

Are climate and security policies coherent and integrated? A Policy Coherence Analysis

Introduction

The impacts of climate change and variability will be experienced in different and uneven ways depending on the extent to which societies – and the communities within them – are exposed, vulnerable, or possess the adaptive capacity to mitigate said impacts. Certain countries, such as those located near the equator or the poles, are exposed to a rapidly changing climate to a greater degree than other countries. Furthermore, countries whose economies are highly dependent on climate-sensitive resources and sectors and that face challenges in diversifying their economic base are inherently more vulnerable to climate-induced perturbations (Tubi and Feitelson, 2017). This can be compounded by high levels of socio-economic, political, and institutional fragility, which serve to undermine adaptive capacity.

These dynamics are also active at the sub-national level. Communities that are highly dependent on climate-vulnerable livelihoods and sectors, possess little scope or capacity for diversification, or face socio-economic and political marginalisation are far more likely to experience tangibly destabilising climatic impacts than others. As a consequence of the uneven landscape upon which climate impacts play out, climate change is therefore likely to set in motion or accelerate any number of different existing processes of change *simultaneously* - yet in qualitatively different ways.

Detecting and measuring the exact ways in which climate impacts play out thus remains challenging, as is designing effective adaptation and mitigation responses. The contextual nature of climate impacts means policies need to be effectively shaped and right sized for different scales, geographic areas, and sectors. What works in one area may not work in another. However, climate policymakers are also faced with an additional layer of complexity in that global society is becoming increasingly complex, interconnected, and interdependent – both vertically and horizontally – meaning that actions undertaken at one level or in one sector are likely to have significant and unpredictable downstream effects elsewhere.

High degrees of connectivity and interdependence within and between systems mean that a change in elements, dimensions, and the relationships within and between them can lead to further changes in other parts of the system (Casti, 1998). Depending on whether systems are tightly or loosely coupled these impacts may be rapid, or they may diffuse over much longer timescales. The increasingly 'nested' nature of our social systems means that policymakers are confronted with increasingly connected hierarchies of scale (for instance, individuals are part of families, which are part of neighbourhoods or villages, which in turn make up larger communities and so on), meaning that a process or impact occurring at one scale is likely to have implications for other both higher and lower levels of the same system. Processes of change are therefore likely to occur at different spatial and temporal scales, dotting a complex landscape in which cause and effect are exceptionally difficult to detect and frequently interwoven into feedback-type relationships.

This level of complexity presents a challenge to scientists and policymakers. Climate change is a 'messy' policy issue, meaning that it does not have a well-defined form or structure, there is often not a clear understanding of the problem faced, and it is expected to involve economic, technological, ethical and political issues simultaneously (Ackoff, 1974). Contemporary policy has tended, conversely, to display a bias towards 'puzzle solving', in which the complex and interconnected nature of 'messes' is poorly understood and 'solutions' are designed to work in one narrow dimension or only at one scale, thereby ignoring broader connections and knock-on effects (Ramalingam et al., 2008).

This is, however, an inappropriate framing for designing climate-related policy. One of the greatest mistakes when dealing with a complex issue is not seeing its dimensions in their entirety, carving off a part, and dealing with this part as if it were a problem and then solving it as if it were a puzzle, all the while ignoring the linkages and connections to other dimensions of the mess (Pidd, 1996). Doing so will at best lead to ineffectual outcomes and wasted resources, and at worst, actively do harm by producing counter-productive policy outcomes.

One way through which climate policies may actively do harm is by failing to deploy a conflict-sensitive lens. Adaptation and mitigation are frequently viewed as primarily technical challenges, limited to technological development and improving the capacity for the management and usage of natural resources in sustainable ways. The apolitical nature of such initiatives is reflected in vulnerability assessments, analytical instruments used to develop adaptation strategies that typically lack a discussion of the socio-economic consequences of climate change and its impact on the political order and on human security. Yet to avoid negative impacts, it is necessary to anticipate the potential socio-economic and political implications of such adaptation measures – particularly when implemented in already fragile contexts – and recognise that they impact people’s livelihoods, asset base, and local power dynamics (Tänzler, Carius and Maas, 2013; Tänzler and Scherer, 2019). Incoherent climate policies may contribute to increased insecurity of land tenure, the marginalisation of minority groups, increased environmental degradation and loss of biodiversity, and accelerated climate change (Rüttiger et al., 2015).

