strategies and Action Plans (NBSAPs),** where linkages to livestock production systems, genetic resources, and rangeland management remain limited or indirect. Similarly, integration of livestock into climate policy instruments varies significantly, with stronger alignment observed in **Nationally Determined Contributions (NDCs)** compared to other sectoral frameworks.

The analysis further shows that while most countries have made progress in developing comprehensive policy frameworks aligned with global **(UNFCCC, UNCBD, UNCCD, SDGs),** continental **(Agenda 2063, CAADP)**, and regional **(REC frameworks)** commitments, the degree of operational coherence and implementation readiness remains limited. RECs demonstrate comparatively stronger alignment patterns, highlighting their critical role in shaping national policy directions, while continental frameworks such as the Livestock Development Strategy for Africa (LiDeSA) are inconsistently referenced across livestock-specific policies.

Another key finding of the study is the persistent **gap between policy formulation and implementation.** Although policy frameworks are generally well developed, translation into operational programmes, coordinated institutional mandates, and adequately resourced implementation mechanisms remains weak. This is compounded by limited clarity in institutional roles, insufficient cross-sectoral coordination, and constrained budget allocations for implementation.

The capacity assessment further highlights **structural weaknesses** in technical, institutional, and digital capacities required for effective implementation of climate-smart livestock systems. Key gaps include limited capacity for climate risk assessment, weak Monitoring, Reporting and Verification (MRV) systems for livestock emissions, insufficient integration of biodiversity considerations, and low uptake of digital decision-support tools. **Gender** integration, while increasingly recognized in policy frameworks, remains inconsistently operationalized in implementation processes.

In addition, **advocacy and governance capacities** are generally moderate but not yet sufficiently strong to ensure effective influence on national and continental policy processes. Awareness of international environmental frameworks is highest for the **UNFCCC,** followed by the **UN Convention on Biological Diversity (CBD),** while awareness of the **UN Convention to Combat Desertification (UNCCD)** remains comparatively lower, despite its direct relevance to livestock systems and rangelands.

The implementation analysis confirms that less than one-quarter of surveyed institutions report fully operational **implementation plans,** while the majority remain in draft or partially operational stages. This indicates systemic challenges in moving from policy design to execution, particularly in relation to financing, coordination mechanisms, and technical capacity.

Despite these challenges, the study identifies strong foundations for transformation. There is broad institutional recognition of the importance of regional collaboration, climate-smart livestock systems, and integrated approaches to sustainable development. **Regional cooperation mechanisms** are active across most Member States, and there is increasing demand for capacity development in climate risk assessment, biodiversity conservation within livestock systems, data-driven decision-making, and policy impact analysis.

In conclusion, while Africa has made significant progress in establishing comprehensive policy frameworks for sustainable livestock development, critical gaps remain in integration, implementation, and capacity. Strengthening policy coherence across livestock, climate, biodiversity, and land use systems, alongside targeted investments in institutional capacity, digital transformation, and financing mechanisms, will be essential to translate existing commitments into measurable outcomes. The LiveSys project is strategically positioned to support this transition by **addressing key capacity gaps and enhancing policy integration across Member States and RECs.**

Key findings

1. Policy Landscape and Integration

The analysis of frameworks across the various policy instruments reveals significant variations in thematic integration.

- One of the most significant findings is the confounding discovery that livestock-specific policies demonstrate weaker thematic integration than broader environmental and climate policies. With livestock policies scoring only 1.31 out of 3.0 in overall integration compared to Nationally Determined Contributions (NDCs) at 2.26 and Land Degradation Neutrality (LDN) policies at 2.43, this challenges conventional assumptions about sectoral policy effectiveness. The weak integration performance of livestock-specific policies further indicates that sectoral approaches may be insufficient for addressing the complex challenges facing livestock systems.
- Climate integration demonstrates the strongest performance in LDN policies (2.72) but shows concerning weaknesses in livestock-specific policies (1.10) and National Adaptation Plans (NAPs) (1.03). The pattern highlights missed opportunities for mainstreaming livestock considerations into national climate adaptation strategies.
- Biodiversity integration exhibits strong performance in LDN policies (2.63) and NDCs (2.57) but weak integration in livestock-specific policies (1.04). The finding highlights a critical gap in ecosystem approaches to livestock policy development, despite the substantial interactions between livestock systems and biodiversity conservation.
- Gender integration demonstrates the most variable performance across frameworks, with NDCs showing the strongest integration (2.12) while NAPs show the weakest integration (0.99). The moderate performance across other frameworks indicates general recognition of gender considerations but suggests significant opportunities for enhanced gender mainstreaming across all policy domains.

2. Policy Coherence Assessment

Policy coherence is assessed with a focus on the LiveSys priority countries of Kenya, Zambia, and Nigeria to evaluate alignment, consistency, overlaps, and gaps in the existing policies across various levels of governance, within and between the AU MSs and RECs. The deep-dive analysis of policy coherence reveals that vertical coherence with international frameworks is generally strong, demonstrating that African countries are well positioned to contribute to global environmental and development objectives through their livestock policies. However, the variation in horizontal coherence suggests that coordination mechanisms between sectors and across governance levels require strengthening to maximize policy effectiveness.

- Vertical coherence analysis demonstrates strong alignment with international frameworks, with Kenya achieving the highest score (2.40), followed by Nigeria (2.22) and Zambia (2.16). However, global-level alignment shows more variation, with climate policies demonstrating stronger alignment than livestock policies, reflecting the specific requirements of international climate frameworks.
- Kenya and Nigeria achieve similar scores of 2.11, reflecting moderate coherence across thematic areas while highlighting specific improvement needs in gender inclusion, monitoring and evaluation systems, and climate finance mechanisms.
- Regional-level alignment consistently shows the highest scores across all countries, reflecting the strong influence of the RECs on national policy development.

3. Capacity Assessment and Development Needs

The comprehensive capacity assessment across 23 organizations from 17 countries reveals compounding capacity gaps with significant variation in specific needs and priorities.

- Climate adaptation capacity emerges as the area with the lowest average capacity score (1.94 out of 3.0), indicating significant development opportunities. The distribution shows that while 45% of respondents rate their capacity as moderate and 25% report strong capacity, a notable 10% report having no capacity in climate adaptation. This finding highlights the critical need for foundational capacity building in climate adaptation planning, which requires integration of climate science, risk assessment, and adaptive management approaches.
- The analysis identifies climate risk assessments as the highest priority capacity need, mentioned by 16 respondents, reflecting the fundamental importance of understanding climate risks as a foundation for all other climate-smart livestock interventions.
- Biodiversity conservation within livestock systems is another high priority with 16 mentions, emphasizing the critical intersection between livestock production and environmental conservation.
- Climate scenario analysis for livestock planning also receives 16 mentions, emphasizing the need for forward-looking planning capabilities that integrate climate projections with livestock development strategies. This capacity need reflects the long-term nature of livestock investments and the importance of climate-informed decision-making for sustainable development outcomes.

4. Regional Economic Communities Performance

The assessment of the RECs reveals significant variation in policy integration performance.

- The Intergovernmental Authority on Development (IGAD) emerges at the top, achieving maximum scores (3.0 out of 3.0) across all thematic areas including livestock system integration, climate resilience, biodiversity protection, gender equity, and land degradation.
- The Economic Community of West African States (ECOWAS) demonstrates strong performance with consistent scores above 2.0 across most thematic areas, while the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC) show moderate performance levels.
- The Southern African Development Community (SADC) significantly lags with uniformly low scores (1.0 out of 3.0) across most indicators, suggesting limited incorporation of sustainability and inclusivity considerations in its livestock policy framework.

5. Policy Implementation Challenges and Barriers

The analysis reveals systematic barriers that constrain effective policy coordination and implementation across the major challenge categories.

- Institutional capacity constraints emerge as critical barriers, including weak capacity at national and sub-national levels, high vacancy rates, shortage of specialized staff, and weak coordination among stakeholders. These capacity constraints directly impact the ability of institutions to effectively implement well-designed policies and achieve intended outcomes.
- Financial and resource gaps represent another major constraint, with inadequate national budget allocations, lack of access to finance for actors, reliance on limited government funding, and absence of innovative financing mechanisms. These financial constraints limit the scope and sustainability of policy implementation efforts across the continent.

- Policy and legal framework challenges include the absence of national adaptation plans for livestock, insufficient legal frameworks, non-enforcement of existing laws, and overlapping institutional mandates. These foundational challenges create uncertainty and inefficiency in policy implementation processes.

Recommendations

Based on the comprehensive assessment of policy landscapes, integration effectiveness, coherence analysis, and capacity needs across AU MSs and RECs, this study recommends the following to address the identified gaps while building on existing strengths and opportunities for enhanced policy effectiveness, coherence, and implementation.

1. Policy Integration and Coherence Enhancement

Recommendation I: AU MSs should establish integrated policy development processes that bring together livestock, climate, biodiversity, gender, and land degradation to strengthen cross-sectoral policy integration.

Recommendation II: Coordination should be strengthened through knowledge sharing and capacity building focused on livestock policy harmonization, with the aim of enhancing both horizontal and vertical coherence.

Recommendation III: Both AU MSs and RECs should create shared monitoring, evaluation, and verification (MRV) systems that track progress across multiple themes and policy frameworks, developing joint MRV frameworks to enable adaptative management.

Recommendation IV: AU MSs should attempt to align policy cycles and implementation timelines by establishing integrated and synchronized policy review and update cycles across related frameworks (livestock, climate, biodiversity, and land degradation policies).

2. Capacity Development

Recommendation V: LiveSys partners together with AU MS research institutions should facilitate the building of climate risk assessment capacity through comprehensive training programs focused on climate risk assessment methodologies specific to livestock systems.

Recommendation VI: AU MSs should strengthen biodiversity conservation capacity, thereby addressing the critical gap in biodiversity conservation within livestock systems through ecosystem-based approaches.

3. Institutional Capacity Strengthening

Recommendation VII: Tailored and context-specific technical assistance mechanisms should be established to support countries in enhancing policy integration through technical advisory services, regional centres of excellence, and peer-to-peer learning networks.

Recommendation VIII: AU MSs should strengthen cross-sectoral coordination mechanisms by establishing formal inter-ministerial coordination platforms that include representatives from ministries of agriculture, environment, climate change, gender, and finance, with clear mandates for policy coordination and joint implementation planning.

4. Digital Transformation and Technology Adoption

Recommendation IX: Comprehensive digital transformation programs should be implemented to enhance the use of digital platforms for livestock–climate–biodiversity evidence-based decision-making.

Recommendation X: Digital platform development should be complemented with comprehensive digital literacy training programs that address the capacity constraints limiting technology uptake.

5. Resource Mobilization

Recommendation XI: Financing mechanisms should be enhanced by developing innovative financing instruments that combine public and private resources (e.g. blended finance mechanisms, climate finance access, livestock insurance products, banks, and private-sector finance).

Recommendation XII: Climate finance access should be strengthened by building institutional capacity for accessing international climate finance (both bi- and multilateral).

Implications for the LiveSys Project and Partners

The findings of this assessment have significant implications for the LiveSys project and its partners in terms of strategic priorities, intervention design, and implementation approaches. The identification of specific capacity needs, policy integration gaps, and implementation challenges provides clear direction for project activities while highlighting opportunities for maximum impact.

In summary, the LiveSys project and its partners are well positioned to contribute to this transformation through their technical expertise, institutional networks, and collaborative relationships across the continent.

Acronyms and Abbreviations

ABSAP	African Union Biodiversity Strategy and Action Plan
AFOLU	Agriculture, Forestry, and Other Land Use
ASAL	Arid and Semi-Arid Lands (Kenya)
AU	African Union
AU-IBAR	African Union Inter-African Bureau for Animal Resources
AU MS	African Union Member State
CAADP	Comprehensive Africa Agriculture Development Programme
CBD	Convention on Biological Diversity
COMESA	Common Market for Eastern and Southern Africa
CSA	Climate-Smart Agriculture
CSA-MSP	Climate-Smart Agriculture Multi-Stakeholder Partnership (Kenya)
CSAIP	Climate-Smart Agriculture Investment Plan
EAC	East African Community
EbA	Ecosystem-Based Adaptation
ECOWAS	Economic Community of West African States
GCF	Green Climate Fund
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
IDDRSI	IGAD Drought Disaster Resilience and Sustainability Initiative
IGAD	Intergovernmental Authority on Development
ILRI	International Livestock Research Institute
LDN	Land Degradation Neutrality
LiDeSA	Livestock Development Strategy for Africa
L-PRES	Livestock Productivity and Resilience Project (Nigeria)
M&E	Monitoring and Evaluation

MoALD	Ministry of Agriculture and Livestock Development (Kenya)
MRV	Monitoring, Reporting, and Verification
NAP	National Adaptation Plan
NbS	Nature-Based Solutions
NBSAP	National Biodiversity Strategy and Action Plan
NCCP	National Climate Change Policy (Nigeria)
NDC	Nationally Determined Contribution
NLTP	National Livestock Transformation Plan (Nigeria)
REC	Regional Economic Community
SADC	Southern African Development Community
SDG	Sustainable Development Goal
SLCP	Short-Lived Climate Pollutant
UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
UNFCCC	United Nations Framework Convention on Climate Change

1 Introduction

This section highlights the critical role of the livestock sector in Africa, its economic importance, its environmental challenges, and its sustainability opportunities. It then presents the rationale for the study and introduces the LiveSys project and the consultancy assignment.

1.1 Background

Livestock systems are one of the most important components of the African agricultural sector, as rangelands used for grazing livestock make up more than half of the continent's land area. Africa's livestock sector plays a crucial role in economic development, food security, and rural livelihoods, representing approximately 30% of the Agricultural Gross Domestic Product and providing employment for about 50% of the economically active population [1]. The sector remains critical for food security not only because of the income benefits but also the nutritional benefits – animal-source foods are protein dense and contain key micronutrients not found in plant-based foods [2]. However, the sector faces unprecedented challenges including environmental degradation, climate change impacts, disease outbreaks, and socio-economic inequalities that threaten its sustainability and growth potential [3].

In addition, climate change is and will have significant impacts on livestock in Africa, even under medium scenarios that keep overall global warming to under 2°C. At the same time, livestock is the largest contributor to greenhouse gas (GHG) emissions from the agricultural sector in Africa. The growing demand for livestock products needs to be managed so that the production is as sustainable as possible, avoiding known negative environmental impacts of livestock (e.g. GHG emissions, degradation, and biodiversity loss). Despite the positive steps taken by Africa to address climate change in the livestock sector, it is evident that there is a need to build climate-resilient and climate-smart livestock systems nurtured in nature-positive environments [4].

These challenges necessitate comprehensive policy interventions supported by robust capacity assessment frameworks and coherent integration strategies.

1.2 Rationale for Policy and Capacity Assessment

The rationale for this comprehensive policy assessment in sustainable livestock development emanates from the sector's complex interactions with multiple development objectives and its critical role [2]. In the context of African development, coherence is particularly critical given the continent's integration into multiple overlapping governance structures, including the African Union (AU) continental frameworks, the Regional Economic Communities (RECs), and global multilateral agreements [2]. Of importance is the AU's recognition of this complexity leading to the development of the Livestock Development Strategy for Africa (LiDeSA) 2015–2035, which acknowledges that livestock development policies must address food security and climate change concerns simultaneously while considering social and economic dimensions [5]. As such, the need for systematic policy assessment becomes particularly evident when examining the challenges facing Africa's livestock sector.

Africa's unique governance architecture, characterized by the coexistence of continental institutions (the AU), RECs, and national governments, creates both opportunities and challenges for policy coherence. Research indicates that the policy context has been particularly dynamic since 2015, with numerous policies developed in the climate, development, livestock, agriculture, and land sectors [2]. This proliferation of policies creates both opportunities and challenges for coherent policy implementation, making systematic assessment essential for identifying synergies, addressing conflicts, and ensuring effective resource allocation. This dynamic nature of the policy environment further reinforces the need for continuous assessment mechanisms.

1.2.1 Policy Integration Challenge

The rationale for integrated policy approaches in livestock development emerges from the sector's inherent connections with multiple development domains. Livestock systems intersect with agricultural production, environmental management, climate change adaptation and mitigation, rural development, food security, and economic growth objectives. This interconnectedness means that policies developed in isolation many a times fail to capture important synergies or may inadvertently create conflicts with objectives in related sectors.

The integration challenge is further complicated by the multi-level nature of governance in livestock development. Effective policy integration requires coordination across the continental, regional, national, and local levels, each with distinct mandates, resources, and implementation capacities. The experience of implementing LiDeSA has highlighted the importance of addressing coordination challenges among diverse stakeholders including AU Commission institutions, RECs and regional institutions, African Union Member States (AU MSs), non-state actors, and international development partners.

1.2.2 Policy Coherence Assessment

Policy coherence for sustainable development represents a critical analytical framework for understanding how different policy instruments work together to achieve common objectives. In the context of livestock development, policy coherence analysis examines the extent to which policies across different sectors and governance levels support or conflict with sustainable livestock transformation objectives. The Policy Coherence for Sustainable Development Framework, as applied by the CGIAR Research Program on Climate Change, Agriculture and Food Security, provides a systematic approach for evaluating policy integration effectiveness [6].

The framework recognizes that policy coherence operates across multiple dimensions, including horizontal coherence between policies at the same governance level, vertical coherence between policies at different governance levels, and temporal coherence between policies developed in different time periods. This multidimensional understanding is particularly relevant for livestock development, where policies must address immediate production challenges while contributing to long-term sustainability objectives.

1.2.3 Multi-Level Capacity Assessment

Effective capacity assessment in livestock development requires frameworks that address capacity needs across multiple levels of intervention. The multi-level approach recognizes that sustainable livestock transformation depends on strengthening capabilities at individual, organizational, and institutional levels simultaneously. This comprehensive perspective ensures that capacity development interventions address the full range of factors that influence policy implementation effectiveness.

1.3 The LiveSys Project

1.3.1 Project Overview

The International Livestock Research Institute (ILRI), African Union Inter-African Bureau for Animal Resources (AU-IBAR), and Alliance of Biodiversity and International Centre for Tropical Agriculture (CIAT) are implementing partners of the new Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) project **Catalyzing Transformation towards Sustainable Livestock Systems (LiveSys)**. LiveSys is designed to drive climate adaptation and biodiversity protection in livestock systems, with a focus on Africa and additional activities in Latin America. The project is funded by the German Federal Ministry for Economic Cooperation and Development (BMZ) with the support of GIZ.

1.3.2 Output Areas

The project works in four key output areas:

1. Global agendas and advocacy
2. Mobilizing finance

3. Capacity development
4. Knowledge exchange and networking

1.4 The Study

The project undertook a continental-wide stocktaking and scoping assessment to establish the existing state of play around livestock, environment, and other related policies, capacity building needs, and levels of climate finance for livestock in Africa.

The specific objectives were:

- To review and create a database of the existing national, regional, and continental livestock, climate, biodiversity, and land degradation policies
- To assess and analyse the integration of key dimensions (climate, biodiversity, land degradation, gender)
- To assess and analyse the policy implementation and coherence status of the identified policies
- To assess and analyse the capacity needs and gaps within the sustainable livestock production sector
- To recommend LiveSys entry points to support the implementation and scaling up of sustainable livestock systems

1.5 Scope of the assignment

The study involved a continent-wide stocktaking by assessing the existing policies that promote sustainable livestock production systems, focusing on relevant government ministries, departments, and agencies in AU MSs and RECs, and taking deep dives into the LiveSys project priority countries of Zambia, Kenya, and Nigeria.

1.6 Limitations and Considerations

The study acknowledges certain limitations that should be considered when interpreting results:

- Data and information access was limited, with some policies not online.
- The analysis focuses on formal policy frameworks and may not capture informal coordination mechanisms or political dynamics that influence policy coherence.
- The assessment is based on policy documents rather than implementation outcomes, which may not fully reflect actual coherence in practice.
- The scoring system, while systematic, involves subjective judgments that may vary among different assessors.
- It was not possible to reach out to all AU MS focal points for more in-depth information and validation.

2 Methods and Approach

The overall approach of the policy scoping and stocktaking study was grounded in literature reviews, desk-based policy analysis, and participatory approaches using surveys, interviews, workshops, and consultations among key stakeholders in AU MSs and RECs as well as research and development institutions. A flexible and an adaptive phased methodology was employed, ensuring comprehensive analysis and synthesis while allowing for inclusive development of deliverables, sub-outcomes, and further detailed validation processes at every step. The methodology made it possible to make adjustments based on emerging findings as well as input and feedback from LiveSys project partners and stakeholders.

The various methodologies and approaches used in the policy scoping and stocktaking study are presented below.

2.1 Policy Inventory

The study searched and documented the existing, validated, and published policies and strategies within AU MSs that promote sustainable livestock production systems and were accessible online.

In choosing the policy documents of focus, the project takes note of the fact that the intersection of livestock systems with climate change, biodiversity conservation, gender equality, and land degradation represents one of the most complex challenges in the contemporary sustainable development arena. The complexity of these interconnections necessitates integrated policy approaches that recognize and address the multifaceted nature of livestock–climate–environment–society relationships.

The selected and analysed policy instruments included:

- National Adaptation Plans (NAPs)
- Nationally Determined Contributions (NDCs)
- National Biodiversity Strategies and Action Plans (NBSAPs)
- Livestock Strategies and Policies
- Climate-Smart Agriculture Investment Plans (CSAIPs)
- Continental and REC Strategies and Policies

By examining five major policy instruments that countries use to address environmental and development challenges, this study provides unprecedented insights into the current state of policy integration and identifies opportunities for relevant policy harmonization and enhanced coherence.

2.2 In-Country Policy Surveys

A structured survey questionnaire addressing policy existence and implementation status was developed and sent out to AU MSs and RECs. The survey employed a mixed-methods approach with both quantitative and qualitative response options. The survey design incorporated both quantitative rating scales and qualitative open-ended responses to capture nuanced perspectives on policy integration, implementation, coherence, capacity needs, and capacity strengthening preferences. Details of the survey can be found in Annex 2.

