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RESEARCH ARTICLE

Women, Climate Change and the Law: Lessons for Tanzania from an Analysis of African Nationally Determined Contributions

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Abstract

Women experience climate change in different ways to men and are often disproportionately affected, highlighting the need for gender-focused climate initiatives. Strengthening laws and policies to address women's and gender issues is one way forward. Yet, less research attention has been given to women and gender in climate change law than in other issues. This article seeks to advance the field by exploring the relevant law, policy and governance commitments made by all African nations under the Paris Agreement. The findings indicate that most African nations include some gender-related commitments, but only a few include detailed legal initiatives ready for implementation. These more detailed initiatives are synthesized to identify a toolbox of options, which are then applied to Tanzania as a case study. This article contributes to the literature by comprehensively analysing the African climate change commitments and by making tangible recommendations for Tanzania.

Keywords: African climate change law; climate change law and women; gender sensitive climate commitments; NDCs; gender and women; Tanzanian climate law and policy

Introduction

Climate change is arguably the most critical issue of our time. Its impacts can be both short and long term, and it can affect communities in diverse and differential ways. In some places these influences are already being experienced and in others the full effects are yet to be felt. Climate change has defied law and policy efforts to date, with greenhouse gas emission reduction commitments off-track to meet the target of limiting global warming to 1.5°C, and adaptation initiatives failing to keep pace with impacts on the environment, human communities and other species. Although climate change can impact all people, women frequently experience it in different ways to men. The vulnerability of, and adverse effects upon, women and the benefits of taking gender considerations

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^{1 &}quot;Summary for policymakers" in Global Warming of 1.5°C: An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty (2022, Cambridge University Press) 3.

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into account have been noted and explored by the Intergovernmental Panel on Climate Change (IPCC),² other UN bodies,³ non-governmental organizations⁴ and scholars.⁵

First, women are disproportionately affected because they make up the majority of the world's poor, have carer and home-based responsibilities limiting their mobility, and depend heavily upon vulnerable natural resources for food, energy and livelihoods. Secondly, women face sociocultural, politico-legal and economic barriers in responding to climate change.⁷ For example, women frequently have unequal access to resources and to the institutions and processes related to access to and use of resources, as well as those that seek to address climate change and its impacts. Thirdly, women often respond, through adaptation, in different ways; they can be innovators and entrepreneurs and in doing so have valuable insights about ways forward, if they are fully enabled to participate in decision-making.9 Climate change adaptation and mitigation initiatives must respond in gender sensitive ways, including by incorporating women's perspectives into climate governance. Yo Women also have an important leadership role to play in addressing climate change in gender responsive ways and, therefore, must be involved as agents of change and be empowered to become climate leaders through strategies that both support education and make opportunities available. 11 Finally, women have already led successful climate change solutions, including in areas such as manufacturing and agricultural production, 12 and there are lessons to be learnt about how to scale up these activities.¹³

This article explores women, gender and climate change in the African nations through a legal lens. Law can be used to create enabling environments for women's participation in climate governance, establishing rights and obligations that support gender equity in the climate change context,

- 7 Ibid.
- 8 Ibid.
- 9 "In Focus: Climate action", above at note 3.
- 10 "Women, gender equality", above at note 6.

^{2 &}quot;Summary for policymakers", ibid; and "Contribution of working groups I, II and III to the sixth assessment report of the Intergovernmental Panel on Climate Change" in H Lee and J Romero (eds) Climate Change 2023: Synthesis Report (2023, IPCC) 35, available at: https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf (last accessed 8 March 2024).

³ For example, "In focus: Climate action by, and for, women" (UN Women), available at: https://www.unwomen.org/en/news/in-focus/climate-change (last accessed 8 March 2024).

⁴ See, for example, "Gender and climate change" (International Union for Conservation of Nature (IUCN) issues brief, November 2015), available at: https://www.iucn.org/sites/default/files/2022-07/gender_and_climate_change_issues_brief_cop21_04122015.pdf (last accessed 15 March 2024). See also, "Gender and environment resource center" (IUCN), available at: https://genderandenvironment.org/ (last accessed 8 March 2024); and "Gender climate tracker" (Women's Environment and Development Organization), available at: https://www.genderclimatetracker.org/ (last accessed 8 March 2024).

⁵ F Denton "Climate change vulnerability, impacts, and adaptation: Why does gender matter?" (2002) Gender and Development 10.

^{6 &}quot;Women, gender equality and climate change" (UN WomenWatch), available at: https://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf (last accessed 8 March 2024).

¹¹ For an examination of the role of female parliamentarians, see A Mavisakalyan and Y Tarverdi "Gender and climate change: Do female parliamentarians make [sic] difference?" (2019) 56 European Journal of Political Economy 151. Other relevant initiatives focus on, for example, training women as solar engineers: "Rural women light up villages in Liberia" (9 January 2017, UN Women), available at: https://www.unwomen.org/en/digital-library/multimedia/2017/1/photo-rural-women-light-up-villages-in-liberia (last accessed 8 March 2024).

^{12 &}quot;Powering up women's income in Côte d'Ivoire through climate: Smart shea butter production" (11 December 2017, UN Women), available at: https://www.unwomen.org/en/news/stories/2017/12/feature-powering-up-womens-income-in-the-ivory-coast (last accessed 8 March 2024); "Climate-smart agriculture improves livelihoods of rural women in Mali" (28 February 2018, UN Women), available at: https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/feature-story-climate-smart-agriculture-improves-womens-livelihoods-in-mali">https://www.unwomen.org/en/news/stories/2018/2/f

^{13 &}quot;Gender and climate change", above at note 4; "Gender and environment resource center," above at note 4; "In Focus: Climate action", above at note 3; and "Women, gender equality", above at note 6.

and providing focused, gender-based climate initiatives in climate laws. However, identifying best practice options is problematic given the limited literature. This article examines African responses to international climate law, including the commitments made to gender-focused policies and programmes, and laws that support gender equity and women in the climate change context. While significant previous scholarship has focused on the link between women and climate change 14 and some relates to African nations, 15 none has comprehensively analysed the legal commitments made by all African states. 16 Similarly, although there have been studies that explore particular impacts of climate change on women 17 and the ways in which gender-sensitive climate strategies can be advanced, 18 there are few that focus on law and legal institutions. 19 This article contributes to the field by analysing how African nations have used law to advance issues at the intersection of women, gender and climate change, through their responses to obligations under the UN Framework Convention on Climate Change (UNFCCC)²⁰ and the Paris Agreement on Climate Change (Paris Agreement).²¹ After outlining the research methodology and detailing the background to gender and women in the international climate change regime, the article addresses this research question in three steps. First, it provides a comprehensive analysis, across all African nations, of nationally determined contribution documents (NDCs) submitted pursuant to the Paris Agreement in relation to women and gender. Secondly, it synthesizes these responses to distil a toolbox of options, as a first step towards identifying best practice. Thirdly, it applies these options to Tanzania. In doing so, it demonstrates how this research can be applied to a case study country and may then be applicable to similar nations seeking to strengthen their gender-related climate change commitments. The article, thus, contributes to global scholarship on gender-related climate change law and policy initiatives, African scholarship on women, climate change and the law, and to the very limited published academic literature on climate change, gender and Tanzania.²²

¹⁴ See for example, S Arora-Jonsson "Virtue and vulnerability: Discourses on women, gender and climate change" (2011) 21 Global Environmental Change 744; and C Perez et al "How resilient are farming households and communities to a changing climate in Africa? A gender-based perspective" (2015) 34 Global Environmental Change 95.