What is needed instead is an integrated and multi-sectoral approach, in which different policy domains each work together in a coherent manner towards a collective, overarching objective simultaneously. Ensuring that climate adaptation and mitigation policy initiatives are cognisant of other processes and sectors is therefore crucial not just to ensure that they are effective, but also that they do no harm (Anderson, 1999).

Methodology

This work seeks to contribute to helping build the peace and conflict responsiveness of climate policies by developing a policy-relevant evaluative and prescriptive methodological framework capable of assessing the degree to which selected policies display a responsiveness to climate security risks and climate peace opportunities. By deploying this framework, this analysis therefore evaluates adaptation and mitigation, security, conflict prevention, and peacebuilding policy and strategy documents based on the extent of their awareness and engagement with climate risks and opportunities in six African countries: Zimbabwe, Kenya, Mali, Nigeria, Senegal, and Uganda. The following research questions formed the basis of our inquiry:

- 1) **To what extent can coherence be detected between climate and security-related policy domains within the selected countries? Does this change over time?**
- 2) **To what extent are policies likely to engage with climate security in a meaningful and implementation-oriented way, as opposed to having surface level engagement?**
- 3) **To what extent does the analysis reveal inter-country variability? Do certain countries display a greater degree of coherence, and why?**

Relevant policy and strategy documents were identified and extracted using a process of systematic search and screening involving the use of Boolean internet searches according to a set of pre-determined keywords, such as “climate” AND “adaptation” AND “(relevant national, regional, or international actor). Publications were subsequently sorted on the basis of a set of pre-determined

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selection criteria, which helped ensure that the focus remained on climate adaptation and mitigation and security-related fields.

For the purposes of the analysis, we made use of a hybrid form of directed content analysis. Directed content analysis can be utilised to validate or extend conceptually a pre-existing theoretical framework or theory and is therefore useful in the ex-ante creation of analytical categories through which bodies of text can be assessed (Hsieh and Shannon, 2005). These coding categories formed the basis of an empirical scoring system which assessed policies across different relevant dimensions of coherence to produce a score out of twelve, following which a document was classed as possessing no, low, medium, or high coherence through a meta-scoring system. For an overview of the coding categories and the meta-scoring system, please see table 1 and 2 below. A total of 44 policies across all 6 countries were eventually analysed.

The analysis aimed to score the coherence of policies for the countries of interest by defining total coherence levels, levels for acknowledgment and implementation category types of coherence and levels for individual analytical categories. Overall levels for analytical categories were found by averaging out their presence and absence scores across all publications, providing coherence levels between 0 and 1. Similarly, overall total coherence levels were found by summing up the twelve analytical category scores and averaging out the results over the number of policies reviewed, providing coherence levels between 0 and 12. Acknowledgment and implementation category scores were found by averaging out the analytical category scores that composed them (seven analytical categories for acknowledgment and five for implementation), providing scores between 0 and 1 for each policy document. These scores were thereafter aggregated by country of interest and year of publication by averaging again the scores by the number of publications per country and per year.

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No.	Category Type	Analytical Category	Explanation
1.	Acknowledgement	Horizontal Acknowledgement 1 and 2	These categories are designed to reflect whether or not a document acknowledges other fields at the same level of governance. Acknowledgement category 1 is scored 1 if, for instance, a document identifies another policy field relevant to the climate security nexus (does a climate policy identify a peace and security-related policy field and vice versa). Acknowledgement category 2 is scored 1 if the document then also mentions a specific policy instrument or mechanism in said field.
2.	Acknowledgement	Vertical Acknowledgement 1 and 2	These categories are designed to reflect whether a document acknowledges a policy operating at a higher level of governance (regional or international). For vertical acknowledgement 1, a score of 1 is awarded if the policy makes reference to a higher-level climate document. For vertical acknowledgement 2, a score of 1 is awarded if the policy makes reference to a higher-level peace and security-related document.
2.	Acknowledgement	Definitional Coherence	Conceptions of what encompasses security as well as what encompasses climate security differ within and across organisations and across mandates. What climate security means cannot therefore be taken for granted. Furthermore, whilst the presence of a clear overarching definition of climate security reflects a clear clearer conceptual picture of how the climate security nexus operates, the absence of an overarching definition may hint at a lack of this. Documents were therefore awarded a score of 1 if they presented a clear definition of climate security, and a score of 0 if they failed to provide said specific definition.
3.	Acknowledgement	Self-reference	This category is designed to capture whether a document mentions or proposes specific instruments, structures, or work processes that relate to improving coherence between ministries or other implementing partners. A score of 1 is awarded if any of the above appears in the