2.3 Policy Integration Analysis

The study analysed the inclusion of livestock, climate, biodiversity, land degradation, and gender into the existing policies using keyword searches. Integration assessment utilized a multidimensional approach combining quantitative and qualitative measures. The integration analysis aimed to:

- Assess the extent and quality of integration of livestock, climate, biodiversity, gender, and land degradation themes across the five policy frameworks
- Identify patterns of integration and significant gaps in cross-thematic policy coherence
- Quantify integration levels using standardized metrics across different policy instruments

- Provide evidence-based recommendations for enhancing policy integration and effectiveness
- Develop a comprehensive framework for understanding cross-sectoral policy linkages in the livestock–environment nexus

Policy assessment was undertaken using the criteria contained in Table 1. Afterwards, the findings were scored using the criteria contained in Annex 1.

Table 1. Integration Assessment Criteria

Thematic Area– Inclusion	Description	Indicators/Checklist	Scoring
Livestock	Assessing **livestock inclusion** in existing policies that promote sustainable development and resilience	• **Recognition**–Are livestock systems explicitly recognized as key production systems and are their roles in livelihoods acknowledged? • **Objectives**–Are there specific objectives for sustainable livestock production, productivity improvement, and market access? • **Practices**–How well are sustainable livestock practices (feed, health, genetics, management) integrated into policy modalities? • **Value chains**–Are livestock value chain development and market linkages promoted?	• 0=Not addressed • 1=Mentioned but weakly addressed • 2=Partially addressed with some measures • 3=Fully addressed with strong measures and clear implementation
Climate	Assessing **climate change action inclusion** in existing policies that promote sustainable livestock production systems	**Adaptation** • Are adaptive livestock systems promoted? • Does the policy support livelihoods diversification for livestock-dependent communities? **Mitigation** • Does the policy address GHG emissions from livestock? • Are low-emission livestock practices promoted? • Are carbon markets or incentives mentioned?	• 0=No mention • 1=Mentioned but not developed • 2=Included with limited implementation strategies • 3=Well integrated with clear actions and accountability
Biodiversity	Assessing **biodiversity inclusion** in existing policies that promote sustainable livestock production systems	• **Recognition**–Is biodiversity explicitly mentioned as a goal and are ecosystems acknowledged in livestock policies? • **Objectives**–Are biodiversity conservation goals included and are nature-based solutions (NbS) promoted? • Is **sustainable use** promoted and supported?	• 0=No inclusion • 1=Mentioned but weakly integrated • 2=Moderate integration with limited implementation detail • 3=Strong, actionable, and well-integrated
Gender	Assessing **gender inclusion** in existing policies that promote sustainable livestock production systems	• **Inclusion**–Does the policy mention gender and are women livestock keepers specifically referenced? • **Disaggregation**–Are data and targets sex-disaggregated? • **Responsibilities**–Are there gender-specific responsibilities/actions outlined?	• 0=No reference to gender • 1=Mention of gender but no concrete actions • 2=Gender-sensitive but not transformative • 3=Gender-transformative (shifting power relations)

Thematic Area– Inclusion	Description	Indicators/Checklist	Scoring
Land Degradation	Evaluating the extent to which **land degradation** issues are incorporated in existing policies that promote sustainable livestock production systems	• **Recognition**–Is land degradation recognized as a challenge affecting livestock systems? • **Objective**–Are there specific objectives for preventing or reversing land degradation? • **Practices**–How well are land degradation considerations integrated into livestock development?	• 0=Not addressed • 1=Mentioned but weakly addressed • 2=Partially addressed with some measures • 3=Fully addressed with strong measures and clear implementation modalities

2.4 Policy Database

The policy databases were compiled for all AU MSs and the RECs. The respective policy databases were presented in an MS Excel spreadsheet that contains the thematic findings and scores both by individual country and regional bloc, which can be accessed in Annex 3.

2.5 Policy Coherence Analysis

Focusing on the LiveSys priority countries, the study evaluated policy gaps and opportunities by identifying and documenting the alignment, consistency, overlaps, and gaps in the existing policies across various levels of governance within and between the AU MSs and RECs.

Secondly, the study undertook a comparative analysis to assess policy alignments with global best practices and to benchmark against the international, continental, and regional guidelines, standards, agreements, and commitments.

In this study, assessment of policy coherence employed multiple indicators that captured different dimensions of policy alignment. The indicators used are:

- **Explicit alignment indicators:** direct references to higher-level frameworks, adoption of similar language and terminology, and explicit commitment to achieving higher-level goals
- **Objective coherence indicators:** consistency between national policy objectives and higher-level goals, even in the absence of explicit references
- **Implementation coherence indicators:** alignment of implementation mechanisms, institutional arrangements, and resource allocation with higher-level framework requirements
- **Monitoring and reporting coherence indicators:** consistency of monitoring, evaluation, and reporting systems with higher-level framework requirements

The analytical framework applied to evaluate and analyse policy coherence along the multiple dimensions mentioned above is presented in Table 2.

Table 2. Policy Coherence Analytical Rubric

Dimension	Guideline/Indicator	Scoring Guide (0–3)
Vertical = Strategic Alignment	Alignment of national policies with regional/international commitments, e.g. NDCs, AU, Sustainable Development Goals (SDGs), Comprehensive Africa Agriculture Development Programme (CAADP)	**3=Excellent coherence** • Comprehensive alignment across all dimensions • Explicit references to higher-level frameworks • Strong implementation mechanisms • Robust monitoring and reporting systems

Dimension	Guideline/Indicator	Scoring Guide (0–3)
Horizontal=Cross-Sector Coherence	Compatibility across sectors and integration with related sectors (e.g. do livestock policies align with climate adaptation and biodiversity protection strategies?)	**2=Good coherence** • Strong alignment with minor gaps • Some explicit references to frameworks • Adequate implementation mechanisms • Basic monitoring systems **1=Moderate coherence** • Partial alignment with significant gaps • Limited explicit references • Weak implementation mechanisms • Minimal monitoring systems **0=Poor/no coherence** • Little to no alignment • No explicit references • No implementation mechanisms • No monitoring systems

2.6 Capacity Development Needs Assessment

An online survey involving a systems-based multi-level approach was administered to the AU MSs to assess institutional capacity across multiple dimensions of sustainable livestock management. The survey gathered insights on the adequacy and effectiveness of capacity, and mechanisms that support the development and implementation of policies for sustainable livestock systems focusing on capacity gaps and needs, in the areas prioritized by the project, as well as capturing the preferred capacity strengthening modalities. The administered questionnaire can be accessed in Annex 2.

3 Policy Landscape and Integration Findings

3.1 Policy Inventory

During the study, the assessment covered the following five distinct policy instruments existing in the AU MSs:

- Livestock-specific policies
- National Adaptation Plans (NAPs)
- Nationally Determined Contributions (NDCs)
- National Biodiversity Strategies and Action Plans (NBSAPs)
- Land Degradation Neutrality (LDN) policies

A total of 196 unique country policy frameworks were identified and downloaded. Table 3 summarizes the number of policies extracted from online sources.

Table 3. Policies Analysed

Policy Framework	No. of Countries
NBSAPs	52
NDCs	46
LDN policies	41
Livestock-specific policies	35
NAPs	22

3.2 Online Survey Results

A total of 24 responses were received from institutional stakeholders, 60.9% in English and 39.1% in French, successfully capturing perspectives from both Anglophone and Francophone regions.

The online survey achieved strong representation from government institutions, with 95.8% of respondents representing national government organizations. The high concentration of government stakeholders reflects the policy-focused nature of the LiveSys project and indicates strong institutional commitment to sustainable livestock development at the national level.

3.3 Current Policy Development Status

Analysis of the survey results show existing governance and policy documents are at different stages of development, as summarized in Table 4.

Table 4. Policy Development Stages

Development Stage	Description
Finalized policies	The highest category of responses, indicating that many countries have completed comprehensive policy frameworks
In progress	Significant number of countries actively developing livestock-climate policies
Does not exist	Some policies remain in development phases

Figure 1 shows the distribution of development stages across different policy frameworks.

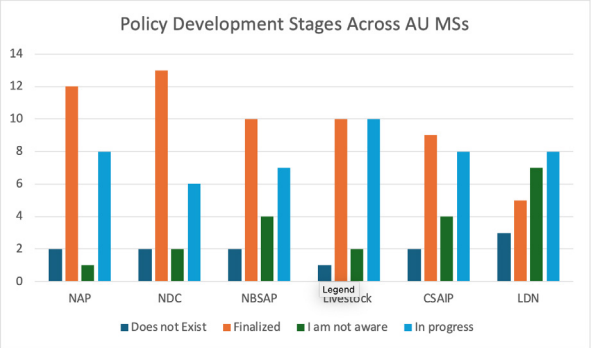


Figure 1. Policy Development Stages

3.4 Policy Integration

The study examined the integration of five critical themes – ***livestock, climate, biodiversity, gender, and land degradation*** – across multiple national policy frameworks that support livestock production. The study analysed data from 196 unique country entries across the five policy frameworks mentioned above. This exercise represents the most comprehensive ever assessment of cross-thematic policy integration in the livestock–climate–biodiversity–environment–social nexus of such a magnitude.

3.4.1 Thematic Analysis

The analysis employed a systematic framework to identify and assess integration of the five core relevant themes within the different policy frameworks:

1. **Livestock theme**: Encompassed direct references to livestock systems, animal husbandry, feeding practices, grazing management, and rangeland systems among others. This theme captures both production and management aspects of livestock systems.
2. **Climate theme**: Included climate change adaptation, mitigation measures, greenhouse gas emissions, carbon sequestration, climate information services, insurance, livelihood diversification, and climate-smart practices amongst others. This theme addresses both climate impacts and responses within livestock systems.
3. **Biodiversity theme**: Covered biodiversity conservation, ecosystem services, species protection, habitat management, wildlife–livestock interactions, and ecosystem-based approaches. This theme covers both conservation and sustainable use dimensions within livestock systems.
4. **Gender theme**: Addressed gender equality, women's participation, gender-responsive approaches, inclusive development, data disaggregation, and gender-sensitive livestock value chains. This theme captures both recognition- and action-oriented gender integration within livestock systems.
5. **Land degradation theme**: Included land restoration, soil conservation, erosion control, degradation, rangeland management, and sustainable land management practices. This theme addresses both degradation prevention and restoration activities within livestock systems.

Integration levels within each of the five thematic areas were scored from 0 to 3 following the criteria presented in Table 5.

Table 5. Policy Integration Scores

Policy Framework	Livestock Score	Climate Score	Biodiversity Score	Gender Score	Land Degradation Score	Average Score
LDN	2.1	2.7	2.6	2.3	2.5	2.4
Livestock	1.5	1.1	1.0	1.2	1.8	1.3
NAPs	1.1	1.0	1.7	1.0	1.7	1.3
NBSAPs	1.3	2.2	2.2	1.5	2.7	1.1
NDCs	2.0	2.2	2.6	2.1	2.4	2.3

The average thematic score within each policy is presented in the graph below.

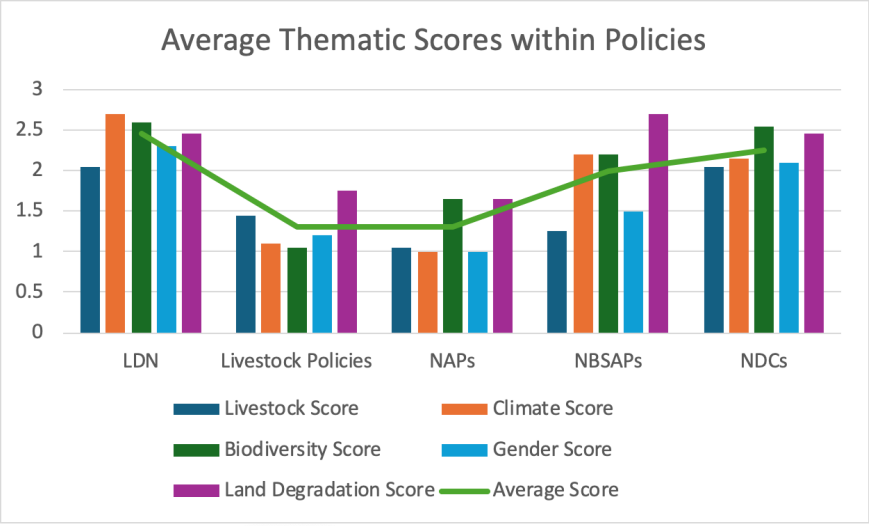


Figure 2. Policy Thematic Scores

The analysis reveals significant variations in thematic integration across policy frameworks, with some policies demonstrating strong cross-sectoral linkages while others maintain more siloed or individual approaches. Detailed key findings are contained in Table 6.

Table 6. Detailed Policy Integration Analysis

Integration: Thematic Area	NAPs	NDCs	Livestock-Specific Policies	NBSAPs	LDN Policies
Climate Integration	Climate themes within NAPs show moderate coverage with a mean score of 1.03. This relatively low score within climate-focused policies suggests that NAPs may emphasize specific climate aspects while potentially overlooking broader climate–livestock development linkages.	Climate themes within NDCs achieve strong integration with a mean score of 2.17, reflecting the core climate focus while maintaining connections to broader livestock development objectives.	Climate themes within livestock-related policies receive extensive coverage but achieve a relatively low mean score of 1.10. This pattern suggests broad recognition of climate–livestock linkages but probably limited depth in integration, representing a significant opportunity for enhancement.	Climate themes within NBSAPs achieve strong integration with a mean score of 2.23, indicating effective recognition of climate–biodiversity linkages within conservation and sustainable livestock production strategies.	Climate themes receive strong attention in LDN policies, with a mean score of 2.72, representing the highest climate integration among all policy frameworks analysed. This reflects the rather obvious connection between land degradation and climate change, addressing climate adaptation and mitigation within livestock systems through land-based solutions.
Livestock Integration	Livestock themes within NAPs receive substantial coverage across AU MSs but achieve a relatively low mean score of 1.06. This suggests that while NAPs recognize livestock systems as important for climate adaptation, the integration depth remains limited or lacking in some cases.	Livestock themes within NDCs receive substantial coverage and a strong mean score of 2.04, indicating effective recognition of livestock systems within the climate action frameworks.	Despite being livestock-focused policies, the mean integration score of 1.45 indicates moderate integration levels. This suggests that even livestock-specific policies may not fully integrate livestock considerations across all relevant dimensions, potentially reflecting sectoral approaches within livestock policy development.	Livestock themes in NBSAPs receive limited coverage with a mean score of 1.26. This suggests that biodiversity policies may not fully recognize the complex and intricate relationships between livestock systems and biodiversity conservation.	LDN policies show substantial livestock integration addressing various aspects of livestock–land interactions. The mean integration score of 2.06 indicates moderate to strong recognition of livestock systems within land degradation frameworks.
Biodiversity Integration	Biodiversity considerations within NAPs achieve strong integration with a moderate mean score of 1.66, reflecting the recognition of ecosystem-based adaptation (EbA) approaches within NAPs.	Within NDCs, biodiversity considerations demonstrate strong integration with a mean score of 2.57, representing higher biodiversity integration and reflecting ecosystem-based approaches in climate action.	Biodiversity considerations achieve a low mean score of 1.04, indicating recognition of livestock–biodiversity interactions but limited integration depth. This finding highlights the need for stronger ecosystem approaches in livestock policy development.	Within NBSAPs, as expected, biodiversity themes receive strong emphasis with a mean score of 2.23, reflecting good integration as the core focus of these policies.	Biodiversity considerations achieve a mean score of 2.63 in LDN policies, demonstrating strong recognition of ecosystem services and biodiversity conservation within land management frameworks.

Integration: Thematic Area	NAPs	NDCs	Livestock-Specific Policies	NBSAPs	LDN Policies
Gender Integration:	Gender themes within NAPs show moderate coverage and achieve a low mean score of 0.99, indicating limited integration of gender considerations in national climate adaptation planning.	Gender themes in NDCs show strong integration with a mean score of 2.12, indicating effective recognition of gender dimensions in climate action planning.	Gender themes within livestock-related policies have a mean score of 1.20, showing moderate recognition but limited integration depth. This suggests opportunities for enhancing gender-responsive approaches in livestock policy frameworks.	Gender considerations within NBSAPs show moderate coverage with a mean score of 1.53, indicating variable but generally positive attention to gender dimensions in biodiversity conservation.	Gender themes show moderate integration with a mean score of 2.30, indicating variable but generally positive attention to gender considerations in land degradation policies.
Land Degradation Integration	Land degradation themes within NAPs demonstrate moderately strong integration with a mean score of 1.67, reflecting the important role of land-based adaptation measures in climate resilience strategies.	Land degradation themes in NDCs achieve much stronger integration with a mean score of 2.44, reflecting the important role of land-based climate solutions in national climate action strategies.	Land degradation themes achieve the highest integration score within livestock policies, with a mean score of 1.76, reflecting recognition of livestock–land interactions but still indicating room for improvement in integration depth	Land degradation themes within NBSAPs again achieve the highest integration score of 2.69, reflecting strong recognition of land-biodiversity connections and ecosystem restoration approaches.	Land degradation themes receive strong emphasis with a mean score of 2.48, reflecting the core focus of these policies while maintaining connections to broader environmental objectives.

A similar scenario is highlighted by the survey findings, where over 45% of the respondents indicate that livestock is fully integrated into the existing policies, followed by 35% stating partially integrated and 19% indicating not mentioned, as illustrated in Figure 3.

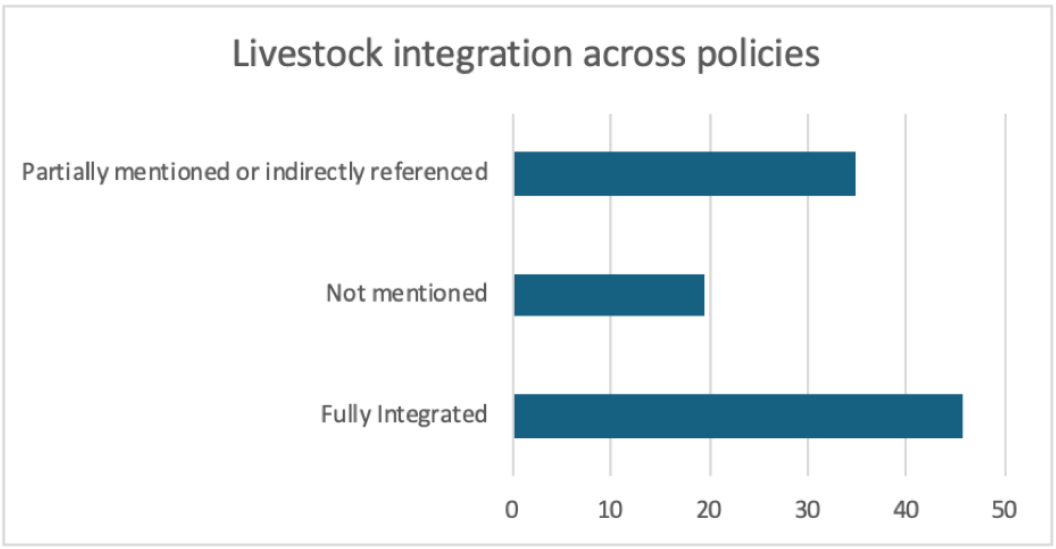


Figure 3. Survey Results: Livestock Integration Across Policies

In-depth analysis of the survey results further reveals that the various themes are integrated to varying levels in livestock-related policies, as highlighted in Figure 4.

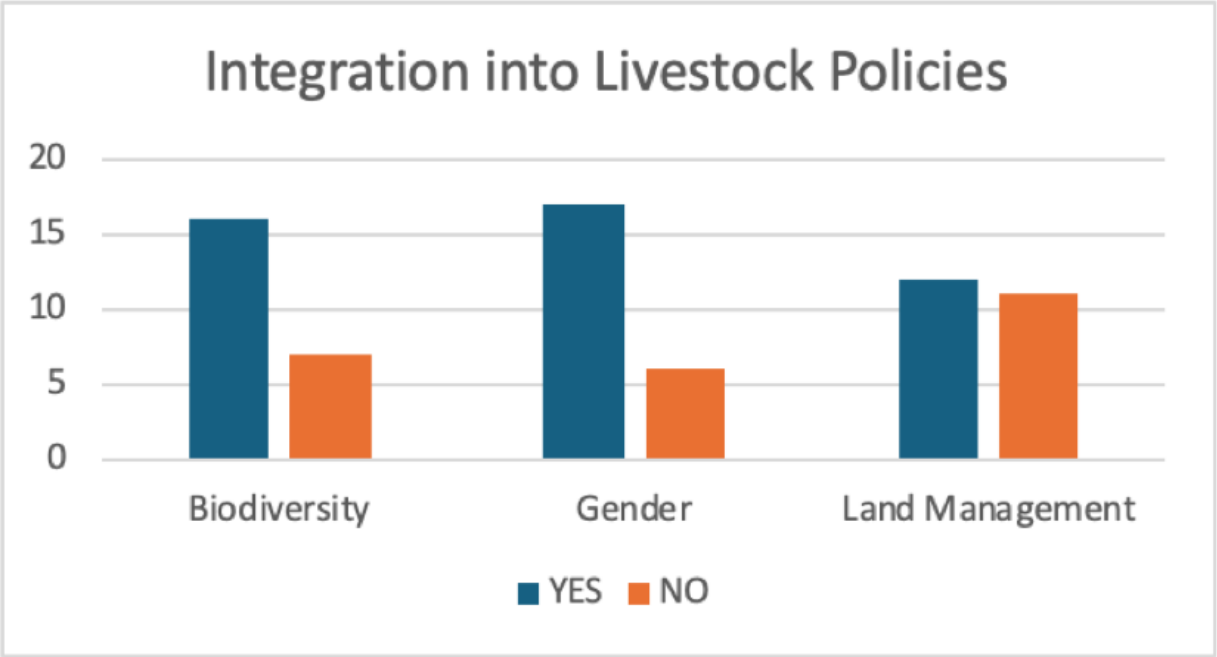


Figure 4. Survey Results: Thematic Integration into Livestock Policies

3.4.2 Cross-Thematic Integration

The study attempted to tease out the existing integration across the various themes, noting that sustainability within livestock systems requires integrated approaches. Findings are summarized in Table 7.