¹⁵ For an analysis of the literature related to Africa, see: S Vercillo, C Huggins and L Cochrane "How is gender investigated in African climate change research? A systematic review of the literature" (2022) 51 *Ambio* 1045. The UN Development Programme (UNDP) has undertaken data analysis of how countries have integrated gender in NDCs and a sub-search of results can be displayed for Africa: "Advancing gender equality in NDCs: Progress and higher ambitions" (UNDP Data Futures Exchange), available at: https://data.undp.org/content/gender-and-ndc/ (last accessed 8 March 2024).

¹⁶ In particular, the UNDP analysis focuses on three areas (inclusive planning, integrated policy frameworks and effective governance), but does not refer explicitly to law: "Advancing gender equality", ibid.

¹⁷ Several refer, for example, to the link between gender-based violence and climate change: BH Desaia and M Mandal "Role of climate change in exacerbating sexual and gender-based violence against women: A new challenge for international law" (2021) 51 Environmental Policy and Law 137; and AC Vithanage "Addressing correlations between gender-based violence and climate change: An expanded role for international climate change law and education for sustainable development" (2021) 38/2 Pace Environmental Law Review 327.

¹⁸ For example, "Tackling violence against women and girls in the context of climate change" (UN Women and IUCN), available at: https://www.unwomen.org/sites/default/files/2022-03/Tackling-violence-against-women-and-girls-in-the-context-of-climate-change-en.pdf (last accessed 8 March 2024), but this does not address legal issues.

¹⁹ One of the only such reports is Gender-Inclusive Legislative Framework and Laws to Strengthen Women's Resilience to Climate Change and Disasters (2021, Asian Development Bank), available at: https://reliefweb.int/report/world/gender-inclusive-legislative-framework-and-laws-strengthen-women-s-resilience-climate (last accessed 8 March 2024). However, this report focused on resilience to disasters generally and included case study laws from selected jurisdictions, but was not a comprehensive comparative analysis across a whole continent.

²⁰ Adopted 9 May 1992, entered into force 21 March 1994, 1771 UNTS 107.

²¹ Adopted 12 December 2015, entered into force 4 November 2016, 3156 UNTS 1.

²² There appears to be only one published journal article focusing on gender, climate change and Tanzania: K Van Aelst and N Holvoet "Intersections of gender and marital status in accessing climate change adaptation: Evidence from rural Tanzania" (2016) 79 World Development 40. However, this research focused on barriers to women's access to climate change adaptation initiatives rather than legal options.

Approach and Methodology Research design and approach

The key issue at the centre of this research is how law can be used by African nations to advance women's and gender issues in the context of climate change. The rationale for focusing on Africa is that women make up a significant portion of the labour force and agricultural sectors on this continent, but the role of law in supporting gender initiatives has received less research attention than in other parts of the world. Tanzania was selected for the case study because one of the co-authors is based in Tanzania and has particular experience and expertise in the Tanzanian law and policy context. It is further justified given that it was one of the last countries to ratify the Paris Agreement and is behind other African nations in developing climate policies and laws and, as noted above, only one study has been published on women and climate change in Tanzania. Furthermore, strong statements have been made by the first female president, Samia Suluhu Hassan, in favour of robust action to strengthen climate resilience. These words must now be turned into actions, and guidance is needed on ways in which to do so. Finally, during the course of this research, findings indicated that Tanzania had made only limited references to women and gender in its NDC and therefore some tentative suggestions are timely.

In designing the research, it was necessary to narrow the focus of the study. Climate law, policy and governance can be examined at multiple scales, from global to local. The research was designed to focus on the global-national interface. An initial analysis of the national communications made to the UNFCCC Secretariat revealed that African states were paying increasing attention to women and gender issues.²⁷ These communications, however, did not include enough specificity and / or reference to law, policy and governance to enable a comparative analysis. Therefore, the research design focused on the NDCs submitted pursuant to the Paris Agreement as they are legally mandated documents, rather than informal statements of intent. Furthermore, all African nations have lodged at least one NDC, providing a common platform for comparative analysis. 28 Relevantly, the NDCs capture national commitments to be actioned at the domestic level. National governments can champion policies, adopt laws and support institutions that respond to local issues and concerns, but they frequently address climate change and gender separately.²⁹ More holistic approaches are needed that centre upon the intersection of climate change, women and gender equity; this research seeks to identify the commitments that have been made in this regard and thereafter to synthesize the findings and identify a toolbox of legal options. In summary, a legal lens has been applied in two key ways: by focusing on legal commitments made under international climate change law; and by drawing out the women and gender-related commitments in communications under the UNFCCC and in the NDCs under the Paris Agreement that have a legal component.

To provide a framework for analysis, the research design was directed to key roles that law and legal institutions can play at the intersection of women, gender and climate change. These include

^{23 &}quot;Women, gender equality", above at note 6.

²⁴ T Leiter "Tanzania's new president: A chance to revitalize climate policy" (29 March 2021, Grantham Research Institute on Climate Change and the Environment), available at: https://www.lse.ac.uk/granthaminstitute/news/tanzanias-new-president-a-chance-to-revitalise-climate-policy/ (last accessed 8 March 2024).

²⁵ Van Aelst and Holvoet "Intersections of gender", above at note 22.

^{26 &}quot;Tanzania's President Hon Samia Suluhu calls for climate change actions at the UN summit" (26 September 2021) Tanzania Natural Resources Forum, available at: https://improving243.rssing.com/chan-5343208/article347.html (last accessed 15 March 2024); "Tanzania: Samia pushes for climate resilience" (22 September 2021) allAfrica, available at: https://allafrica.com/stories/202109220264.html (last accessed 8 March 2024).

^{27 &}quot;National communication submissions from non-annex I parties" (UN Climate Change), available at: https://unfccc.int/non-annex-I-NCs (last accessed 8 March 2024).

²⁸ NDCs are national plans highlighting the climate change mitigation and adaptation measures that a nation commits to making. Although not legally-binding, the submission of NDCs is required under the Paris Agreement, art 3.

²⁹ In Tanzania, for example, the National Strategy for Gender Development recognizes gender inequality and the difficulties that it creates. Yet the Tanzanian NDC makes little reference to women and gender. See below for further discussion.

both mainstreaming women and gender issues (including impacts of climate change upon them), and embedding perspectives on women and gender directly in climate change legislation or at least in climate policies where law can be used as a tool to achieve policy goals. In addition, law can: empower women to take a leadership role by creating rights to participation, and rules and processes for governance institutions that provide equal opportunities; mandate the collection and analysis of data, monitoring areas of concern and transparently reporting findings to demonstrate impacts upon, and of, women; and support policies or strategies that establish targets and indicators for women's participation. Finally, laws and policies can draw on women's knowledge and provide an environment for educational initiatives to upskill women. The African NDC commitments were analysed with reference to these roles, and the findings are set out and synthesized below.

Methodology

The research involved a mixed methodology: doctrinal, comparative and case study analyses. No empirical work was undertaken, due to restrictions on travel during COVID and because the study would not have been feasible given the limited literature already published. Clearly, fieldwork is needed to identify best practice law and policy options for African states grappling with how to advance women and gender issues in a climate change context. The effectiveness of current commitments, and their implementation, could only be assessed in each country with fieldwork. Nevertheless, the value of the present research is that it fills gaps in the current literature and provides a foundational resource for this further study.