			documents, whilst a score of 0 is awarded if no mention of cross-sectoral or cross-ministerial coordination coherence is made at all.
4.	Acknowledgement	Depth of Engagement	Policy documents related to the realms of peace, conflict and security may mention climate issues only indirectly and at a surface level, thereby only implicitly drawing connections between the two policy domains. Climate adaptation and mitigation policy documents may similarly mention conflict, peace and security issues implicitly. Conversely, the overlaps between the two domains may be addressed explicitly, with causal relationships between climate and conflict being deliberately identified. A score of 1 was therefore awarded to documents that actively identified impact pathways leading from climate to conflict and insecurity. A score of 0 was awarded to documents that failed to identify some of the specific channels and mechanisms whereby climate could act to increase the risk of conflict.
5.	Implementation	Objectives	Whether or not a policy document sets out a specific set of synergistic objectives that seek to build connecting bridges across different policy fields is a key first step in moving from acknowledging climate security as an issue to actively seeking to deal with it. As such, documents were awarded a score of 1 when the presence of integrated objectives was detected, and a score of 0 when no objectives that bridged climate and peace and security-related fields were detected.
6.	Implementation	Temporal Coherence	Differing time frames and understanding of at what rates processes play out in the climate versus the humanitarian-development-peace nexus forms a key hindrance to coherence and integration, impacting for instance how objectives are created and prioritised, and what instruments are deemed appropriate for delivering them. A score of 1 was awarded to policies that in some way considered the interplay of fast- and slow-onset temporal processes, whilst a score of 0 was awarded for those that did not reflect on this.
7.	Implementation	Instruments	This category reflects whether a document identifies a specific policy instrument that can be seen to help promote or facilitate a specific set of integrated climate security-sensitive policies. A score of 1 was awarded if a document included a synergistic policy instrument that made reference in some way to both climate and peace and security-related fields (such as a regulatory framework, market incentives, education, capacity building or awareness raising, or monitoring mechanisms). A score of 0 was awarded to documents in which this was absent.
9.	Implementation	Breadth of Engagement	This category captures whether a policy document successfully identifies specific communities, sets of beneficiaries, or geographic areas a policy mechanism should be targeted and from which said constituencies should receive tangible co-benefits. This forms a key step in the implementation of a policy. Documents received a score of 1 if specific societal groups or communities were identified as being at risk of climate security risks and identified as relevant policy beneficiaries. A score of 0 was awarded if the document omitted identifying specific constituencies.
10.	Implementation	Recommendations	The final level of implementation within the scope of this analysis is whether a document is responsible for identifying or helping implement a specific set of climate security-sensitive policy mechanisms or recommendations. A score of 1 was awarded to policies in which this was detected (for example, specific policies relating to reducing the reliance of a population on charcoal production, which is both a source of emissions <i>and</i> helps underpin and sustain a war economy). A score of 0 was awarded to documents in which no specific synergistic policy mechanisms or recommendations were observed.