Table 7. Cross-Thematic Integration

Thematic Integration	Cross-Thematic Description
Livestock Theme Integration	• Livestock integration varies significantly across the different policy frameworks, with NDCs and LDN policies showing the strongest integration levels of 2.04 and 2.06 respectively. This suggests that climate and land degradation frameworks most effectively integrate livestock considerations owing to the direct connections between livestock systems and climate/land outcomes. • Livestock-specific policies, in contrast, show a moderate integration score of 1.45, suggesting that even dedicated livestock policies may benefit from enhanced cross-sectoral integration approaches and further highlighting the importance of mainstreaming livestock considerations across multiple policy domains rather than relying solely on individual sectoral approaches.
Climate Theme Integration	• Climate integration demonstrates strong performance in LDN policies (2.72) and moderate performance in NDCs (2.17), with weaker integration in other frameworks. • This stronger climate integration in LDN policies reflects the inherent connections between land degradation and climate change, while the moderately strong performance in NDCs suggests opportunities for enhanced climate mainstreaming within dedicated climate policies. • The relatively weak climate integration in livestock-specific policies (1.10) and NAPs (1.03) indicates significant opportunities for strengthening climate considerations in these frameworks, particularly given the climate relevance of both livestock systems and adaptation planning.

Thematic Integration	Cross-Thematic Description
Biodiversity Theme Integration	• Biodiversity integration shows the strongest integration performance in NDCs (2.57) and strong performance in LDN policies (2.63), with moderate performance in NBSAPs (2.23). • The strong biodiversity integration in climate and land policies suggests effective recognition of ecosystem-based approaches to environmental challenges. However, the moderate performance in dedicated biodiversity policies (NBSAPs) indicates opportunities for enhanced integration within conservation frameworks. • The weak biodiversity integration in livestock-specific policies (1.04) represents a significant gap, given the substantial interactions between livestock systems and biodiversity conservation.
Gender Theme Integration	• Gender integration demonstrates the most variable performance across frameworks, with NDCs showing the strongest integration (2.12) and NAPs showing the weakest (0.99). • The strong gender integration in NDCs reflects growing recognition of gender dimensions in climate action, while the weak performance in NAPs suggests missed opportunities for gender-responsive adaptation planning. • The moderate performance in other frameworks indicates general recognition of gender considerations but suggests opportunities for enhanced gender mainstreaming across all policy domains.
Land Degradation Theme Integration	• Land degradation integration shows strong performance across multiple frameworks, with NBSAPs achieving the highest score (2.69) followed by LDN policies (2.48) and NDCs (2.44). • The strong land degradation integration across climate, biodiversity, and land policies reflects broad recognition of land-based solutions to environmental challenges. • However, the moderate performance in livestock-specific policies (1.76) suggests opportunities for enhanced land management approaches in livestock policy development.

4 Regional Policy Findings

The study undertook a rapid assessment of the RECs' livestock policy landscape performance based on the priority thematic areas. Table 8 shows the integration scores for the regional livestock policies analysed.

4.1 Integration Analysis

This analysis evaluated five RECs: the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Economic Community of West African States (ECOWAS), the Intergovernmental Authority on Development (IGAD), and the Southern African Development Community (SADC). It examined the integration of livestock, climate change (adaptation and mitigation), biodiversity, gender, and land degradation considerations in their regional policies and strategies.

Table 8. Regional Policy Integration

REC	Livestock Mention/ Recognition	Climate Adaptation (average score)	Climate Mitigation (average score)	Biodiversity (average score)	Gender Equity and Inclusion	Land Degradation
COMESA	3.0	2.0	1.5	2.0	2.0	2.0
EAC	3.0	2.5	1.0	2.0	3.0	2.0
ECOWAS	2.0	2.0	2.5	2.5	3.0	2.5
IGAD	3.0	3.0	3.0	3.0	3.0	3.0
SADC	2.0	1.0	1.0	1.0	1.0	1.0

Overall trends

- IGAD leads across all categories, scoring the maximum (3.0) in livestock system integration, climate resilience, biodiversity protection, gender equity, and land degradation.
- ECOWAS follow closely, with consistent scores above 2.0 across most thematic areas.
- SADC lags behind significantly, with uniformly low scores (1.0) across most indicators, suggesting limited incorporation of sustainability and inclusivity considerations in its livestock policy framework.

Livestock mention and recognition

- All RECs, except ECOWAS and SADC, explicitly recognize the importance of livestock systems in their regional frameworks, achieving full scores (3.0).
- ECOWAS, though focused more broadly on climate, still acknowledges livestock, while SADC shows limited recognition.

Climate adaptation and mitigation

- IGAD demonstrates strong integration of adaptive livestock strategies such as drought resilience, mobility, and animal health.
- Climate mitigation is most advanced in IGAD (3.0) and ECOWAS (2.5), with clear emphasis on reducing GHGs through feeding practices, manure management, and monitoring, evaluation, and verification (MRV).
- SADC scores the lowest on both adaptation and mitigation, signalling a gap in addressing climate risks through livestock.

Biodiversity integration

- IGAD (3.0), and ECOWAS (2.5) show clear efforts to embed biodiversity conservation within livestock policy goals, including rangeland restoration and ecosystem-based practices.
- SADC reflects weak consideration of biodiversity in its livestock approach.

Gender equity and inclusion

- IGAD, ECOWAS, and EAC achieve full marks (3.0), indicating strong policy articulation around women's participation, access, and benefit sharing in livestock systems.
- In contrast, SADC (1.0) lacks substantive focus on gender-inclusive programming.

Land degradation and restoration

- IGAD again scores highest, explicitly addressing land degradation through grazing control, water harvesting, and ecosystem restoration linked to livestock.
- SADC shows the weakest policy linkage between livestock production and land health.

4.2 Vertical Coherence Analysis

The study performed vertical coherence analysis of the five regional livestock-related policy documents (COMESA, EAC, ECOWAS, IGAD, and SADC), assessing their alignment with key continental, global, and international frameworks. The included frameworks were the CAADP, LiDeSA, AU Agenda 2063, and SDGs, as well as the United Nations Framework Convention on Climate Change (UNFCCC), Paris Agreement, Convention on Biological Diversity (CBD), and United Nations Convention to Combat Desertification (UNCCD).

Table 9. Vertical Coherence Matrix: Alignment of Regional Policies

Regional Body	Continental: CAADP	Continental: LiDeSA	Continental: AU Agenda 2063	Global: SDGs	International: UNFCCC/ Paris Agreement	International: CBD / UNCCD
COMESA	3–Strong	3–Strong	2–Moderate	2–Moderate	2–Moderate	2–Moderate
EAC	3–Strong	2–Moderate	2–Moderate	2–Moderate	2–Moderate	1–Weak
ECOWAS	2–Moderate	1–Weak	2–Moderate	1–Weak	1–Weak	1–Weak
IGAD	3–Strong	3–Strong	3–Strong	3–Strong	3–Strong	2–Moderate
SADC	2–Moderate	2–Moderate	2–Moderate	2–Moderate	1–Weak	1–Weak

Table 10. Findings by Regional Policy

Policy	Coherence
COMESA Livestock Policy Framework (2015)	• **CAADP and LiDeSA:** Fully embedded in CAADP principles and strongly aligned with LiDeSA's four strategic objectives – investment, productivity, innovation, and market access. • **AU Agenda 2063:** Moderate alignment via focus on agricultural transformation, trade, and resilience. • **SDGs:** Moderate – addresses SDG 2 (food security), SDG 8 (employment), and SDG 13 (climate resilience). • **UNFCCC and Paris Agreement:** Recognizes climate variability risks but limited reference to NDCs or GHG mitigation. • **CBD and UNCCD:** Moderate reference to environmental health and ecosystem services.
EAC Livestock Policy (2014)	• **CAADP:** Well aligned through growth targets and investment in livestock as a development driver. • **LiDeSA:** Partial alignment, especially on productivity and livelihoods. • **AU Agenda 2063:** Addresses inclusive growth, value addition, and regional integration. • **SDGs:** Policy indirectly supports SDGs 1 (no poverty), 2, and 8. • **UNFCCC:** Addresses adaptive capacity and resilience but lacks strong climate mitigation mechanisms. • **CBD:** Weak – only minimal emphasis on biodiversity conservation or ecosystem integration.

Policy	Coherence
ECOWAS Transhumance and Pastoralism Policy (2019)	• **CAADP and LiDeSA:** Weak alignment; limited references to structured agricultural development beyond mobility. • **AU Agenda 2063:** Moderate – contributes to peace, security, and free movement across borders. • **SDGs:** Weak – indirect relevance to SDGs 1, 2, and 16 (peace and conflict mitigation). • **UNFCCC and Paris Agreement:** Climate change is recognized in context of resource stress but not embedded in framework actions. • **CBD and UNCCD:** Weak recognition of environmental degradation, with no formal biodiversity integration.
IGAD Strategy for Sustainable and Resilient Livestock Development (2022–2037)	• **CAADP and LiDeSA:** Strongly aligned; structured under climate-smart principles and value chain resilience. • **AU Agenda 2063:** Fully consistent with pillars on climate resilience, intra-African trade, and agricultural modernization. • **SDGs:** Directly supports SDGs 1, 2, 5 (gender equality), 13 (climate action), and 15 (life on land) through interventions in climate risk management, food security, and biodiversity. • **UNFCCC and Paris Agreement**: Strong alignment – focus on GHG emissions, climate risk profiling, and adaptation strategies. • **CBD and UNCCD:** Moderate alignment – ecosystem health and biodiversity considered through land/water restoration.
SADC Livestock Policy and Trade Issues (2009)	• **CAADP:** Moderate alignment through emphasis on food security and smallholder development. • **LiDeSA:** Partial overlap in disease control and trade facilitation but lacks strategic framing. • **AU Agenda 2063:** General fit with regional integration and market expansion aims. • **SDGs:** Weak to moderate – touches on SDGs 2, 8 (trade), and 16 (institutional strengthening). • **UNFCCC and CBD:** Little to no direct reference to climate mitigation or biodiversity.

Overall, IGAD shows the highest vertical coherence, with explicit alignment to climate, sustainability, and development frameworks. COMESA and EAC policies are robustly aligned with continental agendas (CAADP, LiDeSA), though weaker in climate mitigation and biodiversity. ECOWAS remains focused on mobility governance and transhumance security, with limited integration into broader international climate or development frameworks. SADC emphasizes trade and sanitary standards but lacks ecosystem, climate, and resilience considerations in strategic policy framing.

Strengthening climate-smart livestock systems across all RECs will require:

- Policy reforms and capacity strengthening
- Improved monitoring (GHG and MRV systems)
- Deeper gender integration
- Biodiversity–livestock linkages (e.g. through EbA)
- Alignment with LDN and NDC commitments

5 Policy Coherence Findings

The study took a deep dive to comprehensively analyse policy coherence, examining the alignment, complementarity, and coordination of policy frameworks across climate change, biodiversity conservation, and livestock sectors and focusing on the LiveSys project priority countries in Africa: Kenya, Nigeria, and Zambia.

5.1 Document Selection and Analysis Process

The analysis encompasses 14 major policy documents spanning from 2015 to 2024, including NDCs, NAPs, NBSAPs, and sectoral policies for agriculture and livestock development., representing a diverse range of policy instruments and sectoral approaches. The policy frameworks were selected based on their relevance to sustainable livestock sectors. These documents reflect the evolution of policy thinking and the increasing integration of climate, biodiversity, and development considerations in national planning frameworks.

The reviewed and analysed documents are listed in Table 11.

Table 11. LiveSys Country Policy Documents

LiveSys Country	Policy Documents
Kenya	• Livestock Policy Sessional Paper No. 3 (2020) • National Adaptation Plan (2015–2030) • Second Nationally Determined Contribution (2031–2035) • Climate-Smart Agriculture Investment Plan (2023) • National Biodiversity Strategy and Action Plan (2019–2030)
Nigeria	• National Livestock Transformation Plan (2019–2028) • Nigeria Livestock Roadmap for Productivity Improvement and Resilience (2020–2026) • Nationally Determined Contribution (2021 Update) • National Climate Change Policy (2021–2030) • National Biodiversity Strategy and Action Plan (2016–2020)
Zambia	• National Livestock Development Policy (2020) • Second National Biodiversity Strategy and Action Plan (2015–2025) • Updated Nationally Determined Contribution (2015–2030) • National Adaptation Plan (2023)

The document inventory reveals several important patterns in policy development across the three countries. All countries have developed comprehensive climate change frameworks through their NDCs and NAPs, reflecting commitments under the Paris Agreement and the UNFCCC framework. Similarly, all countries have established NBSAPs under the CBD, though these vary significantly in their scope, ambition, and integration with other policy frameworks.

Sectoral policies for agriculture and livestock show more variation across countries, with Kenya and Zambia having developed specific livestock policies, while Kenya has also established a comprehensive Climate-Smart Agriculture Investment Plan. Nigeria's sectoral policy coverage in the available documents is more limited, though the National Climate Change Policy provides substantial sectoral guidance across multiple domains.

5.2 Horizontal Coherence

Through a structured approach, the study evaluated the alignment, consistency, and mutual supportiveness of policies across different sectors by analysing compatibility across sectors and cross-sectoral coordination as well joint programming within each country. The following sub-sections provide insights into the findings of each country's policy coherence analysis.

5.2.1 Kenya Findings

Kenya's policy framework demonstrates the most comprehensive coverage across the target sectors, with five major documents providing detailed guidance on climate change, biodiversity, agriculture, and livestock development. The frameworks are anchored by Kenya Vision 2030, which provides overarching development objectives that are consistently referenced across all the sectoral policies.

The study analysed interactions with regard to climate adaptation and mitigation, biodiversity, water management, gender, and MRV in livestock across the five policy frameworks.

Table 12. Policy Interactions in Kenya

Interaction Area	CSAIP (2023)	Livestock Policy (2020)	NBSAP (2019)	NAP (2016)	2nd NDC (2024)
Climate Adaptation in Livestock	3	3	2	3	3
Climate Mitigation in Livestock	1	3	2	3	3
Biodiversity and Ecosystem Conservation	3	3	1	3	1
Sustainable Land and Water Management	3	1	1	2	3
Gender and Social Inclusion	1	3	2	3	1
Finance and Investment Alignment	1	2	2	2	3
MRV and Monitoring Frameworks	3	1	1	2	3
Institutional and Governance Coherence	2	2	1	3	1
Sub-national Implementation and Devolution	3	2	1	2	1

More detailed policy interactions are summarised in a matrix in Table 13.

Table 13. Policy Interaction Matrix for Kenya

Policy Interaction Area	CSAIP (2023)	Livestock Policy (2020)	NBSAP (2019)	NAP (2016)	2nd NDC (2024)
Climate Adaptation in Livestock	Strong promotion of climate-smart livestock practices including drought-resilient breeds, improved feeding systems, and early warning integration.	Promotes Arid and Semi-Arid Lands (ASAL) livestock resilience, sustainable grazing, and genetic resource management.	Moderately acknowledges the role of biodiversity in adaptive systems, but livestock linkages are limited.	Addresses sector vulnerability, promotes resilient breeds and extension support.	Prioritizes livestock as a vulnerable sector, promotes adaptation in ASALs.
Climate Mitigation in Livestock	Limited but present references to manure management and low-emission technologies.	Acknowledges GHG sources and supports improved feeding, health, and productivity.	Moderate reference to ecosystem services in emissions reduction, not livestock specific.	Moderate references to GHGs and low-carbon practices across agriculture.	Strong inclusion of low-emission development pathway including livestock.

Interaction Area	CSAIP (2023)	Livestock Policy (2020)	NBSAP (2019)	NAP (2016)	2nd NDC (2024)
Biodiversity and Ecosystem Conservation	Incorporates ecosystem services and mangrove restoration as part of climate-smart agriculture (CSA) priorities.	Recognizes livestock–wildlife interactions and conservation of rangeland biodiversity.	Weak livestock-specific content despite strong conservation goals.	Strong support for EbA and natural buffers.	Limited biodiversity–livestock linkages.
Sustainable Land and Water Management	Strong emphasis on water harvesting, soil fertility, and rangeland management.	Weak integration; limited measures for sustainable water use.	Weak coverage of rangeland and agro-ecosystems in livestock zones.	Moderate integration of land and water adaptation actions.	Strong national targets aligned to low-carbon sustainable use.
Gender and Social Inclusion	Limited articulation of gender-specific CSA investments.	Strong focus on inclusivity, equity in livestock value chains, and targeting women and youth.	Moderate mention of gender inclusion, especially in conservation engagement.	Strong commitment to social inclusion and vulnerability mapping.	Weak gender-specific targets despite whole-of-society framing.
Finance and Investment Alignment	Focus on blended finance and investment opportunities, though gender and social targeting is weak.	Moderate attention to private investment, livestock insurance, and credit access.	Mentions resource mobilization but limited detail on financial instruments.	Mentions mainstreaming in Medium-Term Expenditure Frameworks (MTEFs) budgeting and accessing climate finance.	Strong emphasis on domestic and international finance pathways.
MRV and Monitoring Frameworks	Robust CSA monitoring and evaluation (M&E) framework with clear metrics and indicators.	Weak monitoring framework; lacks clear MRV indicators.	Basic reporting via National Biodiversity and Ecosystems Management System (NBEMS); weak livestock-specific metrics.	Establishes adaptation indicators and M&E approach across sectors.	Advanced MRV architecture including mitigation and adaptation tracking.
Institutional and Governance Coherence	Moderate clarity on coordination roles among Ministry of Agriculture and Livestock Development (MoALD), counties, and stakeholders.	Moderate clarity as it distinguishes national versus county roles but lacks coordination detail.	Weak coordination mechanisms for cross-sector implementation.	Strong institutional mapping through the Climate Change Secretariat and National Drought Management Authority (NDMA).	Weak clarity on coordination structures for livestock actions.
Sub-national Implementation and Devolution	Strong engagement with counties via Climate-Smart Agriculture Multi-Stakeholder Platform (CSA-MSP) and Financing Locally-Led Climate Action (FLLoCA).	Provides basic role definition for county governments and stakeholders.	Minimal reference to county-level biodiversity governance.	Moderate reference to County Integrated Development Plans and county-level roles.	Limited articulation of devolved implementation mandates.

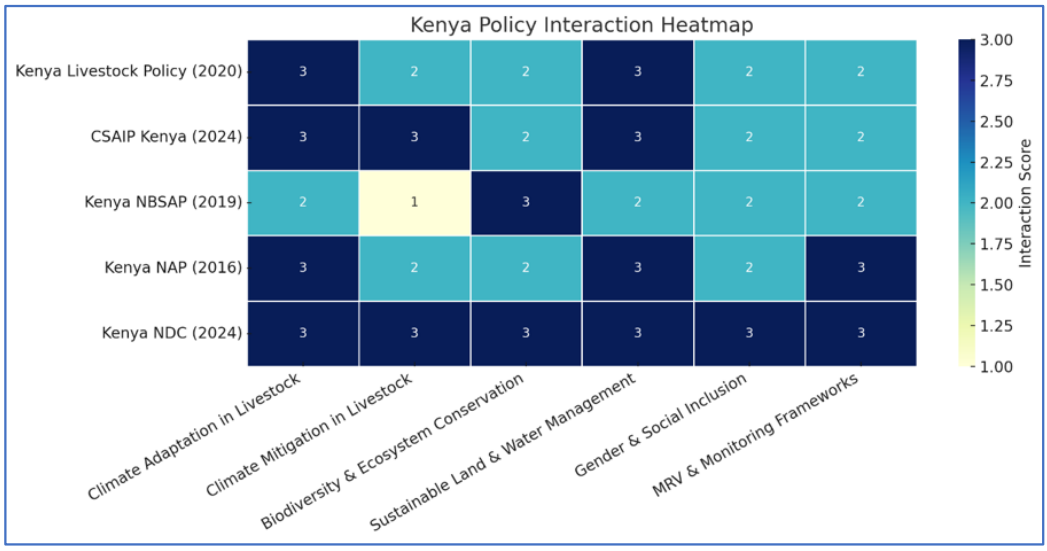


Figure 5. Policy Interaction Heatmap for Kenya

Table 14. Cross-Sectoral Synergies in Kenya

Policy Intersections	Existing Synergies	Gaps and Contradictions
Climate↔Livestock	CSAIP, NDC, and NAP promote adaptive livestock systems covering feeding, water management as well as breeding, amongst others.	The Livestock Policy lacks clear climate adaptation and mitigation metrics. The NDC's focus on power sector reforms may not fully align with the agricultural priorities in the CSAIP and Livestock Policy.
Biodiversity↔Livestock	NBSAP indirectly supports sustainable grazing and breeds.	The Livestock Policy doesn't have biodiversity goals well spelled out.
CSAIP↔NDC	There is alignment in mitigation goals, for example low-emission systems and agroforestry.	NDC updates may need to re-align with the CSAIP, both in focus and timelines. The NDC covers 2031–2035, while other policies have earlier timelines, potentially creating implementation gaps.
NAP↔NBSAP	Joint emphasis on ecosystems and resilience building is recognized.	There is a weak link, i.e. weak institutional coordination given leadership.
NDC↔NBSAP	There is emerging focus on NbS and biodiversity in adaptation.	There are limited operational linkages.