Both quantitative and qualitative doctrinal analyses were undertaken. As there was no relevant literature analysing all the African nations' NDCs, it was necessary to collate them. The most recently submitted NDCs (either the first, updated first, or second NDC) of each African nation were accessed from the UNFCCC NDC register.³⁰ The first stage of analysis involved textual searches within these documents for the words "women" and "gender" and, where the NDC was only submitted in another language (predominantly French), translations of the terms were used, including "femmes" and "genre / sexe". This quantitative analysis identified those states that referred to women and gender the most in their NDCs, and the number of references was taken as a proxy for greater political will to address women's and gender issues. Six states had considerably more references to women and gender than other nations and so these were chosen for the more detailed analysis. This second stage of the research involved a qualitative analysis of the commitments made by these six states, as well as Tanzania. All of the references to women and gender were read and analysed in full and divided into two groups: general commitments and those with specific reference to laws, policies, governance institutions and legal processes. The data were interpreted and synthesized, and from this analysis a toolbox of options was distilled. The third stage of the research applied this toolbox to Tanzania, identifying where gaps existed and where lessons could be learnt from the qualitative analysis and synthesis. Although preliminary and tentative, some recommendations were made that could be explored in future research empirically and in-country, or alternatively by other jurisdictions facing similar challenges.

The structure of the article reflects the research design stages set out above. It provides an overview of developments within the international climate change regime that centre on women and gender, to provide a foundation and rationale for the focus on NDC commitments made pursuant to the UNFCCC and Paris Agreement. It then maps and analyses references to women and gender in all African NDCs. No such analysis has previously been published and it serves to highlight those nations with strong commitments and the ways in which they have chosen to incorporate women's and gender issues. The following section offers a comparative analysis of the six countries with the most references to women and gender in their NDC commitments, as well as Tanzania, to identify

^{30 &}quot;NDC registry" (UN Climate Change), available at: https://unfccc.int/NDCREG (last accessed 8 March 2024).

the range of initiatives, areas of commonality and diversity of approaches. The focus is on law, policy and governance initiatives and what, if any, lessons may be learnt for Tanzania. The article then examines Tanzania in more depth, as a case study, with positive actions highlighted, as well as recommendations for the future based on learnings from the other jurisdictions.

Gender and women in the international climate change regime

International legal efforts to address climate change began with the adoption of the UNFCCC in 1992.31 This convention established a global benchmark and articulated several international commitments including the goal of stabilizing "greenhouse gas concentrations ... at a level that would prevent dangerous anthropogenic interference with the climate system". 32 Subsequently, the Kyoto Protocol added further detail to the ways in which that global goal could be achieved, including by establishing three flexible mechanisms and specific country emission targets for industrialized nations.³³ The initial Kyoto Protocol commitment period was from 2008 until 2012 and a second commitment period from 2014 to 2020 was set out in the Doha Amendment.³⁴ These arrangements resulted in emission reduction targets that only applied to industrialized nations; negotiations continued for an agreement that would bind all states. Subsequently, the Paris Agreement was adopted in 2015 establishing, for the first time, a mechanism that allowed individual nations to set their own mitigation and adaptation commitments (articulated in NDCs) provided that these contribute to the overarching global goals. Although the Paris Agreement is a legally binding agreement, the only enforceable part of it is the obligation to submit an NDC.³⁵ All signatories to the Paris Agreement have now done so, with several states subsequently filing revised or second NDCs.³⁶ It is these NDCs that are analysed below.

Before turning to the results of the research, it is important to examine the specific obligations, initiatives and programmes focused on women and gender that have been catalysed by the international climate change regime. Neither women nor gender are referred to explicitly in the UNFCCC or Kyoto Protocol. It is clear that women are under-represented in terms of participation in international conferences, global climate financing mechanism boards and as national focal points.³⁷ At COP 7 in 2001, a resolution was adopted encouraging states to consider the participation of women as representatives of the state parties.³⁸ Later, in 2009, the Committee on the Elimination of Discrimination against Women (CEDAW) Committee on Gender and Climate Change adopted a statement expressing concern about the absence of any gender perspective in climate change initiatives and calling for gender equality to be included as a guiding principle in future climate agreements.³⁹ Subsequently, the Lima Work Programme on Gender was adopted at COP 20

³¹ See for example, JN Nwabueze and E Techera "International environmental law and climate change" in E Techera et al (eds) Routledge Handbook of International Environmental Law (2nd ed, 2021, Routledge) 216; P Sands et al "Climate change" in P Sands and J Peel with A Fabra and R Mackenzie Principles of International Environmental Law (2018, Cambridge University Press) 295.

³² UNFCCC, art 2.

³³ Protocol to the UNFCCC (adopted 11 December 1997, entered into force 16 February 2005), 37 ILM 22 (Kyoto Protocol).

^{34 &}quot;What is the Kyoto Protocol?" (UN Climate Change), available at: https://unfccc.int/kyoto_protocol (last accessed 8 March 2024). Only 147 state parties signed the Doha Amendment in 2012, compared with 197 that ratified the Kyoto Protocol.

³⁵ See Paris Agreement, art 4(2).

^{36 &}quot;What is the Kyoto Protocol?", above at note 34.

^{37 &}quot;Gender and climate change", above at note 4.

^{38 &}quot;Improving the participation of women in the representation of parties in bodies established under the United Nations Framework Convention on Climate Change or the Kyoto Protocol", FCCC/CP/2001/13/Add.4, decision 36/CP.7.

^{39 &}quot;Statement of the CEDAW Committee on Gender and Climate Change" (CEDAW, 44th session, New York, 20 July - 7 August 2009), available at: https://www2.ohchr.org/english/bodies/cedaw/docs/Gender_and_climate_change.pdf (last accessed 8 March 2024).

in 2014⁴⁰ "to advance gender balance and integrate gender considerations" into parties' and the Secretariat's work to achieve "gender responsible climate policy and action". ⁴¹ At COP 22 the member states agreed to extend the Lima Work Programme and requested a gender action plan, which UN Women helped to produce. ⁴² At COP 25, parties agreed to a five-year enhanced Lima Work Programme and a gender action plan. ⁴³ The action plan focuses on capacity-building, coherence, implementation and monitoring, but makes no direct reference to law and legal institutions. Also at COP 25, a Gender Day was held on 10 December 2019, recognizing issues such as equality and empowerment of women and girls in climate policy and action, along with a multitude of projects, products and services. ⁴⁴ In 2020, the IPCC adopted the Gender Policy and Implementation Plan. ⁴⁵ That plan focuses on mainstreaming gender in the work of the IPCC though equality processes, promoting a gender inclusive environment and raising awareness of gender issues. ⁴⁶ The language used refers to promoting, encouraging and supporting, rather than more formal legal means such as mandating or changing rules and processes. Given the recent adoption of the plan, it remains to be seen how effective it will be.

While advances have been made in relation to gender issues within the general climate change regime, it was not until the adoption of the Paris Agreement that specific reference was made in an international instrument. The preamble to the Paris Agreement notes that "[a]acknowledging that climate change is a common concern of humankind, Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on ... gender equality, [and] empowerment of women". Gender receives a further mention in article 7(5): "[p]arties acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach" and article 11(2): "[c]apacity-building should be ... an effective, iterative process that is participatory, cross-cutting and gender-responsive".

Given the slowly building emphasis on women and gender issues associated with climate change, as well as the references in the Paris Agreement, it could be expected that the NDCs would include specific commitments in this regard. The next section of this article sets out the research findings, which demonstrate that there is considerable variation between nations, with some states including no references to women or gender at all, and others doing so only in passing. Yet some nations have placed considerable emphasis on women and gender issues in line with the recognized impacts and potential benefits set out above. The analysis below highlights these findings and what may be learnt from them.