Table 1. Overview of analytical categories used to assess and score coherence

Score Range	Degree of Coherence	Description
0	No Coherence	A policy document scoring 0 points can be said to possess no degree of coherence at all and likely does not acknowledge the other relevant policy field at all.
1-4	Low-level Coherence	A score of 1-4 denotes a policy document that possesses low levels of coherence. Such a document may make a passing reference or acknowledge the links between policy field A and policy field B, but likely does not represent an attempt to develop and pursue a synergistic set of objectives in a coherent, cross-sectoral manner.
5-8	Medium-level Coherence	A score of 5-8 describes a policy document that possesses a medium level of coherence. Such a document may seek to actively try and pursue integrated, and synergistic objectives across sectors, but falls short in one or two key areas that prevent optimisation.
9-12	High-level Coherence	A score of 9-12 denotes a policy document with high levels of coherence. Such a document likely has both intended to and succeeded in the systematic promotion of mutually reinforcing policy actions across policy sectors and has created synergies towards creating agreed overarching objectives.

Table 2. Meta-scoring system

Results (1200-1500 words)

A number of interesting trends and accompanying narratives emerged from our findings. For the purposes of the analysis, analytical categories were split across acknowledgement and implementation-related categories (see table 1). This is based on the notion that documents may engage with climate security at a surface level, but lack specific ways in which said priorities can be practically implemented. Acknowledgement and implementation scores per policy document result from averaging out the analytical category scores that composed them, yielding coherence levels between 0 and 1, with 1 being the highest coherence.

Firstly, as shown in Figure 1, the selected policy and strategy documents from across all six countries scored on average much higher in the categories related to acknowledgement (see green) than in the categories related to implementation (see other colours). The majority of documents at least acknowledge and identify to some extent the channels through which climate may exacerbate or fuel conflict (depth of engagement) - and approximately two-thirds of documents recognise the connection with and salience of the opposite policy field specifically (horizontal acknowledgement 1) - but less than half of documents mentioning specific cross-sectoral and synergistic objectives (objective) and made specific policy recommendations (recommendations), and less than a third of documents include the development of specific policy instruments (instruments) and identified specific policy beneficiaries and constituencies (breadth of engagement). This is despite the fact that most documents either mentioned the need for or make specific proposals, instruments, or governance mechanism to improve inter-ministerial or inter-departmental coherence (self-reference). This suggests that in general, the documents are much more likely to recognise and - in some cases - articulate how climate may become an issue for peace and security than they are to design or propose specific policy objectives, instruments, and mechanisms to tackle these interconnections.

Figure 2 identifies a similar pattern, showing how across all countries the categories that appear to have been scored the highest consistently are horizontal acknowledgement 1, vertical acknowledgement 1 - which describes whether a document makes reference to a higher-level climate policy or governance mechanism, such as the UNFCCC mechanisms - depth of engagement, and self-reference. Whilst the general underperformance in the implementation categories is also reflected in this figure, some countries can be identified to perform particularly poorly. Senegal and Zimbabwe do not feature at all amongst the implementation categories, meaning that none of their analysed documents featured specific integrated objectives, instruments, recommendations, or identified potential beneficiaries. To compliment this, figure 3 shows the evolution of average acknowledgement

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and implementation category scores across all countries over time, ranging from 2010 to the present day. From this it can be seen that regardless of the year of publication, documents – with the exception of 2014 – scored lower in implementation-related categories than they did for acknowledgement-related categories. This therefore appears to suggest a long-standing trend in policymakers being aware at least at a surface level of how climate may impact peace and security, but lack the ability to respond to these complex interconnections.

These results suggest that some of the key obstacles to achieving a greater degree of coherence and integration between climate and security-related policy fields have less to do with the awareness of policymakers of the fact that climate *can* act as a threat multiplier – as they in fact do frequently tend to recognise and articulate the processes and channels by which this is likely to occur within their own country contexts – but rather lies in the actual design and implementation of integrated climate security practices and approaches to objectives, instruments, and policy mechanisms themselves. These findings are likely reflective of several things.

Firstly, is likely to be reflective of how there is an absence of clear examples of how to design successfully integrated climate security policy mechanisms and when and where specific policy options are appropriate (von Lossow et al., 2021). There are institutional and practical challenges in communicating to the relevant communities of practices what works where, and likely also a lack of actionable data that would help underpin the design of truly integrated climate security practices. Whilst the ‘why’ of climate security were frequently answered, questions relating to ‘what’, ‘how’, and ‘where’ were answered much less frequently.