Table 15. Thematic Coherence in Kenya

Thematic Area	Integration Across Policies
Climate Adaptation	Strong in CSAIP, NAP, and NDC (e.g., adaptive breeds, water management, insurance, disaster risk reduction)
Climate Mitigation	Addressed in CSAIP and NDC through MRV, GHG reduction in livestock and agroforestry
Biodiversity	NBSAP is primary vehicle; CSAIP includes rangeland conservation and ecosystem restoration (mangroves, coral)
Gender and Inclusion	Mentioned in CSAIP, NDC, and NBSAP – weak in Livestock Policy
Financing Mechanisms	CSAIP is strongest on blended finance and investment pathways

Table 16. Policy Implementation and Governance in Kenya

Area	Coherence	Notes
Institutional Linkages	Moderate	Parent ministries, e.g. agriculture, livestock, environment, and forestry, work in parallel.
Monitoring and MRV	Weak	M&E frameworks are fragmented and unharmonized. NDC, CSAIP, and NAP propose separate tracking tools.
County Integration	Partial	NAP and CSAIP promote county role; Livestock Policy and NBSAP are less developed locally.

Table 17. Key Observations for Kenya

Area	Description
Primary Convergence Areas	• **Climate resilience:** The CSAIP, NAP, and NDC explicitly prioritize climate adaptation and mitigation, while the NBSAP and Livestock Policy integrate climate considerations into their sectoral approaches. • **Economic development:** All policies link directly to Kenya Vision 2030, emphasizing economic growth through sustainable resource management. • **Food security:** The CSAIP, Livestock Policy, and NAP prioritize food and nutrition security, with the NBSAP supporting through agricultural biodiversity conservation. • **Institutional frameworks:** The National Climate Change Secretariat (NAP) coordinates with the CSA-MSP (CSAIP) and sectoral institutions. • **Research and innovation:** All policies emphasize research and technology transfer, with the Livestock Policy proposing a dedicated research institution that could support CSAIP and NBSAP objectives.
Coordination Strengths	• **Lead agency clarity:** Lead agencies are clearly designated – MoALD for CSAIP and Livestock Policy; Ministry of Environment for NAP, NDC, and NBSAP. • **Multi-stakeholder platforms:** Established coordination mechanisms include the CSA-MSP and National Climate Change Secretariat. • **Devolved implementation:** There is consistent emphasis on national–county coordination across all policies.
Coordination Challenges	• **Cross-sectoral integration:** There are limited explicit mechanisms for coordination between agricultural (CSAIP, Livestock) and environmental (NBSAP, NAP) policies. • **Timeline coordination:** Different policy cycles may create coordination challenges.

5.2.2 Nigeria Findings

The study carried out a detailed comparative analysis of the policy interactions among the five key Nigerian policies identified.

Table 18. Policy Interactions in Nigeria

Interaction Area	Livestock Plan (NLTP)	NDC (2021 Update)	Livestock Roadmap	Climate Policy (NCCP)	NBSAP
Climate Adaptation in Livestock	3	3	2	3	3
Climate Mitigation in Livestock	1	3	2	3	3
Biodiversity and Ecosystem Conservation	3	3	1	3	1
Sustainable Land and Water Management	3	1	1	2	3
Gender and Social Inclusion	1	3	2	3	1
Finance and Investment Alignment	1	2	2	2	3
MRV and Monitoring Frameworks	3	1	1	2	3
Institutional and Governance Coherence	2	2	1	3	1
Sub-national Implementation and Devolution	3	2	1	2	1

More detailed policy interactions are summarised in a matrix in Table 19.

Table 19. Policy Interaction Matrix for Nigeria

Interaction Area	National Livestock Transformation Plan (NLTP) 2019–2028	NDC (2021 Update)	Livestock Roadmap for Productivity Improvement and Resilience 2020–2026	National Climate Change Policy (NCCP) 2021–2030	NBSAP 2016–2020
Climate Adaptation in Livestock	Strong adaptation focusses via grazing reserves, water systems, and pastoralist conflict mitigation.	Addresses livestock vulnerabilities and agriculture, forestry, and other land use (AFOLU) adaptation priorities.	Emphasizes resilience through veterinary, feeding, and infrastructure services.	Adaptation is well integrated in livestock and other sectors.	Climate–biodiversity link acknowledged; adaptation strongly reflected.
Climate Mitigation in Livestock	Limited mention of GHG reduction; focus mostly on productivity.	GHG reduction from livestock, forestry, and waste addressed.	Indirect focus via waste management and efficiency gains.	Low-carbon livestock pathways and AFOLU mitigation planned.	Indirect link via carbon sequestration, agroecology, and land use.
Biodiversity and Ecosystem Conservation	Integrates restoration of grazing areas and environmental safeguards.	NbS linked to ecosystem protection.	Weak biodiversity integration; focus more on value chains.	Ecosystem restoration and biodiversity co-benefits prominent.	Core policy on biodiversity; livestock linkages weak.
Sustainable Land and Water Management	Strong land and water integration with focus on grazing recovery.	Minimal livestock/land/water restoration linkages.	Water/land included in productivity context, not ecosystem.	Moderate emphasis on watershed and land integration.	Strong emphasis on ecosystem services and landscape restoration.
Gender and Social Inclusion	Mentions women/youth marginally, no dedicated strategies.	Gender Climate Action Plan incorporated.	Moderate engagement via extension and training programs.	Gender mainstreamed across sectors.	Gender mentioned but not operationalized.
Finance and Investment Alignment	References funding needs; lacks structured investment plans.	International climate finance mechanisms proposed.	Budget anchored on Livestock Productivity and Resilience Project (L-PRES) financing.	Proposes climate investment mechanisms including green bonds.	Contains a clear biodiversity finance plan with multiple instruments.
MRV and Monitoring Framework	Includes an implementation tracking and monitoring plan.	Transparency frameworks exist but livestock MRV weak.	Includes value chain M&E; climate aspects underdeveloped.	MRV emphasized; livestock tracking needs strengthening.	Extensive M&E matrix covering biodiversity targets and indicators.
Institutional and Governance Coherence	Coordination noted; weak on national integration mechanisms.	National coordination mechanisms and stakeholder roles acknowledged.	Institutional structure fragmented and not climate integrated.	Clear climate governance roles outlined.	Weak links with climate and livestock institutions.
Sub-national Implementation and Devolution	Strong devolution through state-level transformation hubs.	Recognizes states and local implementation partnerships.	Weak planning for devolution focusing mostly at federal/state level.	Sub-national integration encouraged, though limited tools provided.	Limited provisions for sub-national planning or devolution.

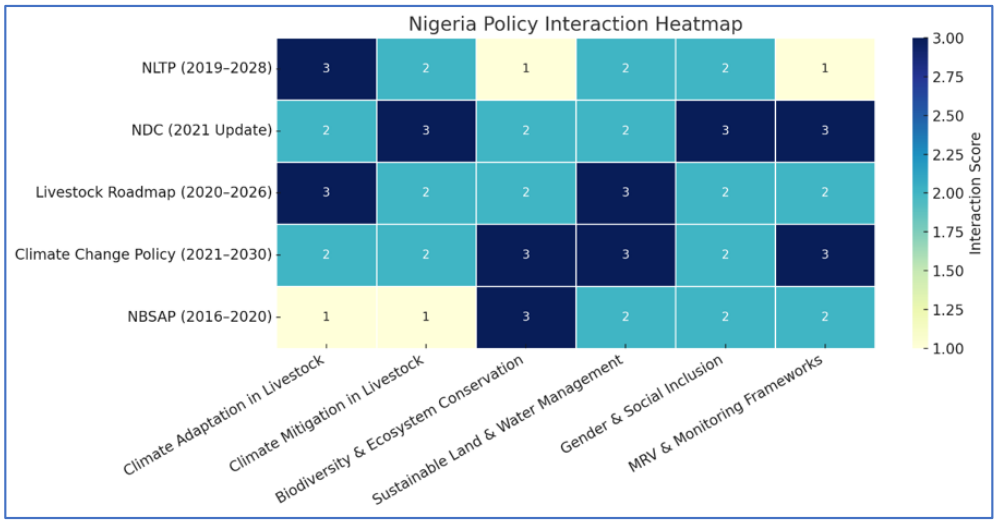


Figure 6. Policy Interaction Heatmap for Nigeria

Table 20. Thematic Coherence in Nigeria

Thematic Area	Coherence
Climate Adaptation in Livestock	• Strong integration in NLTP, NDC, and NCCP. • Livestock Roadmap moderately integrates climate adaptation via resilience and risk management. • NBSAP shows strong recognition of climate impacts on ecosystems, but limited livestock specificity.
Climate Mitigation in Livestock	• NDC and Climate Policy strongly promote GHG reduction and low-emission pathways. • NLTP and Roadmap show limited integration beyond efficiency measures. • NBSAP includes mitigation co-benefits but not livestock-specific GHG tracking.
Biodiversity and Ecosystem Conservation	• Well-addressed across NLTP, NDC, and Climate Policy. • NBSAP is the strongest, being the anchor for biodiversity mainstreaming. • Roadmap provides only basic reference to ecological concerns.
Sustainable Land and Water Management	• Strong in NLTP and NBSAP through land use and rangeland references. • Moderate in Climate Policy. • Weak in NDC and Roadmap, where detailed actions are lacking.
Gender and Social Inclusion	• Strongly mainstreamed in NDC and Climate Policy with gender-responsive action plans. • Roadmap has moderate integration through stakeholder support. • Weak in NLTP and NBSAP, where actions are implied but not prioritized.
Finance and Investment Alignment	• NBSAP, Climate Policy, and NDC demonstrate structured financing strategies, including green finance and climate funds. • NLTP and Roadmap show moderate mention of investment mechanisms (e.g. L-PRES) but lack detailed financial architecture.
MRV and Monitoring Frameworks	• Strong frameworks in NLTP and NBSAP. • Moderate in Climate Policy; NDC mentions transparency but limited livestock-specific MRV. • Weak in the Roadmap, where M&E systems are fragmented.
Institutional and Governance Coherence	• Strong in Climate Policy, which defines institutional roles across sectors. • Moderate in NLTP and NDC. • Weak in Roadmap and NBSAP, which focus more on delivery mechanisms than institutional harmonization.
Sub-national Implementation and Devolution	• Strongest in NLTP, which includes state-level transformation hubs. • Moderate in Climate Policy and NDC through sub-national inclusion and devolution references. • Weak in Roadmap and NBSAP, where engagement beyond federal level is limited.

Table 21. Cross-Policy Synergies and Gaps in Nigeria

Interaction	Synergies	Gaps/Contradictions
NLTP↔Livestock Roadmap	• Both policies explicitly target livestock productivity, resilience, and commercialization, especially through grazing management, animal health, conflict resolution, and institutional capacity building. • Shared commitment to resolving farmer–pastoralist conflict and promoting ranching models. • Complementarity in spatial planning and state-level delivery mechanisms.	• Roadmap has more emphasis on detailed value chain support, waste and pest management, and L-PRES project structuring, while NLTP is more focused on transformation of grazing systems and reintegration of displaced herders.
NLTP↔NDC	• Both acknowledge the livestock sector's climate footprint, especially around AFOLU. • Indirect alignment via NLTP's push for controlled grazing, which supports GHG reduction.	• NLTP does not explicitly frame livestock actions as climate mitigation or adaptation strategies, limiting formal policy alignment with NDC. • No clear MRV link to national emission targets.
NLTP↔NCCP	Shared language on climate resilience, adaptation, and land use sustainability. Opportunities for synergy in climate-smart livestock practices and regional action.	• NLTP does not directly embed NCCP principles or targets, missing a strategic opportunity to mainstream climate change at the operational level.
NLTP↔NBSAP	• Indirect linkage through sustainable grazing and land restoration, which help curb biodiversity loss.	• NLTP does not explicitly mention biodiversity conservation, genetic resources, or the ecological implications of livestock expansion. • No reference to NBSAP targets, Aichi Biodiversity Goals, or Nigeria's ecosystem prioritization.
Livestock Roadmap↔NDC	• Clear integration of climate risk assessments (e.g. pest/disease impacts, fodder security, mobility) under L-PRES, aligning with NDC's AFOLU priority. • Strategies like improved genetics, sustainable feeds, and manure management can contribute to NDC mitigation targets.	• No explicit GHG inventory, emission reduction targets, or MRV provisions within the roadmap. • Livestock Roadmap lacks direct reference to NDC strategies or finance mechanisms.
Livestock Roadmap↔NCCP	• Roadmap embeds climate resilience planning through integrated pest management, environmental and social management plans (ESMPs), waste management, and land rehabilitation, which align with NCCP sectoral adaptation priorities. • NCCP mentions agriculture as a key adaptation sector, giving an umbrella for livestock initiatives.	• No direct policy-to-policy reference to NCCP strategies or frameworks. • Institutional disconnect in delivery and monitoring systems.
Livestock Roadmap↔NBSAP	• Marginal references to animal genetic resource preservation and rangeland management, which have biodiversity co-benefits	• Biodiversity goals and metrics are largely missing. • Missed opportunity to align with Target 7 of NBSAP on conservation of domesticated animal genetics.
NDC↔NCCP	• NCCP forms the strategic framework underpinning NDC implementation. • Both contain clear cross-references on MRV, AFOLU, clean energy, short-lived climate pollutants (SLCPs), and NbS integration. • Joint emphasis on gender, just transition, green jobs, and private sector roles.	• Minor difference in sectoral priority depth (NDC is action-specific; NCCP is strategy-driven).

Interaction	Synergies	Gaps/Contradictions
NDC↔NBSAP	• NDC includes NbS and forest targets, aligning with NBSAP's goal for degraded ecosystem restoration. • Biodiversity acknowledged in the context of land use, water, and agriculture.	• NDC does not directly reference NBSAP targets or indicators. • Biodiversity is seen more as a co-benefit than a primary climate goal.
NCCP↔NBSAP	• NCCP references biodiversity, ecosystem services, and genetic resources across adaptation and mitigation pillars. • Mutual alignment on forest conservation, pollution control, EbA, and governance strengthening.	• No integrated biodiversity–climate financing framework explicitly linking both policies.

5.2.3 Zambia Findings

The study analysed interactions with regard to climate adaptation and mitigation, biodiversity, water management, gender, and MRV in livestock across the five policy frameworks.

Table 22. Policy Interactions in Zambia

Interaction Area	CSAIP	National Livestock Policy	NBSAP-2	Updated NDC	NAP
Climate Adaptation in Livestock	3	3	1	2	3
Climate Mitigation in Livestock	2	2	1	3	2
Biodiversity and Ecosystem Conservation	2	2	3	2	2
Sustainable Land and Water Management	3	3	2	2	3
Gender and Social Inclusion	2	2	2	2	3
Finance and Investment Alignment	2	1	2	3	2
MRV and Monitoring Frameworks	2	1	1	3	3
Institutional and Governance Coherence	3	2	2	2	3
Sub-national Implementation and Devolution	2	2	1	1	3

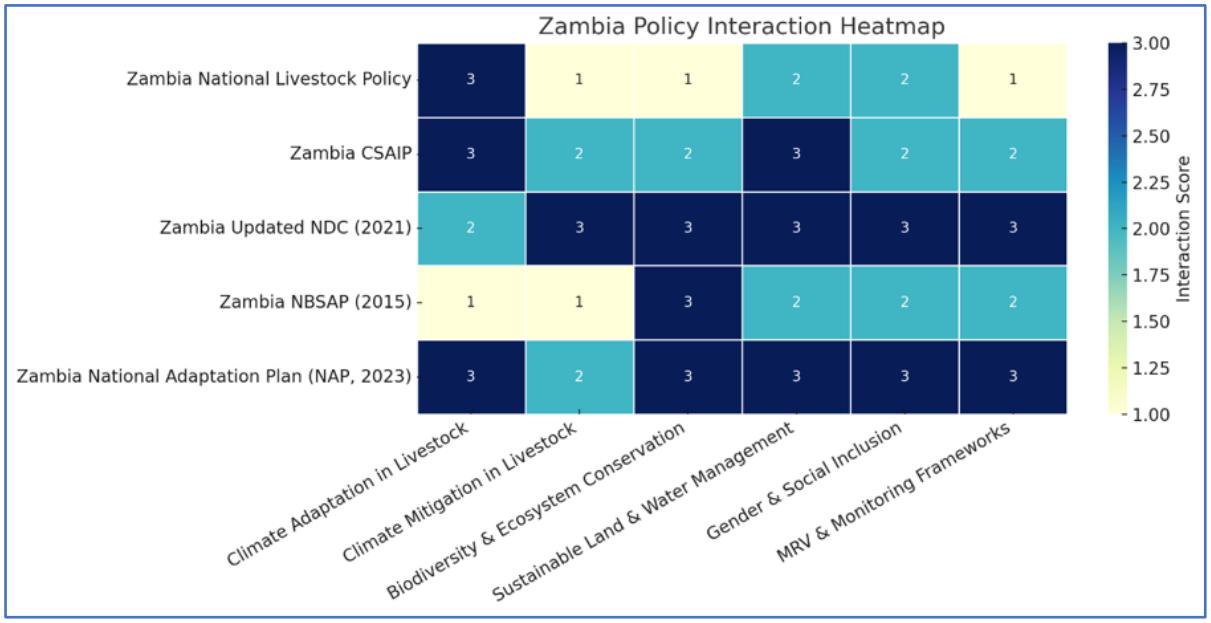


Figure 7. Policy Interaction Heatmap for Zambia

More detailed policy interactions are summarised in a matrix in Table 23.

Table 23. Policy Interaction Matrix for Zambia

Interaction Area	CSAIP	NAP	NBSAP-2	National Livestock Policy	Updated NDC
Biodiversity and Ecosystem Conservation	Integrates ecosystem protection via agroforestry and mixed systems	Addresses biodiversity in relation to EbA	Strong biodiversity strategy; core document for ecosystem conservation	Mentions biodiversity but lacks specific livestock ecosystem plans	Includes ecosystem targets as part of climate co-benefits
Climate Adaptation in Livestock	Promotes adaptive livestock systems including diversification, animal health, and water access	Robust livestock-focused adaptation actions including early warning, insurance, and disaster risk reduction	Limited livestock-specific adaptation strategies	Strong promotion of adaptive grazing and breed improvements	Incorporates adaptation via sustainable agriculture and water systems
Climate Mitigation in Livestock	Addresses AFOLU emissions through feed improvement and agroforestry	Includes livestock methane reduction and sustainable pasture use	No livestock-specific GHG measures	Includes basic mitigation actions like manure management	Targets GHG reductions through sustainable agriculture and AFOLU sector
Finance and Investment Alignment	Includes cost-benefit analysis and investment prioritization for CSA	Outlines resource mobilization for adaptation and Green Climate Fund (GCF) access	Encourages resource mobilization through biodiversity funds	Limited financial instruments or costed plans	Clear conditional and unconditional financing for adaptation and mitigation
Gender and Social Inclusion	Acknowledges gender in CSA delivery mechanisms and outreach	Strong integration of gender and vulnerable groups in climate planning	Supports equitable access to biodiversity benefits	Recognizes women in livestock production but lacks strategy	Highlights gender-sensitive climate actions
Institutional and Governance Coherence	Promotes cross-ministerial and multi-stakeholder mechanisms	Comprehensive governance with NAP secretariat and sectoral coordination	Encourages mainstreaming into sectoral plans	Basic role allocation; limited inter-agency coordination	Defines implementing entities for NDC delivery

Interaction Area	CSAIP	NAP	NBSAP-2	National Livestock Policy	Updated NDC
MRV and Monitoring Frameworks	Includes metrics and indicators for CSA outcomes	Integrated M&E with climate indicators and institutional mandates	Monitoring for biodiversity targets but no livestock linkage	Weak M&E; no defined indicators	Robust MRV systems for tracking NDC actions
Sub-national Implementation and Devolution	Some focus on extension and decentralized advisory systems	Strong provincial and district integration in NAP rollout	Minimal guidance on sub-national integration	District-level outreach mentioned, no clear devolution strategy	NDC implementation at national level with limited sub-national detail
Sustainable Land and Water Management	Promotes CSA practices including rangeland and watershed management	Mainstreamed within adaptation strategies with clear targets	Supports land restoration, forest, and wetland ecosystem services	Focus on grazing land and pasture water access	Promotes land management as part of NDC goals

Table 24. Policy Interactions and Coherence in Zambia

Policy Pair	Area of Interaction	Summary of Interaction	Level of Coherence
CSAIP↔NDC	CSA, GHG mitigation	CSAIP promotes sustainable intensification and CSA practices aligned with NDC's targets on reducing emissions from agriculture and forestry sectors.	Strong
CSAIP↔NAP	Climate adaptation, livestock resilience	Both emphasize adaptive livestock systems and resilience building. CSAIP's interventions in drought-prone areas complement NAP priorities for agro-ecological zones.	Strong
CSAIP↔Livestock Policy	Sustainable livestock production	CSAIP builds on the Livestock Policy's emphasis on improving productivity but adds climate-smart dimensions. Both stress animal health and feed systems.	Moderate
Livestock Policy↔ NBSAP	Biodiversity in livestock systems	Limited direct link. The Livestock Policy minimally references biodiversity; NBSAP emphasizes genetic diversity but not livestock-specific interventions.	Weak
NDC↔NAP	National adaptation strategies	NDC outlines broad adaptation goals; NAP provides detailed, sector-specific adaptation pathways including agriculture, livestock, and water.	Strong
NAP↔ NBSAP	Ecosystem-based adaptation (EbA)	Both promote EbA. NAP highlights biodiversity as a climate resilience enabler; NBSAP integrates climate risks into species and ecosystem conservation.	Moderate to Strong
ND ↔NBSAP	Mitigation–biodiversity nexus	NDC focuses on GHG reductions in AFOLU; NBSAP mentions Reducing Emissions from Deforestation and Forest Degradation (REDD+) and land use, but not in GHG terms. Biodiversity–mitigation synergy is implicit.	Moderate

Table 25. Key Observations for Zambia

Area	Convergence
Primary Convergence Areas	• **Socio-economic development:** All policies emphasize transformation for economic development. • **Sustainable resource management:** There is consistent focus on sustainable use of natural resources. • **Climate resilience:** NAP, NDC, and NBSAP explicitly address climate change, with Livestock Policy showing limited integration.
Complementary Mechanisms	• **Participatory approaches:** All policies emphasize stakeholder consultation and participation. • **Evidence-based planning:** There is consistent emphasis on research and data-driven decision-making. • **Multi-sectoral coordination:** All policies recognize need for cross-sectoral approaches.
Potential Synergies	• **Climate–agriculture integration:** NAP's agricultural adaptation measures could complement Livestock Policy objectives. • **Biodiversity–climate linkages:** NBSAP's ecosystem approach aligns with NAP's EbA.
Coordination Strengths	• **Ministry leadership:** There are clear lead agency designations for each policy area. • **Multi-stakeholder platforms:** There is consistent emphasis on participatory governance. • **Provincial–national coordination:** All policies address multi-level implementation.
Coordination Opportunities	• **Climate–livestock integration:** There is limited explicit coordination between climate policies (NAP, NDC) and Livestock Policy. • **Cross-sectoral platforms:** There is an opportunity to establish integrated coordination mechanisms.