Analysis of the African NDCs

Stage 1: Mapping and quantitative analysis

To explore the issue of national commitments to climate change, and to highlight to what extent women and gender are referenced, the study analysed in detail the NDCs submitted by all

^{40 &}quot;Report of the Conference of the Parties on its twentieth session, held in Lima from 1 to 14 December 2014" (UNFCCC), decisions adopted by the Conference of the Parties, decision 18/CP.20, Lima Work Programme on Gender.

^{41 &}quot;The enhanced Lima Work Programme on Gender" (UN Climate Change), available at: https://unfccc.int/topics/gender/workstreams/the-enhanced-lima-work-programme-on-gender#eq-1 (last accessed 8 March 2024). See also "The gender action plan" (UN Climate Change), available at: https://unfccc.int/topics/gender/workstreams/the-gender-action-plan (last accessed 8 March 2024).

^{42 &}quot;In Focus: Climate action", above at note 3.

^{43 &}quot;The gender action plan", above at note 41.

^{44 &}quot;Gender & women at COP 25" (UN Climate Change), available at: https://unfccc.int/topics/gender-events-meetings/gender-women-at-cop-25 (last accessed 8 March 2024). A similar Gender Day was held at COP 26, on 9 November 2021: "Gender & women at COP 26" (UN Climate Change), available at https://unfccc.int/topics/gender/events-meetings/gender-day-other-events-at-cops/gender-women-at-cop-26#eq-1 (last accessed 8 March 2024).

^{45 &}quot;IPCC gender policy and implementation plan", available at: https://www.ipcc.ch/site/assets/uploads/2020/05/IPCC_Gender_Policy_and_Implementation_Plan.pdf (last accessed 8 March 2024).

^{46 &}quot;About gender" (IPCC), available at: https://www.ipcc.ch/about/gender/> (last accessed 8 March 2024).

African nations. Table 1 sets out the quantitative analysis, based on the search terms noted above. In total, 54 states were explored. Notably, Libya is the only African county not to have submitted an NDC, because it has signed the Paris Agreement but not ratified it.⁴⁷ The analysis shows great disparity between nations that have submitted documents. Six states had no references to women or gender at all; the remaining 47 had at least one reference. The NDCs for Tunisia and South Sudan had over 100 references, far exceeding other nations. Sierra Leone has the next most references (74), with the other states having fewer than 60 references. These findings broadly align with the analysis undertaken by the UNDP.⁴⁸

Stage 2: Qualitative analysis

Six jurisdictions were chosen for further analysis because of the high number of references to women and / or gender in their NDCs, as set out in table 1. These references were taken as a proxy for greater political will and government interest in addressing issues around women, gender and climate change. In addition, Tanzania was included as it is the case study country used in this article. The texts of these seven countries' NDCs were qualitatively analysed to determine the range and nature of commitments made that relate to women and / or gender and climate change. The extracts were divided into two groups (general commitments and those that specifically refer to laws, policies, governance institutions and processes), with extracts set out in table 2. The extracts highlight the diversity of interventions and provide the data for further analysis. Aligned with the UNDP analysis that highlights South Sudan and Guinea Bissau, these were two of the six states chosen for further analysis.

In summary, Sierra Leone's NDC includes two sections on gender and women, making gender a cross-cutting issue and recognizing women as custodians of indigenous knowledge on climate change. This nation also looked at alternative sources of employment, such as interventions include using technology in waste management to create opportunities for business and employment for women and youth in poorer communities, as well as empowering women to practise climate-safe agriculture. The Sierra Leone NDC also provides for economic empowerment as well as reducing the gender gap in education and leadership.

Liberia acknowledged that its first NDC did not take gender and women into account. In preparing for its second NDC, there was a strong focus on gender dialogue; Liberia sought to make sure women took ownership and was quite specific in its interventions focused on women. These included specific percentages for women's involvement, training women in implementing climate-resilient agricultural and livestock practices, and increasing women's access to agricultural inputs and labour-saving devices. It also emphasized the involvement of the Ministry of Gender to ensure that interventions were designed to have gender-sensitive considerations, and that both men and women are actively and equally engaged for an inclusive approach.

South Sudan recognizes the existence of barriers to women's involvement and its NDC prioritizes women's contribution to adaptation and mitigation by including a gender responsiveness section together with a table setting out interventions. The NDC recognizes women as holders of knowledge and their involvement in adaptation through disaster risk management. Examples of their specific interventions include improving women's literacy and education through training, as well as reducing gender inequality in agriculture and women's employment in fisheries, agriculture and tourism. South Sudan has also committed to ensuring 35 per cent representation of women in climate action and, so far, it has appointed a gender focal person to the Ministry of Environment and

⁴⁷ See "Paris Agreement" *UN Treaty Collection*, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en (last accessed 8 March 2024).

^{48 &}quot;Advancing gender equality", above at note 15.

⁴⁹ Ibid.

Table 1: References to women and gender in all African NDCs, collated from the NDCs on the NDC register

Country	Most recent NDC	Total number of times "women or "gender" is mentioned
Algeria	First NDC (2015)	0
Angola	First NDC (updated submission, 2021)	2
Benin	First NDC (updated submission, 2021)	26
Botswana	First NDC (2016)	0
Burkina Faso	First NDC (updated submission, 2021)	7
Burundi	English translation of first NDC (updated submission, 2021)	1
Cabo Verde	First NDC (updated submission, 2021)	56
Cameroon	First NDC (updated submission, 2021)	3
Central African Republic	First NDC (archived, 2016)	1
Chad	First NDC (updated submission, 2021)	5
Comoros	First NDC (updated submission, 2021)	34
Congo	First NDC (updated submission, 2021)	17
Côte d'Ivoire	First NDC (2022)	4
Democratic Republic of Congo	First NDC (updated submission, 2021)	23
Djibouti	First NDC (2016)	0
Egypt	First NDC (2017)	1
Equatorial Guinea	First NDC (2018)	5
Eritrea	First NDC (2018)	2
Eswatini	First NDC (updated submission, 2021)	7
Ethiopia	First NDC (updated submission, 2020)	16
Gabon	First NDC (2016)	0
Gambia	Second NDC (2021)	17
Ghana	First NDC (updated submission), 2021	15
Guinea	English translation of First NDC (2015)	2
Guinea-Bissau	First NDC (updated submission, 2021)	44
Kenya	First NDC (updated submission, 2021)	16
Lesotho	First NDC (2017)	10
Liberia	First NDC (updated submission, 2021)	33
Libya	None	-
Madagascar	First NDC (2016)	0
Malawi	First NDC (updated submission, 2021)	23
Mali	First NDC (updated submission, 2021)	0
Mauritania	First NDC (updated submission, 2021)	12
Mauritius	First NDC (updated submission, 2021)	19
Morocco	English translation of first NDC (archived, 2016)	3

(Continued)

Table 1: (Continued.)

Country	Most recent NDC	Total number of times "women" or "gender" is mentioned
Mozambique	Updated first NDC (2020–25)	3
Namibia	First NDC (updated submission, 2021)	27
Niger	English translation of first NDC (2016)	2
Nigeria	First NDC (updated submission, 2021)	33
Rwanda	First NDC (updated submission, 2020)	4
São Tomé and Príncipe	First NDC (updated submission, 2021)	12
Senegal	First NDC (2020)	4
Seychelles	First NDC (updated submission, 2021)	21
Sierra Leone	First NDC (updated submission, 2021)	74
Somalia	First NDC (updated submission, 2021)	20
South Africa	First NDC (updated submission, 2021)	6
South Sudan	Second NDC (2021)	113
Sudan	First NDC (interim updated submission 2022)	17
Tanzania	First NDC (updated submission, 2021)	4
Togo	First NDC (archived, 2017)	1
Tunisia	First NDC (archived, 2017)	130
Uganda	First NDC (interim updated submission, 2021)	1
Zambia	First NDC (updated submission, 2021)	1
Zimbabwe	First NDC (updated submission, 2021)	18

Forestry. It has also provided gender aggregated data for all key sectors involved and is using a gender and human rights approach in mitigation and adaptation training.