Secondly, it appears that despite coherence and cross-sectoral coordination being at the forefront of the vast majority of analysed documents, the relevant communities of actors – those related to climate and those active in peace and security-related policy fields - do not engage with each other sufficiently. Amongst the policy and strategy documents that did identify the specific ministries and governing bodies and clearly delineated coordinated responsibilities for each, actors relevant to conflict prevention, conflict transformation, and peacebuilding were frequently missing from this. Alongside the ‘what’, ‘how’, and ‘where’, therefore, the ‘who’ was often also missing.

Also notable in Figures 1 and 2 is the general absence of definitional coherence – based on whether a document provides a clear definition of climate security - and temporal coherence, which records whether a document in some way deals with the contrasting lengths of both climatic and conflict-related temporal processes. The fact that depth of engagement is present in the majority of documents whilst overall definitions remain lacking shows the extent to which national level policymakers are much more switched onto how climate impacts the likelihood or nature of conflict in their local contexts, but may lack a clear, overarching, ‘big picture’ climate and security framework that can be used to understand climate-conflict or climate-peace links at a global level. This is perhaps also reflective of the lack of consensus on climate and conflict links within the peer-review literature, which makes it difficult to establish an evidence-base that extends beyond quite specific national or regional contexts (von Uexkull and Buhaug, 2021). The lack of specific engagement with the interplay of different temporal scales is also reflective of how the complexity of the climate-conflict interface is perhaps still poorly understood amongst policymakers.

Figure 4 shows the average coherence across all selected countries broken down by whether the policy or strategy document fell within a climate or security-related policy field. Disaggregating the data this way reveals that climate documents are in terms of total average coherence scores observed to be more coherent than security-related documents in almost all country contexts (bar Zimbabwe and Senegal, for which no security-related documents were able to be extracted). This trend is particularly visible in Mali, where hardly any of the identified security-related documents scored highly in terms

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of overall coherence. To compliment this, figure 4 shows which specific categories of coherence climate and security-related policies performed well or poorly in, in an attempt to analyse whether climate or security-related sectors are perhaps more successful in particular regards. From this, it emerges that there is not a significant difference across the sectors, suggesting that the issues identified at a general level are equally present in both and that no sector is particularly better at either acknowledgement or implementation. Both sectors likely lack access to boundary spanning, cross-sectoral expertise and do not possess sufficient tools or methods to facilitate the design of integrated policy.

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The only major differentiation exists across the categories of vertical acknowledgement - an expected result, given how vertical acknowledgement 1 and 2 are meant to record whether a policy makes reference to a higher-level climate or security-related document respectively – and definitional coherence, in which security-related documents do score markedly higher in. Definitional coherence (see table 1) is defined as when documents presented a clear definition of climate security. Peace and security-related documents are therefore more likely to engage with a more robustly conceptualised understanding of what climate security entails, whereas those policymakers producing climate documents maybe do not have as expansive a familiarity with the concept or how it is framed in grey- and peer-review literature.

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Finally, some insights can be provided based on Figure 5, which shows the average total coherence scores that each country received across all of their documents. From this it emerges that climate and peace and security-related documents from Kenya scored on average the highest, followed by Nigeria, Uganda, Senegal, Mali, and Zimbabwe. However, given how the total attainable score was 12, it must be recognised that no country can be argued to have a high-degree of coherence on average across all documents. Kenya, Nigeria, and Uganda possess – based on the meta-scoring system (table 2) - a medium degree of coherence from the perspective of climate security, but they fall very much at the lower end of the medium coherence range. Senegal, Mali, and Zimbabwe all qualify as possessing low coherence. As such, whilst all countries should certainly make ensuring greater interconnection between climate and peace and security-related policy domains a priority, the countries falling on the lower end of the spectrum in particular should seek to take steps to promote better cross-sectoral interaction.

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Conclusions and recommendations

By way of conclusion, a number of basic recommendations can be made on the basis of the trends and narratives that emerged from the analysis.