5.2.4 Comparative Coherence Assessment

Based on the comparative country assessment matrix in Tabel 26, Zambia remains the top performer with an average coherence score of 2.18, showing relatively stronger integration, especially in land and water management and biodiversity.

Kenya and Nigeria are closely matched with scores of 2.11 each, reflecting moderate coherence across thematic areas but also highlighting areas needing improvement – particularly in gender inclusion, MRV, and climate finance.

Table 26. Comparative Country Assessment Matrix

Thematic Area	Kenya	Nigeria	Zambia	Average Total
Climate Adaptation in Livestock	2.8	2.8	2.4	2.67
Climate Mitigation in Livestock	2.4	2.4	2	2.27
Biodiversity and Ecosystem Conservation	2.2	2.2	2.2	2.20
Sustainable Land and Water Management	2	2	2.6	2.20
Gender and Social Inclusion	2	2	2.2	2.07
Finance and Investment Alignment	2	2	2	2.00
MRV and Monitoring Frameworks	2	2	2	2.00
Institutional and Governance Coherence	1.8	1.8	2.4	2.00
Sub-national Implementation and Devolution	1.8	1.8	1.8	1.80
Average Total	**2.11**	**2.11**	**2.18**	

Table 27. Comparative Country Thematic Coherence

Thematic Area	Coherence
Climate Adaptation in Livestock	• Kenya and Nigeria both score 2.8, indicating strong incorporation of climate adaptation measures in livestock-related policies. These include rangeland management, climate advisory services, and drought-resilient practices. • Zambia scores slightly lower at 2.4, suggesting good but less comprehensive integration of adaptive strategies in livestock systems.
Climate Mitigation in Livestock	• Both Kenya and Nigeria score 2.4, showing a moderate level of mitigation integration, including improved manure management and low-emission practices. • Zambia has a lower score of 2.0, indicating that mitigation aspects like GHG monitoring or carbon-reduction practices are less emphasized.
Biodiversity and Ecosystem Conservation	• All three countries score 2.2, suggesting uniform attention to biodiversity. This points to explicit mentions of ecosystem services and biodiversity conservation within livestock or broader environmental policies.
Sustainable Land and Water Management	• Zambia leads with 2.6, indicating strong policy alignment with sustainable land and water practices through agroforestry, watershed management, and land restoration strategies. • Kenya and Nigeria both score 2.0, reflecting moderate integration due to fragmented land tenure and limited cross-sectoral policy alignment.

Thematic Area	Coherence
Gender and Social Inclusion	• Scores are relatively even (2.0 for Kenya and Nigeria, and 2.2 for Zambia) indicating moderate efforts to mainstream gender, pastoralist inclusion, and vulnerable group considerations into livestock and climate policies.
Finance and Investment Alignment	• Kenya and Nigeria show strong coherence with scores of 2.6, indicating integration of dedicated budget lines, climate finance, and livestock investment frameworks. • Zambia, scoring 2.0, lacks explicitly aligned financing mechanisms or robust funding channels for implementation.
MRV and Monitoring Frameworks	• Again, Kenya and Nigeria score 2.6, demonstrating well-established Monitoring, Reporting, and Verification (MRV) systems aligned with livestock and climate sectors. • Zambia lags slightly at 2.2, implying a need for more structured MRV frameworks and capacity strengthening.
Institutional and Governance Coherence	• Kenya and Nigeria lead with 2.8, reflecting strong coordination mechanisms across ministries, devolved institutions, and policy domains. • Zambia scores 2.4, pointing to some coordination gaps in institutional governance.
Sub-national Implementation and Devolution	• Kenya again scores highest at 2.8, aligned with its devolved governance structure, which supports sub-national implementation. • Nigeria and Zambia score 2.4, indicating fair but less robust integration of sub-national systems and local-level execution strategies.

Table 28. Best Practices Identified within Country Policies

Country	Best Practice
Kenya	• Strong linkage to national development vision (AU Vision 2030) • Comprehensive climate mainstreaming approach • Clear devolved governance coordination
Nigeria	• Robust institutional coordination framework (Inter-Ministerial Committee on Climate Change) • Strong emphasis on gender and social inclusion • Comprehensive sectoral coverage in climate policy
Zambia	• Excellent participatory policy development processes • Strong evidence-based planning approaches • Good integration of traditional knowledge systems

Table 29. Common Coherence Strengths and Challenges

Strengths	Challenges
• Strong alignment on sustainable development objectives • Consistent emphasis on multi-stakeholder approaches • Good integration of climate change considerations • Clear institutional leadership designation	• Timeline coordination across different policy cycles • Limited explicit cross-sectoral coordination mechanisms • Need for updated policies to maintain alignment • Resource mobilization coordination

5.3 Vertical Coherence

The study comprehensively analysed and examined the vertical coherence of national policies from three African countries – Kenya, Nigeria, and Zambia – assessing their alignment with regional, continental, international, and global policy frameworks. In the context of African development, this coherence is particularly critical given the continent's integration into multiple overlapping governance structures, including the AU's continental frameworks, RECs, and global multilateral agreements and international commitments.

5.3.1 Analytical Framework

The analysis employed a multi-level governance framework that examined policy coherence across four distinct levels.

1. **Global:** UNFCCC/Paris Agreement, SDGs, UNCCD, CBD, and Sendai Framework (as applicable).
2. **International level:** Multilateral treaties, conventions, and international agreements (as applicable).
3. **Continental:** AU Agenda 2063, CAADP/Malabo Declaration, Africa Climate Change Strategy (2022), LiDeSA, and AU Biodiversity Strategy and Action Plan (ABSAP), New Partnership for Africa's Development (NEPAD), African Continental Free Trade Area (AfCFTA) (as applicable).
4. **Regional:** EAC Livestock and Climate Change Policy, IGAD Drought Disaster Resilience and Sustainability Initiative (IDDRSI), and ECOWAS, SADC, and COMESA climate and livestock strategies (as applicable).

5.3.2 Data Collection and Validation

Data collection involved systematic content analysis of policy documents, supplemented by review of relevant international, continental, and regional framework documents. The analysis was validated through cross-referencing with official government publications, international organization reports, and academic literature on livestock, climate, biodiversity, and environment.

5.3.3 Conceptual Framework

In this study, vertical coherence analysis draws from multi-level governance theory, which recognizes that authority and decision-making are distributed across multiple levels of governance rather than concentrated at a single level. In the African context, this multi-level structure is particularly complex, involving traditional governance systems, national governments, RECs, continental institutions, and global frameworks. This understanding is presented in the below governance schematic.

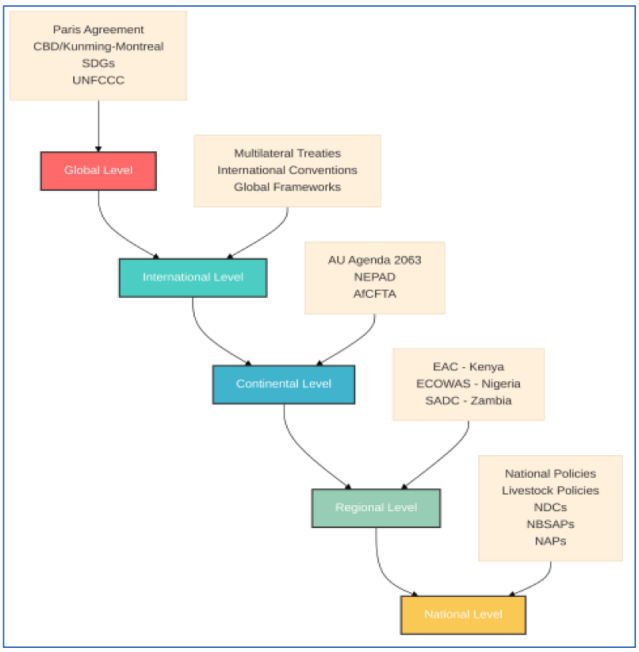


Figure 8. Multi-Level Governance Framework for Vertical Coherence Analysis

The vertical coherence analysis of the national policies for each country are summarized below.

5.3.4 Kenya Findings

Table 30. Vertical Coherence Assessment Matrix for Kenya

National Policy	Regional – EAC, COMESA, IGAD	Continental – AU	Global and International	Overall Coherence
NAP (2016–2030)	Strong integration with IGAD and IDDRSI pillars.	Directly aligned with AU Climate Strategy and CAADP.	Fully reflects Paris Agreement and SDG 13; supports Sendai adaptation priority.	3 = Very high
2nd NDC (2024 for 2031–2035)	High regional compatibility with EAC and COMESA climate plans.	Strongly aligned with AU Africa Climate Strategy and Agenda 2063.	Fully anchored in UNFCCC and Paris Agreement; reflects Global Stocktake/ Just Transition.	3 = Very high
Livestock Policy (2020)	Strong alignment with IGAD and EAC climate/ ASAL policies.	Direct links to CAADP, Africa CSA Alliance, and AU Agenda 2063.	Strongly aligned with SDG 2, Paris Agreement, and UNFCCC goals.	3 = Very high
CSAIP (2023)	Moderately aligned with IGAD Livestock Strategy.	References LiDeSA, aligns with CAADP, but weak on AU Agenda 2063 framing.	Partially aligns with SDG 2, Sendai Framework, and CBD; limited Paris Agreement MRV linkage.	2 = Moderate
NBSAP (2019–2030)	Aligned with COMESA and EAC biodiversity frameworks.	Strong coherence with ABSAP and AU Agenda 2063 Goal 7.	Fully aligned with CBD, SDG 15, and Aichi/Post-2020 Global Biodiversity Framework.	3 = Very high

Table 31. Detailed Findings by Policy for Kenya

National Policy	Findings
NAP (2016–2030)	• **Regional:** Built on IGAD's regional adaptation and resilience programming, especially IDDRSI. • **Continental:** Implements the AU Climate Change Strategy, CAADP, and contributes to Malabo resilience goals. • **Global:** NAP is the formal national instrument for Paris Agreement adaptation; includes M&E, capacity building, and sector-wide planning (SDG 13, 2, 6, etc.). • **Key strength:** Strong institutional framework; mainstreaming across different sectors, including livestock, water, and infrastructure.
2nd NDC (2024 for 2031–2035)	• **Regional:** Promotes energy and agriculture transitions consistent with EAC and COMESA livestock priorities and climate action plans. • **Continental:** Strategically aligns with Africa Climate Change Strategy and AU Agenda 2063 and contributes to continental MRV reporting. • **Global:** Comprehensively integrates Paris Agreement and SDG principles and fully participates in Global Stocktake cycles. • **Key strength:** Clearly sequenced mitigation–adaptation–investment logic.
Livestock Policy (2020)	• **Regional:** Moderate reference to regional livestock trade and transboundary disease management (consistent with IGAD and COMESA). • **Continental:** Aligns with LiDeSA and partially with CAADP and AU Agenda 2063 Goals (food security, agro-processing). • **Global:** Weak on GHG accounting and climate resilience linkages; however, supports biodiversity, animal welfare, and prevention of antimicrobial resistance (supporting SDGs 2, 3, and 15). • **Key gaps:** Limited vertical coherence on climate mitigation, biodiversity targets, and gender-inclusion tracking.

National Policy	Findings
CSAIP (2023)	• **Regional:** Strong alignment with IGAD's dryland resilience and EAC agricultural climate action frameworks. Prioritization of ASALs echoes IGAD and EAC goals. • **Continental:** Coherent with CAADP goals (10% agriculture budget), Malabo commitments, and Africa CSA Alliance investment objectives. • **Global:** Fully supports UNFCCC NDC targets, promotes CSA for SDG 2, and reflects Paris Agreement adaptation finance frameworks. • **Key strength:** Integrated monitoring and financial modelling across sectors.
NBSAP (2019–2030)	• **Regional:** Anchored in COMESA and EAC regional biodiversity frameworks and aligned with IGAD's ecosystem protection in ASAL zones. • **Continental:** Highly consistent with AU Agenda 2063 (Goal 7: environment), ABSAP, and AU Green Recovery Action Plan. • **Global:** Fully aligned with CBD, SDG 15, and the Post-2020 Biodiversity Framework. Recognizes climate–biodiversity nexus and promotes eco-agricultural approaches. • **Key strength:** Mainstreams biodiversity across sectors and emphasizes climate mitigation/adaptation co-benefits.

5.3.5 Nigeria Findings

Table 32. Vertical Coherence Assessment Matrix for Nigeria

National Policy	Regional – ECOWAS, IGAD	Continental – AU	Global and International	Overall Coherence
NLTP	Weak alignment with REC livestock frameworks; lacks explicit references or structured integration.	Partially aligned through goals of improving productivity and conflict mitigation but not explicitly tied to LiDeSA targets.	Minimal climate mitigation elements; livestock GHGs not comprehensively addressed. Addresses SDG-aligned goals such as livelihoods and food security, but without formal biodiversity performance indicators.	1.5 = Moderate
Livestock Roadmap (2020–2026)	Partially aligned with REC policy directions on value chains and resilience; implementation not regionally coordinated.	Strongly aligned with AU Agenda 2063 through productivity, value addition, institutional capacity building, and resilience measures.	Strong focus on biodiversity, ecosystem services, and SDG-aligned indicators across animal value chains. Limited articulation of GHG emissions or climate mitigation pathways.	2.5 = High
NCCP (2021–2030)	Weak coordination with REC frameworks; focuses on national implementation only.	Limited mention of AU climate priorities or Agenda 2063; implementation largely domestic.	Strong alignment through gender-responsive adaptation, ecosystem management, and climate justice elements.	1.5 = Moderate
Updated NDC (2021)	Partial reflection of REC adaptation and energy resilience frameworks, without formal coordination mechanisms.	Strong alignment through green growth, renewable energy, just transition, and resilient development pathways.	Highly aligned with Paris Agreement through detailed GHG inventory, MRV system, SLCPs, and ambitious targets. Limited integration of biodiversity and SDGs	3 = Very high
NBSAP	Moderate alignment with REC biodiversity principles, including forest and wetland management.	Partially aligned with AU biodiversity aspirations but lacks sectoral integration with AU livestock strategies.	Aligns well with Aichi Targets and SDG 15; includes measurable indicators for genetic resources, ecosystems, and local participation. Indirect alignment via EbA but not an explicit climate instrument.	2 = High

Table 33. Detailed Findings by Policy for Nigeria

Policy	Findings
NLTP	• **Regional:** Limited explicit referencing or alignment with REC livestock frameworks (e.g., IGAD, ECOWAS). • **Continental:** Acknowledges AU's livestock transformation goals but lacks measurable integration with LiDeSA. • **Global:** Weak alignment with UNFCCC and Paris Agreement; livestock-related emissions mitigation is not central. • **International:** Some biodiversity and SDG references (e.g. conflict resolution, food security) but not systematized.
Livestock Roadmap (2020–2026)	• **Regional:** Reflects broader REC strategies for resilience and productivity but not formally integrated. • **Continental:** Strongly echoes AU Agenda 2063 and LiDeSA through institutional strengthening and resilience building. • **Global:** Minimal linkage to climate mitigation commitments under UNFCCC. • **International:** Strong inclusion of biodiversity, sustainable livelihoods, and resilience reflecting SDG and CBD targets.
NCCP (2021–2030)	• **Regional:** Limited mention of harmonization with REC climate frameworks. • **Continental:** Poor articulation of alignment with AU Agenda 2063 or Africa's Climate Strategy. • **Global:** While reflecting global climate concerns, lacks direct synergy with UNFCCC instruments (handled more by NDC). • **International:** Strong alignment with SDGs, CBD, and gender-sensitive adaptation strategies.
Updated NDC (2021)	• **Regional:** Integrates sectoral priorities that are consistent with ECOWAS and IGAD but not explicitly harmonized. • **Continental:** Embraces AU Agenda 2063 priorities through energy diversification, resilience, and sustainable growth. • **Global:** Strong alignment with Paris Agreement and UNFCCC, including updated GHG baselines and SLCPs. • **International:** Less emphasis on CBD or biodiversity-specific linkages.
NBSAP	• **Regional:** Aligns loosely with REC biodiversity priorities (e.g. ECOWAS Environmental Strategy). • **Continental:** Reflects AU biodiversity priorities but lacks specific operational linkage to LiDeSA. • **Global:** Aligns indirectly with Paris Agreement through adaptation co-benefits. • **International:** Aligned with CBD Strategic Plan (2011–2020) and Aichi Targets; recognizes SDGs in implementation.

5.3.6 Zambia Findings

Table 34. Vertical Coherence Assessment Matrix for Zambia

Policy	Regional – SADC, COMESA	Continental – AU	Global and International	Overall Coherence
National Livestock Policy (2020)	Refers to SADC market pressures but lacks strong institutional linkages to SADC or COMESA strategies.	Partial alignment with AU goals for livestock modernization, though LiDeSA is not explicitly mentioned.	Biodiversity is referenced, but not in a way that reflects SDGs or Aichi commitments No clear linkage to NDCs, MRV, or mitigation or adaptation components.	1 = Weak
CSAIP	Supports regional CSA objectives and some COMESA initiatives.	Well-aligned with AU Agenda 2063 and LiDeSA on sustainability and resilience.	Strong incorporation of SDGs and biodiversity considerations. Limited direct reference to UNFCCC or Paris Agreement targets, although CSA indirectly contributes.	3 = Very high

Policy	Regional – SADC, COMESA	Continental – AU	Global and International	Overall Coherence
Updated NDC (2021)	Weak reference to SADC and COMESA frameworks.	Mentions consistency with AU Agenda 2063, less so with LiDeSA.	Explicitly acknowledges SDGs and need for biodiversity finance. Strong in tracking GHG reductions and UNFCCC metrics.	2 = High
NAP (2023)	Does not sufficiently integrate regional adaptation strategies.	Aligns with AU Vision 2030 and development principles of Agenda 2063.	Integration of gender and equity matches SDG targets, but biodiversity link is weak. Reflects climate change resilience commitments consistent with UNFCCC.	1.8 = Moderate
NBSAP (2015)	Weak links to regional SADC and COMESA biodiversity plans.	Aligned with continental targets on ecosystem restoration and genetic resources.	Direct alignment with CBD, SDG 15, and Aichi Targets. No meaningful alignment with climate frameworks.	2 = High

Table 35. Detailed Findings by Policy for Zambia

Policy	Findings
National Livestock Policy (2020)	• **Regional:** Reflects general alignment with SADC livestock and animal health frameworks, including disease control, productivity, and marketing. However, lacks explicit reference to COMESA or regional trade harmonization mechanisms. • **Continental:** Partially aligns with LiDeSA and CAADP but misses opportunities to integrate the AU's climate and biodiversity strategies in livestock-specific areas. • **Global:** Recognizes climate change impacts on livestock systems. However, there is limited explicit alignment with the Paris Agreement, CBD, or livestock-relevant SDG indicators.
CSAIP	• **Regional:** Well aligned with SADC regional agricultural and climate resilience priorities, particularly regarding land use and smallholder adaptation. • **Continental:** Explicitly references and operationalizes the goals of AU Agenda 2063, CAADP, and AU Climate Change Strategy. • **Global:** Consistent with the Paris Agreement and supports Zambia's NDC targets through adaptation and low-emission practices in the agricultural sector. • **International:** Integrates the principles of the UNFCCC, UNCCD (land use and desertification control), and contributes to multiple SDGs (especially SDGs 2, 13, and 15).
Updated NDC (2021)	• **Regional:** Supports SADC Climate Change Strategy priorities, particularly in AFOLU and energy transitions. • **Continental:** Aligns fully with AU Climate Change and Resilience Strategy and Agenda 2063, and integrates with continental investment plans such as CAADP. • **Global:** Anchored in the Paris Agreement, with clear targets (25–47% GHG reduction by 2030), alignment with Intergovernmental Panel on Climate Change (IPCC) methodologies, and sector-specific actions including in livestock, agriculture, transport, and energy. • **International:** Links with UNFCCC's Enhanced Transparency Framework, SDGs 2, 7, 13, and 15, and efforts toward climate finance mobilization via the GCF and other channels.
NBSAP-2 (2015–2025)	• **Regional:** Relevant to SADC protocols on wildlife, forestry, and wetlands. • **Continental:** Explicitly aligned with ABSAP and AU Agenda 2063. • **Global:** Fully consistent with CBD, and was developed in response to the Aichi Targets under the CBD Strategic Plan 2011–2020. • **International:** Integrates with EbA approaches and is consistent with SDGs 14 and 15. Aligns with UNCCD goals on LDN and with Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) biodiversity valuation frameworks. Makes clear reference to REDD+, the Nagoya Protocol, and the Ramsar Convention.