Guinea-Bissau's NDC includes a gender and climate change adaptation baseline and focuses on integrating gender equality and women's empowerment in mitigation and adaptation, which is in line with national and international requirements. This state has also acknowledged the low level of general awareness of gender and climate change and has identified this issue as a cross-cutting matter, which requires action in each of the relevant sectors and sub-sectors.

Cabo Verde has placed emphasis on collecting gender disaggregated data in relation to climate change and the use of data to ensure accountability. This nation has also committed to having targets and indicators on gender-climate mainstreaming in all industries and government offices, and to carrying out a gender analysis of men and women in the blue economy. Notably Cabo Verde has also prioritized the implementation of its Action Plan for Gender and Energy by 2030.

Tunisia's NDC has the greatest number of references to women and gender of all African NDCs, and also has the most specific interventions. Its NDC includes many commitments to cross-cutting issues including gender. Social resilience commitments include ten priority areas related to women and climate change, each of them having multiple measures for the government to action. This provides tangible and detailed interventions that are measurable and achievable.

Tanzania's NDC includes only one reference to women and three to gender. It has made a commitment to enhancing gender equity and addressing negative impacts on women but has not included any detail about how or what interventions will be undertaken. This is surprising given that Tanzania has adopted several other relevant instruments, as explored below. This demonstrates

Table 2: Selected commitments at the intersection of gender, women and climate change in NDCs

	Extracts from NDCs		
State	General references to women and gender	Explicit references to laws, policies, governance institutions and / processes	
Guinea-Bissau	 Projects "explicitly consider gender aspects in the proposed adaptation activities and have gender mainstreaming as a specific focus. These ongoing or approved projects have developed gender action plans and gender-sensitive budget activities" "Regarding gender, this should be considered a cross-cutting sector, and should contain actions in each of the relevant sectors and sub-sectors." 	 Gender indicators ensure "the integration of a gender perspective into climate change policies, programs and processes in Guinea-Bissau and [promote] partnerships and cooperation among key agents on gender and climate change" 	
South Sudan	 "Integrate a gender perspective into climate change mitigation and adaptation interventions. Principles of gender equality and women empowerment will be included in climate financing." "Working with women in community-based adaptation planning, using their skills and knowledge on natural resource management." 	 "The Ministry is mandated to develop policies and regulations with the aim of eradicating illiteracy, improving the status of women and providing equitable access to learning opportunities for all South Sudanese people." "Integrate a gender perspective into national level climate change policies and strategies. South Sudan will target 35% representation of women in decision-making related to climate change." 	
Sierra Leone	 "The Medium-Term Development Plan includes empowering women as a key focus including to support implementation of current legislation." "The NDC considers gender transformative and socially inclusive strategies that will empower women" "Actions to reduce CO2 emissions while using technology to spur waste-derived business for women in poor communities." "Create alternative livelihoods of women in the mining sector through effective corporate social responsibilities" "Mainstream Climate Change into Agricultural Development Strategies and ensure inclusion of women." "Expand women's employment opportunities and participation in the management of off-grid solar energy interventions." "Build women-led partnerships" "Bridge the gap in the proportion of women to men employment as solar technicians, engineers, and project managers by promoting the entry of more women into jobs" 	 "Gender Equality and Women's Empowerment Bill establishes a minimum of 30 per cent representation of women in governance at al levels." "The governance and coordination mechanism for the NDC will foster the empowerment of women and marginalised people by ensuring meaningful participation in NDC implementation activities." " institutions identified for implementation and the gender issues covered, lays a solid foundation for strategic partnerships and cross-level learning, and grounds measures in social justice." 	

Table 2: (Continued.)

State	Extracts from NDCs		
	General references to women and gender	Explicit references to laws, policies, governance institutions and / processes	
Liberia	 "Roll out a 'Women in Agriculture' program to support implementation of climate-resilient agricultural and livestock practices and increase women's access to agricultural inputs and labor-saving devices by 2025." "Develop national plan for ecosystem-based adaption in forests, coastal zones, and urban green corridors, ensuring integration of gender considerations into adaptation plans by 2030." 	 "Strengthen institutional and individual capacity for urban planning and management including addressing gender considerations as part of training for institutional and local experts." "Integrate gender-sensitive considerations into existing climate change policies by 2025." 	
Cabo Verde	 "Operationalise the Action Plan for Gender and Energy by 2030 and support local businesses and promote economic opportunities for women particularly in the field of [renewable energy] to represent at least 20% of the workforce in 2030." "By 2025, adopt a public agricultural financing and credit program to promote regenerative, circular agricultural systems, with special incentives for women and youth to enter the scheme." "Develop a gender analysis of women and men in the blue economy by 2022 and identify priority gender-specific actions." "By 2022 define climate policy-specific needs, targets and indicators on gender-climate mainstreaming for all industries and Government offices [C]apacity of the National Institute for Gender Equality and Equity (ICIEG) and the National Statistics Institute (INE) to collect, analyse and interpret gender-disaggregated statistics and qualitative studies for climate relevant sectors, or make better use of available data, will be reinforced" "Accountability: Every year, report in climate action and on the effects of gender-sensitive climate policy planning, budgeting, implementing." 	"Define roles and responsibilities of and within different institutions with regard to gender and climate actions; appoint a National Gender and Climate Change Focal Point, linked to Climate Governance"	

(Continued)

Table 2: (Continued.)

	Extracts from NDCs	
State	General references to women and gender	Explicit references to laws, policies, governance institutions and / processes
Tunisia	 "Integration of a purposeful and institutionalised gender transformational approach." "Social resilience priorities (SRPs) - SRP 1: Endorse the national policy on gender mainstreaming and climate change. SRP 2: Integrate an inclusive and systemic approach to gender in sectoral measures." "Support the inclusion of gender issues and women's participation among political leaders and public affairs managers." "Strengthen women's economic empowerment in the face of climate change impacts." "Position gender as a driving force in Tunisian Agricultural Policies." "Recognise and scale up the role of women in the preservation of the ecosystem strengthen the involvement of gender in coastal resilience." "Priorities related to communication, advocacy and strengthening of gender and climate action." 	
Tanzania	 "The priority sectors for both adaptation and mitigation were identified take into account gender equality" Gender mainstreaming - "Enhancing gender equity in climate change adaptation actions" and "[p]romoting measures to address negative impacts of climate change on young people, women, old and other groups facing inequality" 	

that Tanzania is taking action on women and climate change, but that specific commitments and interventions have not been included in the NDC.

Synthesis

The data reveals differences in the form of the commitments made, with many more commitments to programmes, projects and strategies, than to laws, policies, governance institutions and processes. This could be due to the nascency of the commitments, where firm implementation plans have not yet been developed and decisions are still to be made as to whether non-binding programmes or legally enforceable rules are needed or preferred. Alternatively, it could demonstrate a preference for softer approaches rather than mandatory regulations. Future empirical work could explore the reasoning behind the form chosen in each jurisdiction.