- 1) The analysis reveals a degree of conceptual confusion within the policy and strategy documents selected for the analysis, visible particularly in how essentially no documents reflected on the interplay between long- and short-term climatic and social processes (or how to track or mitigate these), and very few documents provided a clear and concise, overall definition of climate security. At the moment it appears that whilst policy documents do more often than not identify some of the ways through which climate acts a risk multiplier in the local context they are concerned with, an overarching model or understanding of exactly how the climate security nexus may appear is lacking. The complex interplay between local and global contexts and fast- and slow-onset social and climatic processes remains poorly understood. **The research community should therefore perhaps do a better job at creating policy-relevant and actionable understandings of what climate security and climate-peace opportunities mean, to enable policymakers across different contexts and scales to have a common understanding.** This should assist in the dissemination of experiences and

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understandings but would also help better frame and tie together often divergent and confusing empirical evidence regarding the links between climate, conflict, and peace.

2) **It appears that there remains a practical disconnect between climate and peace and security-related policy fields.** Whilst there is a relatively high degree of surface level engagement with climate-conflict links and climate-peace opportunities, most policies fail to demonstrate design and implementation of specific, integrated climate security policy and programming mechanisms. This could be due to policymakers simply not knowing what kind of integrated policy and programming mechanisms are out there ('what'); a lack of knowledge, evidence, and tools required to help facilitate the design and implementation of available policy options into specific local contexts ('how' and 'where'); and a lack of cross-sectoral communication and cross-fertilisation ('how'). As such, **the two communities of practice (climate and peace and security) should be more transparent in the sharing and evaluating of best practices and what has worked where** (von Lossow et al., 2021). Relevant actors at the national, regional, and international levels should therefore facilitate the creation of and actively participate in institutional spaces where partnerships can be developed, institutional learning can take place, and knowledge tested and developed. Existing examples of such spaces include the SDG Climate Facility (UNDP, 2021) and the upcoming World Food Programme (WFP) regional learning facility - to be launched in East Africa.

3) Whilst Kenya can be seen to be possessing the largest average total coherence score out of the six selected countries, it still remains on the lower end of medium coherence. All other countries in the analysis can be found on the lower end of the spectrum, with Nigeria and Uganda barely falling within the medium coherence category and Senegal, Mali and Zimbabwe possessing low coherence from the perspective of climate security. **All countries subjected to the analysis should therefore place a greater emphasis on taking practical steps to ensure greater cross-sectoral fertilisation, participate in collective 'lessons learned' exercises, and the improved sharing of crucial climate security-relevant evidence and data.**

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And here "Whilst the 'what' and 'why' of climate security were frequently answered, questions relating to 'how' and 'where' were answered much less frequently. This may in part be due to a lack of context-appropriate programmatic tools and actionable data that would help underpin the design of truly integrated climate security practices that seek to imbue transformational resilience, thereby reducing both climate and conflict vulnerability simultaneously."

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■ Horizontal acknowledgment 1 ■ Horizontal acknowledgment 2 ■ Vertical acknowledgment 1
 ■ Vertical acknowledgment 2 ■ Definitional coherence ■ Depth of engagement ■ Self-reference
 ■ Objective ■ Temporal coherence ■ Instruments ■ Breadth of engagement ■ Recommendations