5.3.7 Overall Vertical Coherence Findings

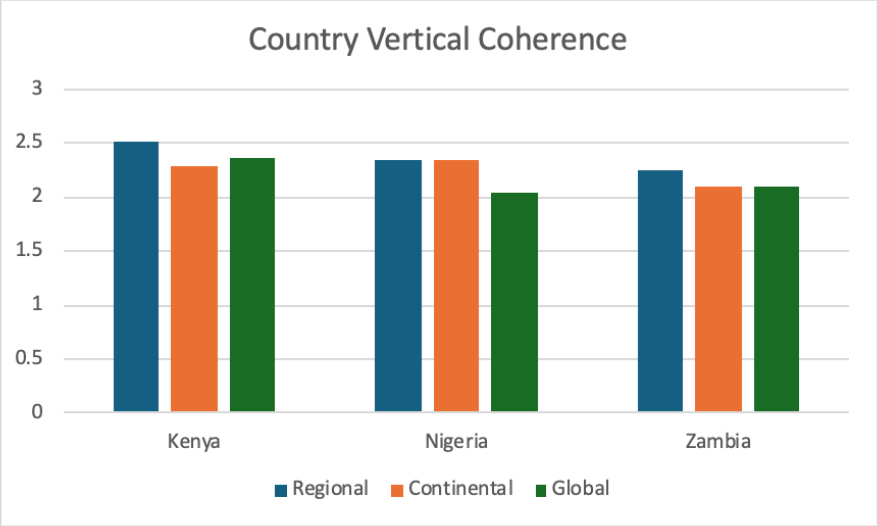
The comprehensive assessment of vertical coherence across the three countries reveals an overall coherence score of 2.26 out of 3.0, indicating generally strong alignment between national policies and higher-level frameworks.

Table 36. Vertical Coherence Across Countries

Country	Global	Continental	Regional	Overall
Kenya	2.37	2.28	2.52	2.40
Nigeria	2.04	2.34	2.34	2.22
Zambia	2.10	2.10	2.25	2.16

This finding suggests that Kenya, Nigeria, and Zambia have made significant progress in developing policies that align with global, continental, and regional commitments while addressing national development priorities.

Figure 9. Vertical Coherence Across Countries Analysis – Alignment Scores Across Governance Levels



There are several important patterns in policy alignment across governance levels. Regional-level alignment consistently shows the highest scores across all countries and policy types, reflecting the strong influence of RECs on national policy development. Global-level alignment shows more variation, with climate policies (NDCs) demonstrating stronger alignment than livestock policies, reflecting the specific requirements of international climate frameworks.

6 Policy Implementation Findings

The study assessed the status of policy implementations through a survey. Based on the survey responses received, the study attempted to tease out the mechanisms that are in place for policy implementation in AU MSs, focusing on what coordination and facilitation structures and mechanisms are in place to support adoption, uptake, and scaling of the policies. The facilitating factors analysed include:

- Existence of operational plans for transitioning from policy to action
- Institutional roles and coordination
- Budget availability
- Collaboration
- Monitoring and reporting
- The findings are presented below.

6.1 Policy Implementation Status

While policy development shows strong progress, the translation to implementation reveals more varied outcomes, as seen in Figure 10.

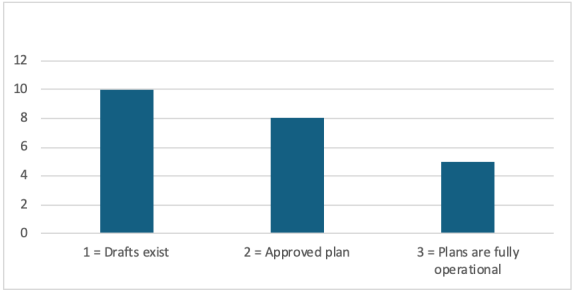


Figure 10. Implementation Planning Status

The survey data analysis shows that 43.5% of countries have draft operational plans in the development stage, 34.8% have approved plans in place, and only 21.7% report fully operational planning systems. This distribution indicates varying levels of institutional maturity and operational readiness across participating organizations.

The pattern suggests a common challenge in moving from policy formulation to practical implementation across the livestock sector. While most countries have developed comprehensive livestock-climate policies with strong climate-smart integration, significant gaps exist in translating these policies into operational implementation plans. The challenge lies not in policy formulation but in the operationalization phase, suggesting a need for targeted support in implementation planning, resource mobilization, and institutional capacity building.

6.2 Institutional Roles and Mandate

Several national institutions surveyed indicated that leadership and institutional roles do exist and are well spelled out. The findings are presented in Figure 11.

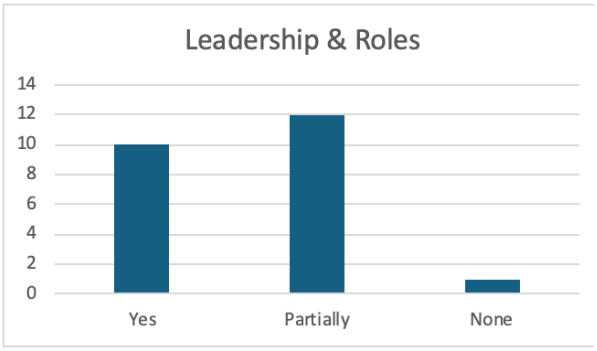


Figure 11. Institutional Leadership and Roles

Most institutions rated their mandate as "Partially" defined, implying there may be gaps or overlaps in institutional responsibilities. This partial mandate clarity could also lead to inefficiencies or coordination challenges with other agencies.

6.3 Cross-Sectoral Coordination

Cross-sectoral coordination represents a critical mechanism for addressing complex policy challenges that span multiple sectors and require integrated approaches. The analysis reveals that 52% of survey respondents actively engage in cross-sectoral coordination, while 32% have planned cross-sectoral coordination initiatives. The findings are presented in Figure 12.

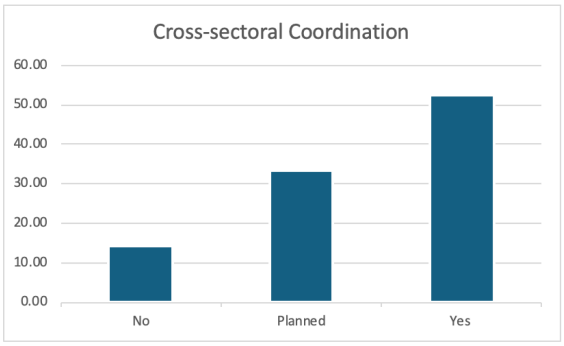


Figure 12. Cross-Sectoral Coordination

Although the majority of respondents marked cross-sectoral coordination as "planned", no active mechanisms or collaborative platforms were identified. This may reflect a planning intention rather than functional inter-sectoral alignment. It is also assumed that the slightly over 14% of national organizations that are not engaged in cross-sectoral coordination may be facing certain barriers, including institutional mandates that are narrowly sectoral, limited capacity for coordination, or lack of awareness about requisite cross-sectoral linkages.

6.4` Budget Allocation and Resource Commitment

Budget allocation for policy implementation shows mixed results, with varying levels of financial commitment across countries.

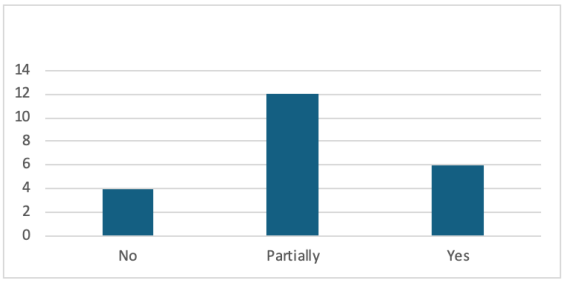


Figure 13. Budget Allocation

Many countries reported partial budgetary allocation, signalling constrained resources for full policy implementation. This partial allocation may hinder program execution and represents a critical constraint for translating well-developed policies into effective programs and interventions.

6.5 Alignment Patterns

The study assessed the alignment of the AU MSs' national policies to regional, continental, and global policies. The analysis reveals complex patterns of institutional engagement with major continental and global policy frameworks. The analysis distinguishes between three levels of alignment: **full alignment, partial alignment,** and **non-alignment.**

- **Full alignment** indicates comprehensive integration of framework objectives into organizational strategies and operations.
- **Partial alignment** suggests selective engagement with framework elements based on institutional priorities and capacity.
- **Non-alignment** may reflect limited relevance to organizational mandates, capacity constraints, or lack of awareness about framework requirements.

Eight key frameworks were examined: the AU Agenda 2063, CAADP, ABSAP, SDGs, UNFCCC, CBD, UNCCD, and RECs frameworks. The alignment outcomes are presented below.

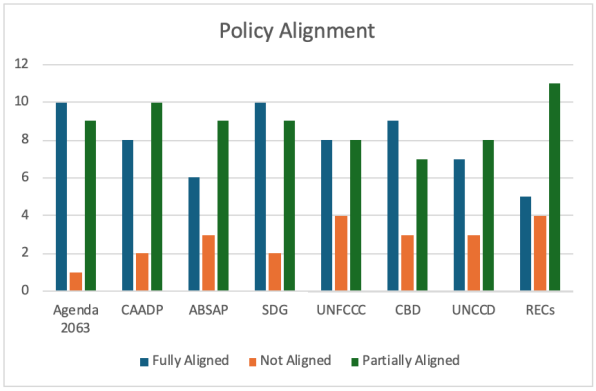


Figure 14. Policy Alignment

Policy alignment patterns vary significantly across frameworks, with some demonstrating high levels of institutional engagement while others show more limited alignment. The variation in alignment rates reflects different factors including framework relevance to organizational mandates, institutional capacity for engagement, resource availability for implementation, and the maturity of framework implementation mechanisms.

6.6 Regional Collaboration

Through the survey, the study assessed the existence and effectiveness of regional cooperation among the AU MSs. From the 23 responses over 80% affirmed the existence of regional collaboration around the areas shown in Figure 15.

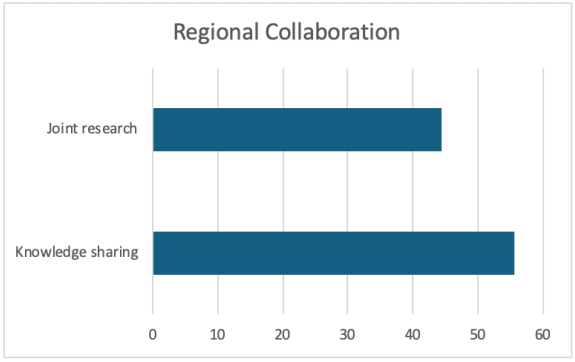


Figure 15. Regional Collaboration

The high rate of regional collaboration indicates significant institutional recognition of the importance of cross-border coordination for addressing shared challenges and achieving common objectives. Beyond the main collaboration categories listed, organizations engage in various other forms of collaboration that contribute to policy coordination effectiveness. From open-ended survey feedback, these include capacity building initiatives, technical assistance programs, joint advocacy efforts, and collaborative resource mobilization activities.

6.7 Policy Implementation Challenges and Barriers

Analysing implementation challenges reveals systematic barriers that constrain effective coordination and implementation of sustainable livestock policies across AU MSs. Through thematic analysis of challenge descriptions provided by all 22 organizations, several key challenge categories emerge with varying frequencies and intensities across the institutional landscape. The study attempted to categorize the indicated challenges faced by AU MSs in implementing livestock supportive policies via open-ended responses. The challenges cut across policy, institutional, financial, technical, environmental, and governance domains, as summarized in Table 37.

Table 37. Categorized and Grouped Challenges

Category	Specific Challenges Identified
Policy and Legal Frameworks	• Absence of national adaptation plans for livestock and aquaculture • Insufficient legal/policy frameworks • Non-enforcement of existing laws • Policy drafts not enacted • Overlapping mandates (ministries, research organizations, non-governmental organizations, etc.)
Institutional Capacity	• Weak institutional capacity at national and sub-national levels • High vacancy rates • Shortage of specialized staff (e.g. climate change–livestock experts) • Weak coordination among stakeholders
Financial and Resource Gaps	• Inadequate national budget allocations • Lack of access to finance for actors • Reliance on limited government funding • Lack of innovative/private financing mechanisms • Unfunded or underfunded project plans
Infrastructure and Services	• Inadequate rural infrastructure (e.g. electricity, transport) • Poor service delivery for livestock keepers • Limited access to feed and inputs
Environmental and Climate Risks	• Climate change impacts (droughts, rainfall variability) • Poor rangeland and water resource management • Environmental degradation and GHG emissions • High dependence on rainfall for pasture quality
Technical and Human Capacity	• Limited number and quality of trained technical staff • Low awareness and training of farmers • Lack of experience and capacity

Category	Specific Challenges Identified
Market and Production Systems	• Fluctuating prices for livestock feed and products • Underdeveloped forage and input systems • Low modernization of livestock systems • Dependence on feed imports
Governance and Implementation	• Weak governance mechanisms and leadership • Low operationalization of plans • Poor monitoring and accountability • Uncertain sustainability of interventions
Social and Land Issues	• Land tenure insecurity • Low involvement of pastoralist communities • Limited community awareness and inclusion

Key issues

- There is general lack of coherent legal frameworks, weak institutional and human capacities, inadequate financing, and low infrastructure development.
- Environmental stressors, especially those linked to climate change, further exacerbate the vulnerabilities of livestock systems.
- Coordination gaps among multiple stakeholders and fragmented interventions weaken efficiency on the ground.
- Sustainability and local ownership are undermined by insufficient engagement of communities, land tenure issues, and weak operational capacity of producer organizations.

6.8 Implementation Considerations

The study gathered information on perceptions and observations regarding the challenges hampering policy implementations. The following are suggestions summarized from the survey responses.

1. **Strengthen policy and legal frameworks:** Finalize and operationalize policy drafts, improve enforcement, and harmonize institutional mandates.
2. **Build institutional and technical capacity:** Invest in training, hiring, and retention of specialized personnel; decentralize capacity to local levels.
3. **Technical assistance mechanisms:** Establish technical assistance mechanisms to support countries in enhancing policy integration, particularly for frameworks showing weak integration performance.
4. **Enhance financing mechanisms:** Mobilize innovative financing, including private sector, climate funds, and blended finance.
5. **Improve coordination:** Establish inter-ministerial platforms to align efforts across sectors and stakeholders.
6. **Invest in resilience and infrastructure:** Prioritize climate-resilient practices and support enabling infrastructure in rural areas.
7. **Promote community engagement and tenure security:** Ensure participatory planning and address land insecurity among pastoralist communities.
8. **Joint planning processes:** Develop joint planning processes that bring together livestock, climate, biodiversity, gender, and land degradation specialists to ensure integrated policy development.
9. **Shared monitoring systems:** Create shared monitoring and evaluation systems that track progress across multiple themes and policy frameworks, enabling adaptive management approaches.
10. **Knowledge management systems:** Create knowledge management systems that capture and share integration experiences, lessons learned, and best practices across countries and frameworks.

7 Capacity Development Findings

The study conducted a capacity development survey using a comprehensive questionnaire, encompassing multiple dimensions of organizational capacity for sustainable climate-smart livestock development. The survey design incorporated both quantitative rating scales and qualitative open-ended responses to capture nuanced perspectives on capacity needs and preferences. Thematic areas were assessed using a four-point categorical scale – "No capacity", "Weak", "Moderate", and "Strong" – providing clear differentiation between institutional capacity levels.

7.1 Analytical Framework

The analytical approach employed a mixed-methods framework combining quantitative statistical analysis with qualitative content analysis. Categorical ratings were converted to numerical scales (No capacity = 0, Weak = 1, Moderate = 2, Strong = 3) to enable statistical calculations while preserving the interpretability of the original categorical responses.

Content analysis of open-ended responses utilized frequency analysis and thematic categorization to identify patterns in capacity needs and training preferences. This approach allowed for the identification of both explicit mentions and implicit themes across multiple response fields, providing a comprehensive view of organizational priorities.

The study examined capacity development needs across 23 organizations from 17 countries. The survey results presented below provide critical insights into current capacity levels, priority needs, and preferred training modalities across key priority areas relevant to sustainable livestock production.

Tables 38–42 below present the results within the priority areas identified by the LiveSys project.

Table 38. Capacity Needs, Gaps, and Priority Assessment (Integration, Practices, and Knowledge)

Assessment Area	1. Understanding Climate, Biodiversity and Gender Integration						2.Practices and Knowledge (Cross-Sectional Capacity)			
	Rating institution's integration capacity						Institution's knowledge of sustainable and climate-smart livestock practices			
Findings	Thematic Area	Strong	Moderate	Weak		No Capacity	Rating	Description		Number
	Climate adaptation	4	9	1		2	1	Very low – No or minimal understanding/ capacity		1
	Climate mitigation	5	7	2		1	2	Low – Basic awareness, but not sufficient for application		3
	Biodiversity protection	4	8	4		0	3	Moderate – General understanding; able to engage or apply with guidance		11
	Land restoration	5	8	2		1	4	High – Good understanding and application in most contexts		1
	Gender inclusion	4	9	3		0				
Capacity Needs	Capacity Need				Number		Capacity Need		Number	
	Climate risk assessments				16		Climate-smart grazing practices		14	
	Gender-responsive livestock planning				13		Feed management		16	
	Biodiversity conservation within livestock systems				16		Breeding for resilience		14	
	Land restoration				15		Pasture rehabilitation		11	
Specific Capacity Building Support Required	Capacity Building Need				Number					
	Training workshops				15					

Assessment Area	1. Understanding Climate, Biodiversity and Gender Integration						2.Practices and Knowledge (Cross-Sectional Capacity)			
	Rating institution's integration capacity						Institution's knowledge of sustainable and climate-smart livestock practices			
	Practical toolkits/ manuals				13					
	E-learning modules				12					
	Policy briefs				11					
	Webinars/seminars				11					
Preferred Training Formats	Training Format				Number		Training Format		Number	
	In-person workshop				14		Practical demonstrations		15	
	Online course				9		Online modules		10	
	Hybrid training				9		Peer-to-peer learning		12	
	Technical guides/ manuals				14		Manuals and handbooks		11	

Table 39. Capacity Needs, Gaps, and Priority Assessment (Governance and Conventions)

Assessment Area	3. Climate Governance			4. International Conventions and Advocacy (Rio Conventions)					
	Ranking the importance of climate change management and governance			Institutional awareness of, and involvement in, implementing commitments under the Rio Conventions					
Findings	Rating	Description	Number	Awareness			CBD		
	2	Slightly relevant	3	Yes			9		
	3	Moderately relevant	4	Limited			4		
	4	Relevant	2	No			3		
	5	Highly relevant	7						
	Rating the understanding of climate governance frameworks (local, national, international)			Institutional capacity to engage in international advocacy					

Assessment Area	3. Climate Governance			4. International Conventions and Advocacy (Rio Conventions)					
	Ranking the importance of climate change management and governance			Institutional awareness of, and involvement in, implementing commitments under the Rio Conventions					
	1	Very low – no or minimal understanding/capacity		Moderate	9	7	6	9	9
	2	Low – basic awareness, but not sufficient for application	1	Strong	4	6	5	4	4
	3	Moderate – general understanding; able to engage or apply with guidance	7	Weak	3	3	5	3	3
	4	High – good understanding and application in most contexts	6						
Capacity Needs	Priority Need			Priority Need			Number		
	Developing inclusive livestock–climate policies			Understanding reporting obligations			11		
	Strengthening institutional coordination			Mainstreaming livestock into national reports and action plans			14		
	Improving livestock sector participation in national climate processes (NDCs, NAPs)			Advocacy and negotiation skills			15		
				Gender mainstreaming and integration			11		
Preferred Training Formats	Format			Format			Number		

Assessment Area	Ranking the importance of climate change management and governance			Institutional awareness of, and involvement in, implementing commitments under the Rio Conventions					
	Policy training workshops			In-depth workshops			15		
	Webinars			Short online courses			12		
	Coaching/ mentoring			Policy advocacy toolkits			13		

Table 40. Capacity Needs, Gaps, and Priority Assessment (Tracking)

Assessment Area	5. Adaptation Tracking		6. GHG Tracking and MRV	
	Existing mechanisms to track adaptation measures in the livestock sector		Institution's engagement in GHG emissions estimation and MRV for the livestock sector	
Findings	Existence	Number	Engagement	Number
	No	4	No	6
	Planned but not yet operational	4	Yes	10
	Yes	8		
	Staff training in adaptation metrics and reporting tools		Challenges faced in GHG measurement	
	Existing Training	Number	Challenge	Number
	No	11	Lack of technical expertise	14
	Yes	5	High costs of measurement tools	12
			Lack of standardized methods	8
Capacity Needs	Priority Need	Number	Priority Need	Number
	Developing livestock-specific adaptation indicators	14	Estimating/calculation of livestock emissions	14
	Building monitoring systems	15	Designing MRV systems for livestock	14

Assessment Area	5. Adaptation Tracking		6. GHG Tracking and MRV	
	Existing mechanisms to track adaptation measures in the livestock sector		Institution's engagement in GHG emissions estimation and MRV for the livestock sector	
Preferred Training Formats	Format	Number	Format	Number
	Policy training workshops	15	Technical workshops	14
	Webinars	12	Online training modules	11
	Coaching/mentoring	13	Field practical	14

Table 41. Capacity Needs, Gaps, and Priority Assessment (Data)

Assessment Area	7. Climate Data Access and Analysis		8. Evidence for Decision-Making (Dashboards and Tools)	
	Capacity to use climate data for planning		Use of data dashboards or digital platforms for livestock-climate-biodiversity decision-making	
Findings	Capacity	Number	Use	Number
	Average	6	No	10
	Good	3	Yes	6
	Limited	6		
Capacity Needs	Priority Need	Number	Priority Need	Number
	Understanding climate data sources	12	Designing livestock data dashboards	15
	Climate scenario analysis for livestock planning	16	Customizing digital tools for real-time monitoring	14
	Climate risk modelling	13	Linking dashboards to policy processes	12
			Training in interpreting dashboard outputs	12
Preferred Training Formats	Format	Number	Format	Number
	Hands-on training sessions	16	Digital literacy workshops	13
	E-learning platforms	10	Tutorials	13
	Data use manuals	14	User manuals	12

Table 42. Capacity Needs, Gaps, and Priority Assessment (Policy Impact Analysis)

Assessment Area	9. Policy Impact Analysis	
	Institution's ability to analyse policies and assess impacts on sustainable livestock systems	
Findings	Ability	Number
	Moderate	8
	Strong	2
	Weak	6
Capacity Needs	Priority Need	Number
	Conducting policy analysis	14
	Livestock policy impact evaluation methods	14
	Linking policy to climate and biodiversity outcomes	12
Preferred Training Formats	Format	Number
	In-person analytical training	14
	Online simulation exercises	8
	Practical field studies	13

7.2 Thematic Capacity Analysis

The analysis of capacity levels across five key thematic areas reveals important patterns in organizational strengths and development needs.