Turning to the specific subjects of the commitments, the data reveals great diversity, with no two nations adopting a similar combination of initiatives. Nevertheless, some common areas emerge. Analysing and synthesizing the more general commitments to women and gender issues in relation to climate change, six key common approaches emerge aligned with the roles that law can play set out in the research design above: mainstreaming women's and gender issues by adopting transformational interventions that position gender equity as critical; including specific gender-focused aspects in climate change adaptation and mitigation interventions; scaling up and strengthening the role of women in areas where successful outcomes have been achieved (although these successes may vary among the nations, the commitment to scaling up is common); adopting and implementing projects, programmes and action plans to support women in all relevant sectors (such as agriculture, energy and environment), while also addressing the cross-cutting nature of gender issues by coordinating across these sectors; actively facilitating women's institutional leadership (including within government and politics) and empowerment (such as economic empowerment through financing); and filling data gaps, setting targets, measuring, evaluating and reporting on progress. Although the UNDP analysis divides the commitments into three key areas and 18 sub-topics, in combination they fall within these six approaches.⁵⁰

In terms of specific law and policy initiatives, the data reveals that states focused on the first two of the common approaches noted above, outlining a specific role for law, policy and governance institutions: developing new laws, policies and institutions to improve the status of women and address gender equality more broadly; and integrating women and gender perspectives into climate change governance, including laws, policies and institutions. In essence, these are two sides of the same coin and both approaches are likely to be needed: ie addressing women and gender in national law and policy to create an enabling environment; and including specific women and gender-focused initiatives in response to the impacts of climate change. This is a new finding as the UNDP analysis did not explore the role of law in integrating women's and gender issues in climate change governance.

All the countries with significant numbers of references to women and gender in their NDCs include at least four of the six approaches noted above. Tanzania, on the other hand, includes only two. In order to make recommendations for how Tanzania might strengthen its NDC commitments, the next section explores this specific jurisdiction in further detail.

The Tanzanian context and lessons to be learnt Background

Tanzania is a party to the UNFCCC and Paris Agreement. Tanzania's focal point for climate change is the Division of Environment in the Vice President's Office (VPO), which is a prominent ministry

reporting directly to the vice president.⁵¹ The VPO coordinates climate policy and administers Tanzania's international climate engagement, including responsibility for the formulation and implementation of the NDCs. 52 Tanzania filed its first NDC in 2015, followed by an updated instrument in 2021.⁵³ As table 1 shows, the updated NDC refers to women or gender only four times; this implies less political will to focus on this issue, which does not appear to be accurate. As table 3 indicates, the National Adaptation Programme of Action (2007) made several references to women and gender, focusing predominantly on the impacts on these groups. The National Climate Change Strategy of 2012-18 built on this awareness by supporting research to acquire gender disaggregated data, and also set out some specific strategies to mainstream gender concerns and enhance equity. Tanzania made many strong commitments to women and gender in the National Strategy on Gender and Climate Change in 2013, prepared before the NDC, and the subsequently adopted National Climate Change Response Strategy 2021-26 (NCCRS) and National Environmental Policy 2021.⁵⁴ The VPO acknowledges the existing gender gap by pointing out that climate change affects men and women differently due to existing gender roles as shaped by norms, cultures and traditions, and noting the importance of mainstreaming gender issues in national policies and plans.⁵⁵ As set out in table 3, these policies, strategies and programmes have strengthened over time. There are multiple references to women and gender in these documents, as well as detailed strategies, actions and interventions; it is unclear why greater reference was not made to them in the NDCs.

Given the predominance of women's engagement in climate-sensitive sectors, including water, agriculture and energy, the gender impacts of climate change are already apparent and reported in many different parts of the country. The most reported incidences are similar to those identified in other jurisdictions, including the increased burden on women in terms of household chores, such as walking longer distances to fetch water due to the drying of shallow wells and seasonal rivers or springs, increased farming tasks due to frequent droughts and family healthcare due to increased diseases from climate-related extreme weather events. These areas have been reported to have increased health risks and affect the welfare of women due to walking to unsafe places to fetch water and increased family care duties owing to men's migration to urban areas in search of new jobs and income-generating opportunities after abandoning traditional activities such as farming, fishing and livestock keeping. In part, this is also contributing to growing incidences of gender-based violence.

It appears that Tanzania understands the implication of climate change and its impacts in the country including on women, although, compared to other sectors such as health, education, industry, tourism and finance, the environment and climate change sector is not prioritized. For example,

^{51 &}quot;National focal point" (UNFCCC), available at: https://unfccc.int/resource/ccsites/tanzania/focal/index.htm (last accessed 8 March 2024).

^{52 &}quot;Vice President's Office", available at https://www.vpo.go.tz/pages/environment-division> (last accessed 8 March 2024).

^{53 &}quot;NDC registry", above at note 30.

[&]quot;National strategy on gender and climate change" (2013, VPO), available at: https://portals.iucn.org/union/sites/union/files/doc/tanzania_ccgap_original.pdf (last accessed 8 March 2024); "National climate change response strategy 2021–2026" (2021, VPO), available at: https://climate-laws.org/document/national-climate-change-strategy-2021-2026_50bb (last accessed 15 March 2024); and "National environmental policy" (2021, VPO), available at: https://www.vpo.go.tz/uploads/publications/en-1644923087-NATIONAL%20%20ENVIRONMENTAL%20POLICY%202021%20new.pdf (last accessed 8 March 2024).

⁵⁵ NCCRS, ibid.

⁵⁶ K Freeman "The state of gender responsiveness in Tanzania's climate change policies" (5 December 2016, Research Program on Climate Change, Agriculture and Food Security), available at: https://ccafs.cgiar.org/news/state-gender-responsiveness-tanzanias-climate-change-policies (last accessed 8 March 2024).

^{57 &}quot;National strategy on gender and climate change", above at note 54 at 68-69.

⁵⁸ Ibid.

⁵⁹ Ibid.

Erika Techera and Anabahati Joseph Mlay

Table 3: References to women and gender, and selected commitments under key Tanzanian policy instruments

Document	Women, gender and climate change summary	Extracts of commitments made
National Adaptation Programme of Action 2007	 "Women" mentioned five times; "gender" mentioned once. Investigation and identification of impacts upon women in specific regions and areas. Initial adaptation programmes with some limited references to women and gender at this early date. 	 Vulnerability to Climate Change and Sectoral Analysis – Health: "The study further indicates that women and children are more vulnerable to malaria than men due [to] the roles they play in the society, and that poverty influence[s] adaptation to malaria / cholera in the area." Shifting of Shallow Water Wells Affected by Inundation on the Coastal Regions of Tanzania Mainland and Zanzibar: "Women have to walk very long distances to fetch water. This consumes a lot of their time which could be spent on other productive activities. The burden is more on women and school children particularly girls who seem to be the main water courier." Climate Change Adaptation through Participatory Reforestation in Kilimanjaro Mountain: Activities: "To strengthen community participation through women groups in conservation activities." Output: "Capacity built in women groups on climate change adaptation and biodiversity conservation with a special focus on conservation of damaged river valleys."
National Climate Change Strategy 2012–18	 "Women" mentioned five times; "gender" mentioned nine times. Highlighting the impacts on women in specific sectors. Increased number of strategies and activities to support women and gender. Build awareness through research and data. 	 "Socially, the impacts of climate change on water resources are felt by the whole society regardless of gender. However, where water sources are depleted or quality compromised, women and children are the most affected. On the other hands [sic], in some areas like Kilombero and Same, floods, landslides and associated waterborne diseases are on the increase and women and children are more impacted." Strategies on cross-cutting issues "Impacts of climate change are differently affecting gender and vulnerable groups therefore gender perspective in development and implementation of adaptation and mitigation strategies is crucial to narrow the gender gap" " building sufficient capacities of marginalised groups, including women, to address climate change related disaster risks." Goal: "To mainstream gender and vulnerable groups concerns in addressing climate change with the aim of enhancing equity" Strategic interventions: "Integrating gender into climate change initiatives; Ensuring that climate change researches [sic] generate gender disaggregated data on impacts and responses; Enhancing equitable representation of women and vulnerable groups at all levels in planning, decision making and mitigation initiatives and implementation of adaptation; Promoting safeguards that will ensure gender and vulnerable groups equity in benefit sharing related to climate change initiatives."