Average policy coherence

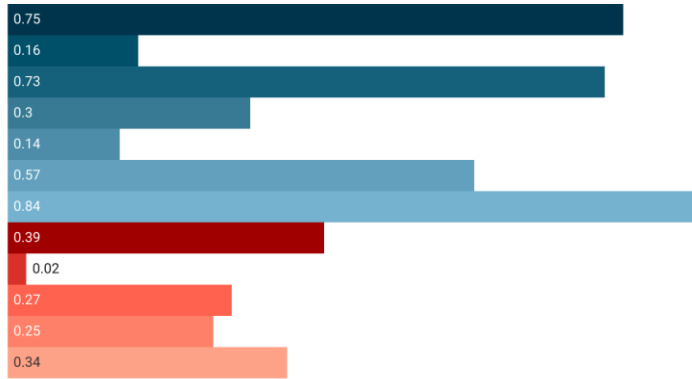
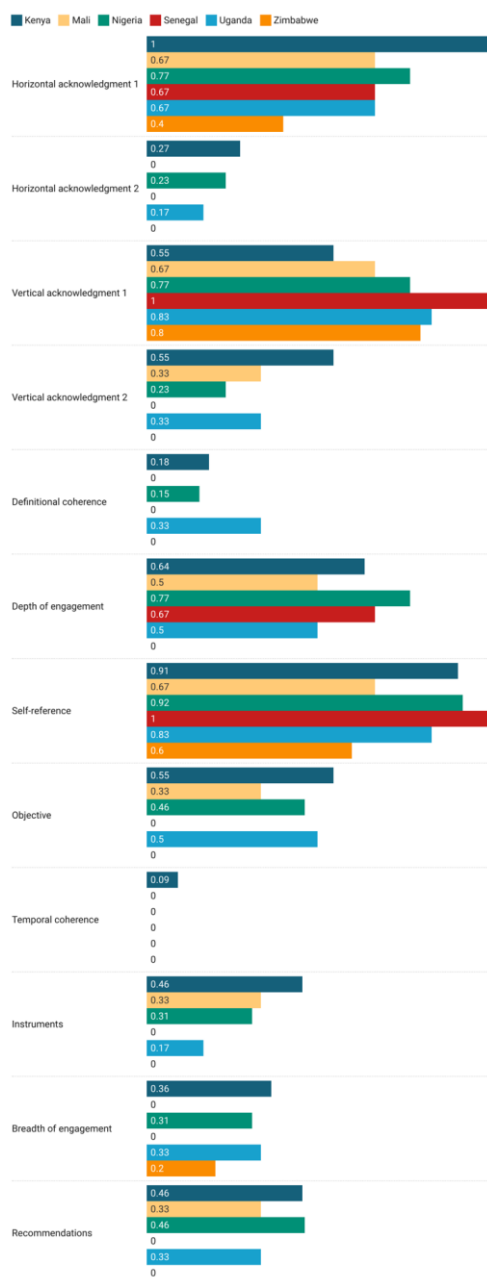


Figure 1: Average Total Policy Coherence Score Across all Countries and Documents. Scores result from averaging each analytical category across all documents reviewed and range between 0 and 1, with 1 being maximum coherence.



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Figure 2: Average Coherence Categories Scores Across all Countries. Scores result from averaging each analytical category across all documents reviewed and are disaggregated across all countries. Scores range between 0 and 1, with 1 being maximum coherence.