Table 43. Thematic Average Scores

Thematic Area	Average Score	Total Responses	Response Rate
Climate Adaptation	1.94	16	69.60%
Climate Mitigation	2.20	15	65.20%
Biodiversity Protection	2.00	16	69.60%
Land Degradation and Restoration	2.06	16	69.60%
Gender Inclusion and Equality	2.06	16	69.60%

Each thematic area demonstrates distinct characteristics in terms of capacity distribution and average performance levels.

Table 44. Thematic Capacity Distribution

Thematic Area	Strong	Moderate	Weak	No Capacity
Climate Adaptation	25.0%	45.0%	10.0%	10.0%
Climate Mitigation	31.3%	43.8%	12.5%	6.3%
Biodiversity Protection	20.0%	40.0%	20.0%	0.0%
Land Degradation and Restoration	27.8%	44.4%	11.1%	5.6%
Gender Inclusion and Equality	26.7%	53.3%	20.0%	0.0%

Climate adaptation emerges as the area with the lowest average capacity score (1.94), indicating significant development opportunities. The distribution shows 45% of respondents rating their capacity as moderate, while 25% report strong capacity. Notably, 10% of organizations report having no capacity in climate adaptation, highlighting the critical need for foundational capacity building in this area. The relatively low average score reflects the complex and evolving nature of climate adaptation planning, which requires integration of climate science, risk assessment, and adaptive management approaches.

Climate mitigation demonstrates the highest average capacity score (2.20) among all thematic areas, suggesting that organizations have developed stronger foundations in emissions reduction and mitigation planning. The distribution shows 43.8% of respondents with moderate capacity and 31.3% with strong capacity. Only 6.3% report no capacity, indicating broader baseline competency in this area. This pattern may reflect the longer history of climate mitigation initiatives and the availability of established methodologies and tools for emissions assessment and reduction planning.

Biodiversity protection shows an average capacity score of 2.00, with a relatively balanced distribution across capacity levels. The equal representation of the moderate (40%) and combined weak and strong response categories (20% each) suggests diverse organizational experiences and priorities in biodiversity conservation. The absence of "no capacity" responses in this area indicates that all participating organizations have at least basic awareness and engagement with biodiversity issues, though significant strengthening opportunities remain.

Land degradation and restoration capacity averages 2.06, showing high capacity as for climate mitigation. The distribution reveals 44% with moderate capacity and 22.8% with strong capacity, while only 5.6% report no capacity. This relatively high performance may reflect the tangible and visible nature of land degradation issues, which often receive priority attention in agricultural and pastoral contexts.

Gender inclusion and equality capacity also averages 2.06, with 53.3% reporting moderate capacity and 26.7% reporting strong capacity. The 20% reporting weak capacity indicates ongoing challenges in mainstreaming gender considerations into livestock development programming. The absence of "no capacity" responses suggests universal recognition of gender issues' importance, though implementation capacity varies significantly.

7.3 Priority Capacity Needs Analysis

The comprehensive analysis of capacity needs across 22 survey variables reveals clear priorities and patterns that can inform targeted intervention design. The frequency analysis of 280 total capacity need mentions provides robust evidence for prioritization decisions. The study attempted to amalgamate the priorities by responses and mentions received, as presented in Table 45.

Table 45. Top Priority Capacity Needs

Rank	Capacity Need	Mentions	Percentage
1	Climate risk assessments	16	5.7%
2	Biodiversity conservation within livestock systems	16	5.7%
3	Climate scenario analysis for livestock planning	16	5.7%
4	Land restoration	15	5.3%
5	Designing livestock data dashboards	15	5.3%
6	Improving livestock sector participation in national climate processes (NDCs, NAPs)	14	5.0%
7	Estimating/calculation of livestock emissions	14	5.0%
8	Designing MRV systems for livestock sectors	14	5.0%
9	Customizing digital tools for real-time monitoring	14	5.0%
10	Conducting policy analysis	14	5.0%
11	Livestock policy impact evaluation methods	14	5.0%
12	Gender-responsive livestock planning	13	4.6%
13	Strengthening institutional coordination	13	4.6%
14	Climate risk modelling	13	4.6%
15	Developing inclusive livestock–climate policies	12	4.3%

Climate risk assessment emerges as one of the three highest priority needs, mentioned by 16 respondents (5.7% of total mentions). This priority reflects the fundamental importance of understanding climate risks as a foundation for all other climate-smart livestock interventions. Organizations recognize that effective adaptation and mitigation strategies require robust risk assessment capabilities, including understanding of climate projections, vulnerability assessments, and impact modelling specific to livestock systems.

Biodiversity conservation within livestock systems ties for the highest priority with 16 mentions, highlighting the critical intersection between livestock production and biodiversity conservation. This need reflects growing recognition that sustainable livestock development must integrate biodiversity considerations throughout production systems, from grazing management to breed conservation and ecosystem service provision.

Climate scenario analysis for livestock planning also receives 16 mentions, emphasizing the need for forward-looking planning capabilities that integrate climate projections with livestock development strategies. This capacity need reflects the long-term nature of livestock investments and the importance of climate-informed decision-making for sustainable development outcomes.

Land restoration follows closely with 15 mentions (5.3% of total), reflecting the critical importance of restoring degraded lands for sustainable livestock production. This priority aligns with global initiatives on land restoration and highlights the role of livestock systems in both causing and addressing land degradation challenges.

Designing livestock data dashboards also receives 15 mentions, indicating strong demand for data management and visualization capabilities. This need reflects the increasing availability of livestock-related data and the importance of translating data into actionable information for decision-making at multiple levels.

The analysis reveals several clusters of related capacity needs that suggest integrated intervention approaches. **Policy and governance** needs include improving livestock sector participation in national climate processes (14 mentions), conducting policy analysis (14 mentions), and livestock policy impact evaluation methods (14 mentions). This cluster indicates significant demand for strengthening the policy interface and ensuring that livestock considerations are effectively integrated into national climate and development planning processes.

MRV needs encompass estimating livestock emissions (14 mentions), designing MRV systems for livestock sectors (14 mentions), and customizing digital tools for real-time monitoring (14 mentions). This cluster reflects the growing emphasis on evidence-based management and the need for robust monitoring systems that can track progress toward climate and development goals.

Gender and social inclusion needs include gender-responsive livestock planning (13 mentions) and developing inclusive livestock–climate policies (12 mentions). While these needs receive somewhat fewer mentions, they represent critical cross-cutting issues that must be integrated throughout capacity development interventions.

7.4 Training Format Preferences and Learning Modalities

The analysis of training format preferences across 29 survey variables reveals clear patterns in preferred learning modalities that have significant implications for capacity development program design. With 365 total training format mentions analysed, the findings provide robust evidence for designing effective learning interventions, as highlighted in Table 46.

Table 46. Preferred Training Formats

Rank	Training Format	Mentions	Percentage
1	Hands-on training sessions	16	4.4%
2	Practical demonstrations	15	4.1%
3	Policy training workshops	15	4.1%
4	In-depth workshops	15	4.1%
5	Training workshops	15	4.1%
6	Knowledge sharing platforms	15	4.1%
7	In-person workshop	14	3.8%
8	Technical guides/ manuals	14	3.8%
9	Technical workshops	14	3.8%
10	Field practical	14	3.8%

Hands-on training sessions emerge as the most preferred format with 16 mentions (4.4% of total), reflecting a strong preference for experiential learning approaches. This preference aligns with the practical nature of livestock development work and suggests that effective capacity building must provide opportunities for participants to practice new skills and apply knowledge in realistic contexts. The emphasis on hands-on approaches indicates that theoretical training alone is insufficient for building the complex competencies required in climate-smart livestock development.

Practical demonstrations receive 15 mentions (4.1%), reinforcing the preference for experiential learning while highlighting the importance of seeing techniques and approaches in action. This format preference suggests that capacity development interventions should incorporate field visits, demonstration sites, and opportunities to observe best practices in real-world settings. The popularity of demonstrations also indicates the value of peer-to-peer learning and the importance of showcasing successful examples.

Policy training workshops also receive 15 mentions, indicating strong demand for specialized training in policy analysis, development, and implementation. This preference reflects the recognition that effective livestock development requires engagement with policy processes at multiple levels, from local to national and international. The specific mention of policy workshops suggests that generic training approaches may be insufficient and that specialized policy-focused interventions are needed.

In-depth workshops and training workshops each receive 15 mentions, demonstrating continued value for traditional workshop formats when they provide sufficient depth and focus. The distinction between general training workshops and in-depth workshops suggests that participants value intensive learning experiences that allow for comprehensive exploration of complex topics.

Knowledge sharing platforms receive 15 mentions, highlighting the importance of ongoing learning and collaboration beyond formal training events. This preference indicates demand for sustained engagement mechanisms that facilitate continuous learning, peer exchange, and access to updated information and resources. The emphasis on knowledge sharing platforms reflects the rapidly evolving nature of climate-smart livestock development and the need for adaptive learning approaches.

Technical guides and manuals receive 14 mentions, indicating continued value for well-designed reference materials that support ongoing learning and implementation. This preference suggests that effective capacity development programs should include comprehensive documentation and resources that participants can access after formal training events conclude.

The training format preferences can be categorized into four main clusters that suggest integrated program design approaches.

- **Cluster 1: Hands-on and practical** formats (including hands-on training sessions, practical demonstrations, and field practical) account for 45 mentions, representing the largest category.
- **Cluster 2: Workshop-based** formats (including various types of workshops) account for 74 mentions across multiple subcategories.
- **Cluster 3: Knowledge sharing platforms** represent a distinct category focused on ongoing collaboration and learning.
- **Cluster 4: Documentation and resources** (technical guides and manuals) represent the smallest but still significant category.

7.5 Rio Conventions Awareness and International Framework Engagement

The analysis of awareness levels regarding the three Rio Conventions provides important insights into organizational engagement with international environmental frameworks and highlights opportunities for strengthening linkages between local capacity development and global environmental governance.

Table 47. Rio Conventions Awareness Distribution

Convention	Full Awareness (Yes)	Limited Awareness	No Awareness
UNFCCC	62.5%	25.0%	12.5%
CBD	56.2%	25.0%	18.8%
UNCCD	50.0%	25.0%	25.0%

The UNFCCC demonstrates the highest awareness level, with 62.5% of respondents indicating full awareness. An additional 25% report limited awareness, while only 12.5% report no awareness. This pattern reflects the prominence of climate change in international development discourse and the extensive capacity building efforts that have focused on climate issues over the past decade. The high UNFCCC awareness suggests that organizations are well positioned to engage with climate-related capacity development initiatives and to contribute to national climate planning processes.

The CBD shows somewhat lower awareness levels, with 56.2% reporting full awareness, 25% reporting limited awareness, and 18.8% reporting no awareness. The lower CBD awareness compared to the UNFCCC suggests opportunities for strengthening biodiversity-focused capacity development and highlighting the connections between livestock development and biodiversity conservation. This pattern may reflect the more recent emphasis on biodiversity in development programming and the need for more targeted awareness building efforts.

The UNCCD demonstrates the lowest awareness levels among the three conventions, with 50% reporting full awareness, 25% reporting limited awareness, and 25% reporting no awareness. The lower UNCCD awareness is particularly significant given the direct relevance of desertification and land degradation issues to livestock development across Africa. This pattern suggests important opportunities for strengthening awareness of land degradation issues and connecting local capacity development efforts with international frameworks for sustainable land management.

The awareness patterns reveal a clear hierarchy that reflects the relative prominence of different environmental issues in international development discourse. Climate change awareness leads, followed by biodiversity, and then land degradation. However, the interconnected nature of these issues in livestock systems suggests that effective capacity development should adopt integrated approaches that highlight the synergies and trade-offs across all three conventions.

The "limited" awareness category represents a particularly important target group for capacity development interventions. Across all three conventions, approximately 25% of respondents report limited awareness, suggesting existing foundation knowledge that could be built upon through targeted interventions. This group may be more receptive to awareness building efforts than those with no awareness, while requiring fewer intensive interventions than complete introductory programs.

7.6 Advocacy Capacity Analysis and Institutional Influence

The assessment of advocacy capacity across five key areas provides critical insights into organizational abilities to influence policy processes and promote climate-smart livestock development at multiple levels. With consistent response rates of 16 participants across all advocacy areas, the analysis provides reliable comparative data on institutional influence capabilities.

Table 48. Advocacy Capacity Scores by Thematic Area

Advocacy Area	Average Score	Response Count
Climate Action	2.19	16
Sustainable Livestock	2.06	16
Land Degradation and Restoration	2.06	16
Gender Inclusion and Equality	2.06	16
Biodiversity Protection	2.00	16

Climate action advocacy demonstrates the highest capacity score (2.19), indicating that organizations feel most confident in their ability to advocate for climate-related policies and initiatives. This relatively strong performance aligns with the high UNFCCC awareness levels and suggests that climate advocacy has benefited from extensive capacity building efforts over the past decade. The strong climate advocacy capacity provides a foundation for expanding engagement with climate policy processes and for leveraging climate arguments to support broader livestock development objectives.

Sustainable livestock advocacy and **land degradation advocacy** both score 2.06, indicating moderate but consistent capacity levels. The sustainable livestock advocacy score suggests that organizations have developed reasonable capabilities for promoting livestock sector interests, though significant strengthening opportunities remain. The land degradation advocacy score aligns with the moderate UNCCD awareness levels and suggests that organizations recognize the importance of land issues while requiring additional support to effectively advocate for sustainable land management policies.

Gender inclusion and equality advocacy also scores 2.06, indicating moderate capacity that reflects the cross-cutting nature of gender issues and the ongoing challenges of mainstreaming gender considerations into sectoral advocacy efforts. This score suggests that while organizations recognize the importance of gender inclusion, they may require additional support to effectively advocate for gender-responsive policies and to integrate gender considerations into their broader advocacy strategies.

Biodiversity protection advocacy demonstrates the lowest capacity score (2.00), aligning with the moderate CBD awareness levels and suggesting significant opportunities for strengthening biodiversity-focused advocacy capabilities. The lower biodiversity advocacy capacity may reflect the complex and technical nature of biodiversity issues, the need for specialized knowledge to effectively engage with biodiversity policy processes, and the relatively recent emphasis on biodiversity in livestock development programming.

The advocacy capacity analysis reveals important patterns in organizational confidence and capability across different thematic areas. The relatively narrow range of scores (2.00–2.19) suggests that organizations have developed baseline advocacy capabilities across all areas while indicating that none of the areas demonstrate truly strong advocacy capacity. This pattern suggests opportunities for comprehensive advocacy capacity strengthening that builds on existing foundations while addressing specific thematic priorities.

7.7 Cross-Cutting Themes and Integration Opportunities

The study attempted to tease out possible thematic opportunities that emanates from the survey. The comprehensive analysis reveals several cross-cutting themes that transcend individual thematic areas and suggest opportunities for integrated capacity development approaches. The themes summarized below reflect the interconnected nature of climate-smart livestock development and highlight the importance of systems thinking in capacity building program design.

Data and information management emerges as a critical cross-cutting theme, with high demand for livestock data dashboards (15 mentions), customizing digital tools for real-time monitoring (14 mentions), and designing MRV systems (14 mentions). This theme reflects the increasing importance of evidence-based decision-making and the need for robust information systems that can support planning, implementation, and monitoring across all thematic areas. The emphasis on data management suggests that capacity development interventions should include strong components on data collection, analysis, visualization, and use for decision-making.

Policy integration and governance represents another major cross-cutting theme, with significant demand for improving livestock sector participation in national climate processes (14 mentions), conducting policy analysis (14 mentions), and livestock policy impact evaluation (14 mentions). This theme highlights the importance of strengthening the interface between technical capacity and policy processes, ensuring that improved technical capabilities translate into effective policy influence and implementation.

Risk assessment and planning appears as a fundamental cross-cutting capability, with climate risk assessments (16 mentions), climate scenario analysis (16 mentions), and climate risk modelling (13 mentions) all ranking among the top priorities. This theme suggests that effective capacity development must build foundational capabilities in risk assessment and forward-looking planning that can be applied across all thematic areas.

Gender and social inclusion emerges as a cross-cutting priority that requires integration throughout capacity development programming rather than treatment as a separate thematic area. The demand for gender-responsive livestock planning (13 mentions) and developing inclusive livestock–climate policies (12 mentions) indicates that gender considerations must be mainstreamed across all capacity development interventions.

Institutional coordination and collaboration represents an important cross-cutting theme, with strengthening institutional coordination receiving 13 mentions. This theme reflects the complex institutional landscape of climate-smart livestock development and the need for enhanced collaboration across sectors, levels, and organizations to achieve sustainable development outcomes.

7.8 Capacity Strengthening Insights

The comprehensive analysis generates several key insights that have significant implications for capacity development strategy and program design in climate-smart livestock development.

- **Capacity gaps are universal but varied:** The analysis reveals that capacity gaps exist across all thematic areas and all participating organizations, but the specific nature and severity of gaps vary significantly. This finding suggests that effective capacity development must adopt differentiated approaches that address specific organizational contexts while building on existing strengths. One-size-fits-all approaches are unlikely to be effective given the diversity of capacity levels and organizational priorities.
- **Integration is essential:** The strong interconnections between thematic areas, the prominence of cross-cutting themes, and the relationships between technical and advocacy capacity all point to the critical importance of integrated approaches. Capacity development interventions that focus on single thematic areas or single types of capacity are likely to be less effective than integrated approaches that address multiple dimensions simultaneously.
- **Practical learning is preferred:** The strong preference for hands-on training, practical demonstrations, and field-based learning indicates that effective capacity development must provide opportunities for experiential learning and practical application. This preference has significant implications for program design, suggesting that classroom-based or purely theoretical approaches will be less effective than programs that incorporate substantial practical components.
- **Awareness building remains important:** The varying levels of Rio Conventions awareness indicate that awareness building remains an important component of capacity development, particularly for biodiversity and land degradation issues. However, awareness building should be integrated with practical capacity development rather than treated as a separate activity.
- **Advocacy capacity requires attention:** The moderate advocacy capacity scores across all areas indicate that organizations have developed baseline capabilities but require significant strengthening to effectively influence policy processes. This finding suggests that advocacy capacity development should be a priority component of comprehensive capacity building programs.
- **Data and information systems are critical:** The high demand for data management capabilities across multiple survey sections indicates that information systems and data literacy are fundamental requirements for effective climate-smart livestock development. Capacity development programs must include strong components on data collection, management, analysis, and use for decision-making.

8 Recommendations

Based on the comprehensive assessment of policy landscapes, integration effectiveness, coherence analysis, and capacity needs across AU MSs and RECs, this section presents strategic recommendations organized by priority areas. These recommendations are designed to address the identified gaps while building on existing strengths and opportunities for enhanced policy effectiveness and implementation.

8.1 Policy Integration and Coherence Enhancement

Recommendation 1: Establish integrated policy development processes

- AU MSs should establish mandatory integrated policy development processes that bring together livestock, climate, biodiversity, gender, and land degradation specialists during policy formulation phases. This recommendation addresses the finding that livestock-specific policies show weak integration scores (1.31 out of 3.0) compared to NDCs (2.26) and LDN policies (2.43). The integrated approach should include joint planning workshops, shared analytical frameworks, and coordinated stakeholder consultation processes.
- Implementation should begin with pilot programs in countries showing moderate coherence scores, such as Kenya and Nigeria (both 2.11), where existing institutional frameworks can support enhanced integration efforts. The LiveSys project together with the AU Commission should develop standardized guidelines for integrated policy development that AU MSs can adapt to their specific contexts while maintaining consistency with continental frameworks.

Recommendation 2: Develop joint monitoring and evaluation systems

- National governments should create shared monitoring and evaluation systems that track progress across multiple themes and policy frameworks, enabling adaptive management approaches. The current fragmented M&E systems, as evidenced by weak MRV frameworks scoring 2.00 across priority countries, limit the ability to assess policy effectiveness and make evidence-based adjustments.
- These systems should incorporate livestock-specific indicators within climate, biodiversity, and land degradation monitoring frameworks, rather than maintaining separate sectoral monitoring systems. The integration should align with existing international reporting requirements under the Rio Conventions while providing national-level data for policy adjustment and improvement.

Recommendation 3: Strengthen REC coordination

- Given the significant variation in REC performance, with IGAD achieving maximum scores while SADC scores uniformly low, there is an urgent need for knowledge sharing and capacity building among RECs. IGAD should serve as a centre of excellence, sharing its integrated approach to livestock policy development with other RECs through structured peer learning programs.
- The AU should facilitate regular REC coordination meetings focused on livestock policy harmonization, with particular attention to supporting SADC in developing more integrated approaches. This coordination should include joint policy development initiatives, shared technical assistance programs, and collaborative resource mobilization efforts.

Recommendation 4: Align policy cycles and implementation timelines

- The timeline coordination challenges identified in the coherence analysis should be addressed by national governments by establishing synchronized policy review and update cycles across related frameworks. The fact that NDCs cover 2031–2035 while other policies have earlier timelines creates implementation gaps that undermine policy effectiveness.
- AU MSs should develop integrated policy calendars that align review cycles for livestock, climate, biodiversity, and land degradation policies. This

alignment should include coordinated stakeholder consultation processes, joint impact assessments, and synchronized resource allocation planning.