Document	Women, gender and climate change summary	Extracts of commitments made
National Climate Change Response Strategy 2021– 26	 "Women" mentioned 16 times; "gender" mentioned 61 times. Repositioning of women as key stakeholders and champions. Acknowledging the existing gap and the impact already felt by women due to climate change, such as walking long distances for water and increasing gender-based violence. Promoting gender-responsive climate change adaptation and mitigation interventions, which will accelerate the empowerment and repositioning of women, as well as other groups closely affiliated with women, in climate related decision-making processes. As such, women will have access to land and productive resources, including financial resources plus equal benefit sharing in resources management. 	 Addressing " gaps include [an] inventory of resources and data availability national capacity to undertake research to generate climate data and information to fill existing gaps and to conduct regular climate change impacts on socio-economic and environmental monitoring." Recognizing "[a]pproaches such as gender analysis, gender audit and gender budgeting using gender disaggregated data and reporting on all climate change responses should be enhanced." To ensure " gender considerations are mainstreamed into the Strategy strong commitments are put in place and stronger actions are taken to address and reduce vulnerability to the shocks and harmful effects of climate change to women" "Build the capacity of local stakeholders and of local financial structures to better manage finance and deliver adaptation results, while addressing asymmetries, in particular the gender dimension contributing towards NDC implementation." "Climate change adaptation will be mainstreamed into local government planning and budgeting systems in a participatory and gender-responsive manner." Addressing "these gaps through adoption of gender sensitive approaches and activities." "To enhance gender equity in climate change adaptation and mitigation actions by 2026."
National Environmental Policy 1977 (as revised in 2021)	 "Women" mentioned six times; "gender" mentioned 28 times. Acknowledges the role of women in environmentally related activities. Acknowledges the inadequate gender considerations in environmental management. 	 "Concerns include inadequate environmental research, data and information on environmental issues." " emphasis shall focus on literacy of women as a key element for the improvement of health, nutrition and education in the family, and for empowering women to participate in decision-making in society; as well as in anti-poverty programmes such as employment schemes and credit facilities for women, among other measures" " integrate gender aspects in environmental management by considering and raising awareness on the roles of gender in environmental management." "The Government shall (i) Strengthen gender mainstreaming in environmental management; and (ii) Promote public awareness on the role of gender in environmental conservation."

Table 3: (Continued.)

Document	Women, gender and climate change summary	Extracts of commitments made
Tanzania National Strategy on Gender and Climate Change 2013	 "Women" mentioned 330 times; "gender" mentioned 305 times. Acknowledges not just the impacts on women but also the leadership role they can play. Continue to build knowledge about the links between women, gender and climate change. Greater focus on implementation of gender responsible programmes and plans. 	 Recognizing that "[w]omen are powerful agents for change hence; their leadership in addressing climate change impacts is crucial" and that the "disproportionate burden of climate change on women can be countered by their empowerment and recognition." Objectives include to "[b]uild and strengthen institutional understanding on gender, CC and climate change" for health, forestry, and coasts and to "[s]trengthen capacity on technical and scientific links of climate change, health and gender" with indicators including "disaggregated gender data" To "[c]onduct studies on disaggregated gender data [and] baseline study on infrastructure needs of women." To operationalize the "National Guidelines on Mainstreaming Gender and Climate change." To "[p]romote women's participation in sustainable agriculture programs." "To promote and conduct research and studies on gender, forestry and climate change" and "enhance capacity of women to participate in negotiations and implementation related to carbon trade." "To promote gender-responsive Action Plans related to climate change in coastal areas, in the health sector." "To increase awareness on climate change effects on coastal zones, gender differentiated vulnerability and gender-sensitive adaptation options."

in planning sectorial development and the national budget, the VPO's Division of Environment receives one of the lowest budgets of all the ministries.⁶⁰ However, with the help of other sectors and ministries the adverse impacts of climate change are being directly and indirectly addressed in the respective sectors through various interventions, programmes and solutions.⁶¹

The VPO's Division of Environment also has responsibility for broader environmental strategies, plans and programmes. For the first time, the National Environmental Policy 2021 has taken into account the role of gender in climate change and environment.⁶² Section 3.11 of the policy addresses gender policy issues, objectives and statements. The government has clearly considered the role that gender plays in environmental management and climate change as a cross-cutting issue. For example, the policy stresses the need to strengthen gender mainstreaming efforts in environment and natural resources management by considering all social groups and raising awareness of the roles of gender in environmental management.⁶³ The objective is to promote gender considerations in environmental management. The policy statements commit the government to strengthening gender mainstreaming in the environment and promoting public awareness on the role of gender in environmental conservation.⁶⁴ Tanzania has various sectors that are also differently affected by climate change, with different levels of impact being felt by men and women. According to the World Bank's Tanzania Economic Update 2024,65 notable sectors of the Tanzanian economy are finance and insurance, tourism, mining, construction, agriculture and manufacturing. All these sectors are affected differently, hence the need for coordination and a sectoral approach towards gender and climate change. Again, it is unclear why the cross-cutting and coordination issues and responses have not been set out in the NDC.

Entry points for mainstreaming gender considerations in Tanzania's NDCs

The analysis above indicates that there appears to be political will to advance the role of women in climate governance in Tanzania, and to ensure that climate change law and policy account appropriately for gender issues. Yet it remains the case that Tanzania has not committed to these as part of its NDCs. Set out below are tentative recommendations, drawn from the six approaches identified in the synthesis of findings above.

Women and gender mainstreaming

It is clear that Tanzania has made significant advances in gender mainstreaming and this is one of the areas referenced in the current NDC. However, the NDC makes no reference to the National Strategy for Mainstreaming Gender in Climate Change (2013) or National Guidelines for Mainstreaming Gender into Climate Change Adaptation Related Policies, Plans, Strategies, Programmes and Budgets, as outlined in the NCCRS. Furthermore, since the NDC was submitted, several key policies have been adopted and implemented. A revised NDC could include the whole range of interventions to provide a clearer picture of gender mainstreaming and where any gaps or weaknesses might lie.

^{60 &}quot;Budget speech" (Parliament of Tanzania), available at: https://www.parliament.go.tz/budget-list (last accessed 8 March 2024). In fact, it receives the third lowest budget of all ministries, with the lowest being the Ministry of Community Development, Gender, Women, and Special Groups and the Ministry of Culture, Arts, and Sports.

^{61 &}quot;Guidelines for integrating climate change adaptation into national sectoral policies, plans and programmes of Tanzania" (2012, VPO), available at: https://www.vpo.go.tz/uploads/publications/en-1592644632-GUIDELINES-FOR-INTEGRATING-CLIMATE-CHANGE-ADAPTATION-INTO-NATIONAL-SECTORAL-POLICIES-PLANS-AND-PROGRAMMES-OFTANZANIA.pdf (last accessed 8 March 2024).

^{62 &}quot;National environmental policy", above at note 54.

⁶³ Ibid.

⁶⁴ Ibid.

^{65 &}quot;Tanzania economic update: Overcoming demographic challenges while embracing opportunities" (2024, World Bank), available at: http://documents1.worldbank.org/curated/en/099031124044543127/pdf/P1796101f356d10fa1b47215b969 e1205b2.pdf> (last accessed 15 March 2024).