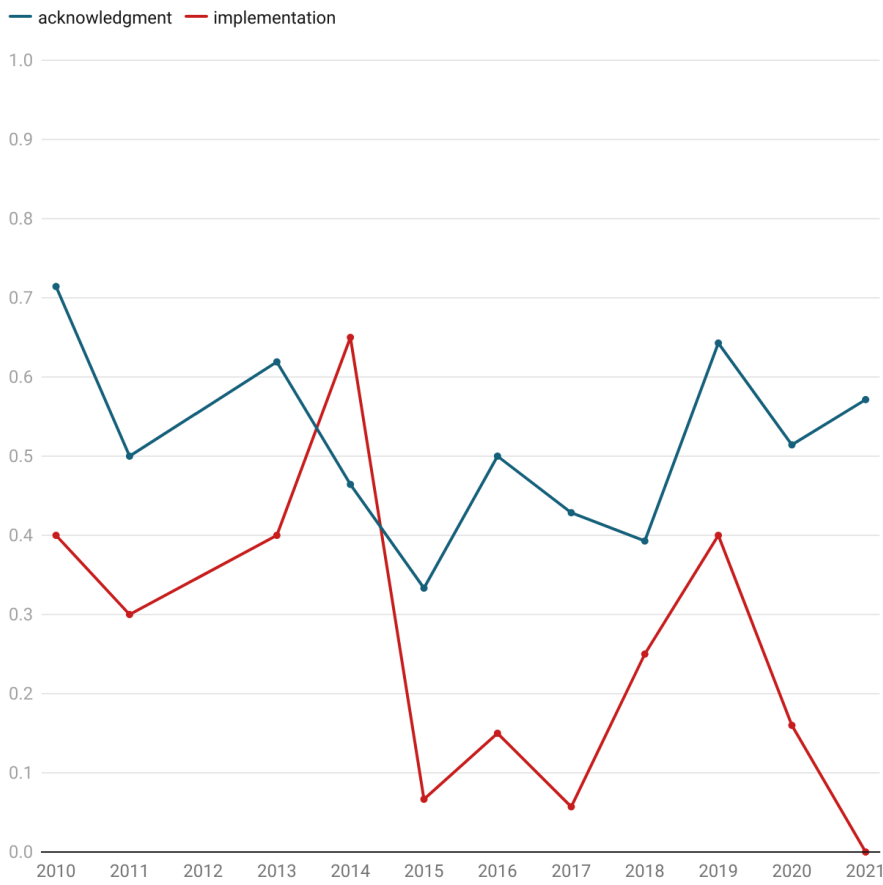


Figure 3: Evolution of acknowledgement and implementation category scoring over time. Acknowledgment and implementation scores result from averaging the analytical categories composing them (table 1). Scores were disaggregated by year and range between 0 and 1, with 1 being maximum coherence.

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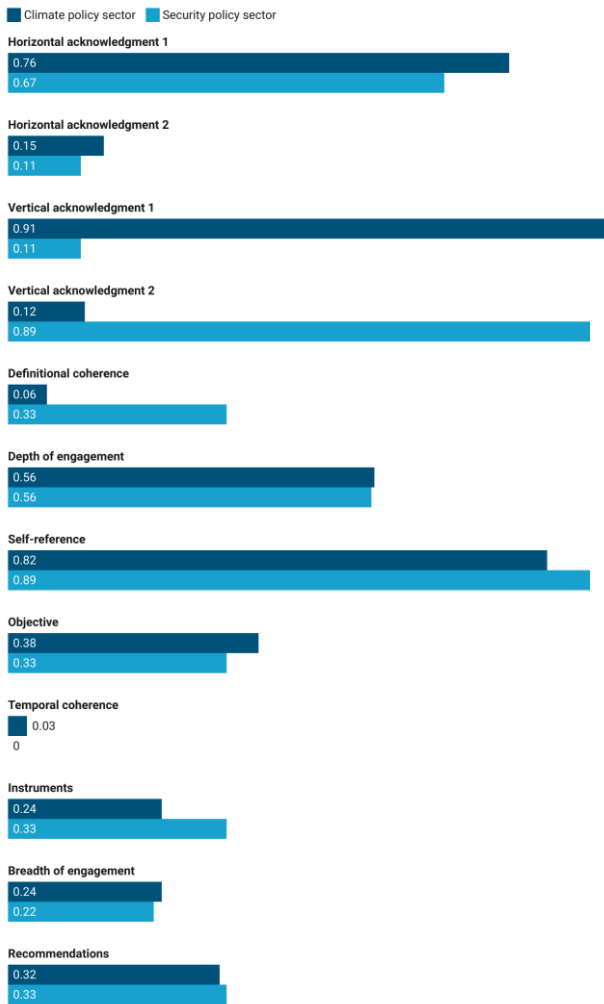


Figure 4: Average Coherence Score Across All Countries Per Analytical Category and Policy Sector. Scores result from averaging each analytical category across all documents reviewed and are disaggregated by policy sector and analytical category. Scores range between 0 and 1, with 1 being maximum coherence.

Kenya Mali Nigeria Senegal Uganda Zimbabwe

Total policy coherence

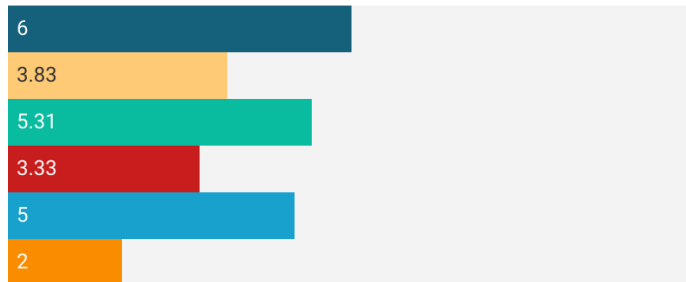


Figure 5: Average Total Policy Coherence Score Across all Countries. Scores result from averaging each total coherence score across all documents reviewed and are disaggregated by country. Scores range between 0 and 12, with 12 being maximum coherence.

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