8.2 Capacity Development

Recommendation 1: Implement climate risk assessment capacity building

- Given that climate risk assessments emerged as the highest priority capacity need (16 mentions), relevant development partners should implement comprehensive training programs that focus on climate risk assessment methodologies specific to livestock systems. These programs should address the finding that climate adaptation shows the lowest capacity scores (1.94) while being fundamental to all other climate-smart livestock interventions.
- The capacity building should include hands-on training sessions (the most preferred format with 16 mentions), practical demonstrations (15 mentions), and field-based learning opportunities. Training should cover climate data access and interpretation, vulnerability assessments, and risk modelling specific to different livestock production systems across various agro-ecological zones.

Recommendation 2: Strengthen biodiversity conservation capacity

- The critical gap in biodiversity conservation within livestock systems, which tied for the highest priority with 16 mentions, needs to be addressed. This recommendation also responds to the finding that biodiversity integration in livestock-specific policies scores only 1.04, indicating significant opportunities for improvement.
- Capacity development should focus on ecosystem-based approaches to livestock management, including sustainable grazing practices, rangeland restoration, wildlife–livestock interactions, and conservation of livestock genetic resources. Training programs should emphasize the economic benefits of biodiversity conservation and provide practical tools for integrating conservation objectives into livestock production systems.

Recommendation 3: Establish technical assistance mechanisms

- Regional technical assistance mechanisms should be created through RECs to support countries in enhancing policy integration, particularly for frameworks showing weak integration performance. The finding that 75% of institutions rate their climate data capacity as average or limited indicates substantial need for ongoing technical support beyond one-time training interventions.
- These mechanisms should include regional centres of excellence, technical advisory services, and peer-to-peer learning networks. The technical assistance should be tailored to specific country contexts while maintaining consistency with regional and continental frameworks.

Recommendation 4: Strengthen cross-sectoral coordination mechanisms

- Only 52% of organizations actively engage in cross-sectoral coordination, which could be improved by establishing formal inter-ministerial coordination platforms at the national level. These platforms should include representatives from agriculture, environment, climate change, gender, and finance ministries, with clear mandates for policy coordination and joint implementation planning.
- The coordination mechanisms should include regular coordination meetings, joint planning processes, shared resource allocation frameworks, and integrated reporting systems. Success should be measured through improved policy coherence scores and enhanced implementation effectiveness.

8.3 Digital Transformation and Technology Adoption

Recommendation 1: Implement digital platform development programs

- The critical finding that 58.8% of institutions do not use digital platforms for livestock–climate–biodiversity decision-making can be addressed by AU MSs implementing comprehensive digital

transformation programs. The high demand for livestock data dashboards (15 mentions) and customizing digital tools for real-time monitoring (14 mentions) indicates strong institutional interest in digital solutions.

- Digital platform development should focus on user-friendly interfaces that integrate livestock, climate, and biodiversity data while providing evidence-based recommendations for decision-making. The platforms should be designed for use at multiple levels, from national policymaking to field-level implementation, with appropriate access controls and data sharing protocols.

Recommendation 2: Build digital literacy and technical capacity

- Digital platform development must be complemented by comprehensive digital literacy training programs that address the capacity constraints limiting technology adoption. The combination of limited climate data access capabilities (rated by 75% of respondents as average or limited) and low digital platform adoption creates compounding constraints on evidence-based decision-making.
- Training programs should include digital literacy workshops (13 mentions), hands-on training sessions, and ongoing technical support. The training should be tailored to different user levels, from senior policymakers to technical staff, with appropriate content and delivery methods for each audience.

8.4 Financial Mechanisms and Resource Mobilization

Recommendation 1: Develop innovative financing instruments

- The financial and resource gaps identified as major implementation barriers should be addressed by multistakeholder partnerships of AU MSs, financing institutions and development partners developing innovative financing instruments that combine public and private resources. The finding that inadequate national budget allocations and lack of access to finance represent critical constraints indicates need for diversified financing approaches.
- Innovative financing should include blended finance mechanisms, climate finance access, livestock insurance products, and private sector engagement strategies. These instruments should be designed to address the specific financing needs of different livestock production systems while maintaining alignment with sustainability objectives.

Recommendation 2: Strengthen climate finance access

- Development partners can support institutional capacity building for AU MSs to access international climate finance, given the strong alignment between livestock policies and climate frameworks demonstrated in the vertical coherence analysis. The finding that NDCs show strong integration (2.26) while having clear climate finance linkages indicates opportunities for leveraging climate finance for livestock development.
- Capacity building should include proposal development, project design, monitoring and reporting requirements, and stakeholder engagement strategies. Training should cover different climate finance mechanisms, including the GCF, Adaptation Fund, and bilateral climate finance initiatives.

These recommendations provide a comprehensive roadmap for enhancing the effectiveness of livestock policies across Africa while addressing the complex challenges of climate change, biodiversity conservation, and sustainable development.

9 Conclusion

The conclusions of this assessment point toward a path forward for African livestock development that emphasizes integration, implementation, and innovation as mutually reinforcing elements of a comprehensive livestock transformation strategy. The findings demonstrate that these three elements cannot be addressed in isolation but must be pursued through coordinated approaches that recognize their interconnections and synergies.

- Integration must be pursued at multiple levels, from policy development processes that bring together different sectoral perspectives to implementation approaches that coordinate interventions across different themes and governance levels. The assessment has identified a confounding challenge for policy integration: integration cannot be assumed to occur naturally, but must be actively promoted through appropriate institutional arrangements and incentive structures.
- Implementation must be strengthened through comprehensive approaches that address institutional, financial, technical, and coordination constraints simultaneously. The implementation gap identified in the assessment indicates that policy development alone is insufficient and must be complemented by sustained attention to implementation capacity and support systems.
- Innovation must be promoted across technological, institutional, and financial dimensions while ensuring that innovations are appropriate for African contexts and accessible to African institutions. The digital divide and capacity constraints identified in the assessment indicate that innovation strategies must include substantial capacity building and institutional strengthening components to be effective.

9.1 Implications for the LiveSys Project and Partners

The findings of this assessment have significant implications for the LiveSys project and its partners in terms of strategic priorities, intervention design, and implementation approaches. The identification of specific capacity needs, policy integration gaps, and implementation challenges provides clear direction for project activities while highlighting opportunities for maximum impact.

The finding that climate risk assessments represent the highest-priority capacity need aligns well with the LiveSys project's focus on climate adaptation and resilience, indicating that the project is well positioned to address critical capacity gaps. Similarly, the high priority placed on biodiversity conservation within livestock systems aligns with the project's biodiversity protection objectives.

In summary, the LiveSys project and its partners are well-positioned to contribute to this transformation through their technical expertise, institutional networks, and collaborative relationships across the continent.

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Annexes

Annex I: LiveSys Project - Policy ScoringCriteria & Analysis Framework

A. Policy Landscape Assessment

Thematic Area - Inclusion	Description	Indicators/Checklist	Scoring	Comments
Livestock	Assessing **livestock inclusion** in existing policies that promote sustainable development and resilience.	• **Recognition** - Are livestock systems explicitly recognized as key production systems and are their roles in livelihoods acknowledged? • **Objectives** - Are there specific objectives for sustainable livestock production, productivity improvement, and market access? • **Practices** - How well are sustainable livestock practices (feed, health, genetics, management) integrated into policy modalities? • **Value chains** - Are livestock value chain development and market linkages promoted?	• 0 = Not addressed • 1 = Mentioned but weakly addressed • 2 = Partially addressed with some measures • 3 = Fully addressed with strong measures and clear implementation	
Climate	Assessing **climate change action inclusion** in existing policies that promote sustainable livestock production systems	Adaptation • Are adaptive livestock systems promoted? • Does the policy support livelihoods diversification for livestock-dependent communities? Mitigation • Does the policy address GHG emissions from livestock? • Are low-emission livestock practices promoted? • Are carbon markets or incentives mentioned?	• 0 = No mention • 1 = Mentioned but not developed • 2 = Included with limited implementation strategies • 3 = Well-integrated with clear actions and accountability	
Biodiversity	Assessing **biodiversity inclusion** in existing policies that promote sustainable livestock production systems	• **Recognition –** Is biodiversity explicitly mentioned as a goal and are ecosystems acknowledged in livestock policies? • **Objectives –** Are biodiversity conservation goals included and are NBS practices promoted? • Is **sustainable use** promoted and supported?	• 0 = No inclusion • 1 = Mentioned but weakly integrated • 2 = Moderate integration with limited implementation detail • 3 = Strong, actionable, and well-integrated	
Gender	Assessing **gender inclusion** in existing policies that promote sustainable livestock production systems.	• **Inclusion**: Does the policy mention gender and are women/livestock keepers specifically referenced? • **Disaggregation**: Are data and targets sex-disaggregated? • **Responsibilities**: Are there gender-specific responsibilities/actions outlined?	• 0 = No reference to gender • 1 = Mention of gender but no concrete actions • 2 = Gender-sensitive but not transformative • 3 = Gender-transformative (shifting power relations)	

Thematic Area - Inclusion	Description	Indicators/Checklist	Scoring	Comments
Land degradation	Evaluating the extent to which **land degradation (LD)** issues are incorporated in existing policies that promote sustainable livestock production systems.	• **Recognition** - Is LD recognized as a challenge affecting livestock systems? • **Objective** – Are there specific objectives for preventing or reversing land degradation • **Practices** - How well are LD considerations integrated into livestock development	• 0 = Not addressed • 1 = Mentioned but weakly addressed • 2 = Partially addressed with some measures • 3 = Fully addressed with strong measures and clear implementation modalities	

B. POLICY INTEGRATION ASSESSMENT

Dimension	Indicators	Scoring Guidance
Livestock	• Livestock-specific objectives • Animal health & productivity • Feed and water access • Sustainable livestock management	• **3** = Policy comprehensively covers livestock development including sustainable production, animal health, feed, and productivity. • **2** = Some livestock aspects included, but incomplete. • **1** = Livestock only mentioned, no details. • **0** = No mention.
Climate	• Climate-smart livestock practices • Climate risks addressed • Mitigation & adaptation included	• **3** = Policy fully integrates climate adaptation & mitigation for livestock. • **2** = Some climate elements present but not comprehensive. • **1** = Climate mentioned generally without livestock linkage. • **0** = Not mentioned.
Biodiversity	• Grazingland protection • Genetic diversity conservation • Habitat protection	• **3** = Biodiversity fully mainstreamed in livestock systems. • **2** = Partial biodiversity integration. • **1** = Biodiversity mentioned indirectly. • **0** = Not addressed.
Land Degradation	• Land Degradation Neutrality (LDN) • Sustainable land management • Soil protection	• **3** = Land degradation fully addressed with clear livestock linkages. • **2** = Partial land degradation measures. • **1** = Land degradation mentioned with no livestock linkages. • **0** = No mention.

Dimension	Indicators	Scoring Guidance
Gender	• Women in livestock value chains • Access to services/resources • Empowerment & capacity building	• **3** = Gender fully integrated with specific livestock gender actions. • **2** = Some gender actions included. • **1** = Gender mentioned but not operationalized. • **0** = Gender not mentioned.

C. Examples

i. Thematic Integration Assessment within policies in a country

Policy Name	Livestock	Climate	Biodiversity	Land Degradation	Gender	Average Score
Policy A	3	2	1	2	1	1.8
Policy B	2	3	2	1	0	1.6
Policy C	3	3	3	3	2	2.8

ii. Integration within policies across countries

Country	Policy	Livestock	Climate	Biodiversity	Land Degradation	Gender	Total Score	Average Score
Kenya	National Livestock Policy	3	3	2	2	2	12	2.4
Ethiopia	Livestock Master Plan	3	2	2	1	1	9	1.8
Uganda	Agriculture Sector Plan	2	2	1	1	1	7	1.4

iii. Interpretation of Average Scores

Average Score	Interpretation
0–0.5	No integration
0.6–1.5	Very weak integration
1.6–2.0	Moderate integration
2.1–2.5	Good integration
2.6–3.0	Full integration

D. POLICY IMPLEMENTATION

1. Facilitating Factors

Dimension	Indicator	Score	Comments
1. Institutional Coordination			
1.1 Lead agency clearly designated	0 = None; 1 = Unclear; 2 = Designated; 3 = Active & functional		
1.2 Inter-ministerial coordination mechanisms exist	0 = None; 1 = Ad hoc; 2 = Formal but weak; 3 = Formal & active		
1.3 Stakeholder engagement platforms	0 = None; 1 = Minimal; 2 = Some stakeholder roles; 3 = Inclusive & participatory		
1.4 Coordination with sub-national levels	0 = Absent; 1 = Limited; 2 = Periodic; 3 = Integrated & regular		
2. Policy Facilitation Mechanisms			
2.1 National policy guidance/tools on sustainable livestock	0 = None; 1 = Draft; 2 = Available; 3 = Widely used		
2.2 Extension and capacity building systems	0 = Weak/absent; 1 = Limited; 2 = Functioning; 3 = Well-resourced		
2.3 Research and innovation linkage	0 = None; 1 = Informal; 2 = Project-based; 3 = Institutionalized		
3. Budgeting and Disbursement			
3.1 Budget allocation for sustainable livestock	0 = None; 1 = Token allocation; 2 = Moderate; 3 = Adequate & prioritized		
3.2 Disbursement mechanisms (e.g., timely fund release)	0 = Delays/ineffective; 1 = Irregular; 2 = Some consistency; 3 = Predictable & efficient		
3.3 Funding sources diversified (e.g., govt, donors, private)	0 = Sole source; 1 = Limited sources; 2 = Multiple; 3 = Diversified & sustainable		
4. Monitoring, Evaluation & Learning			
4.1 M&E framework exists for sustainable livestock	0 = Absent; 1 = Draft; 2 = Functional; 3 = Comprehensive & dynamic		
4.3 Feedback mechanisms to inform policy	0 = None; 1 = Irregular; 2 = Some feedback used; 3 = Routinely informs change		
5. Legal & Regulatory Framework			
5.1 Livestock policy coherence with environmental/climate policy	0 = Misaligned; 1 = Somewhat aligned; 2 = Mostly aligned; 3 = Fully integrated		
5.2 Enforcement capacity for sustainability regulations	0 = Weak; 1 = Limited; 2 = Functional; 3 = Strong & consistent		
5.3 Land use & tenure policies supportive of sustainable livestock	0 = Hindering; 1 = Unclear; 2 = Supportive; 3 = Strong & enabling		

ii. Key Implementation Dimensions

Pillar **Implementation**	Sub-Dimensions	Implementation Focus	Comment
Livestock Systems	Breed improvement, animal health, feeding systems, market access, extension services	Are livestock interventions operationalized?	
Climate Action	Climate-smart livestock practices, GHG mitigation, adaptation measures	Are climate measures in place?	
Biodiversity Action	Rangeland management, pasture biodiversity, genetic resources conservation	Are biodiversity actions being applied?	

Pillar **Implementation**	Sub-Dimensions	Implementation Focus	Comment
Land Degradation Neutrality	Soil health, erosion control, sustainable grazing, land restoration	Are land degradation interventions implemented?	
Gender Mainstreaming	Gender-responsive programs, participation, capacity building	Are women actively involved in livestock sector activities?	

D. POLICY COHERENCE ANALYSIS

Coherence Type	Focus	Key Question
Horizontal	Across sectors	Do different sector policies align to support sustainable livestock?
Vertical	Across levels	Are the policies aligned with national, regional, continental, global- level policies?

I. Policy Coherence Dimensions and Indicators

Dimension	Indicator	Scoring Guide (0–3)
1. Strategic Alignment	Alignment with policies, development plans, strategies, frameworks e.g NAPs, NDCs, CAADP, SDGs, UNFCCC, etc	0 = No reference to national/international frameworks1 = Vague alignment2 = Clear reference but weak operationalization3 = Strong alignment with actions and timelines
2. Cross-Sector Coherence	Integration with other related sectors (e.g climate, environment, water)	0 = Not addressed; 1 = Mentioned but siloed; 2 = Partial integration; 3 = Strong integration and coordination mechanisms
3. Institutional Coordination	Mechanisms for cross-ministerial coordination and stakeholder engagement	0 = None; 1 = Ad hoc or limited coordination; 2 = Defined roles but limited effectiveness; 3 = Strong, functional multi-sector platforms
4. Legal and Regulatory Harmonization	Alignment of laws, regulations, and enforcement instruments.	0 = Contradictions and mandate overlaps; 1 = Significant overlaps or contradictions exist & coordination is weak; 2 = Minor overlaps exist; 3 = No overlaps or contradictions - fully aligned and coherent across sectors.
5. Budgeting & Financing	Clear budgeting, financing mechanisms, and disbursement tracking	0 = No budget information; 1 = Budget outlined without financing source; 2 = Budget and source defined but no disbursement information; 3 = Fully costed with financing and tracking mechanisms
6. Monitoring & Review	Monitoring systems, indicators, and review mechanisms	0 = No M&E framework; 1 = Mention of M&E without clarity; 2 = Defined M&E indicators but weak reporting; 3 = Robust system with regular reviews

E. Examples

I. Coherence within policies

Policy	Strategic Alignment	Cross-Sector Coordination	Institutional Coordination	Regulatory Harmonization	Budgeting & Financing	Monitoring & Review	Total	Coherence Level
Policy A	3	2	2	3	2	1	11/18	Moderate-High
Policy B	2	1	0	1	1	0	5/18	Low

II. Cross-Policy Coherence - Pairing

Policy Pair (or Sectoral Combination)	Strategic Alignment	Cross-Sector Coordination	Institutional Coordination	Regulatory Harmonization	Budgeting & Financing	Monitoring & Review	Average Score	Key Findings/ Recommendations
Livestock & Climate								
Livestock & Biodiversity								
Livestock & Land Degradation								
Livestock & Gender								

III. Comparing Policy Coherence Across Countries/Regions

Country / Region	Climate	Livestock	Biodiversity	Land degradation	Gender	Budgeting	Notes / Observations
Country A	x	x	x	x	x	x	Strong on climate adaptation, weak on funding
Country B	x	x	x	x	x	x	No clear livestock focus
Country C	x	x	x	x	x	x	Holistic approach, clearly costed

Annex 3: Policy Inventory Databases

Databases Link

Annex 4: Primary Sources and Policy Documents

a. Country-Specific Policy Documents

Kenya

- Government of Kenya. (2020). Livestock Policy Sessional Paper No. 3. Nairobi: Ministry of Agriculture, Livestock, Fisheries and Cooperatives.
- Government of Kenya. (2016). National Adaptation Plan 2015–2030. Nairobi: Ministry of Environment and Natural Resources.
- Government of Kenya. (2024). Second Nationally Determined Contribution 2031–2035. Nairobi: Ministry of Environment and Forestry.
- Government of Kenya. (2023). Climate-Smart Agriculture Investment Plan. Nairobi: Ministry of Agriculture, Livestock, Fisheries and Cooperatives.
- Government of Kenya. (2019). National Biodiversity Strategy and Action Plan 2019–2030. Nairobi: Ministry of Environment and Forestry.

Nigeria

- Federal Government of Nigeria. (2019). National Livestock Transformation Plan 2019–2028. Abuja: Federal Ministry of Agriculture and Rural Development.
- Federal Government of Nigeria. (2020). Nigeria Livestock Roadmap for Productivity Improvement and Resilience 2020–2026. Abuja: Federal Ministry of Agriculture and Rural Development.
- Federal Government of Nigeria. (2021). Nationally Determined Contribution – 2021 Update. Abuja: Federal Ministry of Environment.
- Federal Government of Nigeria. (2021). National Climate Change Policy 2021–2030. Abuja: Federal Ministry of Environment.
- Federal Government of Nigeria. (2016). National Biodiversity Strategy and Action Plan 2016–2020. Abuja: Federal Ministry of Environment.

Zambia

- Government of Zambia. (2020). National Livestock Development Policy. Lusaka: Ministry of Fisheries and Livestock.
- Government of Zambia. (2015). Second National Biodiversity Strategy and Action Plan 2015–2025. Lusaka: Ministry of Lands and Natural Resources.
- Government of Zambia. (2021). Updated Nationally Determined Contribution 2015–2030. Lusaka: Ministry of Green Economy and Environment.
- Government of Zambia. (2023). National Adaptation Plan. Lusaka: Ministry of Green Economy and Environment.

b. Regional Economic Community Policy Documents

- Common Market for Eastern and Southern Africa. (2015). COMESA Livestock Policy Framework. Lusaka: COMESA Secretariat.
- East African Community. (2014). EAC Livestock Policy. Arusha: EAC Secretariat.
- Economic Community of West African States. (2019). ECOWAS Transhumance and Pastoralism Policy. Abuja: ECOWAS Commission.
- Intergovernmental Authority on Development. (2022). IGAD Strategy for Sustainable and Resilient Livestock Development 2022–2037. Djibouti: IGAD Secretariat.
- Southern African Development Community. (2009). SADC Livestock Policy and Trade Issues. Gaborone: SADC Secretariat.

c. Continental and Regional Frameworks

- African Union Commission. (2015). Livestock Development Strategy for Africa (LiDeSA) 2015–2035. Addis Ababa: African Union Commission.
- African Union Commission. (2013). Agenda 2063: The Africa We Want. Addis Ababa: African Union Commission.
- African Union Commission. (2022). Africa Climate Change Strategy. Addis Ababa: African Union Commission.
- African Union Commission. (2014). Comprehensive Africa Agriculture Development Programme (CAADP). Addis Ababa: African Union Commission.

d. International Frameworks and Conventions

- United Nations Framework Convention on Climate Change. (2015). Paris Agreement. Paris: UNFCCC Secretariat.
- Convention on Biological Diversity Secretariat. (2010). Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets. Montreal: CBD Secretariat.
- United Nations Convention to Combat Desertification. (2017). Land Degradation Neutrality Target Setting Programme. Bonn: UNCCD Secretariat.
- United Nations. (2015). Transforming Our World: The 2030 Agenda for Sustainable Development. New York: United Nations General Assembly.

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