Mainstreaming women and gender was one of the two areas in which other states have made commitments to improve law and legal institutions. Tanzania could consider strengthening the law and indeed has previously committed to amending laws with discriminatory components. A detailed scoping analysis of all relevant legal provisions and institutional architecture would be a first step towards this goal.

Strengthen commitments at the intersection of women, gender and climate change in the next NDC update

The existing NDC does not include all the initiatives supporting women and gender within the current climate change policies included in Tanzania's National Strategy on Gender and Climate Change or include initiatives set out in the more recent NCCRS, such as the National Guidelines for Mainstreaming Gender into Climate Change Adaptation Related Policies, Plans, Strategies, Programmes and Budgets. Beyond this, it is clear that some states have committed to adopting enforceable legislation. Tanzania does not yet have climate legislation in place, and the NCCRS refers only to strengthening health regulations so that they are "climate informed" and mainstreaming climate change in regulations for sectors such as energy. Tanzania could consider reviewing gender legislation to ensure it is also climate-informed and / or adopting enforceable climate laws that are gender-informed.

Scale up success

A detailed evaluation of interventions to date is required to determine where opportunities lie to scale up initiatives that have been successful. However, one area that has received attention elsewhere but not in the climate context is a gender dialogue. Tanzania has done well in organizing gender dialogues on different issues, one of them being gender-based violence, which is well coordinated between government, the private sector and civil society organizations. Tanzania could follow a similar approach towards building a culture of having a gender dialogue in relation to climate change by, for example, including workshops in preparation for the next NDC and building an ongoing dialogue. This was the case in Liberia where, recognizing the failure to have a gender dialogue when preparing its first NDC, it called for a nationwide gender dialogue in preparing for the second NDC. This approach would enable Tanzania to raise awareness on gender and climate change, not just within the government but also with the private sector, civil society organizations and the community.

Support a sectoral approach and coordination

Having tailored action plans for specific sectors, together with timeframes for goals to be achieved in relation to women and climate change, is one way to manage interventions effectively. This is the case in Cabo Verde, which has prepared an Action Plan for Gender and Energy to be achieved by 2030. Tanzania includes some sectoral commitments in the NCCRS (such as the Tanzania Sustainable Energy for All Action Agenda (2015)), but these are not comprehensive across all sectors.

In 2021, the president of the United Republic of Tanzania disestablished the Ministry of Health, Community Development, Gender, Elderly and Children, in which health seemed to have swallowed the other sections. Two ministries were formed, one of them being the Ministry of Community Development, Gender, Women and Special Groups, which should play a pivotal role

^{66 &}quot;United Republic of Tanzania intends to amend all laws with discriminatory provisions and leverage economic growth to advance women's equality" (UN Women), available at: https://www.unwomen.org/en/get-involved/step-it-up/commitments/tanzania (last accessed 8 March 2024).

^{67 &}quot;16 days of activism against gender based violence campaign 2022" (9 November 2022, Women in Law and Development in Africa), available at: https://wildaftanzania.or.tz/16-days-of-activism-against-gender-based-violence-campaign-2022/?utm_source=rss&utm_medium=rss&utm_campaign=16-days-of-activism-against-gender-based-violence-campaign-2022> (last accessed 8 March 2024).

in conversations on gender, climate change and women. This ministry should be involved at all stages and in all conversations about climate change to overcome siloes and ensure cross-sectoral integration. A good example of a similar arrangement is in Liberia, where the Ministry of Gender is highly involved in ensuring inclusion of women from the grassroots to the national level through consultation on needed interventions. The same approach could be taken in Tanzania.

Also, specific training on gender and climate change should be offered to leaders in all crosscutting sectors for public servants and parliamentarians. This will increase awareness and make them more conversant about gender and climate change.

Empowerment and alternative employment opportunities supported by gender financing

Facilitating alternative livelihood opportunities will reduce climate-harmful economic activities such as unsustainable farming. In many cases, financing will be needed to support a transition to new employments, and in particular to encourage the involvement of women. Sierra Leone has committed to having more women working in solar energy and Liberia implemented a training programme for women in agriculture to ensure women are equipped for climate-resilient agriculture.

Education is another key aspect of women's empowerment. Raising awareness and integrating climate change in education programmes should be done at all levels. This will build public support for government interventions, as well as encouraging individual actions and activities. In many cases, environmental education is included at the school and university level and programmes could be expanded to cover climate change, women and gender issues. Workplace, private and public sector training programmes are also needed. For example, training could be implemented for women who are agricultural custodians to carry out climate resilient agriculture projects, as Sierra Leone and Liberia adopted in their NDCs. Similarly, a commitment could be made to identify new climate-sensitive economic opportunities. This would encourage and increase public-private partnerships in climate adaptation and financing. Sierra Leone has prioritized investment in the use of technology in creating alternative sources of income that are also environment friendly, such as recycling waste products.

Expand data collection, collation and accessibility, and set targets

Tanzania, in its policy instruments, but not its NDC, has recognized the lack of data and the need to provide aggregated data on women, gender, climate change and various sectors. Collation of existing data, filling data gaps and the production of statistical analyses are all needed. Some commitments to addressing the challenges are included in table 3. However, Cabo Verde and South Sudan have gone further in their NDCs by committing to making data public. For example, South Sudan has undertaken an information gap analysis identifying datasets that exist, gaps and where data is not currently available publicly. In addition, in its NDC it published some high-level data, such as the percentage of women involved in the workforce in various sectors. Mapping all datasets in Tanzania is the first step to identifying and filling gaps. Making information publicly accessible will assist with transparency and then allow for scorecards to be developed to measure improvements over time. Building on improved data, setting targets for the percentage of women involved in climate governance will create a goal as well as a threshold for continuous improvement. This was the case in South Sudan, which set a threshold of 35 per cent representation in decision-making related to climate change. Tanzania has done very well in political inclusion with regard to the number of women in Parliament (currently approximately 37 per cent, the threshold being 35 per cent),⁶⁸ and a similar approach could be adopted in climate governance.

⁶⁸ L Kamer "Proportion of seats held by women in the national Parliament of Tanzania from 2008 to 2022" (28 February 2024) Statista, available at: https://www.statista.com/statistics/1248349/proportion-of-seats-held-by-women-in-tanzania-national-parliament/ (last accessed 8 March 2024).

Conclusion

This research has provided a comparative analysis of all the African NDCs and the various ways in which they have committed to integrating women and gender into climate change governance. The data shows considerable diversity of responses although some commonalities exist. The findings include both law and non-law related interventions across six common areas. This analysis provides a globally useful resource for future research.

The research also highlights where Tanzania sits on the spectrum of responses to issues at the intersection of climate change, women and gender, and to what extent law is being used to achieve outcomes. Tanzania's NDC commitments have been assessed against those of other African nations and it has been found that this country has not articulated, in its NDCs, all activities at the national level. Relevantly, Tanzania is clearly aware of the importance of addressing gender issues in the context of climate change and has committed to action through various national policy instruments. It has done much to mainstream women's issues but could strengthen its NDCs and enhance actionable commitments as recommended above. In particular, relevant domestic law and policy may need to be amended, and stakeholder perspectives gathered, on both the commitments and further actions that are needed. Much more research is needed to determine priorities and to monitor and evaluate outcomes, including through empirical fieldwork and perhaps the development of a scorecard system. This article is a first step and a basis for this further research and similar scholarship in other states seeking to enhance their efforts at the intersection of women, gender, climate change and law.

Competing interests. None

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